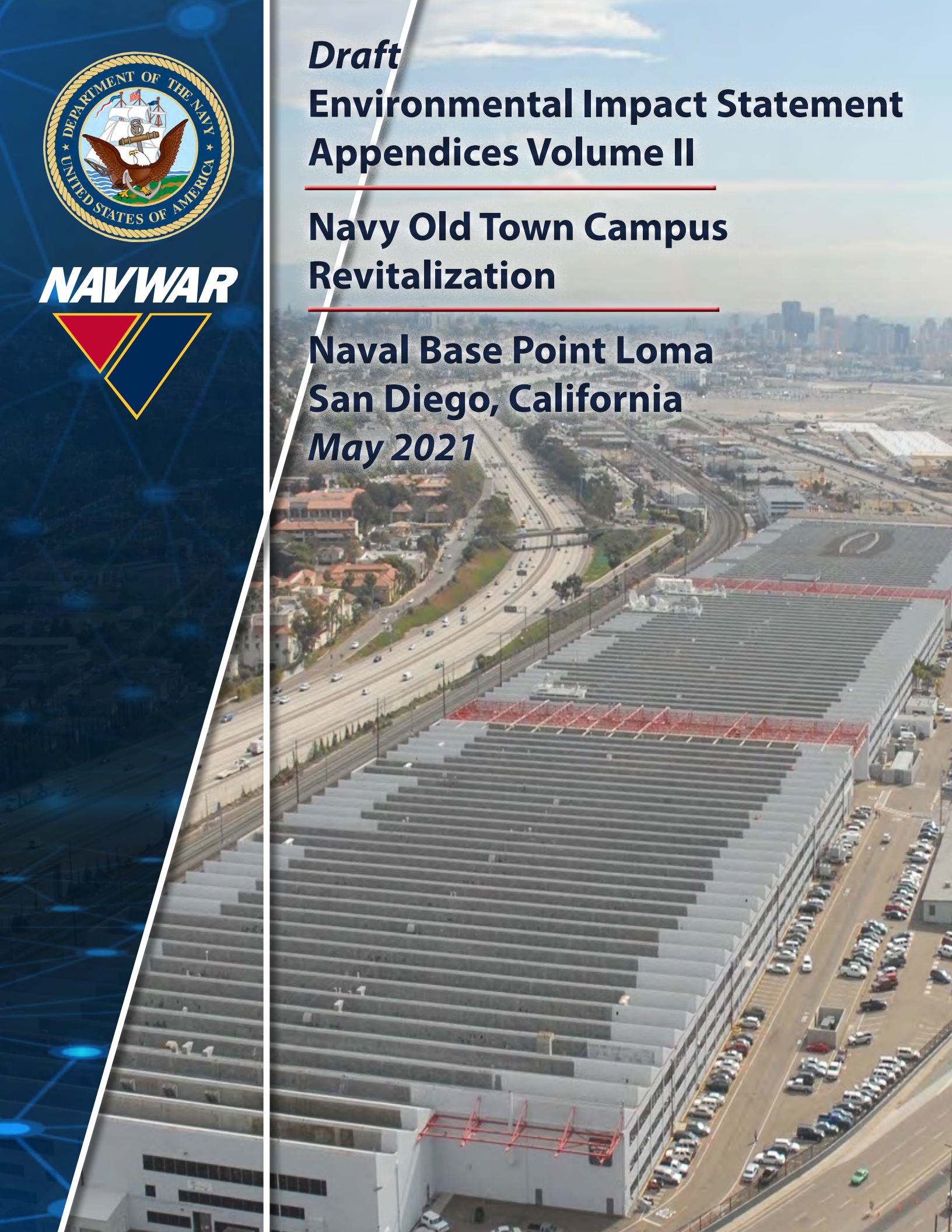
Draft

Environmental Impact Statement Appendices Volume II

Navy Old Town Campus Revitalization

Naval Base Point Loma San Diego, California

May 2021



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1 AFFECTED ENVIRONMENT

1.1 Visual Impact Assessment Overview

Aesthetic or visual resources are the natural and man-made features of the landscape that can be seen and perceived by viewers and this viewing contributes to the public's perception and interaction with the environment. Visual or aesthetic resource impact studies must determine if the project's physical characteristics, potential visibility, and the extent that the project's presence would negatively (or positively) change the perceived visual character and quality of the environment. To ensure that potential changes to visual quality resulting from a project are adequately and objectively considered, it is critical that an accepted, systematic evaluation process be used.

1.1.1 Visual Impact Assessment Methodology

The analysis of the Navy Old Town Campus (OTC) Revitalization project (referred to as the Proposed Action or the Naval Information Warfare Systems Command [NAVWAR] project hereafter) must utilize a process that results in a full understanding and description of the proposed changes, how these changes will or will not contrast with the setting and must predict if viewer groups that see these changes will like or dislike the changed visual environment.

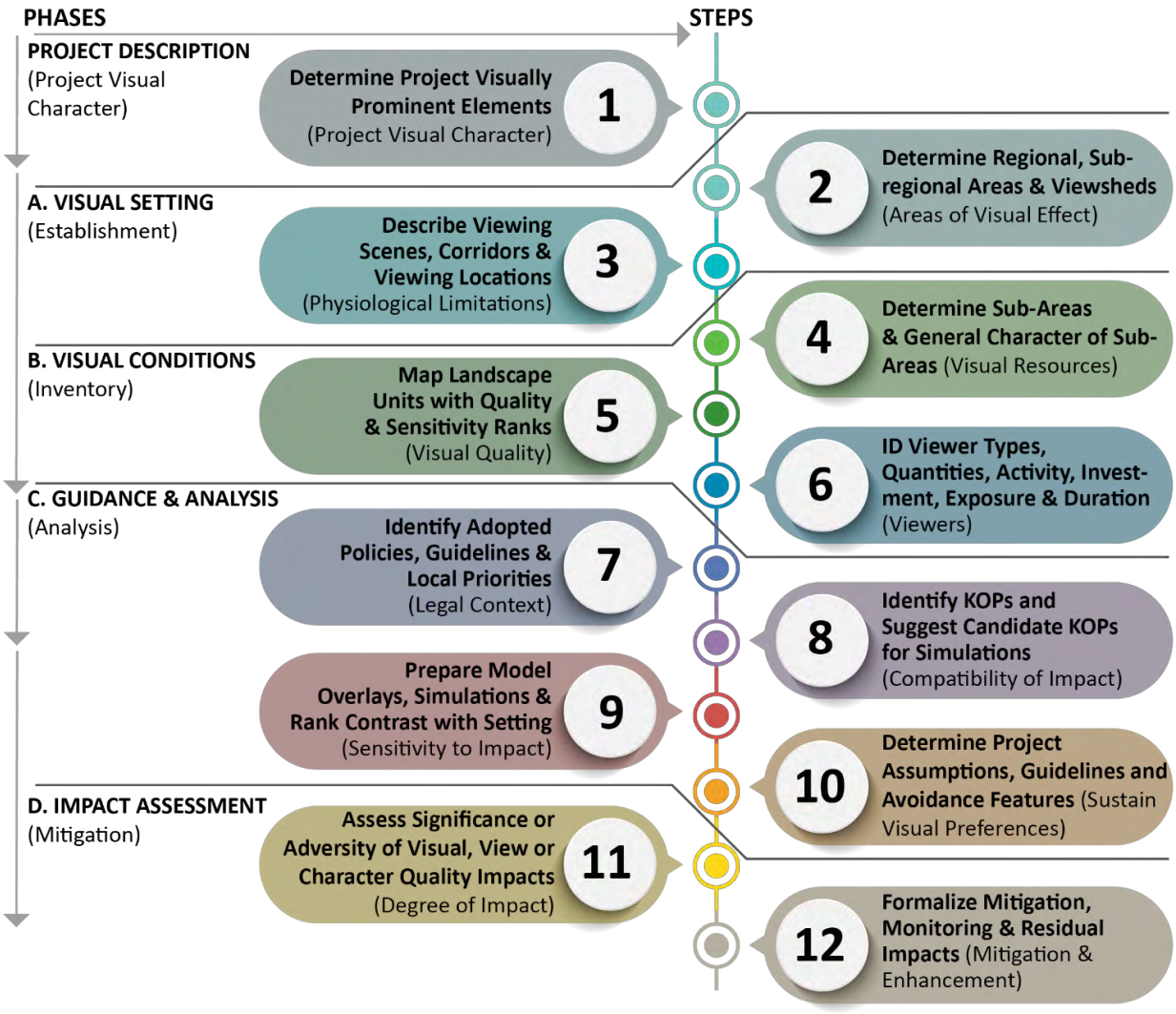
The primary method used for most federal projects is based upon the blending of two primary methodologies. The first methodology is based on the Federal Highway Administration (FHWA) Visual Impact Assessment (VIA) for Highway Projects (FHWA, 1988). While this guidance document was updated in January 2015, the Division Chiefs of Design and Environmental Analysis at Caltrans released a memorandum on November 6, 2015 stating that they were evaluating the new guidelines and that any new Caltrans VIA guidance would be released through a Policy Memorandum. The current Principal Landscape Architect of Caltrans confirmed via telephone on October 13, 2020 that Caltrans is still evaluating the new FHWA guidance and continues to use the older approach, although they will eventually adopt parts of this new federal document. This study will continue to use the 1988 version until Caltrans adopts the 2015 version. To help with a transition, this report uses the older terms but when appropriate, the new term will be shown in parenthesis. The FHWA method is commonly selected because it is applicable for larger scale projects in urbanized and suburbanized communities, especially those that would include transportation projects or non-transportation projects that would be seen by the public on freeways, highways and roadways. The second method utilizes the U.S. Forest Service Scenery Management System (U.S. Forest Service, 1995). Both systems were developed by major federal agencies that invested considerable resources in their creation, testing, and implementation, and as a result, both approaches are robust and heavily relied upon to provide systematic and objective evaluations of visual change. Together, these systems provide methodologies that are reliable and widely accepted for evaluating changes to visual or scenic quality.

A visual quality and aesthetics assessment typically addresses three primary questions:

1. What are the visual qualities and characteristics of the existing landscape in the project area?
2. What are the potential effects of the project's alternatives on the area's visual quality?
3. Who would see the project, and what is their likely level of concern about, or reaction to how the project visually fits into the existing landscape?

The proposed methods for this Visual Impact Assessment include twelve major steps (see Figure 1.1-1: Visual Impact Assessment Major Steps). These steps, in general, need to be in a linear fashion since the results of one step inform the next step in the process. The latest 2015 FHWA process has changed terminology compared to the 1988 version. The process chart uses the new terms shown in parenthesis. The twelve steps generally follow four general phases of work including a pre-phase condition called project description (project visual character) the four phases include: A) visual setting (establishment); B) visual conditions (inventory); C) guidance and analysis (analysis); and D) impact assessment (mitigation). The twelve steps on Figure 1.1-1 are component steps that go through the four phases of a Visual Impact Assessment.

Figure 1.1-1 Visual Impact Assessment Major Steps



1.1.1.1 Methodology for Identifying and Analyzing Viewsheds

The Area of Visual Effect (AVE) for the Proposed Action is defined as a 3-mile radius within the viewsheds emanating from OTC. These viewsheds and the associated AVE were determined by performing a computer-based viewshed analysis using ArcGIS Spatial Analyst software. This viewshed analysis applied a regional digital elevation model (a landform-based model that does not include built environment features) to determine the maximum extent of the surrounding area from which the

existing and proposed OTC buildings would be visible (without regard to other structures in the area, which would otherwise constrain the shape of the viewsheds and reduce the radius of the AVE). The model was applied for the 55-foot height of both the existing OTC buildings and those proposed under Alternative 1, as well for the tallest buildings proposed under Alternatives 2 and 3 (240 feet) and Alternatives 4 and 5 (350 feet), to yield the viewsheds and maximum AVE applicable to the Proposed Action Alternatives.

The AVE fits mostly within a portion of the sub-regional visual resource boundary, but also extends outside that boundary in a few places along its eastern edge. This AVE includes diverse natural landforms, including canyons, bluffs, drainages, the San Diego River, and a sizeable urbanized area. Because OTC covers a sizeable land area (both length and width), most areas in the AVE have visibility of OTC's existing structures. Those areas within the AVE that do not have visibility of existing OTC structures are shielded behind landforms, but the taller structures proposed under certain Alternatives would be visible from these areas. Within the AVE, the foreground is considered to be 0.5 miles from the edges of the OTC site (2,640 linear feet), the middle ground is 0.5 to 1 mile (out to 5,280 linear feet), and the background is 1 to 3 miles (out to 15,840 linear feet). Anything beyond 3 miles is considered to be a distant background and is not included in the AVE.

A viewshed is dependent upon the landform conditions of an area and by the built environment that is placed upon those landforms. In general, major landforms are not heavily modified by development and are considered, for the purposes of this study, to be the key defining factor as to who can see a project and from where they can see it. The Environmental Systems Research Institutes' ArcGIS Spatial Analyst software was used to generate viewsheds based on regional digital elevation model data. The landform-based model is the foundation for mapping views, which represent the theoretical limits of a viewshed. While trees and buildings can be modified or removed, the underlying landform stays the same in most cases.

The viewshed models are run based on the principle of inverse visibility; simply put, if you can see an object in the environment, then that object would also be able to see your viewing location. The modeling software places multiple points on the outer edges and tops of proposed project building forms to test the visibility within the viewshed. The results of multiple runs are combined into a composite viewshed, and viewing locations are ranked by how much of the project forms they can see. In general, the more points a viewing location can see, the higher the degree of visibility.

1.1.1.2 Methodology for Identifying and Analyzing Viewing Scenes, Corridors, and Locations

A two-step analysis process was undertaken for each sub-regional viewing scene identified: (1) viewshed from the viewing scene; and (2) viewshed to the viewing scene.

For step one, an array of observation points were placed across the scene area to perform a composite viewshed analysis that determined which viewing locations within a two-mile buffer from OTC's property boundary can see the viewing scene while looking over or through the OTC site. The areas with the highest visibility of the viewing scene looking over or through OTC are the areas with the highest potential for view blockage based on the Proposed Action Alternatives.

Step two placed observation points in the areas of moderate to high visibility (determined in the first step) and evaluated a composite viewshed looking towards the viewing scene. The results of step two were used in the alternatives evaluation process to compare changes in visibility to the viewing scene

under each action alternative. The results for all the sub-regional viewing scenes are presented in Section 1.2.5.

1.1.1.3 Methodology for Creating Visual Simulations

It is critical that the proposed project be portrayed accurately in a visual simulation that mimics real world conditions with the appropriate detail to appear realistic. In general, this project has attempted to provide accurate and realistic images of what the project is likely to look like, from locations and viewing angles close to what viewer groups are likely to see. This requires the analysis of many possible Candidate Key Observation Points (CKOPs) to identify the most important views of the project that represent the most dramatic change in the areas that may have a coherent and harmonious visual character as seen from the larger and more sensitive to change viewer groups. Likely viewer groups are identified for each CKOP and a less detailed model of the project is overlaid on existing photographs. These CKOPs are then narrowed down to the Key Observation Points (KOPs) that are recommended for simulation. Simulations use a 3-dimensional model of the proposed project, with enough detail to be reasonably expected, but not with specific project details that an architect is likely to design. This simplified version of the possible modeling is a compromise between using blank massing shapes to represent buildings and detailed visual simulations with a great deal of creativity and design fenestration that may be what the final project looks like. Too little detail and the mass models look more impactive than they are likely to be, too much detail and the simulation may not represent the actual design that is likely to come out of an architectural effort with obvious styles, themes and highly unique fenestrations.

1.1.1.4 Methodology for Determining Impacts

With the review of the simulations in hand, the adjacent visual character and quality of adjacent Landscape Assessment Units (LAUs) are also summarized to assess the contrast that the project is likely to have. Then likely viewer groups along with their exposure and their likely reactions are taken into account. At that point, impacts are discussed and potential mitigations are considered and worked into the simulations to test the affect. Finally, after minimization and avoidance measures have been considered the resulting impacts of the overall project are then documented.

1.1.2 Visually Prominent Elements of the Proposed Project

A project of this scale will by definition, have a large variety of visually prominent elements that have the potential to be seen by many potential viewers. The intent of identifying visually prominent elements is to determine what, where, and how these elements would be seen by potential viewers. The primary purpose of this visual impact assessment is to note major changes in the visual environment and, if these changes contrast with the setting, would this contrast likely be considered negative (or positive) by the many viewers in the study area. Therefore, it is only necessary to consider the large scale, worst case (or best case) physical elements that would likely dominate the visibility of the proposed project. The major elements would be:

- Building heights and widths that contribute to a large mass of structure
- Building materials that are vertical planes that will dominate the viewing scene, especially with contrasts to the scale, color, materials, or reflectivity of what is common on or near the site
- Major flat surfaces (over 10,000 sf) that would be easily seen from the elevated viewing locations found around the site
- Secondary structures including bridges, parking structures or raised platforms or decks
- Vertical elements related to solid fencing, screening, or retaining walls

- Landscape treatments that are mostly focused on larger mature trees (since size and percentage of the viewing scene needs to be large enough to be seen)

The visually prominent elements have been worked into the viewshed modeling by extruding these surfaces and forms above the ground plane. The elements have also been incorporated into the visual simulations, although the level of likely design has not been included since this level of project development has not yet occurred.

1.1.3 Visual Distances

The distances used to determine the limits of the study area or area of potential effect (APE), or area of visual effect (AVE), are based on the size of the project, the viewing conditions of the project site, and the viewing area the site is seen from. In urban areas where dense mixed-use development occurs, the distance away from a project site would be shorter than those in natural areas with distant views. For the purposes of this study, the foreground is considered to be one-half mile from the edges of the project site (2,640 linear feet); the middle ground is one-half to one-mile (out to 5,280 linear feet); the background is one mile to three miles (5,280 to 15,840 linear feet); and anything beyond three miles is considered to be a distant background and would normally not be considered a significant or highly adverse impact, unless it blocked a sub-regionally important viewing scene.

1.2 Visual Environment

In general terms, the visual environment is considered to be a vital component of an area's overall vibrancy and value. These high visual quality areas generally have higher quality development, protected open space, and higher land values.

The ability of the landscape to undergo alteration without losing its visual character is considered important for the maintenance of high scenic value and cohesive neighborhood character. As development deviates from the natural landscape, visual impacts can increase, especially if the development pattern is incoherent, chaotic, or of poor design. The visual impacts of a project are determined by a number of factors, including effects on the visual character and quality (e.g., form, line, color, and texture), visual exposure, viewer sensitivity, and the number of viewers who are expected to see the project. In certain areas such as this one, views are also an important resource for a community.

1.2.1 Regional Environment

Western San Diego County is made up of regions that are a mix of natural and man-made elements. The study area is within the San Diego Central Coast and Bay region, which is commonly considered to be from the end of Point Loma, south of downtown San Diego, then up to Torrey Pines State Park and east to Interstate 15. The region to the south is South Coast/South Bay and the region to the north is North County Coastal (see Figure: 1.2-1: Regional and Sub-regional Areas).

1.2.2 Sub-regional Visual Environment

The visually affected environment is defined as all areas within the viewshed of the project site. Typically, the viewshed is contained in the sub-region, which are geographically defined areas that have a similar viewshed with landform edges that define some of the limits of the region. Regions, on the other hand, do not need to have similar viewsheds and are made up of very large areas. This particular sub-region is defined as the San Diego Central Coastal and Bay subregion. This sub-region is diverse in natural landforms, canyons, bluffs, creeks, canyons, and rivers, as well as having the most urbanized areas of San Diego County. At the center of the sub-region are the San Diego River and wetlands that touch the Pacific Ocean. The landform has low spots, including Mission Bay and Northern San Diego Bay, as well as high spots, including Point Loma and Mount Soledad. The sub-region consists of several major

Figure 1.2-1 Regional and Sub-regional Areas

transportation corridors, rail lines, freeways, and the San Diego International Airport. Land uses are perhaps the most diverse in the county from low density housing to moderate density mixed use housing and large estates. Many of the neighborhoods were originally developed in the early 1900s, with significant housing resources built from the 1950s to the present. Business parks, industrial parks, strip commercial centers, regional commercial centers, hospitals, schools, government institutions, and a variety of entertainment facilities all exist in the area.

This sub-region has extreme differences in land uses that in turn produce a broad variety of project scales, massing, and character from traditional neighborhoods to high density projects in Downtown San Diego. Except for downtown and portions of Uptown, most buildings are 30 feet in height, with only a few exceptions like the Port District Building, the Sports Arena, SeaWorld, the EF International Language campus, buildings at the University of San Diego, the Presidio, and Caltrans headquarters. This height limit resulted from grass-roots efforts in the 1970s known as Proposition D.

1.2.3 Sub-regional Viewshed

Reviewing the viewshed as shown in the sub-region existing visibility map (see Figure 1.2-2 and 1.2-3) indicates that the majority of the sub-region can see the existing NAVWAR facilities if trees and other buildings were not in the way. Because of the broad overall length and width of the existing NAVWAR complex, and the heights of the proposed buildings, many areas in the sub-region can see the project site in its current height of 55 feet tall.

The viewshed analysis described above was applied to the tallest building height under Alternatives 2 and 3 (240 feet) and Alternatives 4 and 5 (350 feet). The resulting viewsheds within 3-miles of OTC was defined as the AVE as shown in Figure 1.2-2. The distances used to determine the limits of the AVE are based on the size of the project, the viewing conditions of the OTC site and the viewing area that OTC is seen from. In urban areas where dense mixed-use development occurs, the distance away from the OTC site would be shorter than those in natural areas with distant views. A summary of acres of visibility within the distance zones, including the full sub-region, and the associated 2016 population is shown in Table 1.2-1.

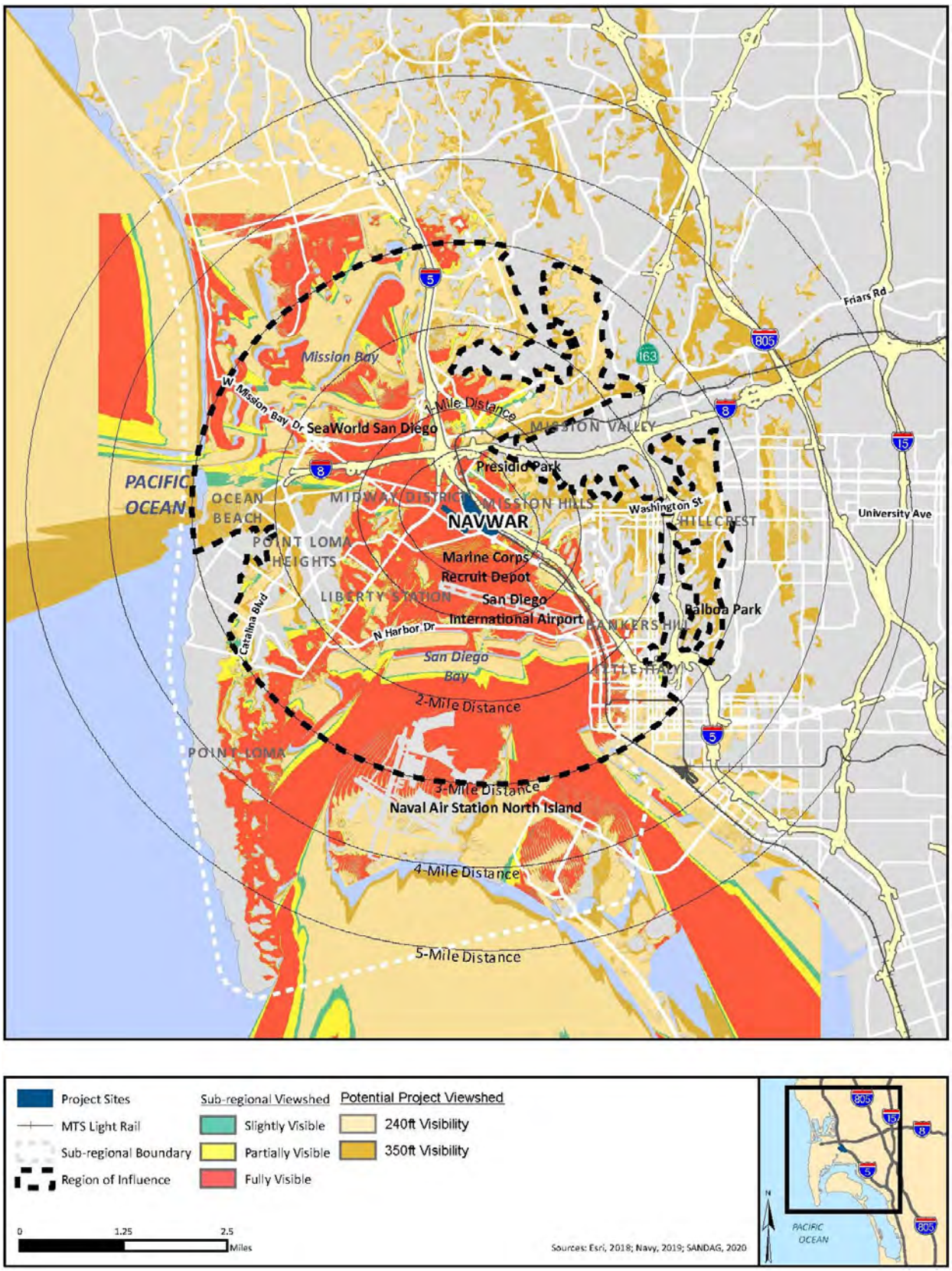


Figure 1.2-2 Sub-regional Viewshed Map (using Digital Elevation Models showing landform only)

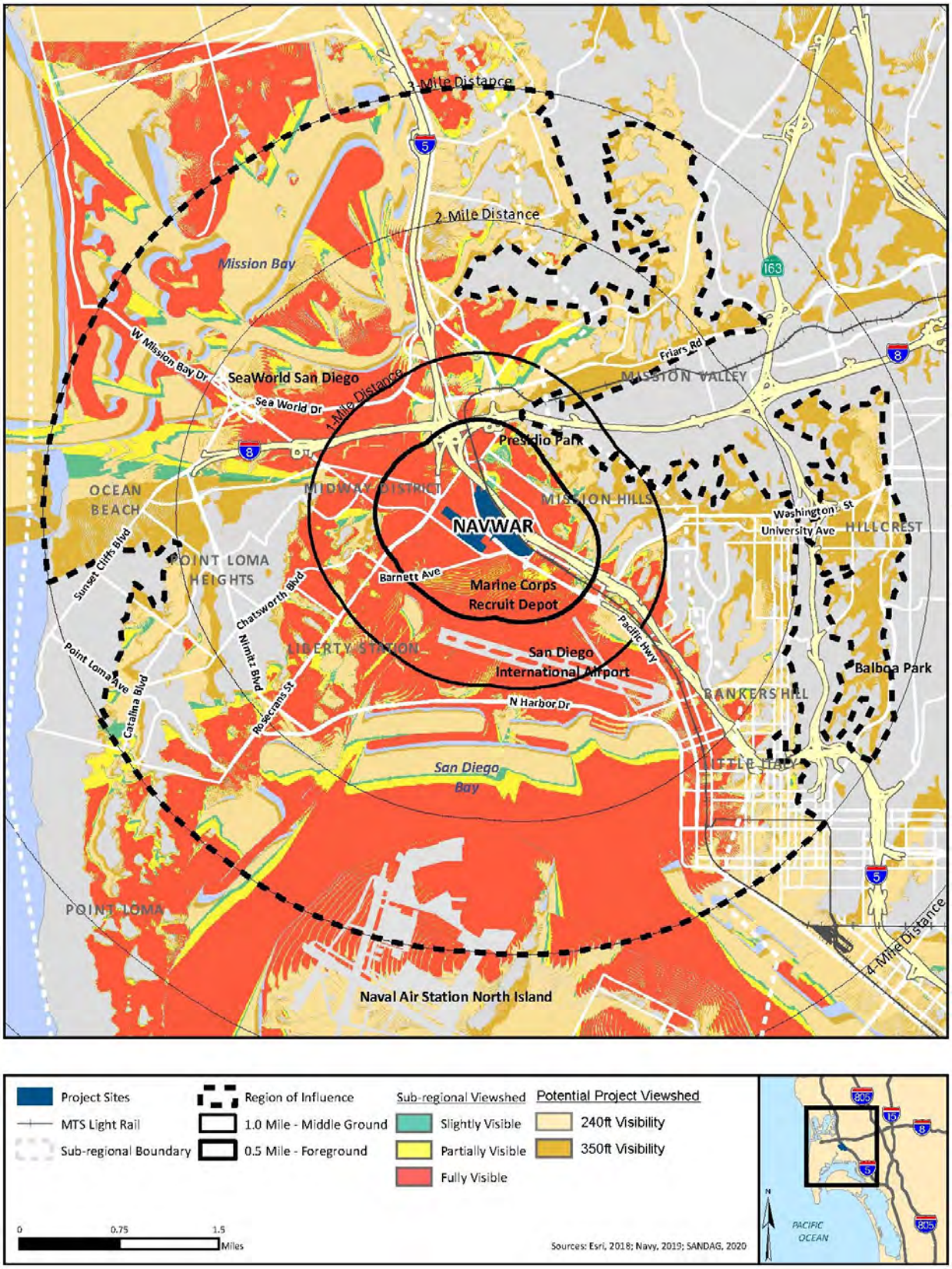


Figure 1.2-3 Detailed Area of Visual Effect (using Digital Elevation Models showing landform only)

Table 1.2-1 OTC Site Visibility Analysis using a Digital Elevation Model

Distance from OTC	*Acres with No Visibility of 55-foot Tall Buildings at OTC(1)*	*Acres with Slight Visibility of 55-foot Tall Buildings at OTC*	*Acres with Partial Visibility of 55-foot Tall Buildings at OTC*	*Acres with Full Visibility of 55-foot Tall Buildings at OTC*	*Additional Acres with Visibility of 240-foot Tall Buildings at OTC(2)*	*Additional Acres with Visibility of 350-foot Tall Buildings at OTC(3)*
0.5 mile	95	37	90	980	56	76
1 mile	689	58	122	1,118	337	508
3 miles	8,707	394	767	5,074	3,799	5,949
Subtotals	9,490	489	979	7,172	4,183	6,533
Distance from OTC	*Acres with No Visibility of 55-foot Tall Buildings at OTC(1)*	*Acres with Slight Visibility of 55-foot Tall Buildings at OTC*	*Acres with Partial Visibility of 55-foot Tall Buildings at OTC*	*Acres with Full Visibility of 55-foot Tall Buildings at OTC*	*Additional Acres with Visibility of 240-foot Tall Buildings at OTC(2)*	*Additional Acres with Visibility of 350-foot Tall Buildings at OTC(3)*
0.5 mile	710	167	605	6,592	456	587
1 mile	5,818	449	855	4,966	2,277	3,966
3 miles	99,756	2,703	4,576	21,623	32,094	65,851
Subtotals	106,284	3,319	6,036	33,181	34,827	70,404

Notes: (1) Height of the existing buildings on OTC and the proposed maximum building height under Alternative 1.
(2) Proposed maximum building height under Alternatives 2 and 3.
(3) Proposed maximum building height under Alternatives 4 and 5.

This AVE includes diverse natural landforms, including canyons, bluffs, drainages, the San Diego River, and a sizeable urbanized area. Because OTC covers a large land area (both length and width), most areas in the AVE can see OTC and the existing structures. Those areas that cannot see OTC within the AVE are shielded behind landforms. If a more detailed model of all built and natural elements on top of the land were available, shielded areas from view would be much greater than shown. However, trees and buildings come and go so the reliance of landforms is both logical and practical.

The AVE includes several major transportation corridors, including rail lines and freeways, and the San Diego International Airport. Other land uses in the AVE range from low density residential to moderate density mixed-use housing; business and industrial parks; strip commercial and regional commercial; hospitals, schools, and government institutions; and a variety of entertainment facilities. Two major military installations (U.S. Marine Corps Recruit Depot [MCRD] and Naval Base Point Loma) are also located in the AVE. From a visual resources perspective, these wide-ranging land use types produce a broad variety of building scales, massing, and character. Most existing buildings in the AVE are 30 feet in height with a few exceptions being taller than 30 feet, like the Port District Building, the Sports Arena, elements at Sea World, the Education First's International Language campus, buildings at the University of San Diego, the Presidio, and Caltrans headquarters.

1.2.4 Sub-regional Character

The overall character of the sub-region is extremely diverse. It is diverse in age of development, architecture, roadway layouts, landscape treatments, and how well each property or area is maintained. The sub-region is characterized by many mesa tops, deeply incised canyons, and creeks. The area is framed by landforms of the Point Loma peninsula to the west, the Mount Soledad hills to the north, San Diego Bay to the south, and the edges of the upper mesa areas of Clairemont to the north and Uptown

to the east. There are few uniform or harmonious elements of any kind in the area, although there are pockets or sub-areas that do have consistent character and uniformity. These areas will be discussed in the sub-area character descriptions.

Various images that denote the diversity of the sub-region:

1.2.5 Sub-regional Visual Resources

Visual resources are the elements or components that contribute to the visual environment. These can be natural or man-made. They can also be temporary, such as vegetation, or last for long periods of time, like historic homes or major landforms. When there is a level of consistency between the physical elements of an area, the area becomes a sub-area or a neighborhood. Without consistency, the area looks chaotic and random in its layout. Natural resources are almost always considered to have a higher visual quality than man-made elements, especially in a built-out area like the study area. The sub-areas range from a very low quality, such as that found around the project site, to a very high quality, such as

in the historic neighborhoods of Mission Hills, Old Town, and Point Loma. The area has everything in between these two extremes as well.

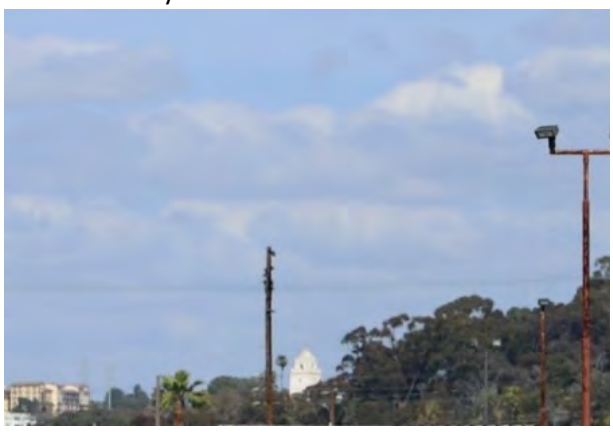
1.2.5.1 Sub-regional Viewing Scenes

The sub-region has ten important viewing scenes that would be considered as sub-regionally significant views of a moderate high to very high visual quality. They are unique, broad, and intact areas that are well balanced and vibrant. Important viewing scenes are generally panoramic in nature, offer dynamic unobstructed distant views, and often signify a balance between the natural and man-made environments. Below are images of each of the ten viewing scenes that are mapped in Figure 1.2-4: Sub-regional Viewing Scenes). These views are generally not taken from the project site but are from viewing locations that mostly see through the site or near the edges of the site.

1. San Diego River

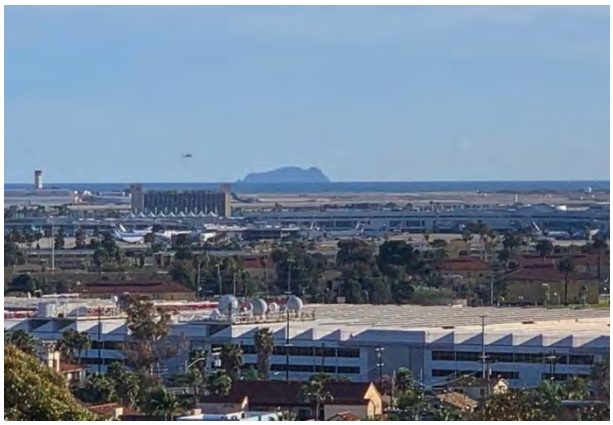
2. Mission Bay

3. Mission Valley North Gateway (USD)



4. Mission Valley South Gateway (Presidio and Mission Hills)

5. Pacific Ocean to the West



6. Pacific Ocean to the Southwest

7. San Diego Bay and North Island (Coronado)

8. Point Loma Hillside

9. Cabrillo Point

10. Downtown Skyline

Sub-regional Viewing Corridors

Viewing corridors that span the distance between viewing locations and viewing scenes can sometimes be blocked by new development. The amount of blockage would be a direct result of the size of the project elements, as well as the distance to viewer groups (see Chapter 3 for view quality blockage analysis). The amount of the corridor that is blocked will determine the extent of the view quality impacts. Generally, beyond one mile, the project would be considered to be part of the distant background, making it part of the viewing scene instead of an obstruction to the corridor.

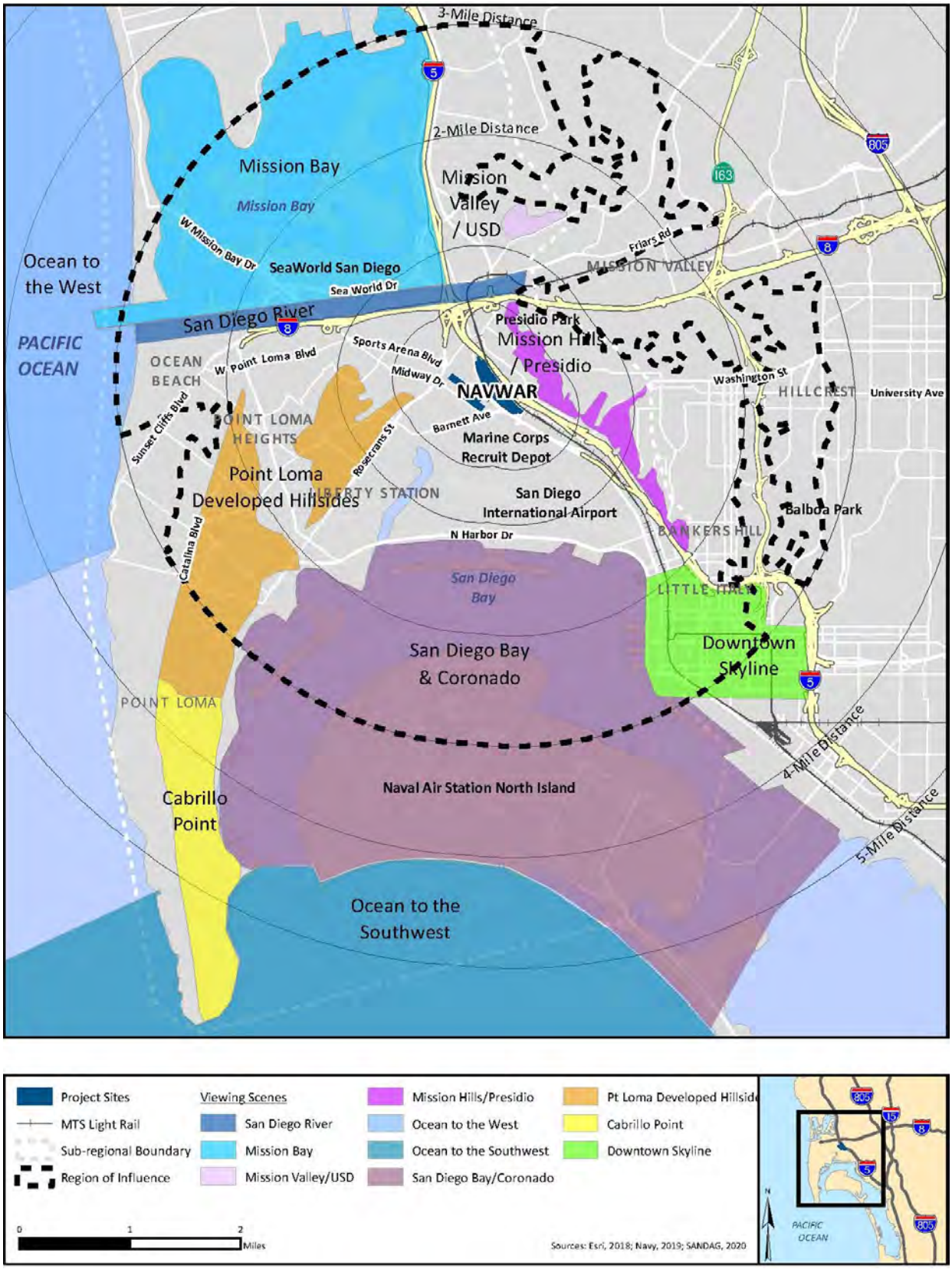


Figure 1.2-4 Sub-regional Viewing Scenes

1.3 Sub-Area Visual Environment

The sub-region has been further defined by delineating sub-areas. These sub-areas have been defined by viewshed limits within the foreground and middle ground distance zones, as well as Landscape Assessment Units (LAU) that define areas of similar character, land use, and viewer groups (see Figure 1.3-1: Sub-areas of the Sub-region). The sub-areas do not necessarily match the community boundaries since they are based on visual elements and characteristics. The full one-mile area around the site has been considered, but a few areas that are outside of all potential viewsheds have been eliminated from the sub-areas, leaving some areas not classified within the one-mile limit.

The sub-region within the one-mile limit of the study area has been sub-divided into one of eleven sub-areas. These sub-areas have been identified to ensure that each sub-area is analyzed for potential visual quality, view quality, and community character impacts, and that possible KOPs have been distributed equitably through the sub-region into the eleven sub-areas.



The **Mission Bay and Mission Valley** sub-area consists of natural open spaces, including the San Diego River and Mission Bay open space areas. Another portion of the site consists primarily of industrial areas and business parks. This area is sometimes called the Morena District. The southern edge of the sub-area is defined by Interstate 8.



The **Midway District** consists of three segments of the Midway/Pacific Highway community plan area. These include the North, Central and South Midway/Pacific Coast Highway areas. This area consists of commercial retail, special event areas, business parks, industrial parks, and the MCRD off-base housing area. One school, several churches, and the County of San Diego Health and Human Services are found in this area.

Point Loma is represented by residential areas on the hillside, rising up above the Midway District. This area is also sometimes call Loma Portal. The area consists of several historic and Mid-Century style homes and larger estates.

The former Naval Training Center, San Diego is found in the next sub-area. This area is now known as **Liberty Station**. The channel extension from San Diego Bay is also in this area. Since a portion of MCRD that contains officer housing and several recreational and open space areas are similar to Liberty Station, they have been included in this area.

MCRD and the San Diego International Airport have been grouped together in the next sub-area. Although MCRD has a variety of land uses, most of it has similar design character. The airport is very different from MCRD, but it has been included since it relates to mostly industrial and operation areas similar to the south and southeast sides of MCRD.

Old Town is a well-defined sub-area with similar characteristics and land uses. The sub-area is defined on two edges by I-5 and I-8, as well as the San Diego River to the north. The area contains Caltrans District 11 headquarters and Old Town Historic State Park. The Old Town Transit Center integrates bus, the trolley, the Coaster heavy rail commuter service, as well as Amtrak. Most of Old Town is focused on tourism, but a substantial part includes older neighborhoods with single and multi-family units throughout.

Finally, the **Mission Hills** area has been segmented into North, Central and South Mission Hills sub-areas. This historic and generally intact set of neighborhoods range from estates and single-family units in the north end, to more mixed neighborhoods with varying densities of multi-family housing areas to the south.

The acreage of each of these sub-areas is shown in Table 1.3-1: Acreage and Population for each Sub-area.

Table 1.3-1 Acreage and Population for each Sub-area

	1/2 Mile Radius from Project site				From 1/2 Mile to 1 Mile Radius			
Sub-area	Acres in Sub Area	2012 Population in Sub Area	2016 Population in Sub Area	2035 Population in Sub Area	Acres in Sub Area	2012 Population in Sub Area	2016 Population in Sub Area	2035 Population in Sub Area
Mission Bay / Mission Valley / Morena District	0	0	0	0	378	636	850	627
Midway District (North, Central & South)	405	2,652	3,158	7,030	254	2,280	2,912	2,669
Point Loma	6	59	61	63	168	1,998	2,162	2,054
Old Town	216	1,039	907	945	26	1	9	1
Mission Hills / Presidio (North, Central and South)	142	1,119	1,202	1,180	327	3,320	3,641	3,534
Liberty Station / Channel / Open Space	35	346	393	346	173	342	392	338
NTC/MCRD	246	2,023	2,335	2,078	502	836	965	834
NAVWAR Site 1 and 2	70	0	16	1,120	0	0	0	0
Freeway, Railway and East of Mission Hills	81	69	24	183	441	2,605	2,609	2,811
Totals:	**1,201**	**7,307**	**8,096**	**12,945**	**2,269**	**12,018**	**13,540**	**12,868**

Population data from SANDAG Master Geographic Areas demographics information.

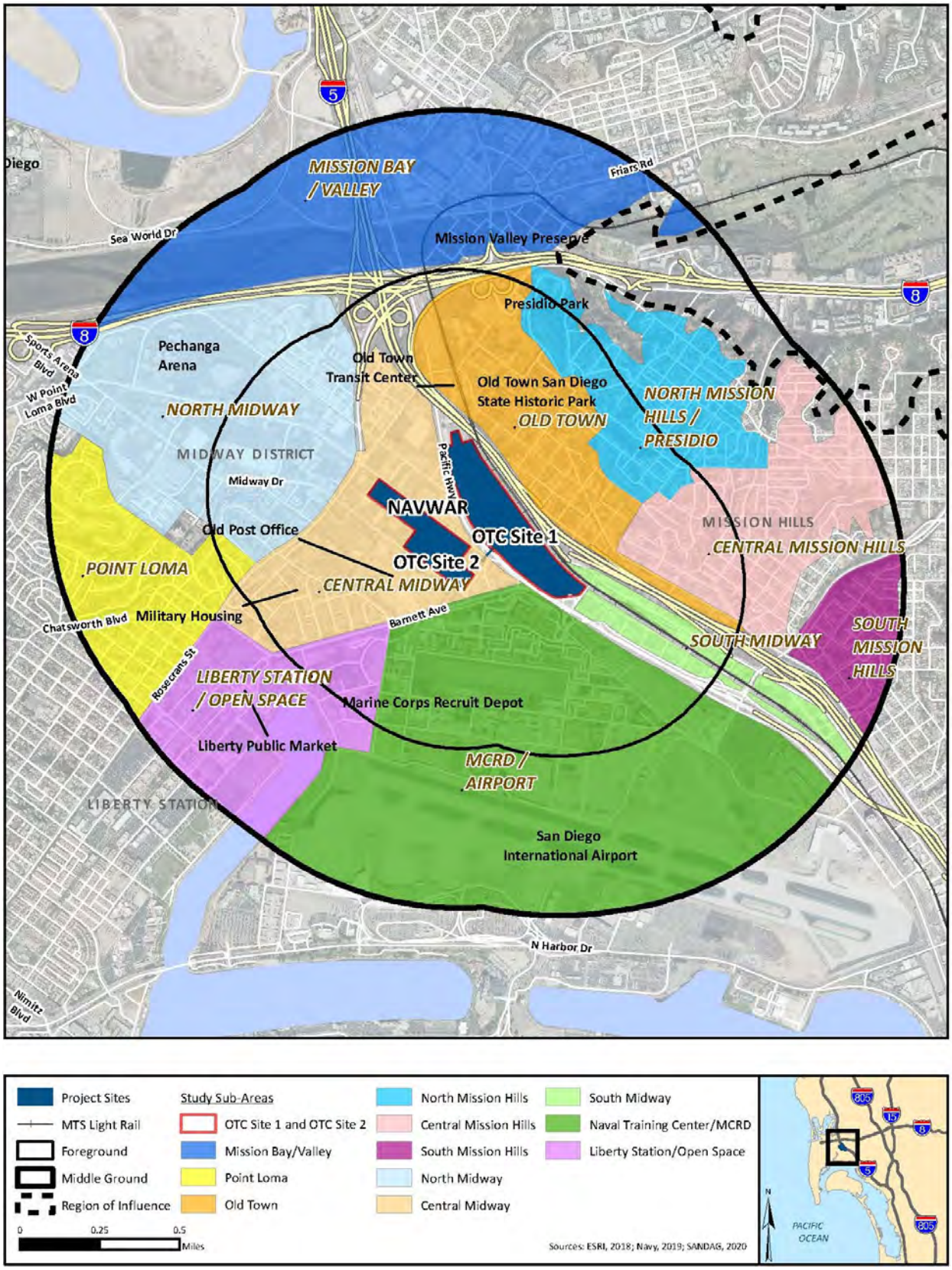


Figure 1.3-1 Sub-areas of the Sub-region

1.3.1 Sub-area Landscape Assessment Units

A landscape assessment unit (LAU) is an area that has similar character, land uses, building development patterns, and overall massing. LAUs are used to identify typical viewing groups that may live, work, play, learn, or shop in these areas. They are also used to help identify the existing visual quality and character of the area. Impacts to aesthetics, visual quality, neighborhood character, and view quality are dependent upon the visual setting. In order for an impact to be considered adverse, it must either remove, damage, or block areas that are considered to have high visual quality, or if located in the same viewing area as the project site, a strong contrast with the context setting is required as the first step in assessing impacts.

All areas within the Foreground and Middle Ground zones have been analyzed and grouped into similar LAUs. Because of the abrupt diversity of the area, a large number of LAUs have been established (see Figure 1.3-2: Unranked LAUs within the Foreground and Middle Ground). Not all portions of a LAU may be within a viewshed of a particular viewing location. This is due to the dynamics of changing viewing locations. All LAUs have been shown in their entirety, even if they are not that visible from public viewing locations.

Eighty-one landscape assessment units totaling over 3,000 acres exist within one mile of OTC. Only those LAUs that fall within one-half mile (Foreground) of OTC have been classified, numbered, and ranked for quality and sensitivity to change (see Figure 1.3-3: Ranked LAUs within the Foreground). Since LAUs are used to understand the context of the setting and the potential contrast a project may have with its surroundings, it is not necessary to rank areas too far from the project site. Generally, LAUs that touch the proposed project site at OTC, or that are likely to be in the foreground or middle ground are considered important to setting the overall character of an area. The intent of VIAs is to identify areas where the proposed project will highly contrast with its surroundings. Due to this factor, going more than ½ mile for full ranking of quality and sensitivity to change is not necessary. The highly diverse nature of the units found within the sub-area are shown in Figure 1.3-2: Landscape Assessment Unit Diversity in the Sub-area.

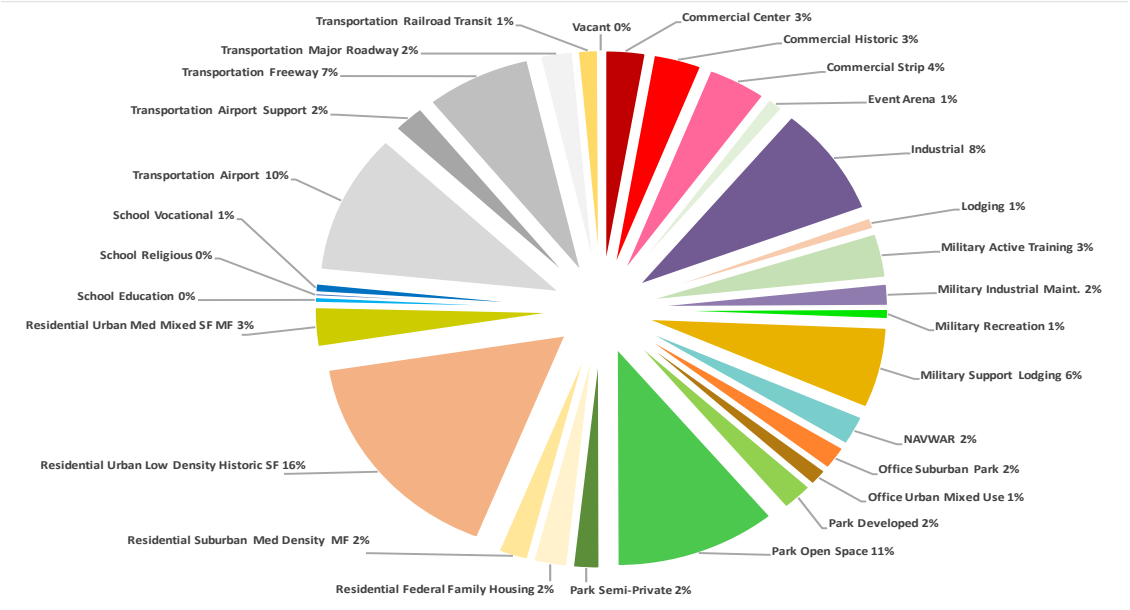


Figure 1.3-2 Landscape Assessment Unit Diversity in the Sub-areas

1.3.1.1 Landscape Assessment Units Found within the Foreground

The visual environment, or character, is a function of both the natural and man-made landscape features within a LAU and contributes to a sense of place or the lack of a sense of place. The character of any given LAU is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. The perception of visual character can vary significantly as season, hour, light, shadow, weather, and other elements of a view change. Form, line, color, and texture are the basic components used to describe visual character and quality for most visual assessments. The dominance of each of these components on the landscape composition forms the viewer's impression of the LAU, and therefore, the aesthetic value of the unit. The size of the LAU itself can often determine the dominance that LAU may have in determining the character of the overall area as well. Table 1.3-2 shows the acreage of each of the LAUs found within one-half mile of the site (foreground), Table 1.3-3 shows the acreage of each LAU between one-half mile and one mile of the site (middle ground), and Table 1.3-4 presents the acreage by LAU for both the foreground and middle ground.

Table 1.3-2 Landscape Assessment Units within the Foreground

Landscape Unit Type	*Acres*
Commercial	**169**
Commercial Center	57
Commercial Historic	33
Commercial Strip	79
Special Event	**5**
Event Arena	5
Industrial	**127**
Lodging	**22**
Military	**313**
Military Active Training	20
Military Industrial Maintenance	24
Military Recreation	9
Military Support Lodging	190
NAVWAR	70
Office	**54**
Office Suburban Park	20
Office Urban Mixed Use	35
Park / Open Space	**50**
Park Developed	13
Park Open Space	16
Park Semi-Private	21
Residential	**225**
Residential Federal Family Housing	66
Residential Suburban Med Density MF	24
Residential Urban Low-Density Historic SF	124
Residential Urban Med Mixed SF MF	11
School	**19**
School Education	11
School Religious	7
School Vocational	2
Transportation	**216**
Transportation Freeway	117
Transportation Major Roadway	70
Transportation Railroad Transit	30
Vacant	**2**
Total	**1,201**

Table 1.3-3 Landscape Assessment Units within the Middle Ground

Landscape Unit Type	*Acres*
Commercial	**145**
Commercial Center	28
Commercial Historic	69
Commercial Strip	47
Special Event	**29**
Event Arena	29
Industrial	**134**
Lodging	**4**
Military	**127**
Military Active Training	84
Military Industrial Maintenance	27
Military Recreation	15
Military Support Lodging	1
Office	41
Office Suburban Park	**37**
Office Urban Mixed Use	5
Park / Open Space	421
Park Developed	**55**
Park Open Space	330
Park Semi-Private	35
Residential	525
Residential Federal Family Housing	**6**
Residential Suburban Med Density MF	39
Residential Urban Low-Density Historic SF	397
Residential Urban Med Mixed SF MF	82
School	22
School Education	**3**
School Religious	0
School Vocational	19
Transportation	522
Transportation Airport	**333**
Transportation Airport Support	68
Transportation Freeway	109
Transportation Railroad Transit	13
Total	**1,969**

Table 1.3-4 Landscape Assessment Units within the Foreground and Middle Ground

Landscape Assessment Unit Type	*Acres*
Commercial	**313**
Commercial Center	85
Commercial Historic	102
Commercial Strip	126
Special Event	**34**
Event Arena	34
Industrial	**261**
Lodging	**26**
Military	**370**
Military Active Training	104
Military Industrial Maintenance	51
Military Recreation	24
Military Support Lodging	191
NAVWAR	**70**

Office	**96**
Office Suburban Park	56
Office Urban Mixed Use	39
Park / Open Space	**470**
Park Developed	67
Park Open Space	347
Park Semi-Private	56
Residential	**749**
Residential Federal Family Housing	72
Residential Suburban Med Density MF	63
Residential Urban Low-Density Historic SF	522
Residential Urban Med Mixed SF MF	93
School	**41**
School Education	13
School Religious	7
School Vocational	20
Transportation	**738**
Transportation Airport	333
Transportation Airport Support	68
Transportation Freeway	225
Transportation Major Roadway	70
Transportation Railroad Transit	42
Vacant	**2**
Total	**3,170**

Tables 1.3-5 through 1.3-10 rank each of the LAUs with a composite existing visual quality score, a viewer group probable sensitivity ranking, as well as a summary of the views that can be seen from each of the LAUs themselves. Below are descriptions of how these rankings were developed.

1.3.1.2 Visual Quality Factors

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. These elements of visual quality are defined as follows:

- Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual manmade components in the landscape.
- Intactness is the visual integrity and maintenance of the natural and man-made landscapes and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

1.3.1.3 Visual Character Factors

Visual character is a description of the composition of the landscape and is defined by the relationships between the existing visible natural and built features. These relationships are considered in terms of dominance, scale, diversity, and continuity. Visual character-defining resources and features include:

- Landforms: types, gradients, and scale
- Vegetation: types, size, maturity, and continuity
- Land uses: height, bulk, scale, and architectural detail
- Open space: type (parks, reserves, greenbelts, and undeveloped land), extent and continuity
- Water bodies, historic structures, and downtown skylines

- Apparent composition or mixture of character and land uses
- Apparent upkeep and maintenance

1.3.1.4 Visual Quality Composite

A textual description of the vividness, intactness, and unity of each LAU accompanies the assigned ratings in Tables 1.3-5 through 1.3-10 and explains why the LAUs were assigned a particular rating. The composite score is an average of the individual components of vividness, unity, and intactness (see definitions in Section 1.6).

1.3.1.5 Viewer Group Discussion

The following sections discuss the types of viewers that are expected to be found in different areas of each LAU in more detail. The basic minimums for a view or visual quality impact is that people must see and understand what they are seeing for them to determine if they like or dislike the physical change to the visual environment.

A viewer must have an open or partially open view of the site, they must be located within reasonable distance of the change, they must not be involved in activities that prevent or distract someone from viewing a site, and they must care about or have an opinion on if the changes are negative, neutral, or positive. However, it is very difficult to poll a broad viewer group or to create a survey for input considering the broad nature of the full public that may see the proposed project site. Therefore, it is necessary to discuss the possible viewers and their likely sensitivity to changes in a logical manner.

1.3.1.6 View Analysis Discussion

Tables 1.3-5 through 1.3-10 also show likely views from the unit that may be hindered by the proposed project. Further analysis in the following sections verifies the amount of view blockage from specific KOPs. For a significant impact to occur, the view has to include the following three characteristics: 1) it must be a regionally or sub-regionally important and unique viewing scene that is being looked at; 2) it must be visible from a public viewing location that is not more than one mile from the proposed project; and 3) it must have a viewing corridor that is mostly open from obstructions such as buildings, structures, landscaping, and landforms.

1.3.1.7 Mapping of Visual Quality

Figures 1.3-3 and 1.3-4 show unranked LAUs within the foreground and middle ground and ranked LAUs within the foreground, respectively. As seen in Figure 1.3-5, the composite quality ranking has been used to categorize each of the LAUs. The rankings include Low, Moderately Low, Moderate, Moderately High, and High. Although there are objective reasons why these areas have been ranked as shown on the map, a level of subjectivity remains. This subjectivity is acceptable however, since there will not be a consistent reaction from the public that is only based on objective reasons. The subjectivity is generally introduced as part of the likely impression or reaction that viewer groups are expected to have.

1.3.1.8 Mapping of Viewer Sensitivity

As can be seen in Figure 1.3-6, the visual sensitivity of viewer groups has been composited into an average likely viewer response by viewers expected the see the project from a vantage point in the LAU.

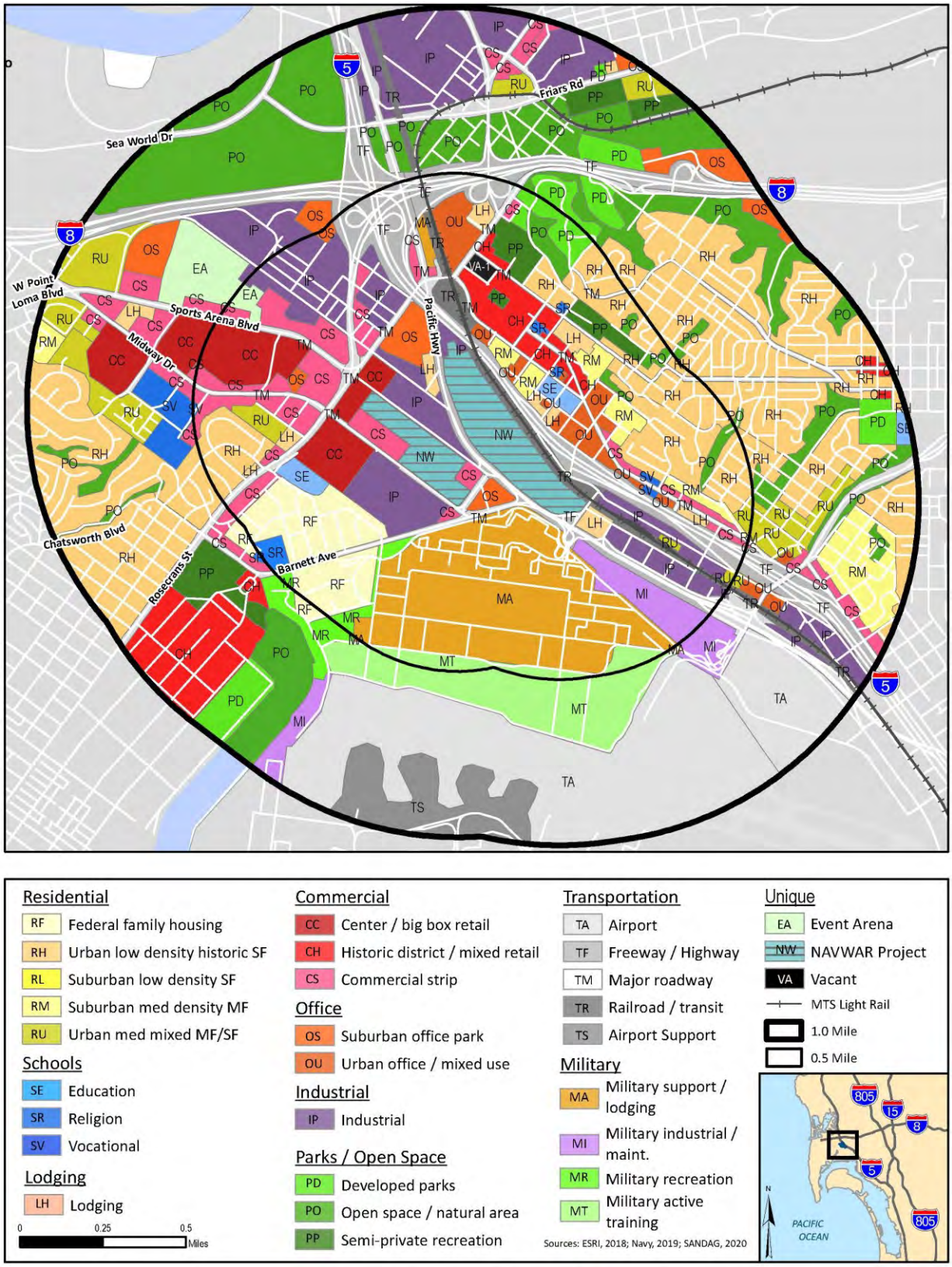


Figure 1.3-3 Unranked LAUs within the Foreground and Middle Ground

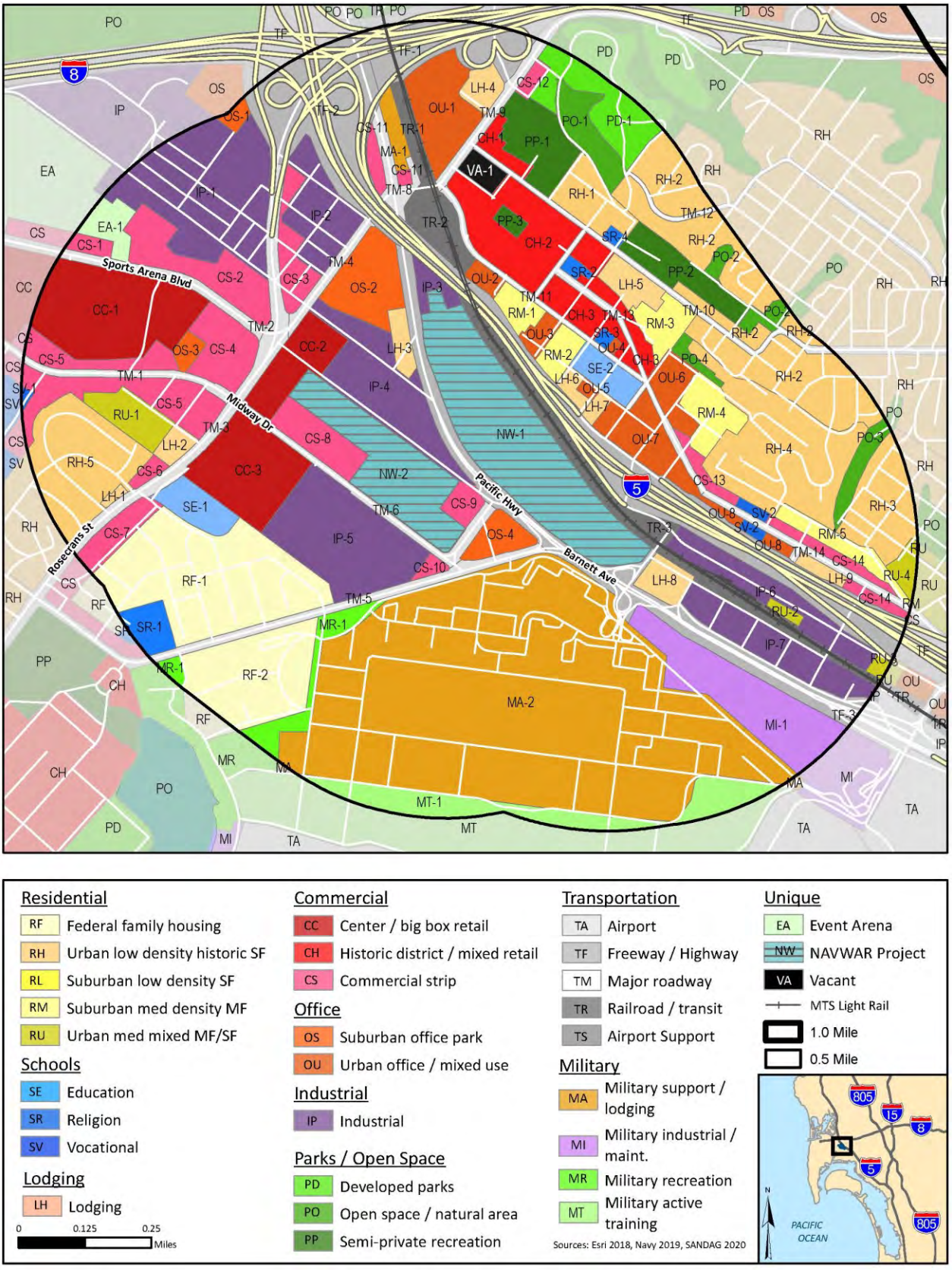


Figure 1.3-4 Ranked LAUs within the Foreground

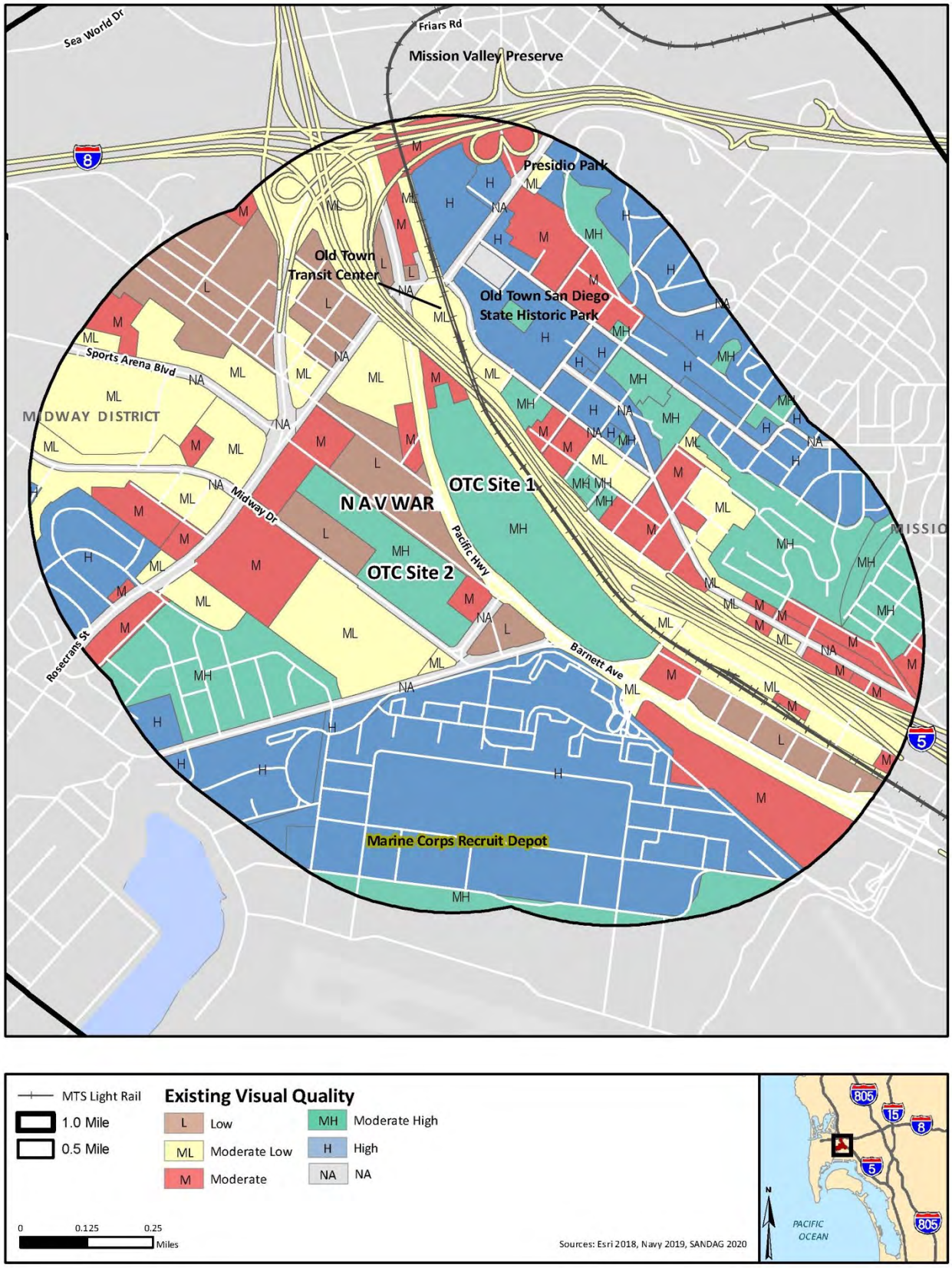


Figure 1.3-5 Visual Quality Ranking of LAUs within the Foreground

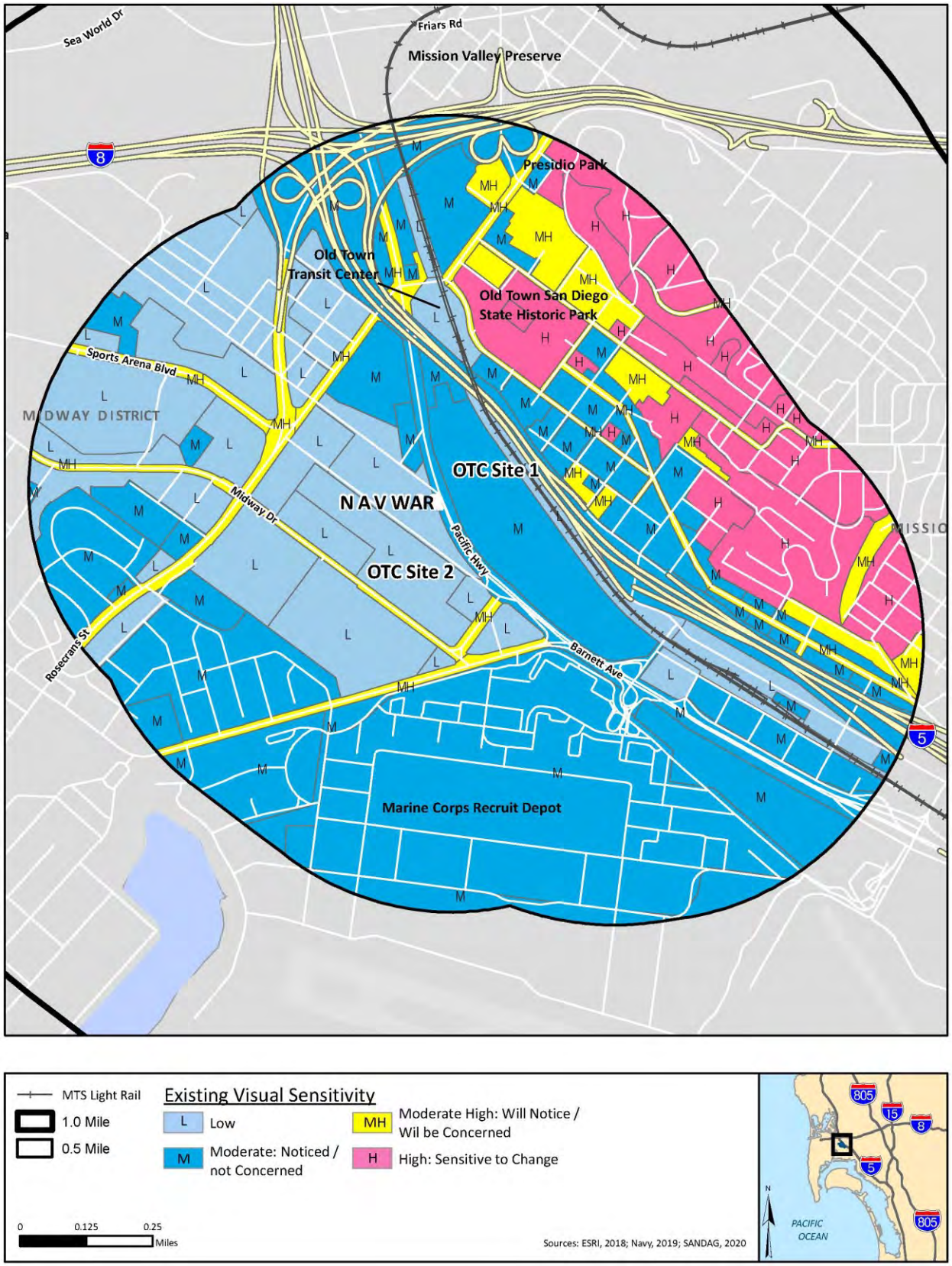


Figure 1.3-6 Visual Sensitivity of Typical Viewers in Each LAU within the Foreground

Table 1.3-5 Residential Landscape Assessment Units

Residential Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site / View	Regionally Significant Views Seen	Project View Blockage
Federal Family Housing	RF-1		MCRD Off-base housing with 2-3 story moderate density units	M	H	H	MH	2,4,& 5	MH	FG	3 & 4	S for 3 & 4
Federal Family Housing	RF-2		MCRD- On-base officer housing in historic Spanish revival structures	H	M	H	H	2	MH	FG	3 & 4	S for 3 & 4
Urban Low Density SF-Historic	RH-1		Mixed age mid-century and older homes in a compact neighborhood	M	L	M	M	1,2,4,5 & 10	MH	FG	8	S for 8
Urban Low Density SF-Historic	RH-2		Diverse scales but unified historic homes in traditional neighborhoods	H	M	H	H	1,2,4,5 & 10	H	FG	5,6,7,8,9 & 10	M for all
Urban Low Density SF-Historic	RH-3		Diverse age, architecture and scales in a traditional hillside neighborhood	M	M	H	MH	1,2,4,& 5	H	FG/BG	1,2,5,6,7,8, 9 & 10	M for all
Urban Low Density SF-Historic	RH-4		Mid-century homes and larger estates on a curvilinear street in a hillside location	M	H	H	MH	1,2,4,& 5	H	FG	1,2,5,6,7,8, 9 & 10	M except for 6-10
Urban Low Density SF-Historic	RH-5		Historic Loma Portal neighborhoods with consistent scales and period architecture	H	H	H	H	1,2,4,5,6,9 & 10	M	FG/ BDG	1,2,3,4 & 7	S for 3 & 4
Suburban Med. Density MF	RM-1		Portions of this single family area have been turned into shops given its Old Town location	M	L	M	MH	1,2,3,4,5,6,7 ,8,9 & 10	M	FG	4	N
Suburban Med. Density MF	RM-2		Mixed use are with hotels, offices and housing scattered with a great deal of variety	M	L	M	M	1,2,3,4,5,6,7 ,8,9 & 10	M	FG	4	N
Suburban Med. Density MF	RM-3		Hillside apartments / condos with substantial views and consistent architecture and scale	M	H	M	MH	1,2,&4	H	FG	1,2,5,6,7,8, 9 &10	M except for 3, 9-10
Suburban Med. Density MF	RM-4		Mixed use neighborhood with large scale apartments and small single family units	M	L	L	ML	1,2,&4	H	FG	8 & 9	S for 8 & 9
Suburban Med. Density MF	RM-5		Multi-family units along lower hillside with zero lot line and street frontages & mixed scales	M	M	M	M	1,2,3,4,5,6,7 ,8,9 & 10	MH	FG	1,2,5,6,7,8, 9 &10	M for 1 & 2
Urban Med Density Mixed Use	RU-1		Tucked away apartment complexes away from busy Rosecrans	L	M	M	M	1,2 & 4	M	FG	4	S
Urban Med Density Mixed Use	RU-2		Isolated high density development in a business park	MH	L	MH	M	1,2,3,4,5,7 & 8	M	FG	8	N
Urban Med Density Mixed Use	RU-3		Isolated high density development in a business park	MH	L	MH	M	1,2,3,4,5,7 & 8	M	FG	8	N
Urban Med Density Mixed Use	RU-4		Higher density housing with great views in a mixed scale neighborhood	M	M	MH	M	1,2,3,&4	MH	FG	1,2,5,6,7,8, 9 &10	M for 1,2,5

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low- Chaotic / Disorganized Elements	VL=Very Low- Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile (2,640')	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will be Concerned	BG= Background: 1 to 3 mile (out to 15,840')	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-6 Commercial Landscape Assessment Units

Commercial Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Commercial Strip	CS-1		Hardware, retail and a broad variety of shops, architecture and site arrangements	M	L	M	ML	4,6,7, & 8	L	FG	3,4 & 10	S for 10
Commercial Strip	CS-2		Medium size strip / commercial center with variety of building styles, character and materials	L	L	M	ML	4,5,6,7, & 8	L	FG	3,4,& 10	S for 10
Commercial Strip	CS-3		Small shops with mixture of styles and materials with highly varied site plans	M	L	M	ML	4,6,7, & 8	L	FG	3 & 4	N
Commercial Strip	CS-4		Medium size strip / commercial center with variety of building styles, character and materials	M	L	M	ML	4,5,6,7, & 8	L	FG	3,4,& 10	S for 10
Commercial Strip	CS-5		Highly varied commercial retail strip businesses with no unity or high design treatments	L	L	M	ML	4,6,7, & 8	L	FG	8	N
Commercial Strip	CS-6		Small Office / Commercial spaces with low investments in buildings	M	M	L	ML	4, 5, 6, 7, 8 & 9	L	FG/BG	3 & 4	N
Commercial Strip	CS-7		Art Deco commercial complex with older small retail spaces with aged improvements	M	M	M	M	4, 5, 6, 7, 8 & 9	L	FG/BG	3 & 4	N
Commercial Strip	CS-8		Highly mixed commercial with minimal improvements and very poor maintenance	L	L	L	L	4, 5, 6, 7, & 8	L	FG	3 & 4	M for 3 & 4
Commercial Strip	CS-9		Single use nursery and small office with high composition of plant material	M	M	ML	M	4, 5, 6, 7, & 8	L	FG	3, 4, & 10	M for 4
Commercial Strip	CS-10		Small convenience center with consistent architecture and site planning	L	M	M	ML	4, 5, 6, 7, & 8	L	FG	3, 4, & 8	M for 3 & 4
Commercial Strip	CS-11		Remnant retail restaurant and abandoned retail buildings	L	M	L	L	4, 5, 6, 7, & 8	M	FG	4	N
Commercial Strip	CS-12		Remnant retail shops and small office building	L	L	M	ML	3,4,5,6,7, 8, & 10	M	FG	3, & 4	N
Commercial Strip	CS-13		Variety of shops intermixed with some residential and office	L	L	M	ML	1,2,3,4,5,6, 7,8,9 & 10	M	FG	6, 7, 8, 9, & 10	M for all views
Commercial Strip	CS-14		Remnant main street businesses with similar storefronts and character	M	M	M	M	1,2,3,4,5,6, 7,8,9 & 10	M	FG/BG	6,7,8,9 & 10	N

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low- Chaotic / Disorganized Elements	VL=Very Low- Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will be Concerned	BG= Background: 1 to 3 mile (out to 15,840')	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point- Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-6 (cont.) Commercial Landscape Assessment Units

Commercial Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Commercial Center	CC-1		Big box retail with large anchor stores and smaller retail with large parking lots	L	M	M	ML	4,5,6,7, & 8	L	FG/BG	8	N
Commercial Center	CC-2		Smaller scale center with smaller shops and consistent architecture	M	H	M	M	4,6, 7, & 8	L	FG	3,4,8	N
Commercial Center	CC-3		Mixed retail center with a variety of architecture and massing's	M	M	M	M	4,6,7,& 8	L	FG	4,8	N
Commercial Historic	CH-1		Small scale shops with high visual interest and historic look although not historic	H	H	H	H	4,5,6,7,8, & 10	M	FG	4	N
Commercial Historic	CH-2		Old Town State Park with many historic structures & consistent scale & historic character	H	H	H	H	5,7,8, & 10	H	FG	4,8,& 9	N
Commercial Historic	CH-3		Old Town Main Street Shops, some historic. Small scale with Spanish / early pioneer styles	H	H	H	H	5,7,8,9 & 10	M	FG	4	N

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low Chaotic / Disorganized Elements	VL=Very Low Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile (2,640')	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will be Concerned	BG= Background: 1 to 3 mile (out to 15,840)	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point- Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-7 Industrial, Military and Special Event Landscape Assessment Units

Industrial / Military / Special Area Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Industrial Park	IP-1		Industrial buildings housing a variety of businesses with no consistent design or materials	VL	L	L	L	4,7, & 8	L	FG	3 & 4	N
Industrial Park	IP-2		Industrial buildings housing a variety of businesses with no consistent design or materials	VL	L	L	L	4,7, & 8	L	FG	3 & 4	N
Industrial Park	IP-3		State Parks industrial yard and maintenance facility	M	M	M	M	4, 5, 6, 7 & 10	M	FG	N	N
Industrial Park	IP-4		Primarily shipping businesses with poor aesthetics with a poor maint. & homeless problem	VL	L	VL	L	4, 7, & 8	L	FG	N	N
Industrial Park	IP-5		Abandoned Post Office Property with large paved areas	M	M	VL	ML	4, 7, & 8	L	FG	3 & 4	M
Industrial Park	IP-6		Side street of mixed industrial, warehouse, office and housing	M	M	L	ML	4, 7, & 8	L	FG	N	N
Industrial Park	IP-7		Highway side industrial park, with various businesses with non-unifying design and architecture	L	L	VL	L	3, 4, 6, 7, & 8	M	FG	N	N
Military Support / Lodging	MA-1		NAVBASE Pt. Loma Public Works facility with low rise buildings	M	M	M	M	3, 4, 6, 7, & 8	M	FG	10	M for 10
Military Support / Lodging	MA-2		MCRD buildings including admin., housing, retail, and various entertainment venues	H	H	H	H	3, 4, 7, 8, & 10	M	FG	7 & 8	N
Military Industrial Maint.	MI-1		MCRD maintenance and supply areas with minimal design treatments	L	M	M	M	3, 4, 7, 8 & 10	M	FG	4	M
Military Recreation	MR-1		MCRD waterfront MWR facility with open fields, recreation & sports	H	H	M	H	7	H	FG	3 & 4	M
Military Active Training	MT-1		MCRDs field training and operations for recruits	M	M	H	MH	7	H	FG	3 & 4	M
NAVWAR Site 1	NW-1		NAVWAR Site One, simple forms, historic treatments and austere design elements	H	M	M	MH	3, 4, & 7	M	MG	NA	NA
NAVWAR Site 2	NW-2		NAVWAR Site Two, mostly empty parking lots with well-designed building / warehouse	H	H	M	MH	4, 7, & 8	L	FG	NA	NA
Special Event Area	EA-1		Sports Arena and parking lot, very large scale void of positive design elements	MH	M	L	M	2, 3, 4, 5, 6, 7, & 8	M	FG	3, 4 & 8	S for 4
Vacant	VA-1		Old Caltrans building now demolished, likely to be State Park improvements	NA	NA	NA	NA	1, 2, 3, 4, 5, 6, 7, 8 & 10	MH	FG	8	S for 8

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low- Chaotic / Disorganized Elements	VL=Very Low- Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will be Concerned	BG= Background: 1 to 3 mile (out to 15,840')	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-8 Lodging, Schools and Churches Landscape Assessment Units

Lodging / School / Religion Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Lodging	LH-1		Small, aged hotel / motel along the edges of Rosecrans next to local neighborhoods	L	M	M	M	1,2,4,5,6,7,8 ,9 & 10	M	FG/BG	3 & 4	S for 4
Lodging	LH-2		Small, aged hotel / motel along the edges of Rosecrans next to local neighborhoods	L	M	M	M	1,2,4,5,6,7,8 ,9 & 10	M	FG/BG	3 & 4	S for 4
Lodging	LH-3		Small, aged hotel / motel along the edges of Rosecrans next to local neighborhoods	M	M	M	M	3,4,6,7,& 8	M	FG	4,8 & 10	S for 4
Lodging	LH-4		New large scale hotel in Old Town next to Caltrans Building	H	H	H	H	1, 2, 3, 4, 5, 6, 7, 8 & 10	MH	FG	8	M
Lodging	LH-5		Multi-level hotel on slopes on Juan Street with positive Spanish revival architecture	H	H	M	MH	1, 2,4, 5, 7, 8 & 10	MH	FG	1, 2, 3, 4, 5, 6, 7, 8, & 9	M
Lodging	LH-6		Moderate size hotel with urban amenities and generally designed well for Old Town	H	M	M	MH	1, 2,3, 4, 5, 7, 8, 9 & 10	MH	FG	4, 8 & 9	M
Lodging	LH-7		Moderate size hotel with urban amenities and generally designed well for Old Town	H	M	M	MH	1, 2,3, 4, 5, 7, 8, 9 & 10	MH	FG	4, 8 & 9	M
Lodging	LH-8		Veterans home and support facilities along Pacific Highway	M	M	M	M	3,4,6,7 & 8	L	FG	4	N
Lodging	LH-9		Motel overlooking freeway with great unobstructed views	M	M	M	M	1,2,3,4, 5, 6, 7, 8, 9 & 10	M	FG	All views	M
School / Education	SE-1		Small elementary school with aged facilities	L	M	M	ML	1, 2,4, 5, 6, 7, 8 & 9	M	FG	3 & 4	N
School / Education	SE-2		Small elementary school with aged facilities	L	M	M	ML	1, 2,4, 5, 6, 7, 8 & 9	M	FG	8 & 9	M
School / Religious Facility	SR-1		Well designed Catholic School with well designed grounds and misc. structures	H	H	H	H	4, 5, 7, 8 & 9	M	FG	3 & 4	N
School / Religious Facility	SR-2		Well designed Catholic Church and School with well designed grounds	H	H	H	H	1,2,4,5,6,7,8 ,9 & 10	H	FG	3 & 4	N
School / Religious Facility	SR-3		Historic Church and School in Historic Old Town	H	H	H	H	4, 5, 7, 8, 9 & 10	H	FG	3 & 4	N
School / Religious Facility	SR-4		Mormon Museum and Church	M	M	H	MH	1,2,4,5,6,7,8 ,9 & 10	H	FG	8 & 9	M
School / Vocational	SV-1		EF Campus for Continuing Education, with several large well designed buildings	H	H	H	H	4, 5, 7, 8, & 9	M	FG/BG	3 & 4	N
School / Vocational	SV-2		Aspire Continuing Education with one main building	M	M	H	M	1,2,4,5,6,7,8 ,9 & 10	M	FG	1, 2, 5, 6, 7, 8, 9 & 10	M for 2 & 5

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low- Chaotic / Disorganized Elements	VL=Very Low- Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will	BG= Background: 1 to 3 mile (out	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-9 Parks and Transportation Landscape Assessment Units

Parks / Transportation Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Public Park-Developed	PD-1		Presidio Park with the iconic Presidio Sierra Museum historic structure	H	H	H	H	1,2,4,5 & 10	H	FG	1,2,3,5 & 6	H for 2, 5,6,7& 9
Public Undeveloped Open Space	PO-1		Native and non-native planted public open space as part of Presidio Park	M	H	M	MH	1,2,4,5 & 10	H	FG	1,2,3,5 & 7	H for 2, 5,6,7& 10
Public Undeveloped Open Space	PO-2		Canyon open space, mostly with natives, around Heritage Park, as seen from Juan Street	M	H	H	MH	1,2,4,5 & 10	H	FG/BG	1,2,3 & 5	N
Public Undeveloped Open Space	PO-3		An east to west canyon on the slopes above I-5	M	H	H	MH	1,2, & 4	MH	FG/DBG	1,2,5 & 8	N
Public Undeveloped Open Space	PO-4		A remnant open space in the hills above Old Town	M	M	L	ML	1,2 & 10	MH	FG	1,2,3,4,5,8 & 9	M for 1,2, 5 & 8
Public Park with Private Leases	PP-1		A leased area as part of Presidio Park where an executive golf course is leased	M	H	M	M	1,2,4,5,7,8 &10	MH	FG	None	N
Public Park-Developed	PP-2		Heritage County Historic Park & open space with public park lands and historic buildings	H	H	H	H	1,2,4,5,7,8 & 10	H	FG	5 & 8	M for 5 & 8
Public Park with Private Leases	PP-3		Public park surrounded by leased historic buildings as part of the Old Town State Park	H	H	M	MH	5,7,8 & 10	H	FG	8	M for 8
Transportation - Freeway or Highway	TF-1		Interstate 8 including all interchanges and misc. landscape areas	M	H	L	M	3	M	FG/BG	1,2,3,4,8, & 9	N
Transportation - Freeway or Highway	TF-2		Interstate 5 including all interchanges and misc. landscape areas	M	M	L	ML	3	M	FG/BG	1,2,3,4,5,6,7, 8,9, & 10	M for 6,7,8,9 & 10
Transportation - Freeway or Highway	TF-3		Pacific Coast Highway including interchanges	M	M	L	ML	3 & 4	M	FG/BG	1,2,4,5,6,7,8, 9 (flyover) &10 (all)	N
Transportation - Major Roadways	TM-1 to TM-9		Various Major Roadways that have some views of the project site or distant scenes	Varies from Low to High				4, 5 &6	MH	FG/BG	1,2,3,4,5,6,7, 8,9, & 10	M to S for all
Transportation - Railroad Lines	TR-1 to TR-3		Various Railroad Lines that include Heavy Rail and Light Rail Components	M	M	L	ML	6	L	FG/BG	1,2,3,4,5,6,7, 8,9, & 10	N

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low-Chaotic / Disorganized Elements	VL=Very Low-Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low-Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
M=Moderate- Some Elements are Unique	M=Moderate- Most all Elements Appear to be Related	M=Moderate- Many Elements are Intact & Well Maintained	H= High	5. Walker / Jogger / Cyclist	MH= Mod. High: Will Notice & Will be Concerned	BG= Background: 1 to 3 mile (out to 15,840')	5. Ocean to the West	M=Moderate 10-15%
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High-Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point-Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

Table 1.3-10 Office Landscape Assessment Units

Office Related LAUs				Existing Visual Quality				Viewer Group		Views from Unit		
LAU Category	LAU #	Assessment Unit Typical Image	LAU Description	Vividness	Unity	Intactness	Composite Quality	Primary Viewer Groups	Probable Viewer Sensitivity	Distance to Project Site/ View	Regionally Significant Views Seen	Project View Blockage
Office Suburban Park	OS-1		Hidden office park inside an industrial park with monolithic buildings mostly out of view	M	H	M	M	7	L	FG	N	N
Office Suburban Park	OS-2		County of San Diego Health Services Complex	L	M	M	ML	4,5,6,7 & 8	M	FG	N	N
Office Suburban Park	OS-3		Hidden small office complex in amongst retail areas	M	M	M	M	4, 5, 6, 7 & 8	M	FG	N	N
Office Suburban Park	OS-4		Small business park next to NAVWAR, aged without recent investment	L	M	L	L	3,4,6,7 & 8	L	FG	N	N
Office Urban Mixed Use	OU-1		Caltrans District 11 Headquarters, well designed and unified building complex	H	H	H	H	3,4,5,6,7,8 & 9	M	FG	8 & 9	M
Office Urban Mixed Use	OU-2		Older office complex near the transit station with some nod to Spanish architecture	M	M	L	ML	3,4,5,6,7,8 &9	M	FG	3 & 4	N
Office Urban Mixed Use	OU-3		Small stand along office building with good landscaping and simple form	M	M	M	M	1, 2, 4,7, 8 & 9	M	FG	3 & 4	N
Office Urban Mixed Use	OU-4		Well designed small office complex with historic detail	M	H	H	MH	1, 2,4, 5, 6, 7, 8 & 10	M	FG	3, 4, & 8	S for * 8
Office Urban Mixed Use	OU-5		Well designed small office complex with historic detail	M	H	H	MH	1, 2,4, 5, 6, 7, 8 & 10	M	FG	3, 4, & 8	S for * 8
Office Urban Mixed Use	OU-6		Mixed complex of several office buildings	M	M	M	M	1, 2,4, 5, 6, 7, 8 & 10	M	FG	3, 4, & 8	S for * 8
Office Urban Mixed Use	OU-7		Larger Old Town Office Park with some views to the west, several buildings in the complex	M	M	M	M	1, 2,4, 5, 6, 7, 8 & 10	M	FG	3, 4, & 8	S for * 8
Office Urban Mixed Use	OU-8		Linear office buildings overlooking the freeway with significant views	M	L	ML	ML	1, 2,4, 5, 6, 7, 8 & 10	M	FG	2,4,5,6,7,8,9 & 10	M for 2-5

LEGEND

VIVIDNESS	UNITY	INTACTNESS	COMPOSITE	VIEWER	SENSITIVITY	DISTANCE	VIEW LEGEND	BLOCKAGE
VL=Very Low Monotonous / Common Elements	VL=Very Low- Chaotic / Disorganized Elements	VL=Very Low- Poorly Maintained / Damaged Elements	L= Low	1. Property Owner / Resident	NS= Not Seen	FG= Foreground: < 1/2 of a mile	1. San Diego River	N=None
			ML= Moderate Low	2. Renting Resident	L= Low: Won't Notice Change		2. Mission Bay	D=Distant, becomes part of view scene
L=Low- Boring or Very Commonly Repeated	L=Low- No Sense of Unified Character	L=Low- Poorly Maintained with Some Intactness Noticed	M= Moderate	3. Freeway Driver	M= Moderate: Noticed / not Concerned	MG= Middleground: 1/2 -1 mile (to 5,280')	3. Mission Valley North (USD)	S=Slight < 5% View Blockage
			MH= Moderate High	4. General Street Driver			4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
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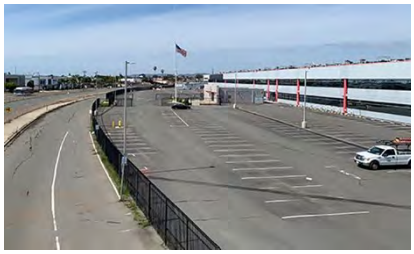
				6. Transit User			6. Ocean to the Southwest	H=High >15%
H=High- Overall Composite of Unit is Very Vivid	H=High- Most All Elements are Unified	H=High- Most Elements are Intact & Well Maintained		7. Employee in the Unit	H= High: Sensitive to Change	DB= Distant Background: >3 mile	7. SD Bay & Coronado Island	
				8. Customer in the Unit			8. Pt. Loma Hillside	
				9. School Attendee			9. Cabrillo Point- Hillside	
				10. Tourist / Visitor			10. Downtown Skyline	

1.4 Current Visual Quality of the Project Site

The overall impression of the site is that of a tall building laying on its side. The massive structure is nearly one-half mile of structure that is 47 feet tall and 400 feet wide. Site One is completely covered either by the fabrication/warehouse buildings or parking lots. No special design or landscape treatments exist. The original Consolidated Defense Industry fabrication buildings do maintain some of their original simple and austere but unique form and character. The view of the site is memorable and vivid because of the massive size and consistently repeating saw-tooth roof structure. Occasional views into open hangar doors provide visual interest. The complex is mostly unified because of the repeating scale and overall extended structure. The site has very little variety and becomes somewhat monotonous given its overall length and repeating forms.

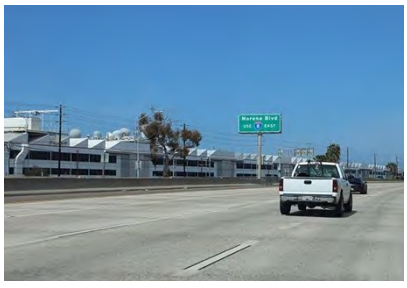
Site Two consists mostly of large surface parking lots with the main warehouse/tactical operations center. The simple but elegant architectural treatments have an austere look, but with materials and fenestration that is much more refined than most industrial buildings. Both sites are void of site elements, amenities, and landscape treatments.

The areas immediately around the project site are in poorly maintained condition with deteriorated road surfaces, utility poles, trash, graffiti, homeless camps, minimal lighting, and an unsafe walking environment. The railroad side of the building is also lacking in positive design elements and has similar problems as the Pacific Highway edge. Because of these factors, the project site and its immediate surroundings would be considered as having a moderately low visual quality with a moderate character based on the history of the site and the architecture. This can be seen by reviewing the various images that cover Site One and Site Two, as well as the immediate areas around the project site.





1.5 Viewer Groups in the Sub-region

People respond differently to changes in the physical environment depending on their prior experiences and expectations, their proximity to the views, and the length of time the view is visible to them. Determining a visual impact is considered by many to be highly subjective. For this reason, aesthetics and visual resources are addressed qualitatively rather than just quantitatively.

1.5.1 Viewers Defined

Viewers are people who have views of the project. Viewers are usually discussed in terms of general categories of activities (such as residents, workers, recreationists [including park users, hikers, boaters, or bicyclists], pedestrians, or motorists [both commuters and leisure travelers]) and are referred to as viewer groups.

1.5.2 Viewer Sensitivity (or Level of Concern)

Viewer sensitivity refers to the extent of the public's concern for particular landscapes. Judgments of visual quality and viewer response should be based on a regional or sub-regional frame of reference. For example, a project does not have to be a national or state level of significance as a viewing scene to be considered important. A regional or sub-regional level of importance, on the other hand, is required for there to be a significant view quality impact.

Viewer sensitivity is a combination of the following factors for a specific view:

- How many people have the view and what types of viewers are they?
- How long can they see the view? Residents and recreational viewers generally have views of long duration, while bicyclists and motorists typically have views of a much shorter duration.
- What is their likely level of concern about the appearance, aesthetics, and quality of the view? Level of concern is a subjective response that is affected by factors such as the visual character of the surrounding landscape, the activity the viewer is engaged in, their level of investment, and their values, expectations, and interests. Residents, tourists, and recreational users are considered to be highly sensitive viewers, and commuters and workers in commercial and industrial areas are considered to be less sensitive.

Low viewer sensitivity results when there are few viewers who experience a defined view, or they are not particularly concerned about the view. High viewer sensitivity results when there are many viewers who have a view frequently or for a long duration, as well as viewers (many or few), such as those in a residential neighborhood, who are likely to be very aware of and concerned about changes in the visual environment and blockage of existing views. Viewer sensitivity or level of concern does not imply support for or opposition to a proposed project; it is a neutral term that is an important parameter in assessing visual quality.

1.5.3 Factors Affecting Viewer Sensitivity

The overall sensitivity and response of a viewer to the quality of a view is based on a combination of viewer exposure and viewer sensitivity. Viewer exposure refers to the visibility of resources in the landscape, the proximity of the vantage point to the view, the elevation of the viewer relative to the view, the frequency and duration of the viewing, the number of observers, and the preconceived expectations of individual viewers. The geographic setting and nature of the visual resource will influence the degree of visual quality and sensitivity experienced by the viewer. For example, the presence of a small hill in an otherwise flat landscape may be considered a significant visual element, but a hill of the same size may have very little significance when located in mountainous terrain.

1.5.3.1 Viewer Groups

The perceptions of viewers are influenced by their location, specific activities in which they are engaged, personal degree of awareness, and individual values and goals.

1. Property Owners or Resident Owners - This viewer group has the greatest investment in the area based on owning property and having a high interest in preserving or increasing property value. Residents, in general, are also the group that is most likely to see the proposed project over the longest period of a day, week, month, or year. If the individuals in the residence are retired, then they are also likely to be more involved in the community and have the available time to meet the needs of the involvement and are at home longer than those that are employed.
2. Renting Resident - Although the renting resident does not have the same financial investment in the home they are living in, they are still highly interested in a positive experience and enrichment from the positive aspects of the surrounding visual environment.
3. Freeway Drivers - Commuters and people making high speed trips on roadways are generally not that interested in what they see from the freeway or highway. However, if they are there as a visitor, a tourist, or if they are in a highly scenic area, they may be much more interested.
4. General Street Drivers - Similar to the freeway driver, the activity of driving can dominate the viewers perception of the environment they are traveling through. However, their speeds are generally lower than those on the freeway, so their duration or exposure is slightly greater.
5. Walkers, Joggers, and Cyclists - For those traveling through an area by active transportation means, the concern over their visual environment is considered to be higher than their driving counterparts. This has to do with lower speed, ability to change viewing directions quicker, and to not have barriers from inside a vehicle obstruct a portion of their views.
6. Transit Users - since transit users do not have their attention on driving, they have more time to see their surrounding visual environment.
7. Employees - A person that works in a LAU has the potential to become very familiar with an area if they are traveling to, through, or working in a particular LAU. Employees are less likely than many other viewers to care about their visual environment since they self-selected to work in that environment.
8. Customers - Individuals that visit businesses in the LAU will have a higher sensitivity and concern with their visual environment than many others in the LAU. If they do not like an area, they are not likely to frequent businesses in that area.
9. School Attendees - This group is similar to drivers based on the frequency of visiting the LAU. However, depending on their travel mode, they may pay more attention to the visual setting.
10. Tourists or Visitors to the LAU - This group is likely to have a high sensitivity to the visual setting.

1.5.3.2 Viewer Exposure

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project. Viewer duration and viewer proximity are also important factors in describing viewer exposure.

1.5.3.3 Viewer Awareness/ Experiences Sought

The activity an individual viewer is experiencing will affect the ability of the viewer to pay attention to the moving environment or to subtle changes that may be happening in the environment. The activity of the viewer groups will help to determine if the person is connected and aware of their environment since many of the viewer group activities require attention be given to the activity. Or they may specifically be at a particular location because they are in search of views, visual quality or character that may affect their experience.

1.5.3.4 Viewer Likely Response

All of the factors listed above have been composited into an overall viewer expected concern for the range of possible visual changes resulting from the range of alternatives being considered, as seen in Table 1.5-1: Summary of Viewer Sensitivity.

1.5.3.5 Viewer Investment

The amount of financial or non-financial investment that has been made in improving a property where someone lives or works, is one factor in how concerned a viewer is to negative changes in views or visual quality. Also, a viewer may have an investment of time or contributions to a community and be therefore more concerned about negative changes in their community compared to a viewer that does not have pride or investment in their community.

Table 1-5.1 Summary of Viewer Sensitivity

Viewer Type	Viewer Activity				Investment		Experience Sought		Viewing Duration					Likely Viewer Sensitivity
	Mostly Stationary / Not Distracted	Partially Stationary / Mostly not Distracted	Moving Slowly/ Mod. Distracted	Moving Quickly / Mostly Distracted	Financial Interest	Community Pride or Involvement	Expected Scenic, Natural or Unique	Expected Clean, Safe and Organized	L=Long: > 1 hour	ML=Moderate Long: 5 minutes to 1 hour	M=Moderate: 1 minute to 5 minutes	S=Short: 5 seconds - 1 minute	VS=Very Short: < 5 seconds	
1) Property Owners or Resident Owners	✔	✔			✔	✔	✔	✔	✔					**High**
2) Renting Residents	✔	✔				✔	✔	✔	✔					**Moderate High**
3) Freeway / Highway Drivers				✔								✔	✔	**Moderate**
4) General Street Drivers			✔	✔								✔	✔	**Low**
5) Walkers, joggers and Cyclists		✔	✔				✔	✔			✔	✔		**Moderate High**
6) Transit Users		✔	✔					✔			✔	✔		**Low**
7) Employees		✔						✔	✔					**Low**
8) Customers		✔					✔	✔		✔	✔			**Moderate**
9) School Attendees		✔	✔			✔		✔	✔	✔				**Moderate High**
10) Tourists or Visitors	✔	✔					✔	✔						**Moderate High**

1.6 Definitions

Visual technical studies typically use some terms that may not be commonly understood or that can have a wide range of meanings to various groups of readers. It is critical that these definitions are described in detail as to how they are used in this technical study.

1.6.1 Area of Potential Effect (APE)

The Area of Potential Effects is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if such properties exist. The area of potential effects is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking.

1.6.2 Area of Visual Effect (AVE)

The area in which views of the project would be visible as influenced by the presence or absence of intervening topography, vegetation, and structures.

1.6.3 Candidate Key Observation Points

KOPs (see below) that are considered to have characteristics of high visibility of visually prominent elements of a project that will be seen by many viewers, will contrast with its setting, and will be noticed potentially in a negative way are considered to be candidates for the preparation of visual simulations that will provide insight into the level of impact the proposed project would have on a particular key view location and viewer group.

1.6.4 Coastal Visual Resources

Visually prominent features associated with coastal elements include the horizon line, ocean, beaches, landforms associated with the coastline, lagoons, bays, creeks, rivers, and recreational facilities including marinas, boats, and coastal recreational activities.

1.6.5 Community Character

Community character is a common look and impression of a landscape visual assessment unit that is consistent in materials, forms, massing, styles, and other site planning elements, and leads to a harmonious look in an extended area. This does not mean that all elements need to match and be consistent, only that the majority of visually prominent elements match in a consistent or compatible manner. This character should be consistent or dominant across a neighborhood or within at least one or more landscape assessment units. If a grouping of assessment units is all somewhat consistent, then this would be called a consistent and dominant character of a sub-area of a sub-region.

1.6.6 Community Character Attainment Goals

An area that is under a requirement or under advised control of a series of design guidelines, development standards, design review requirements, zoning restrictions, or Covenants, Controls and Restrictions (CC&R) that control the aesthetics of an area or that dictate styles, massing, building materials, and other visually prominent elements so as to have a harmonious and positive aesthetic and uniform visual environment. This can apply to an area that is not considered to be currently harmonious, but that is intended to become more harmonious through the adoption and implementation of these design processes and requirements.

1.6.7 Elements with High Visual Prominence

Proposed physical improvements that are generally vertical in nature and of a size that can be seen from at least one-half mile distance. Flat elements may also be visible due to their size and the location of viewers, but they generally need to be large open areas that are not blocked by vertical elements.

Prominence is usually defined by solid physical elements that contrast with the immediate visual setting. By definition, small details or soft elements such as proposed landscaping or flat areas are not normally considered to be elements of high visual prominence.

1.6.8 Horizon-line Silhouette

When a visually prominent element is placed in such a position that much of it pierces through the horizon line in the distance without a substantial amount of adjacent background elements in the viewing scene so that it highly contrasts with distant views across the ocean or open land areas that are silhouetted against major water bodies of the sky.

1.6.9 Intactness (under 2015 FHWA Guidance this is now called harmony, but means the same as intactness)

Is the visual integrity of a natural and man-made landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

1.6.10 KOPs

KOPs are locations selected that represent different views of the proposed project that the general public can get to (a viewing location) with a viewing corridor that makes landscape visual elements obvious. Once these KOPs have been analyzed, they will be narrowed down to Candidate KOPs where the conditions, visual prominence of the project, and the contrasts and viewer groups are large enough and sensitive enough to suggest they be looked at in more detail and at least informed by quick project models to see if they should be simulated. Selected KOPs are those that are chosen because of their worst-case nature for visual contrasts and are best representative of the visual conditions and viewer groups to warrant the production of realistic visual simulations.

1.6.11 Landform Quality

An assessment to determine if a consistent and naturally appearing landform described as a hill, valley, escarpment, bluff, mountain, canyon, outcrop, headland, or other unique and visually prominent landform that is considered to be unique, positive, and harmonious to the natural or man-made setting is expected to be removed or blocked from views found in the sub-region.

1.6.12 Landscape Assessment Units

A grouping of areas, generally larger than one acre, that have such similar visual quality, visual elements, and neighborhood character that they appear to be visually consistent and compatible with each other. Each assessment unit also has a visual quality rating, as well as a sensitivity to change rating. Units can have different viewer groups and viewer activities that affect the visual perception of an area and how much a viewer group may notice change. The project site would be considered to be a landscape assessment unit itself. Generally, for a project to have a significant visual quality or neighborhood character impact, it must be seen with the adjacent landscape assessment units and the overall composition of the project visually prominent elements contrasts highly or moderately with the adjacent landscape assessment unit. Generally, units that are further away than one mile are not considered to have a significant effect on contrast from the project assessment units.

1.6.13 Private Views

Views of the adjacent visual environment that can see sub-regionally important viewing scenes, but only from private property. Although private views should be considered important, they do not reach a level of significant impact under the California Environmental Quality Act (CEQA) in most locations or local thresholds of significance have not been adopted to consider private views. Concern over private views may be high, but it is not generally considered to reach a level of significance under CEQA. NEPA would

consider all views as being potentially affected (whether beneficial or adverse). For views that would be adversely affected, levels of adversity are described by contrasts depending on the access and quantity of viewer groups that can access the private viewing location.

1.6.14 Public Views

Views of regionally significant views that can be accessed along public roads, public parks, public open space, and other areas where the public is generally invited to access.

1.6.15 Region

A region is a broader description of an area that has a geographic limit based on location, coastal orientation, and landforms. For example, the region of the study area would be the Central San Diego Coastal region.

1.6.16 Area of Visual Effect

The AVE is related to the areas that are potentially affected, and therefore need to be able to see the project site directly. This is determined by viewsheds. The AVE is defined as all areas within the 3-mile viewshed of the project site.

1.6.17 Sky-line Silhouette

When a visually prominent element is placed in a position, much of it is seen with an open sky behind it without a large amount of background elements in the scene so that it highly contrasts with the sky.

1.6.18 Sky Blockage

Sky blockage is related to shade and shadow impacts associated with a large mass that projects heavy shade onto an adjacent area that is long in duration, wide in shadow, and that falls on land uses or viewer groups in a detrimental way, depending on time of season and adjacent outdoor uses.

1.6.19 Sub-region

Sub-region defines the limits of the project setting that would be affected by the project as it relates to visual impacts and considerations. This area is defined as the viewsheds affected by the project site, determined mostly by landform that defines the visibility of seeing the project site.

1.6.20 Sub-areas

A sub-area is a further division of the sub-regional area into community areas that are similar in land use, geographic location, viewshed, and character. They are groupings of landscape assessment units that are geographically next to each other and confined to the viewshed limits of the project.

1.6.21 Sub-regionally Unique Viewing Scene

A sub-regionally unique viewing scene is a combination of distant visual resources that are not common within the sub-region, are generally harmonious and dynamic, and have a high visual quality and intact composition that contributes to the quality of the view.

1.6.22 Unity

Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape. Under the 2015 FHWA Guidance, the term “coherence” means the same as unity.

1.6.23 Viewing Distance (foreground, middle ground, background, and distant background)

For the purposes of this study, the foreground is considered to be 1/2 mile from the edges of the OTC site (2,640 linear feet); the middle ground is ½ to 1 mile (out to 5,280 linear feet); the background is 1 mile to 3 miles (beyond 5,280 linear feet to 15,840 lineal feet); and anything beyond 3 miles is

considered to be a distant background and would normally not be considered a highly adverse impact unless it blocked a sub-regionally important viewing scene and the project elements were very large.

1.6.24 View Quality

View quality is an assessment to determine if a proposed project feature will affect a sub-regionally important viewing scene by blocking the view corridor that connects a viewing location with the viewing scene. For the impact to be highly or moderately highly adverse, the viewing scene needs to be visually prominent and unique in the sub-region, which is generally defined as all of the landscape assessment units found within view of a particular project. By definition, all views have to have a viewing location, a viewing corridor, and a viewing scene that is distant enough to represent a wide angle on an open and distant view.

1.6.25 View Corridor

The view corridor is open airspace that allows a person to see a distant view from a viewing location without having physical elements block that corridor.

1.6.26 Viewing Location

The viewing location is the spot at which a viewer group would stand, sit, or move through to see a viewing scene. Generally, for CEQA and NEPA purposes, this viewing location would need to be a publicly accessible viewing location that can see a sub-regionally important viewing scene to be considered a visually significant impact.

1.6.27 Viewing Scene

The viewing scene includes views of distant landscape assessment units that can be seen at one time from a viewing location, through a viewing corridor that is generally wide, and can take in as much as 170 degrees of view (considering a stationary viewing position with peripheral views). These views need to be in the background, and they need to consist of unique and high-quality visual resources that combine to make a unique and harmonious visual experience.

1.6.28 Viewsheds

The viewshed is the area of physical space that can be seen from one viewpoint or inversely, the part of a site or project that can be seen from a larger area around it that can see parts or all of the project. If something is not within a view, it is not considered to be in a viewshed. A practical viewshed is based upon all physical elements that can be seen or affect the view of a distant area that block it based on size and location. These are often landforms, structures, and trees. A theoretical viewshed is one that only takes into account landforms that block views since trees and structures can often be demolished, trimmed, modified, or moved. Depending on the size of the visually prominent project elements, the distance considered and tested could be as little as one-quarter mile for the limits of the viewshed out to five miles for large projects such as dams, landfills, and major urban development. Generally, however, viewsheds of more than one mile tend to be affected by atmospheric conditions of weather, smog, and lighting, and the project elements tend to take up a small percentage of the viewing scene that they are then considered to be part of the viewing scene instead of the view corridor.

1.6.29 Visual Character

Visual character is a description of the composition of the landscape and is defined by the relationships between the existing visible natural and built features. These relationships are considered in terms of dominance, scale, diversity, and continuity. Visual character-defining resources and features include:

- landforms: types, gradients, and scale

- vegetation: types, size, maturity, and continuity
- land uses: height, bulk, scale, and architectural detail
- open space: type (parks, reserves, greenbelts, and undeveloped land), extent and continuity
- water bodies, historic structures, and downtown skylines
- apparent composition or mixture of character and land uses
- apparent upkeep and maintenance

1.6.30 Visual Quality

Visual quality is an assessment of the combination of visually prominent elements (line, form, color, texture, and contrast) and qualities (intactness, vividness, harmony, uniqueness, and unity) and if a proposed project highly contrasts with these elements and qualities.

1.6.31 Visual Resources

The physical resources that contribute to a high visual quality and character of an area, and that if removed or blocked, could change the overall visual quality of an area.

1.6.32 Vividness

Is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

2 REGULATORY SETTING

Visual resources are regulated at the federal, state, and local levels of government. Federal requirements are the primary guidance being applied to this project. State guidance is applicable in two manners: (1) Alternatives 4 and 5 are intended to be a joint project with SANDAG, and therefore create a nexus to apply CEQA (Appendix A of the EIS); and (2) while the OTC site is not within the coastal zone, project elements have an opportunity to affect views of coastal resources. At the local level, the City of San Diego applies its discretionary permit process via implementation of the Municipal Code. However, the City of San Diego has no regulatory authority over land owned by the federal government, and if the property remains in federal ownership, the City's permitting process would not apply.

2.1 Federal Regulatory Framework

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government will use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Visual impacts are mentioned in the National Environmental Policy Act (NEPA) of 1969 and Council on Environmental Quality (CEQ) regulations to implement NEPA under the heading of aesthetics. These regulations identify aesthetics as one of the elements or factors in the human environment that must be considered in determining the effects of a project. Further, Title 23, USC 109(h) cites "aesthetic values" as a matter that must be fully considered in developing a project.

The National Historic Preservation Act (NHPA), Section 106 requires federal agencies to take into account the effects, including visual, of their undertakings on historic properties. These effects are covered in Appendix H to the EIS and Section 3.6 of the EIS.

2.2 State Overview of Scenic and Aesthetic Values

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities" (CA Public Resources Code Section 21001[b]).

2.2.1 Applicability of the California Coastal Zone

The protection of scenic values along the California coast, together with public access, is a major principle of the Coastal Act. The premiere objective of the California Coastal Plan called for in the California Coastal Zone Conservation Act of 1972 was: The maintenance, restoration, and enhancement of the overall quality of the coastal zone environment, including, but not limited to, its amenities and aesthetic values. The coastal zone was defined in the initiative as extended from three miles at sea inland to a specifically delineated boundary. The California Coastal Act of 1976 made permanent the Coastal Commission and established the conservation and use policies guiding planning and regulation of land and water areas in the new coastal zone established by that law. Specifically, relative to the protection of scenic values, the act provides that: The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. 3 Section 30009 PRC requires that — [The Coastal Act] shall be liberally construed to accomplish

its purposes and objectives. The Coastal Commission has implemented scenic resource protection policies by focusing on land-based scenic views from public parks, trails, roads, and vista points.

2.2.2 Old Town State Park Considerations

Old Town State Historic Park is a state protected historical park in San Diego. It commemorates the early days of the City of San Diego and includes many historic buildings from the period 1820 to 1870. The park was established in 1968. In 1969, the site was registered as California Historical Landmark #830. Then on September 3, 1971, it was added to the National Register of Historic Places as Old Town San Diego Historic District. In 2005 and 2006, California State Parks listed Old Town San Diego as the most visited state park in California. No guiding documents have been found, nor would guidance on design elements apply to the NAVWAR site. However, the State of California may want to be included as a stakeholder and reviewer of all plans.

2.2.3 Caltrans Adjacent Jurisdictions including Scenic Highways

The Department of Transportation manages the State Scenic Highway Program, provides guidance, and assists local government agencies, community organizations, and citizens with the process to officially designate scenic highways.

The intent of the State Scenic Highway Program is to protect and enhance California's natural scenic beauty. Caltrans provides city and county governments the opportunity to nominate eligible scenic highways and adopt corridor protection programs to obtain official scenic highway status. Corridor protection programs contain land use elements that support scenic preservation along the route. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway System and care must be taken to preserve its eligible status.

The Interstate 5 highway corridor is part of the California Scenic Highway System and is eligible for designation as an Official Scenic Highway. It has not yet been nominated nor designated but is eligible as a scenic highway. Interstate 5 from downtown San Diego to Orange County is listed in California state law as eligible for designation as a State Scenic Highway. If I-5 is officially designated a State Scenic Highway, then memorable natural landscape views from the highway right-of-way would be protected, by local ordinances, from visually intrusive development. Interstate 8 from Sunset Cliffs Boulevard to SR 98 is also considered to be eligible for Scenic Designation. Figure 2.2-1: Designated and Eligible Scenic Roadways/Highways shows local eligible and designated scenic highways.

The intent of the state law is to protect California’s natural beauty for the benefit of residents, travelers, and tourists that help support the state economy. Once designated a scenic highway, Caltrans and the FHWA would publish all future maps with the I-5 scenic highway designation to encourage travelers to visit the region. Responsibility for protecting the visual resources of the scenic highway stays with the local governing agencies to establish zoning controls and other protective measures that preserve the scenic integrity.

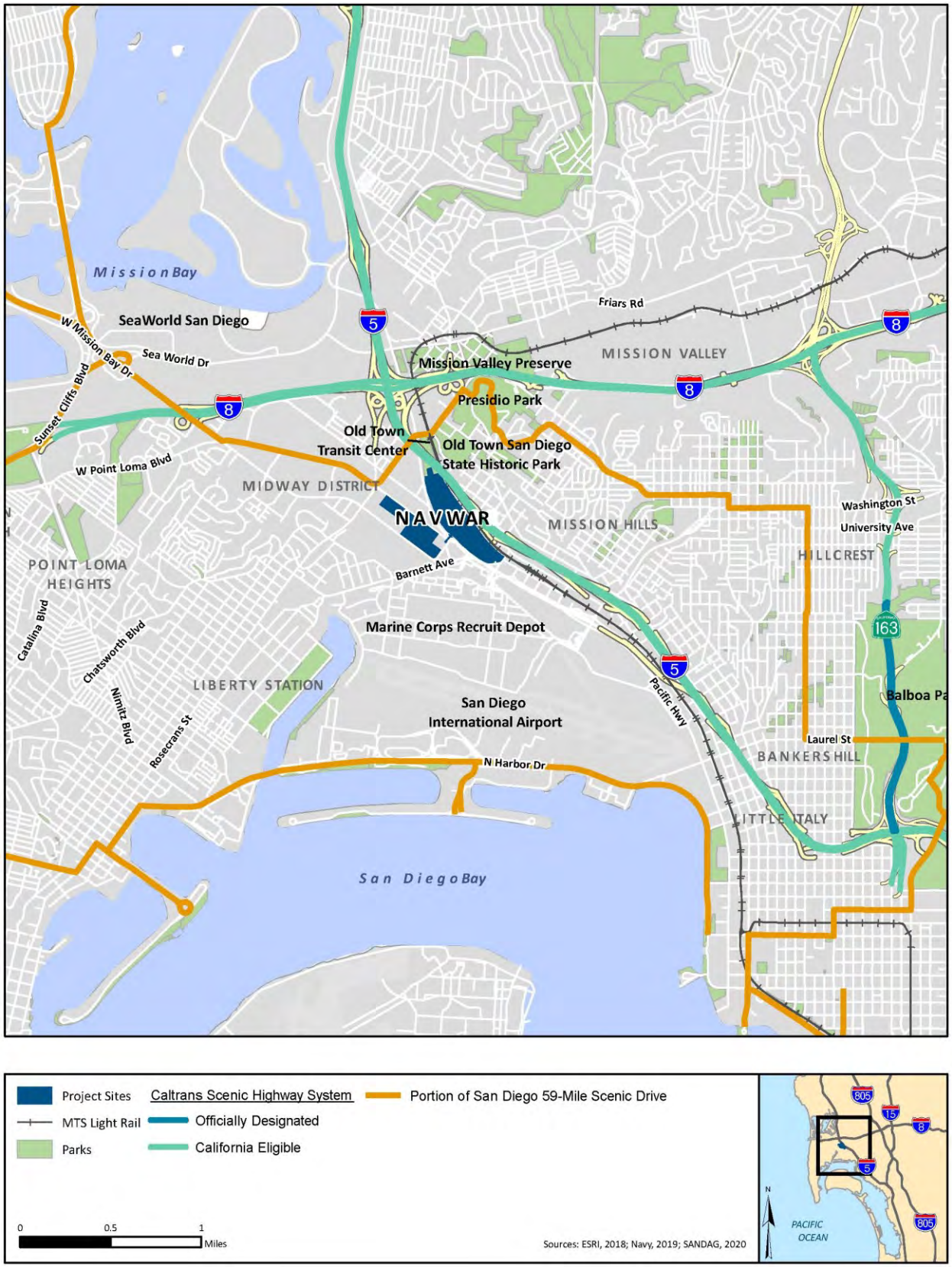


Figure 2.2-1 Designated and Eligible Scenic Roadways/Highways

To be considered a State Scenic Highway, the City or County of San Diego would need to begin the process by developing a visual assessment using Caltrans and FHWA guidance to determine if the view corridor meets minimum requirements. Caltrans and FHWA retain authority for final determination, but the local agency is required to fund all analysis and reporting used by Caltrans and FHWA to make the determination. An existing highway that is already designated a State Scenic Highway can have its official designation revoked if it no longer complies with Caltrans or FHWA program requirements. The program's requirements generally consider buildings, unsightly land uses, commercial development, parking lots, billboards, powerlines, and various other elements to be visual intrusions that might disqualify the highway as a State Scenic Highway.

2.2.4 City of San Diego Overview of Scenic and Aesthetic Values

The City of San Diego maintains signage that designates scenic routes throughout the city to afford scenic views of the community, as well as to link points of visitor interest. This route does not have any official designation or protection. However, by self-selection, many people that drive it are interested in seeing the views and scenery and are therefore likely to be sensitive to changes in the view or view blockage. The route in the study area is marked by signage from the bottom of Presidio Park at Jackson Street and Presidio Drive all the way up the hill and then turns left on Arista, which leaves the viewshed at that point. There is no specific information on these routes nor any guiding policies or development restrictions.

2.3 Municipal Overview Context

2.3.1 City of San Diego General Plan

The General Plan (City of San Diego, 2013, 2015) provides policy guidance intended to balance the needs of a growing population while enhancing quality of life for current and future residents. It provides a strategy, the City of Villages, for how the City can enhance its many communities and neighborhoods as the planned growth occurs over time. The plan is presented in ten elements that provide a comprehensive road map for the City of San Diego's growth to the year 2030 or beyond. While visual resources are not the focus of any one element, policies from several elements are relevant.

2.3.1.1 Recreation Element

RE-E.2. Provide for sensitive development of recreation uses within and adjacent to City-owned open space lands.

e. Preserve designated public open space view corridors, such as views to the Pacific Ocean, other bodies of water and significant topographic features.

2.3.1.2 Urban Design Element

UD-A.3. Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.

l. Protect views from public roadways and parklands to natural canyons, resource areas and scenic vistas.

m. Preserve views and view corridors along and/or into waterfront areas from the public right-of-way by decreasing the heights of buildings as they approach the shoreline, where possible.

UD-A.12 Reduce the amount and visual impact of surface parking lots.

e. Avoid large areas of uninterrupted parking especially adjacent to community public viewsheds.

2.3.1.3 Mobility Element

Under the discussion of Street Layout, Design and Operations under the Mobility Element:

The quality of our traveling experience is also influenced by the scenic quality of the area traversed. San Diego enjoys many scenic vistas of our coastline, canyons, and other open spaces. Scenic highways and routes provide an opportunity for people to experience these views while traveling through the City.

2.3.2 City of San Diego Community Plans

The City of San Diego utilizes community plans to translate the broad goals of the General Plan down to the community scale and allows each community to integrate and enhance their unique characteristics. OTC Site 1 and Site 2 are within the Midway-Pacific Highway community plan area. The surrounding community plan areas include Old Town, and portions of Uptown and Peninsula.

2.3.3 Midway-Pacific Highway Community Plan

The Midway-Pacific Highway community vision is to develop a sustainable, compact land use pattern of attractive villages that focus development within one-half mile radius (10-minute walk) of trolley or Rapid Bus stations. New development is seen as an opportunity to change the community's visual appeal with cohesive new mixed- and multiple-use villages and districts that include housing, offices, retail, restaurants, parks, public spaces, and amenities to enhance the community's identity and livability. Linear parks will encircle the villages with safe pedestrian and bike paths improved with street trees and landscape. Centrally located parks or plazas will be the focal point for each village.

Improving visual appeal, connectivity and safety of existing and new streets is a primary community goal. Public and private development on Rosecrans Street, Pacific Highway, Midway Drive, Barnett Avenue/Lytton Street and Sports Arena Boulevard will be required to incorporate complete street infrastructure and green street improvements. Streets will require aesthetic landscapes, wide sidewalks, separated bike paths, lighting, street trees, landscaped center medians, linear parkways, and ground-floor pedestrian-oriented buildings that create outdoor spaces where feasible. Existing superblocks will be broken up into smaller grid pattern blocks (perimeter of 1,500 feet or less) with tree-lined pedestrian and bike-oriented community gateway streets and nodes.

Community gateways require extensive landscape improvements to improve visual character as linear street-side parkways and attractive community nodes. Street trees will define linear gateways and nodes while providing shade for pedestrians and bicyclists, reducing urban heat island effect, providing passive building cooling in summer, and creating a visual sense of place for pedestrians and motorists. Wayfinding signage is required to guide traffic and enhance each village character. Incentives for public space improvements include options for higher density residential and floor areas in the project.

Buildings should vary in size, form, massing, color, and textures using high quality materials to create an attractive and inviting community identity. Building entrances, patios and windows should be oriented to the street side ground floor to create a pedestrian sense of place, improve security, and activate the public realm. Long stretches of uninterrupted blank walls are discouraged. Edges and boundaries between public and private spaces should be defined with landscaping, grade separations, covered patios, low garden walls, low gates, and similar site features. Street trees are considered a major infrastructure component that provides many benefits including a more attractive and comfortable environment by providing shade and visual relief/beautification. One of the community's policies is to increase the overall tree canopy and community gardens within the public right-of-way and in developments.

Parking structures should be wrapped with retail, residential or commercial uses on the ground floor to improve the view. Unattractive service areas and utilities should be located at the back of buildings and should not create impediments to pedestrian paths. If in the public realm, then service areas and utilities should be screened with living walls, landscaping, public art, and lighting designs. Nighttime lighting fixtures are required for safety and visibility, but they must be dark-sky compliant, enhance the community ambiance and not create visual disruption for residents at night.

2.3.4 Old Town Community Plan

The Old Town community vision is to preserve, maintain and enhance the historic buildings and character of the community, establish a stronger connection between the Historic Core to Presidio Park, and increase economic prosperity in the Core Sub-District with commercial/retail for visitors of Old Town San Diego historic sites. Underground parking is encouraged in the Core Sub-District to reduce visual impact that automobiles have on the Historic Core character. Extensive architectural and landscape criteria are provided in the community plan to ensure future development is consistent with existing buildings and enhances the historic character that attracts visitors to the commercial core.

2.3.5 Uptown Community Plan

The Uptown community vision is to preserve, maintain and enhance the high quality residential, commercial retail and office developments in each of its five neighborhoods. Preserving existing views of undeveloped natural canyons and views of San Diego Bay, Downtown and Mission Valley from ridgelines is a high priority for the community.

2.3.6 Peninsula Community Plan

The Peninsula community vision is to preserve, maintain and enhance the high quality, low density residential community character while improving the visual appeal of commercial areas. Dramatic ocean and downtown views are scattered throughout the community, creating a unique visual environment. Development objectives include protecting unique natural and manmade features, improving community entry points, and preserving and enhancing significant views of the bay and ocean.

2.4 Significance Thresholds

Significance thresholds are used to determine whether a project may have a significant environmental effect or what level of adversity or benefit the project may bring. The significance thresholds for the project, as defined by federal and state regulations and guidelines, are discussed below.

2.4.1 Federal Guidance on Significance Thresholds

NEPA requires federal agencies to determine if an undertaking would significantly affect the environment; however, NEPA does not include specific significance thresholds. According to the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA, the determination of significance under NEPA is based on context and intensity.

Context relates to the various levels of society where impacts could result, such as society as a whole, the affected region, the affected interests, and the locality. The intensity of an impact relates to several factors, including the degree to which the impact would affect public health and safety; the proximity of the project to sensitive resources; and the degree to which effects on the quality of the human environment are likely to be highly controversial or involve unique or unknown risks. Under NEPA, the context and intensity of a project's impacts are discussed regardless of any threshold's levels, and mitigation measures are included where reasonable.

The proposed project will affect the relative proportion of existing features which would be removed, altered, or demolished that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area. The following items are possible methods of gauging the factors that support the threshold:

2.4.1.1 Aesthetics

- The amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished.
- The amount of natural open space to be graded or developed.
- The degree to which proposed structures in natural open space areas would be effectively integrated into the aesthetics of the site, through appropriate design, etc.
- The degree of contrast between proposed features and existing features that represent the area's valued aesthetic image.
- The degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements.
- The degree to which the project would contribute to the area's aesthetic value.
- Applicable guidelines and regulations.

The proposed project will cause the loss or partial loss of a sub-regionally important and unique view by blocking the view corridor, assuming this view is from a public viewing location. The following items are possible methods of gauging the factors that support the threshold:

2.4.1.2 Obstruction of Views

- The nature and quality of recognized or valued views (such as natural topography, settings, man-made or natural features of visual interest, and resources such as mountains or the ocean).
- Whether the project affects views from a designated scenic highway, corridor, or parkway.
- The extent of obstruction (e.g., total blockage, partial interruption, or minor diminishment).
- The extent to which the project affects recognized views available from a length of a public roadway, bike path or trail, as opposed to a single, fixed vantage point.

2.4.1.3 Shading

A project impact would normally be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

2.4.1.4 Nighttime Illumination

- The change in ambient illumination levels as a result of project sources.
- The extent to which project lighting would spill out of the project site and affect adjacent light-sensitive areas.

2.4.2 State Guidance on Significance Thresholds

CEQA requires state and local government agencies to identify the significant environmental effects of proposed actions. According to the Governor's Office of Planning and Research, significance thresholds

for a given environmental effect are at the discretion of the lead agency and are the levels at which the lead agency finds the effects of a project to be significant.

The CEQA Guidelines define "significant effect on the environment" as: "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project including land, air, water, minerals, flora, fauna, ambient noise and objects of historic or aesthetic significance." (CEQA Guidelines, 14 CCR Section 15382).

The CEQA Guidelines do not describe specific significance thresholds. However, Appendix G of the CEQA Guidelines lists the following significance thresholds for the purpose of evaluating aesthetic effects (except as provided in Public Resources Code Section 21099), would the project:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings and historic buildings within a scenic highway
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (note that this criteria will not be used in this assessment since it is an urbanized area and not a non-urbanized area)
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area

The Public Resources Code Section 21099 was enacted on September 2013, the Governor signed into law Senate Bill (SB) 743, which instituted changes to CEQA when evaluating environmental impacts to projects located in areas served by transit. While the thrust of SB 743 addressed a major overhaul on how transportation impacts are evaluated under CEQA, it also limited the extent to which aesthetics and parking are defined as impacts under CEQA. Specifically, Section 21099 (d)(1) of the Public Resources Code (PRC) states that a project's aesthetic and parking impacts shall not be considered a significant impact on the environment if: 1) the project is a residential, mixed-use residential, or employment center project, and 2) the project is located on an infill site within a transit priority area. However, this law did not limit the ability of the City to regulate, or study aesthetic related impacts pursuant to other land use regulations. Also note that the limitation of aesthetic impacts pursuant to Section 21099 of the PRC does not include impacts to historic or cultural resources. Impacts to historic or cultural resources will need to be evaluated pursuant to CEQA regardless of project location.

2.4.3 City of San Diego Thresholds for Visual Effects and Neighborhood Character

While the Proposed Action is not bound by the City of San Diego permit process and would not be required to comply with the identified requirements, the city's significance thresholds are presented here for reference only in an effort to conform as best as possible in the spirit of cooperation.

According to the Development Services Significance Determination Thresholds, dated 2011:

"Making the determination of a significant impact on visual quality is highly subjective. Identifying how a proposed development would fit or blend with the existing scale and character of the surrounding developed and natural environment is the key to determining significance. A project may meet all of its height, bulk, scale and zoning requirements and still have a significant visual impact on the environment if it is not in character with the surrounding development and natural landforms."

2.4.3.1 Initial Study Checklist Questions

The city's initial study checklist to determine potential significance of impacts to Visual Quality and Neighborhood Character are similar to those listed in Appendix G of the Guidelines for Implementing CEQA but provide additional detail.

2.4.3.2 View Thresholds from the Development Services Department (DSD) Document

Projects that would block public views from designated open space areas, roads, or parks or to significant visual landmarks or scenic vistas (Pacific Ocean, downtown skyline, mountains, canyons, waterways) may result in a significant impact.

To meet this significance threshold, one or more of the following conditions must apply:

a. The project would substantially block a view through a designated public view corridor as shown in an adopted community plan, the General Plan, or the Local Coastal Program. Minor view blockages would not be considered to meet this condition. In order to determine whether this condition has been met, consider the level of effort required by the viewer to retain the view.

b. The project would cause substantial view blockage from a public viewing area of a public resource (such as the ocean) that is considered significant by the applicable community plan. Unless the project is moderate to large in scale, condition "c" below, would typically have to be met for view blockage to be considered substantial.

c. The project exceeds the allowed height or bulk regulations, and this excess results in a substantial view blockage from a public viewing area.

d. The project would have a cumulative effect by opening up a new area for development, which will ultimately cause "extensive" view blockage. View blockage would be considered "extensive" when the overall scenic quality of a visual resource is changed; for example, from an essentially natural view to a largely manufactured appearance. Views from private property are not protected by CEQA or the City of San Diego.

2.4.3.3 Neighborhood Character/Architecture Thresholds from the DSD Document

Projects that severely contrast with the surrounding neighborhood character. To meet this significance threshold, one or more of the following conditions must apply:

a. The project exceeds the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project by a substantial margin.

b. The project would have an architectural style or use building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme (e.g., Gaslamp Quarter, Old Town).

c. The project would result in the physical loss, isolation, or degradation of a community identification symbol or landmark (e.g., a stand of trees, coastal bluff, historic landmark) which is identified in the General Plan, applicable community plan, or local coastal program.

d. The project is located in a highly visible area (e.g., on a canyon edge, hilltop, or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive height, bulk, signage, or architectural projections.

e. The project would have a cumulative effect by opening up a new area for development or changing the overall character of the area (e.g., rural to urban, single-family to multi-family). Analysts should also evaluate the potential for a project to initiate a cumulative effect by building structures that substantially differ from the character of the vicinity through height, bulk, scale, type of use, etc., when it is reasonably foreseeable that other such changes in neighborhood character will follow.

2.4.3.4 Landform Alteration Thresholds from the DSD Document

Projects that significantly alter the natural landform. To meet this significance threshold, typically the following conditions must apply:

a. The project would alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill. Grading of a smaller amount may still be considered significant in highly scenic or environmentally sensitive areas. Excavation for garages and basements are typically not held to this threshold. In addition, one or more of the following conditions (1-3) must apply to meet this significance threshold.

   1) The project would disturb steep hillsides in excess of the encroachment allowances of the Environmentally Sensitive Lands regulations (Land Development Code Chapter 14, Article 3, Division 1). In evaluating this issue, environmental staff should consult with permit staff.

   2) The project would create manufactured slopes higher than ten feet or steeper than 2:1 (50 percent).

   3) The project would result in a change in elevation of steep hillsides as defined by the San Diego Municipal Code Section 113.0103 from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site. (A continuous elevation change of five feet may be noticeable in relation to surrounding areas. In addition, such a change may require retaining walls and other features to stabilize slopes, potentially resulting in a manufactured appearance.)

   4) The project design includes mass terracing of natural slopes with cut or fill slopes in order to construct flat-pad structures.

b. However, the above conditions may not be considered significant if one or more of the following apply:

   1) The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through “naturalized” variable slopes.

   2) The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and at no point vary substantially from the natural landform elevations.

   3) The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the project’s overall grading requirements.

2.4.3.5 Development Features Thresholds from the DSD Document

Projects that have a negative visual appearance. To meet this significance threshold, one or more of the following conditions must apply:

a. The project would create a disorganized appearance and would substantially conflict with City codes (e.g., a sign plan which proposes extensive signage beyond the City's sign ordinance allowance).

b. The project significantly conflicts with the height, bulk, or coverage regulations of the zone and does not provide architectural interest (e.g., a tilt-up concrete building with no offsets or varying window treatment).

c. The project includes crib, retaining, or noise walls greater than six feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public.

d. The project is large and would result in an exceeding monotonous visual environment (e.g., a large subdivision in which all the units are virtually identical).

e. The project includes a shoreline protection device in a scenic, high public use area, unless the adjacent bluff areas are similarly protected.

These conditions may become more significant for projects which are highly visible from designated open spaces, roads, parks, or significant visual landmarks. The significance threshold may be lower for such projects.

2.4.3.6 Shading

A project impact would normally be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

2.4.3.7 Light/Glare Thresholds from the DSD Document

Projects that would emit or reflect a significant amount of light and glare. To meet this significance threshold, one or more of the following must apply:

a. The project would be moderate to large in scale, more than 50 percent of any single elevation of a building's exterior is built with a material with a light reflectivity greater than 30 percent (see LDC Section 142.07330(a)), and the project is adjacent to a major public roadway or public area.

b. The project would shed substantial light onto adjacent, light-sensitive property or land use, or would emit a substantial amount of ambient light into the nighttime sky. Uses considered sensitive to nighttime light include, but are not limited to, residential, some commercial, and industrial uses and natural areas.

3 PROJECT ANALYSIS

This chapter investigates the way the existing visual environment and resources of the study area interact with viewers and with the future changes brought about by the proposed project. The initial analysis in this chapter is not yet making a value judgement or assessment on how the project will impact the visual environment, but it does move one step forward from the existing conditions and one step closer to the impact assessment.

3.1 View Scene Analysis

The sub-regional viewing scenes in the study area are analyzed to evaluate where potential views of the sub-regional scene could be affected by the Proposed Action. The impacts or benefits associated with these affects are referred to as “view quality”. It is based on the premise that there are three components to view quality: the viewing scene, the viewing scene corridor, and the viewing locations.

Figures 3.1-1 through Figures 3.1-10 show the three elements for each viewing scene.

3.1.1 Viewing Scene

Viewing scenes are at the outer edge of views. It is not necessary for a viewing location to see the full extent of a viewing scene. However, a minor slice of a broad viewing scene is substantially less important than a completely unobstructed viewing scene. This is especially true for a distant view that includes the horizon line. Of importance is an unobstructed view of a broad horizon line in the ocean. The dynamics of view quality puts a great deal of impact concern on the first element that breaks this continuous horizon line. As nearly important, a broad mountain, valley, hill, or canyon that is currently a fully open viewing scene becomes problematic for a project that first breaks this continuity of view.

3.1.2 Viewing Scene Corridors

The corridor is simply the unobstructed open-air space that the viewing scene is seen through. A project off in the distance, if it is not substantially blocking an important view, becomes part of the viewing scene itself. However, if a substantial amount of the viewing angle is interrupted by a new project element, then varying degrees of impact will be associated with varying degrees of viewing field blockage.

Generally, a project that blocks 10-15 percent or more of a viewing cone of view (40-50 degrees for what is called binocular 3D vision that a person tends to pay attention to and see in 3D, and another 100-120 degrees of peripheral vision that is not in 3D that focuses on patterns, texture, and movement) would mean 10 percent of view blockage would then equate to 14-17 degrees of view blockage. The project would not necessarily dominate the entire view if it is less than 10 percent or 14-17 degrees.

3.1.3 Viewing Locations

Under NEPA and CEQA, all view blockage should be considered in the evaluation, regardless if the view is a public or a private view. Public views from parks, roadways, trails, and other public spaces will always be considered to be of a higher concern than private views that only a few people have the opportunity to see. Figure 3.1-11 shows the public rights-of-way that have clear and open views of the project sites and associated viewing scenes.

Figure 3.1-1 San Diego River: Viewing Scene

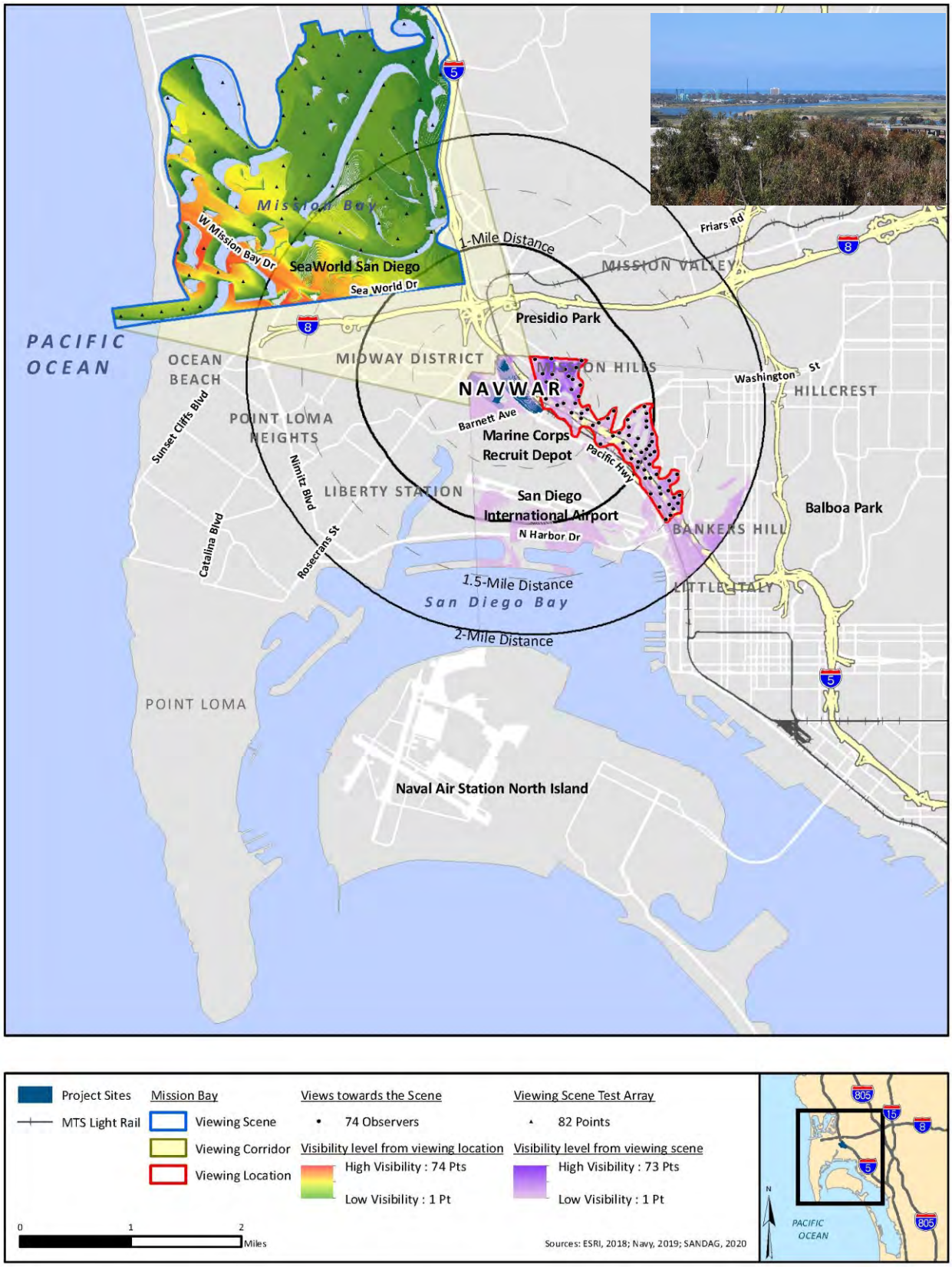


Figure 3.1-2 Mission Bay: Viewing Scene

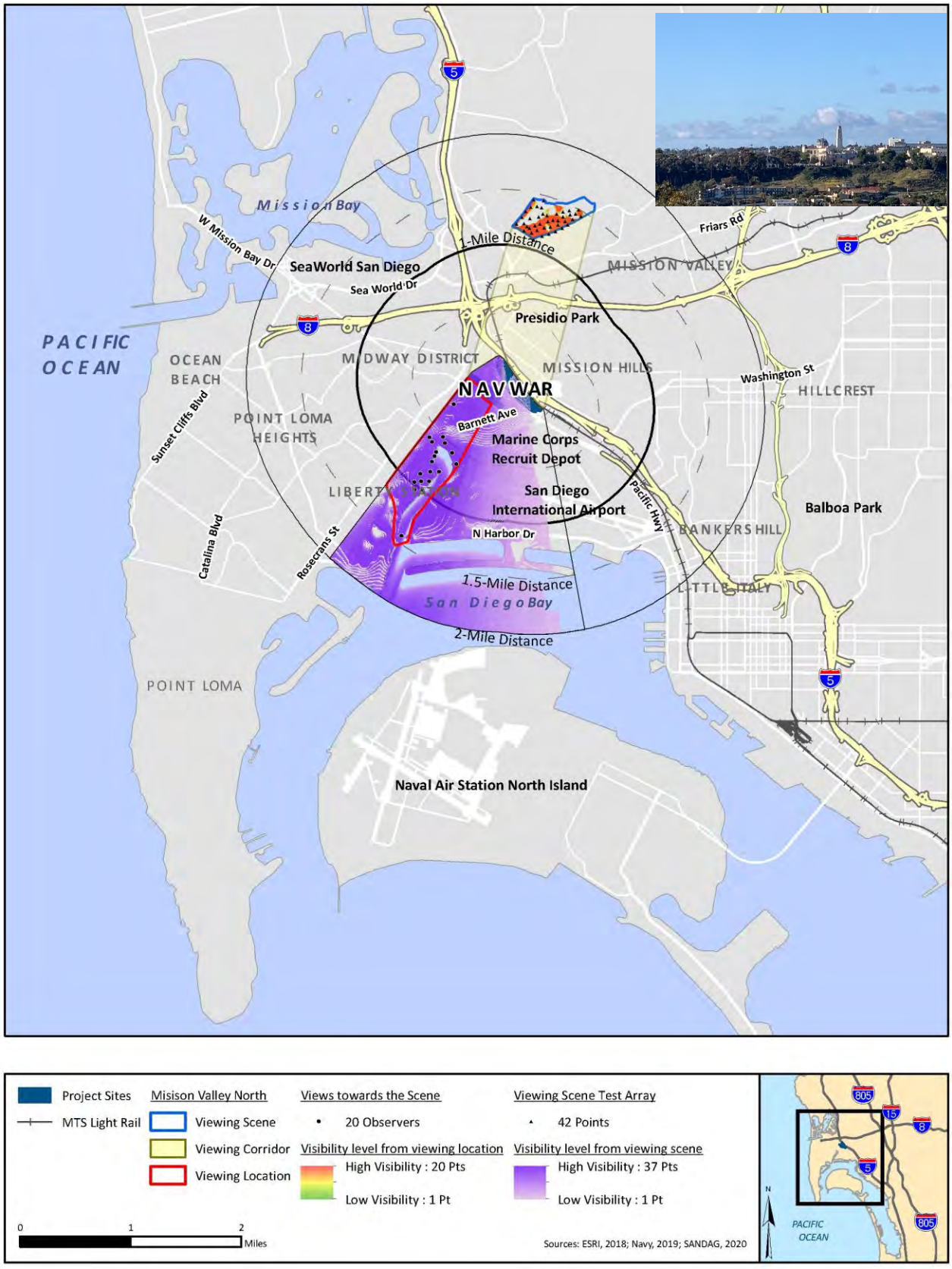


Figure 3.1-3 Mission Valley North: Viewing Scene

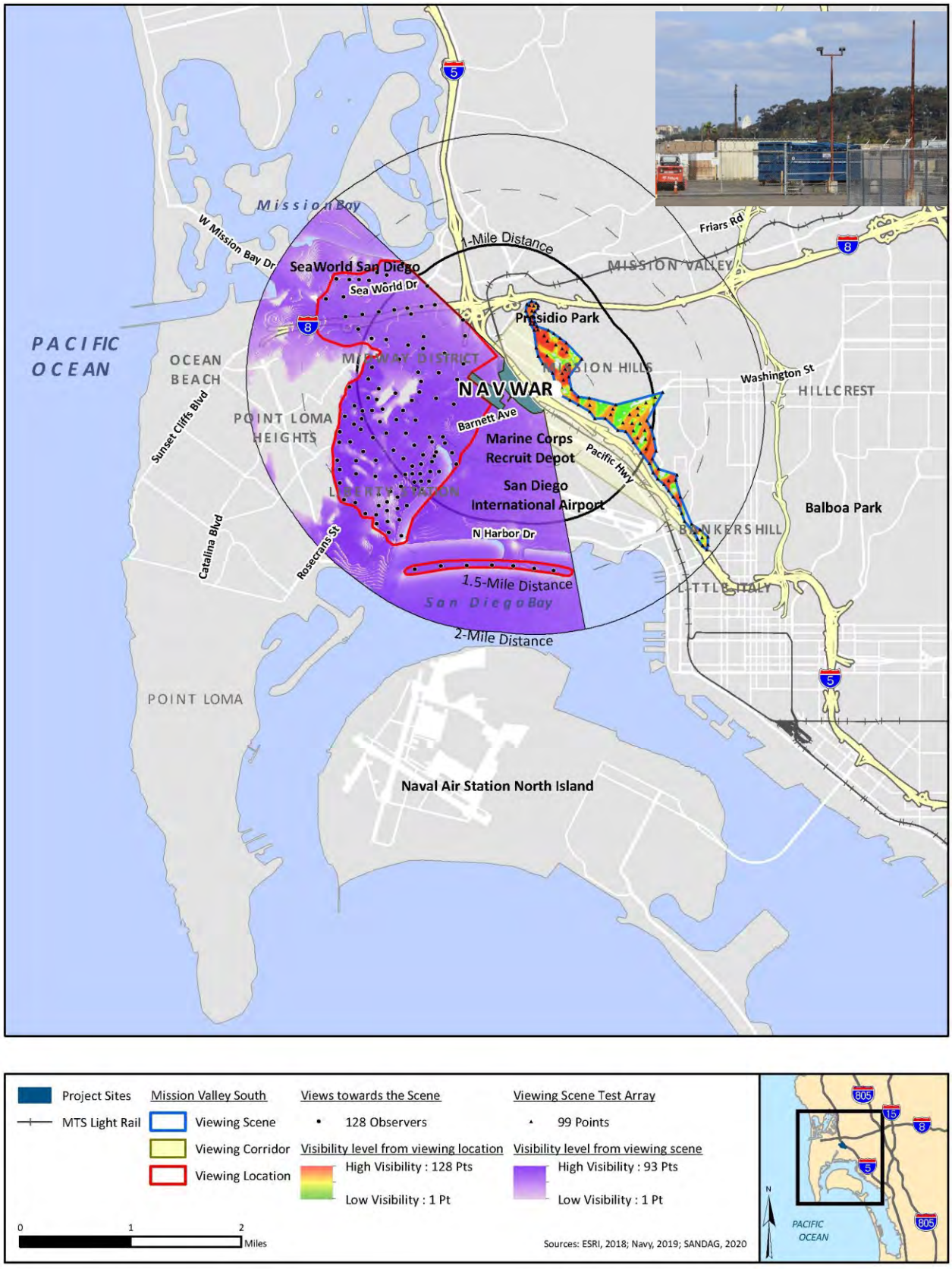


Figure 3.1-4 Mission Valley South/Presidio/Mission Hills: Viewing Scene

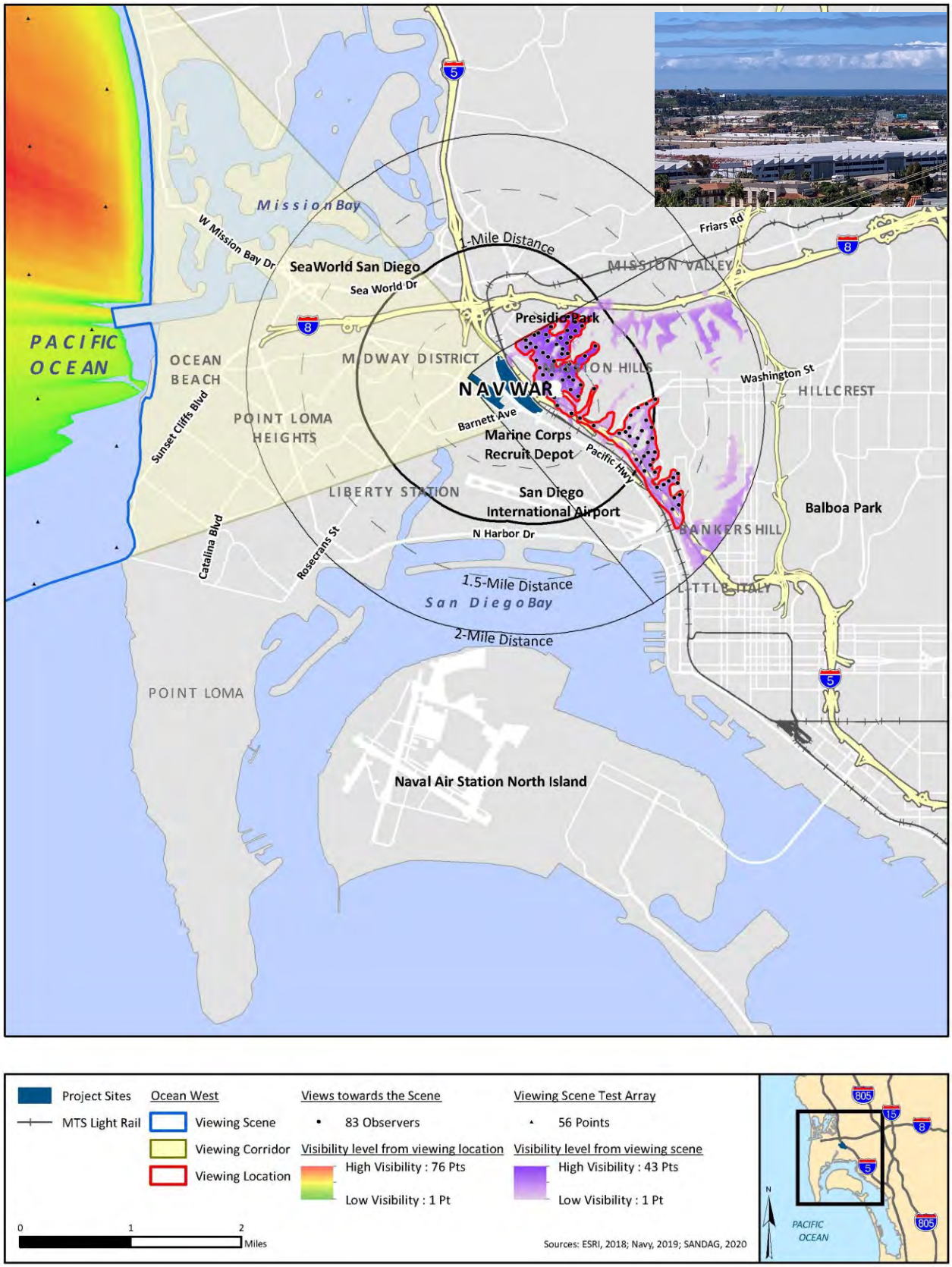


Figure 3.1-5 Ocean to the West: Viewing Scene

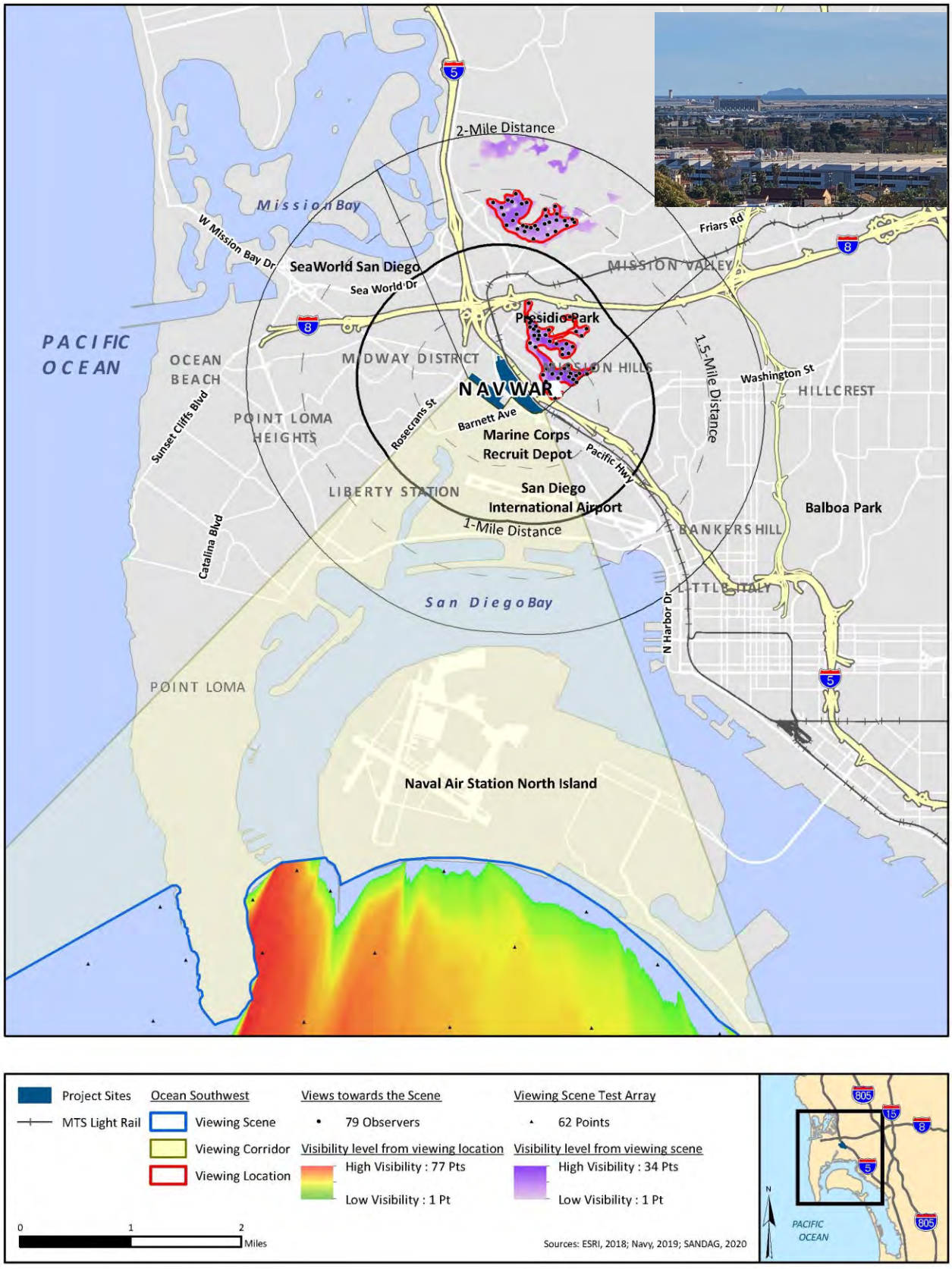


Figure 3.1-6 Ocean to the Southwest: Viewing Scene

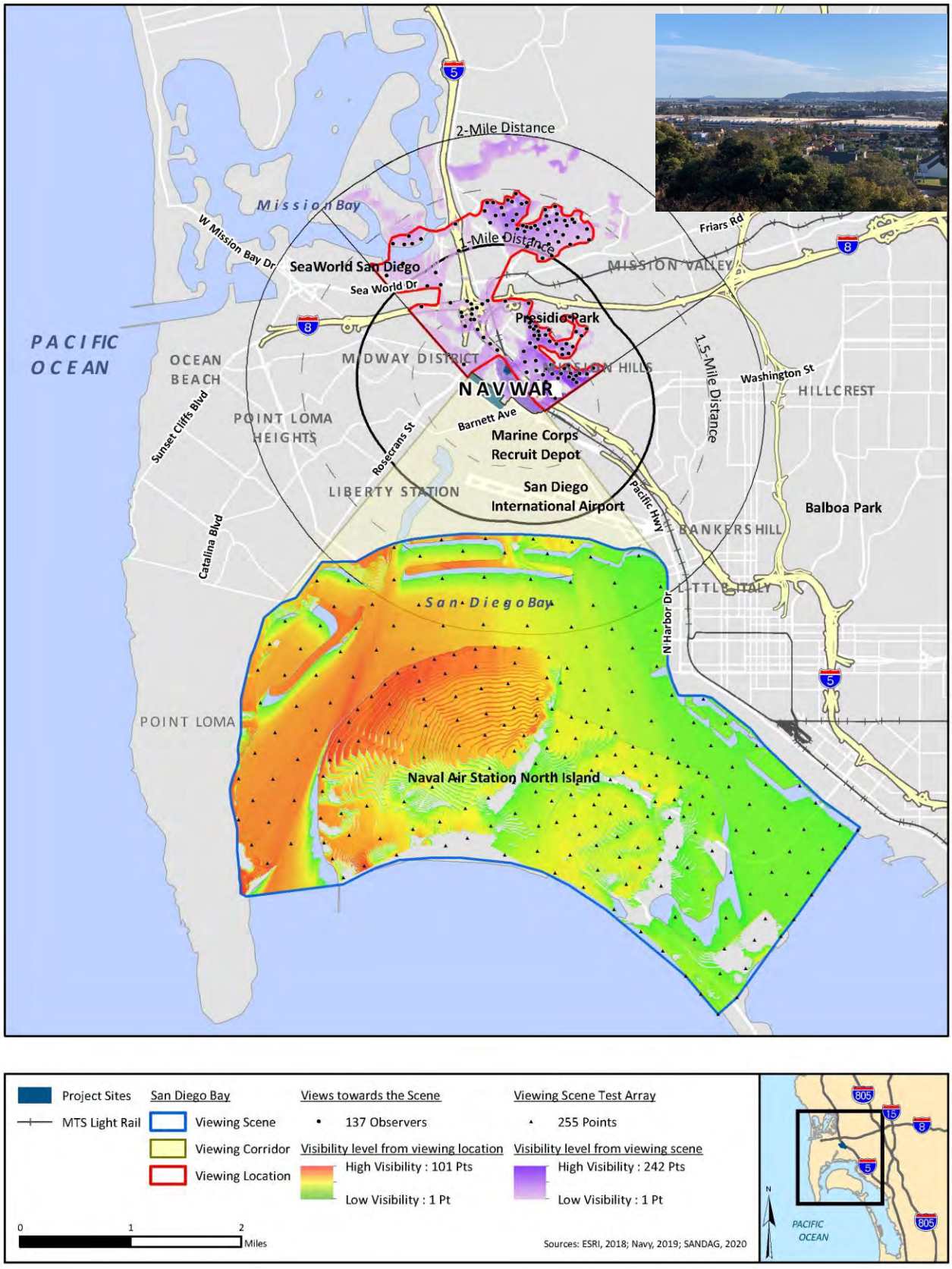


Figure 3.1-7 San Diego Bay and Coronado Peninsula/Island: Viewing Scene

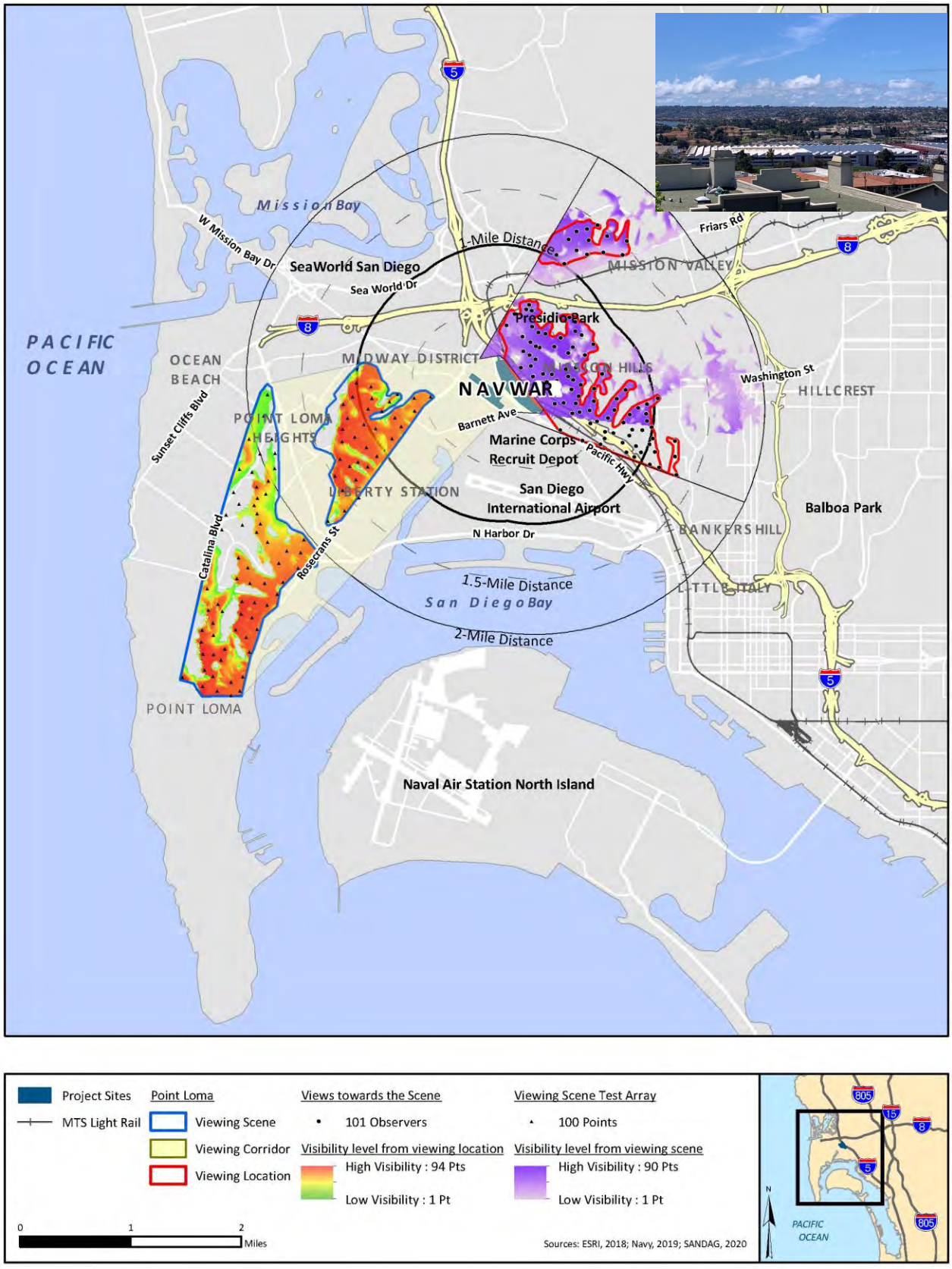


Figure 3.1-8 Point Loma Developed Hillside: Viewing Scene

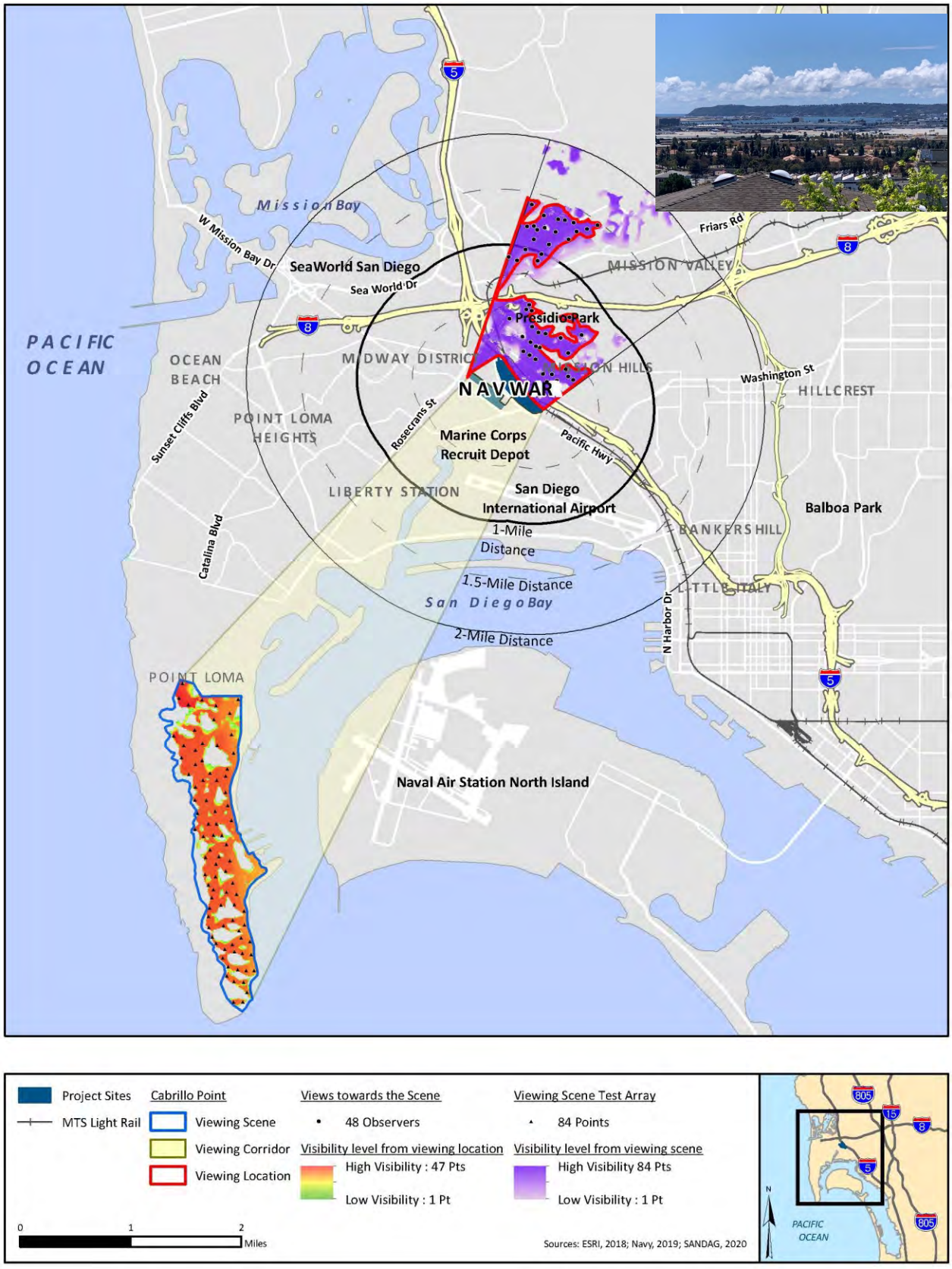


Figure 3.1-9 Cabrillo Point- Undeveloped Hillside: Viewing Scene

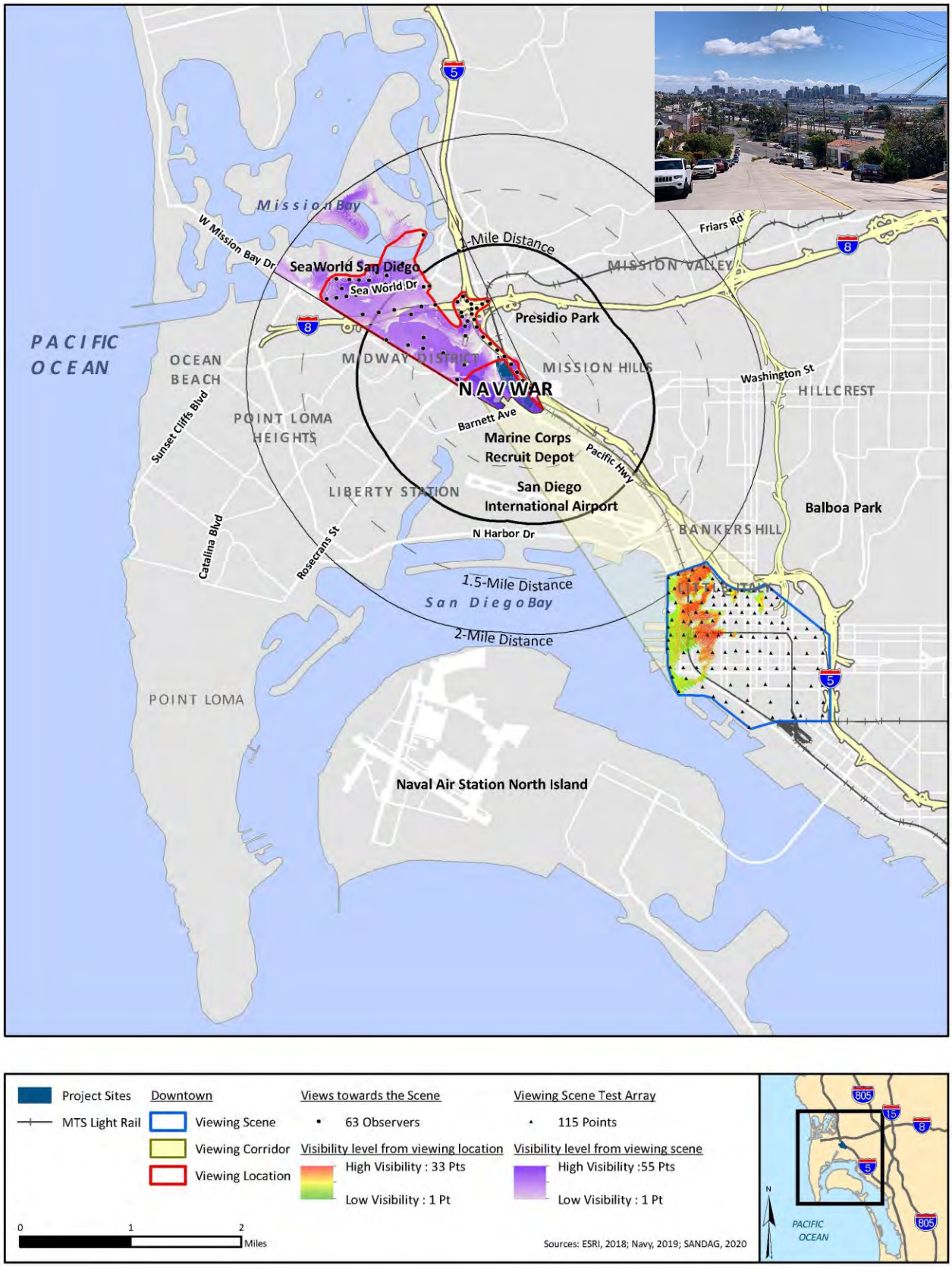


Figure 3.1-10 Downtown Skyline: Viewing Scene

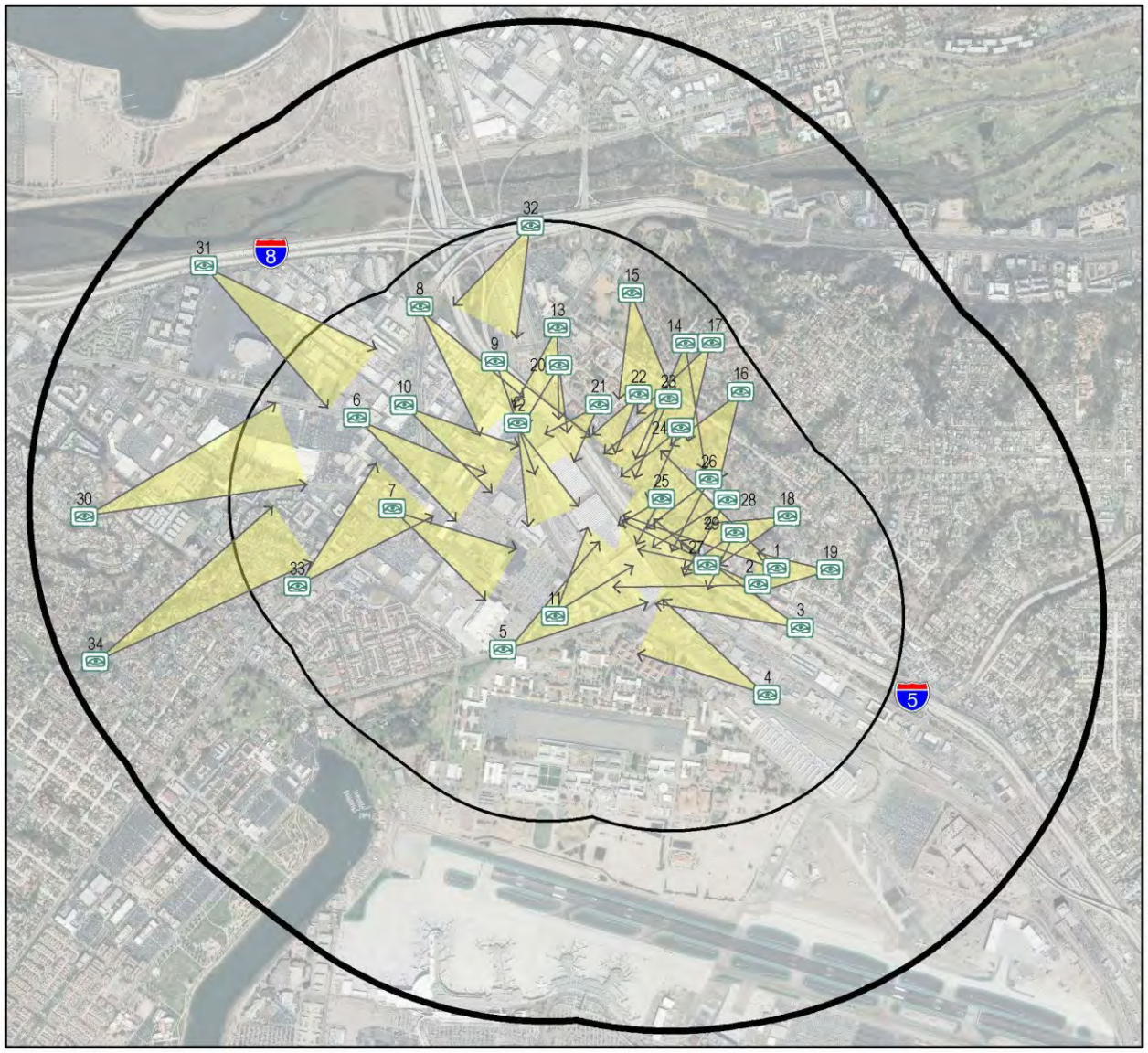


Figure 3.1-11 Public Rights-of-Way that have Visual Access to the Project Site

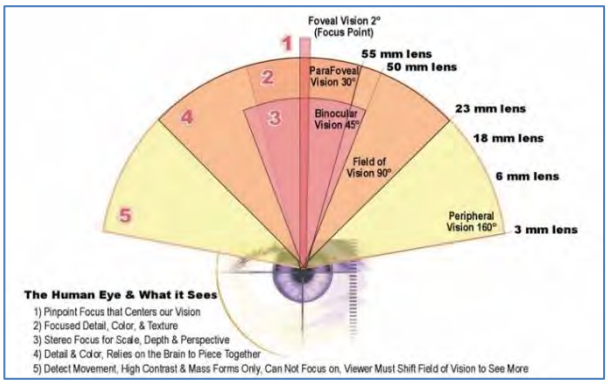
3.2 View Location (KOPs) Analysis

The KOP selection process resulted from the following field visits: December 12, 2019; March 11; March 22; March 24; March 28; April 1; April 3; and April 5, 2020. These field visits were conducted after extensive exploration of the various locations throughout the study area. Over 1,300 photo images were taken to demonstrate views, viewing scenes, visibility, character, and other site conditions. Photos in March and April 2020 used a Canon EOS 6D Mark II camera with integral GPS and leveling capability. The photos used a 24-105mm Image Stabilizer Canon Ew-83M lens. Shots were taken at 24, 35, and 50mm lens settings. A 50mm lens is one that most closely approximates the perspective and scale that the human eye sees. A 24mm wide angle lens approximates a person's field of vision when add to peripheral vision. Using a wide-angle lens, although it approximates our total field of vision, it results in distorting the apparent distance between each element in the visual environment. Likewise, above 55mm, the telephoto characteristics of this lens fore-shortens and brings elements closer together in a manner that the human eye does not see. Since standard 35mm film is no longer commonly used, most digital cameras have a digital cropping process that no longer equates to the lens markings. An adjustment factor is required. For the Canon EOS, the adjustment factor is 1.6. So, a 55mm equivalent shot is taken with a setting on the lens at 34mm. These dynamics can be seen in the photo series below. The diagram shows the angles of view that the different parts of the human eye see. The human brain puts together images that have been captured by the eye. It combines peripheral, binocular, and para-foveal images stitched together as though they are one image. This process is not able to be replicated with static images. The most accurate way of doing simulations is to use large 11 x 17 55mm based simulations with the upper and lower areas cropped to present a wider angle view while maintaining accuracy.

24mm lens setting (38mm equivalent) wide angle photo

35mm lens setting (56mm equiv.) best to match human eye

50mm lens setting (80mm equivalent) telephoto



How the human eye sees and how it compares with focal lengths

3.3 KOPs

Out of the 1,300 photos and over 150 possible viewing locations, 40 KOPs were initially selected to be included in the study. The 150 points were narrowed down by eliminating those that did not represent a large number of possible viewers, did not have an open view where the project could be seen very well, or were primarily limited to private views. The resulting KOPs are shown in Figure 3.3-1.

3.3.1 Initial Modeling of Alternative 3 and Alternative 4

Alternative 3 represents the smallest of the alternatives with the exception of Alternative 1, which is the recapitalization of the existing facilities. Alternative 4 is the tallest and largest massing of the alternatives. The models for Alternative 3 and Alternative 4 were placed in Google Earth, with a 1-to-1 vertical and horizontal distance, to test and graphically display what the proposed project would look like in a generalized manner. The opaque nature and lack of detail of the models are likely to be perceived as being more massive in appearance than they might actually be. However, including any detail on the massing of buildings can miscommunicate the fact that no design of buildings currently exists with the exception of Alternative 4 that represents the Navy and SANDAG partnership. To be consistent and to provide an equal level of review and comparison, the SANDAG designs have not been used in this document. A generic building type that looks more realistic, but that is not stylized with materials or forms, has been used to typify a range of possible building designs. The ten visual simulations in this visual impact assessment have also used this semi-stylized model to provide a greater degree of transparency at the edges of buildings where light will come through outer glass panels. Floor fenestration and detail provides the visual clues needed for the proper perception of the proposed project alternative. The models in Figure 3.3-2 through 3.3-17 show the existing photograph, as well as a model export from SketchUp for Alternative 3 and Alternative 4. Of the 40 KOPs, the top 30 were identified for model overlays to verify the importance and relevance of the KOPs.

3.3.2 CKOPs

The adjusted top 30 KOPs are considered to be candidates for visual simulations. However, a process was needed to narrow down the 30 KOPs to 10 recommended for visual simulations. This needed to be done in a logical fashion using a selection process that considers the wide range of viewing locations, distances, viewer groups, and visibility conditions. This process is shown on a series of tables following the model overlays (see Tables 3.3-1 through 3.3-4). Each KOP is compared against the likely viewers, their sensitivity to visual changes, the number of viewers, the viewing time exposure, distance, feature visibility, viewing scenes, and the potential view blockage of these scenes.

3.3.3 Recommended KOPs for Simulation

Tables 3.3-1 through 3.3-4 analyzed the conditions and factors that are found in each area around the KOP. This analysis was used to determine which KOPs warrant developing a model overlay prepared on top of existing photos and which KOPs should be fully simulated. If a KOP is not suggested for even a model overlay, it was determined that no significant visual impact could result from this observation point. If the KOP is not suggested for a simulation, it generally means that some other KOP is more representative of a visual issue, a viewer group, or a viewing scene, and will be used as a proxy for what the visual changes are likely to be and if impacts are likely to occur.

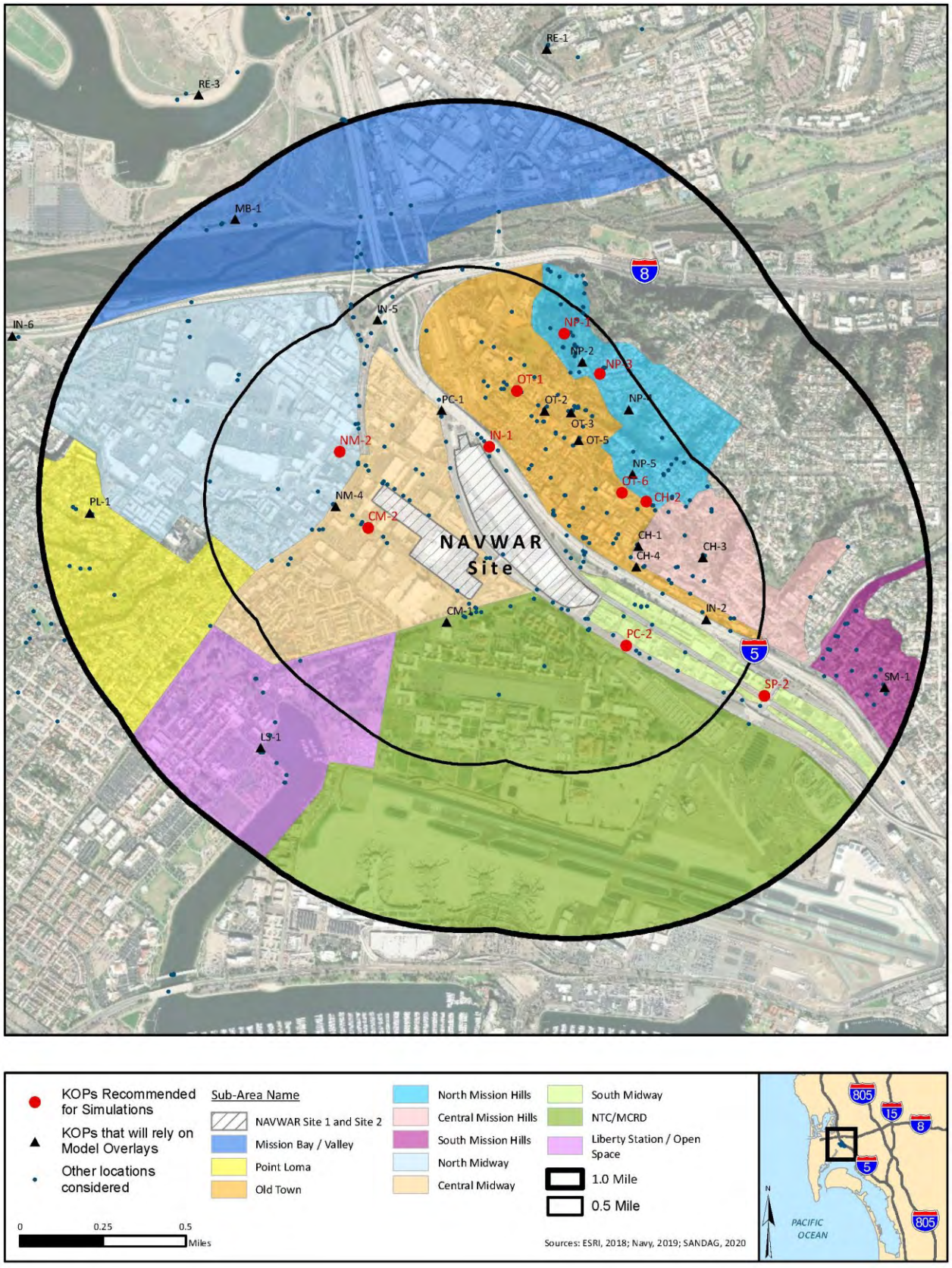


Figure 3.3-1 KOP Locations and Recommended Priorities

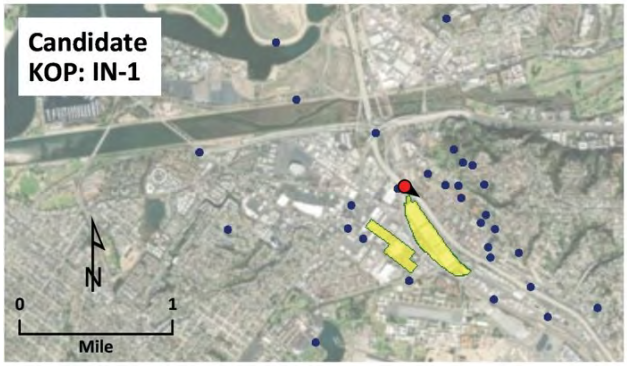
Table 3.3-1 KOPs for Freeways, Highways and Remote Areas

Key Observation Points		Viewer Conditions				Project Distance	Project Features that May be Visible			View Dynamics		Recommendations	
KOP #	Key Observation Point Name	Viewer Groups	Viewer Sensitivity	Quantity of Viewers	Viewer Duration Average	Distance from Viewer to Proposed Project	High Rise Towers	Mid-rise Towers	Elevated Project Platform @ 35'	Blocks View to Unique Viewing Scene	Blocks a Portion of the Ocean Horizon Line	Simulate?	Notes or Suggested Alternative
SUB-AREA: FREEWAYS AND HIGHWAYS													
IN-1	I-5 Corridor southbound	3 & 10	M	VH	S	FG	VV	VV	VV	10	S	Yes	Highly visible, large # of viewers, downtown view
IN-2	I-5 Corridor northbound	3 & 10	M	VH	S	FG	VV	VV	MV	2	M	Yes	Straight on view, high number of viewers
IN-3	I-5 Corridor off-ramp to Rosecrans	3 & 10	M	H	S	FG	MV	MV	N	10	M	No	Use IN-1 or IN-2 or IN-5
IN-4	I-5 / Pacific Hwy overpass	3 & 10	M	H	S	BG	HV	MV	SV	10	N	No	Too distant of a view
IN-5	I-8 Corridor westbound ramp to Rosecrans	3 & 10	M	H	M	FG	HV	MV	MV	10	N	Yes	Use IN-1 for more viewers
IN-6	I-8 Corridor eastbound	3 & 10	M	VH	VS	BG	HV	MV	SV	4	N	No	Too distant of a view
PC-1	Pacific Coast Highway southbound	3,4,6,7 & 8	L	H	S	FG	HV	HV	HV	N	N	No	Too close and design detail does not exist
PC-2	Pacific Coast Highway northbound	3,4,6,7 & 8	L	H	S	FG	HV	HV	MV	N	N	Yes	Good view with a lot of viewers & industrial context
SUB-AREA: REMOTE (BEYOND 1-MILE)													
RE-1	USD public plaza and Peace Gardens	5,7,9 & 10	MH	ML	ML	BG	MV	MV	MV	6 &7	M	Yes	High visual quality and open view
RE-2	Liberty Station bike / ped bridge / Harbor Dr.	1,2,4,5, 6,7,8,9, & 10	MH	M	M	BG	MV	MV	N	3 & 4	N	No	Too distant of a view
RE-3	Fiesta Island	4,5 & 10	MH	M	ML	BG	MV	SV	N	10	N	No	Too distant of a view

LEGEND

VIEWER GROUPS	SENSITIVE TO CHANGE	# OF VIEWERS	VIEW TIME EXPOSURE	DISTANCE	FEATURE VISIBILITY	VIEWING SCENES	VIEW BLOCKAGE
1. Property Owner / Resident	= High	L=Low: <10	VS=Very Short: less than 5 seconds	FG= Foreground: ≤ 1/2 of a mile (2,640')	SV= Sight Visibility: Sees at least one major project feature	1. San Diego River	N=No Blockage
2. Renting Resident	= Moderate High	ML=Moderate Low: 10-100				2. Mission Bay	D=Distant, part of view scene
3. Freeway Driver	= Moderate	M=Moderate: 100-1,000	S=Short: 5 seconds - 1 minute	MG= Middleground: 1/1 -1 mile (to 5,280')	MV: Moderately Visible: Sees unobstructed views of several of the features	3. Mission Valley Gateway North (USD)	S=Slight < 5% View Blockage
4. General Street Driver	= Low	MH=Mod. High: 1,000-5,000				4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
5. Walker / Jogger / Cyclist	= Moderate High	H=High: 5,000-50,000	M=Moderate: 1 minute to 5 minutes	BG= Background: 1 to 3 mile (out to 15,840')	HV= Highly Visible: Sees unobstructed views of most of the features, with several complete views of major features	5. Ocean to the West	M=Moderate 10-15%
6. Tourist User	= Low	VH=Very High: >50,000				6. Ocean to the Southwest	H=High >15%
7. Employee in the Unit	= Low		ML=Moderate Long: 5 minutes to 1 hour	DB= Distant Background: >3 mile	V V: Very Highly Visible: Sees unobstructed views of all the features and these views are dominated by the features	7. San Diego Bay & Coronado Island	
8. Customer in the Unit	= Moderate					8. Pt. Loma Developed Hillside	
9. School Attendee	= Moderate High		L=Long: > 1 hour			9. Cabrillo Point Undeveloped Hillside	
10. Tourist / Visitor	= Moderate High					10. Downtown Skyline	

SUB-AREA: FREEWAYS AND HIGHWAYS

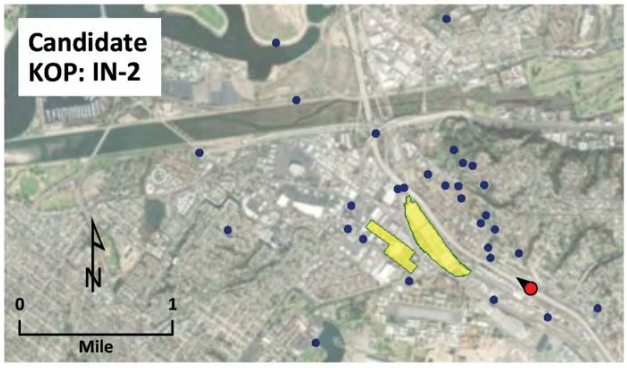


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



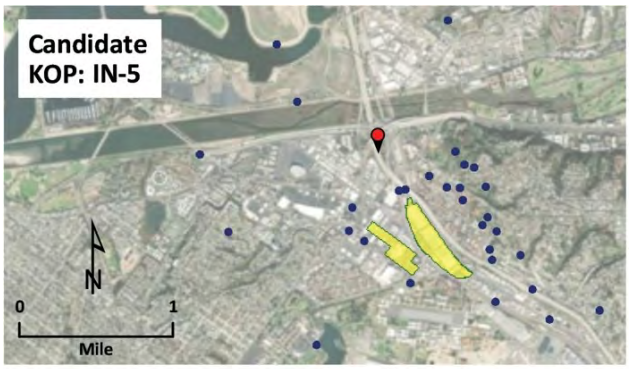
Location

Field Photo

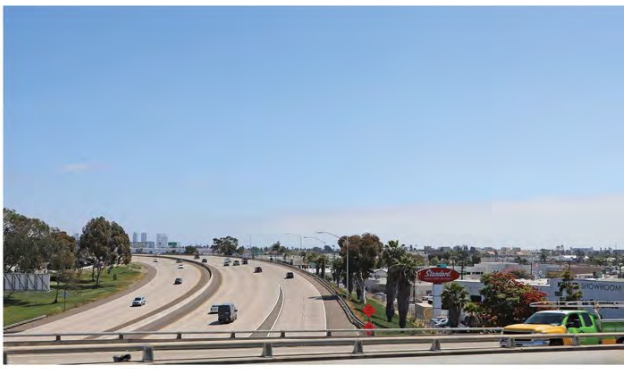
Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-2 Model Overlays for KOP IN-1 and IN-2



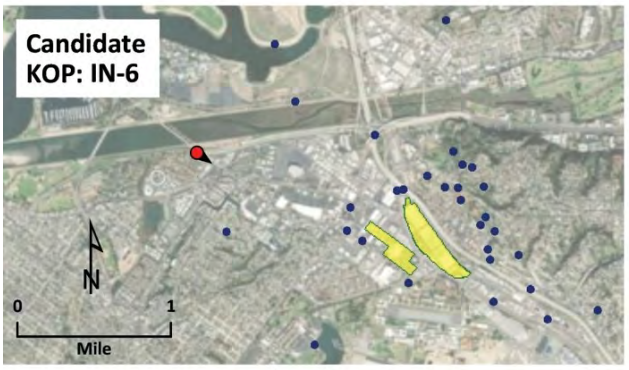
Location



Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



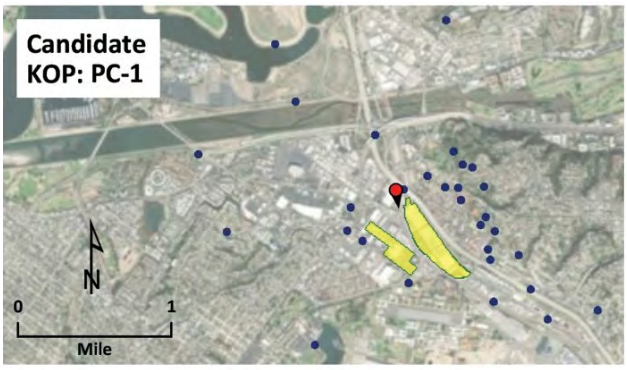
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

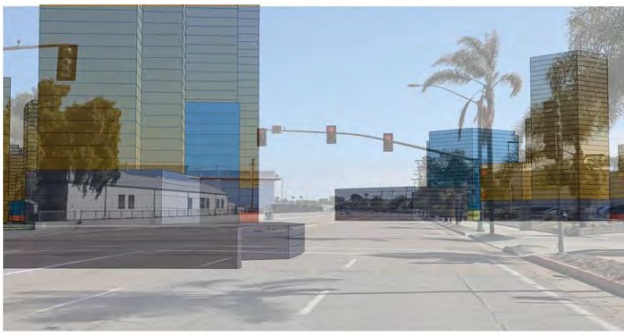
Figure 3.3-3 Model Overlays for KOP IN-5 and IN-6



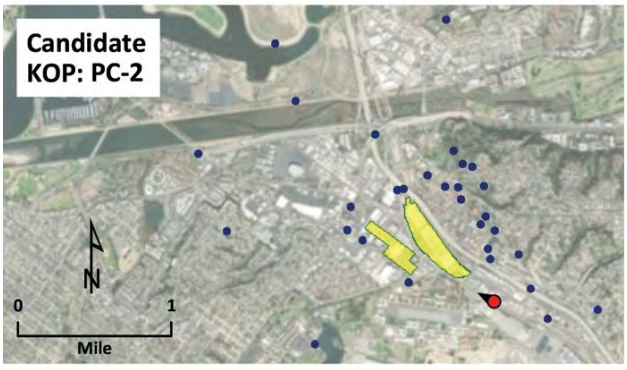
Location

Field Photo

Model Overlay, Alternative 3



Model Overlay, Alternative 4



Location

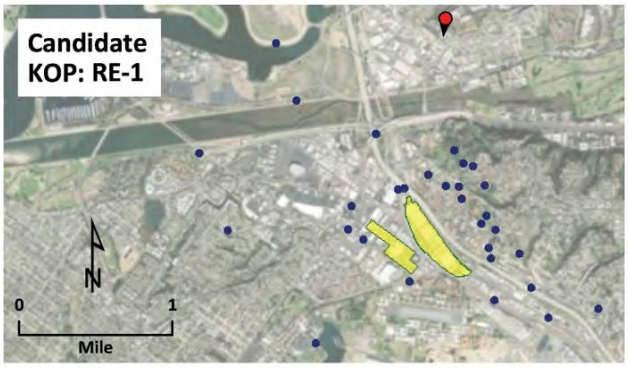
Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-4 Model Overlays for KOP PC-1 and PC-2

SUB-AREA: REMOTE (BEYOND 1-MILE)

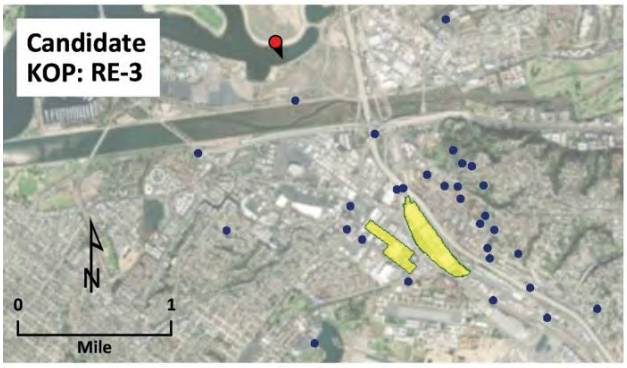


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-5 Model Overlays for KOP RE-1 and RE-3

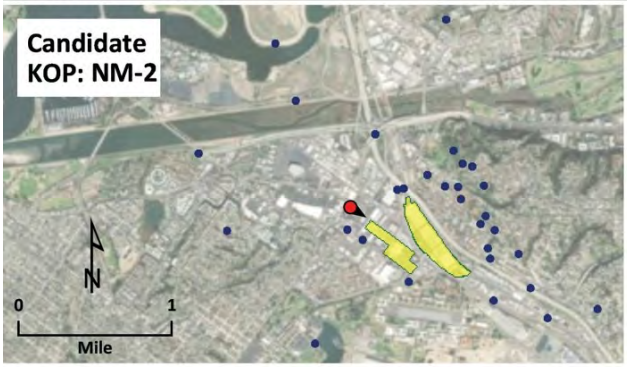
Table 3.3-2 KOPs for North, Central, South Midway and Mission Bay/Mission Valley

Key Observation Points		Viewer Conditions				Project Distance	Project Features that May be Visible			View Dynamics		Recommendations	
KOP #	Key Observation Point Name	Viewer Groups	Viewer Sensitivity	Quantity of Viewers	Viewer Duration Average	Distance from Viewer to Proposed Project	High Rise Towers	Mid-rise Towers	Elevated Project Platform @ 35'	Blocks View to Unique Viewing Scene	Blocks a Portion of the Ocean Horizon Line	Simulate?	Notes or Suggested Alternative
NORTH MIDWAY													
NM-1	Sports Arena parking lot	3,4,7 & 8	L	MH	M	MG	HV	MV	N	10	N	No	Too distant of a view
NM-2	Sports Arena and Rosecrans Site 1	4,5,6,7 & 8	M	MH	M	FG	HV	HV	MV	N	N	Yes	Contrast between ex. conditions & future
NM-3	Sports Arena and Rosecrans Site 2	4,5,7 & 8	M	M	S	FG	HV	MV	SV	N	N	No	Too close, use NM-2
NM-4	Midway and Rosecrans	4,5,6,7 & 8	M	MH	S	FG	HV	MV	SV	N	N	No	NM-2 should be characteristic for district
CENTRAL MIDWAY													
CM-1	Barnett and MCRD	3 & 10	M	H	M	FG	HV	MV	MV	10	N	No	Too close of a view, use CM-2
CM-2	Midway at Site 2	4,5,6,7 & 8	M	MH	S	FG	HV	MV	SV	4	N	Yes	Representative of commercial focus
CM-3	Midway at Site 2	3,4,6,7 & 8	L	H	S	FG	HV	HV	MV	3 & 4	N	No	Too close and design detail does not exist
SOUTH MIDWAY / PACIFIC													
SP-1	Hancock industrial area	2,3,4,6, 7 & 8	L	ML	S	FG	HV	HV	SV	N	N	No	Too similar to PC-2
SP-2	Trolley station at Hancock and Washington St.	3,4,6,7 & 8	M	M	M	MG	MV	MV	N	M	N	Yes	Represents a broad set of viewer groups
MISSION BAY / VALLEY													
MB-1	San Diego River path	3,4,5 & 10	MH	M	M	MG	MV	MV	N	10	N	Yes	Good open space representation

LEGEND

VIEWER GROUPS	SENSITIVE TO CHANGE	# OF VIEWERS	VIEW TIME EXPOSURE	DISTANCE	FEATURE VISIBILITY	VIEWING SCENES	VIEW BLOCKAGE
1. Property Owner / Resident	= High	L=Low: <10	VS=Very Short: less than 5 seconds	FG= Foreground: < 1/2 of a mile (2,640')	SV= Slight Visibility: Sees at least one major project feature	1. San Diego River	N=No Blockage
2. Renting Resident	= Moderate High	ML=Moderate Low: 10-100				2. Mission Bay	DB=Distant, part of view scene
3. Freeway Driver	= Moderate	M=Moderate: 100-1,000	S=Short: 5 seconds - 1 minute	MG= Middleground: 1/1-1 mile (to 5,280')	MV: Moderately Visible: Sees unobstructed views of several of the features	3. Mission Valley Gateway North (USD)	Sl=Slight < 5% View Blockage
4. General Street Driver	= Low	MH=Mod. High: 1,000-5,000				4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
5. Walker / Jogger / Cyclist	= Moderate High	H=High: 5,000-50,000	M=Moderate: 1 minute to 5 minutes	BG= Background: 1 to 3 mile (out to 15,840')	HV= Highly Visible: Sees unobstructed views of most of the features, with several complete views of major features	5. Ocean to the West	M=Moderate 10-15%
6. Transit User	= Low	VH=Very High: >50,000				6. Ocean to the Southwest	H=High >15%
7. Employee in the Unit	= Low		ML=Moderate Long: 5 minutes to 1 hour	DB= Distant Background: >3 mile	V V: Very Highly Visible: Sees unobstructed views of all the features and these views are dominated by the features	7. San Diego Bay & Coronado Island	
8. Customer in the Unit	= Moderate					8. Pt. Loma Developed Hillside	
9. School Attendee	= Moderate High		L=Long: > 1 hour			9. Cabrillo Point-Undeveloped Hillside	
10. Tourist / Visitor	= Moderate High					10. Downtown Skyline	

NORTH MIDWAY

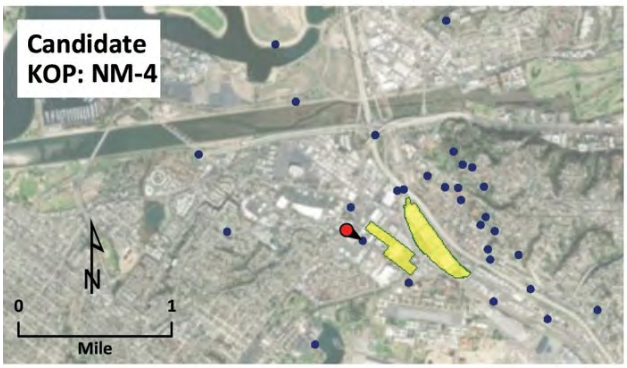


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



Location

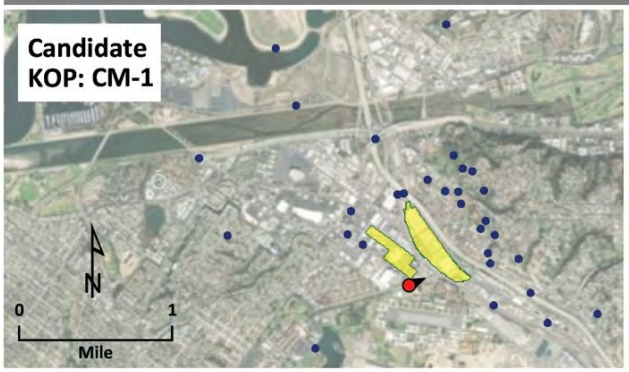
Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-6 Model Overlays for KOP NM-2 and NM-4

CENTRAL MIDWAY

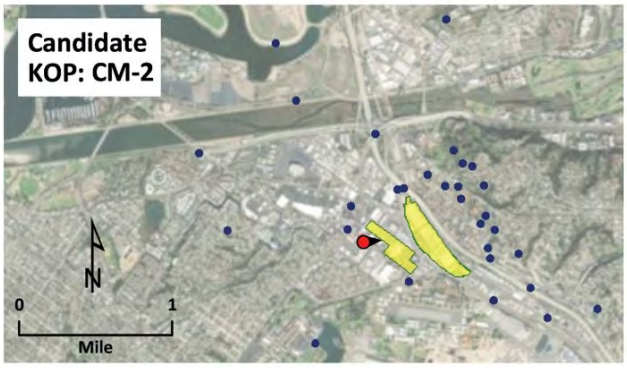


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



Location

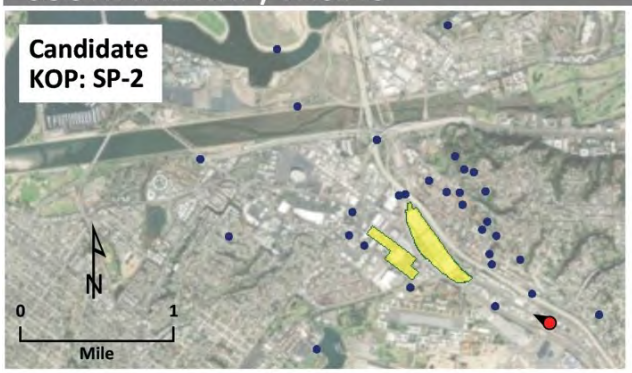
Field Photo

Model Overlay, Alternative 3

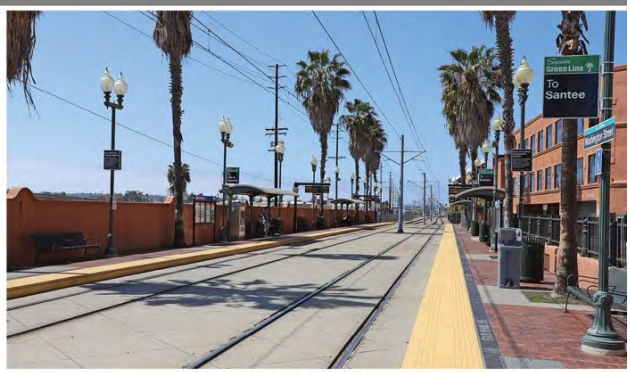
Model Overlay, Alternative 4

Figure 3.3-7 Model Overlays for KOP CM-1 and CM-2

SOUTH MIDWAY / PACIFIC



Location

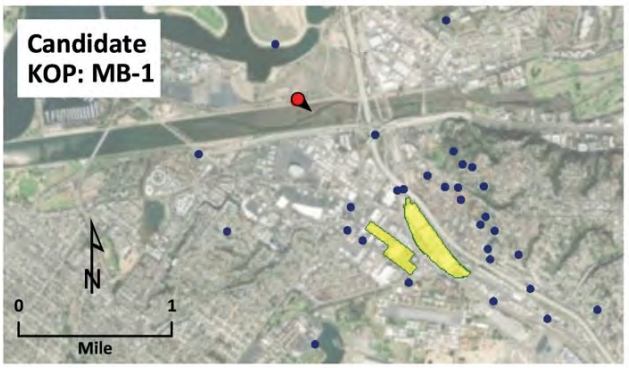


Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

MISSION BAY / VALLEY



Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-8 Model Overlays for KOP SP-2 and MB-1

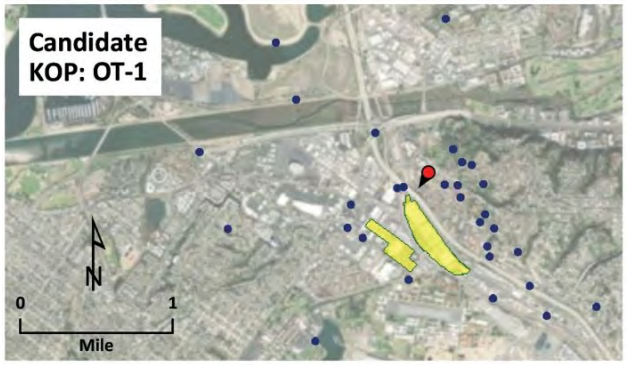
Table 3.3-3 KOPs for Old Town and Liberty Station/MCRD/Point Loma

Key Observation Points		Viewer Conditions				Project Distance	Project Features that May be Visible			View Dynamics		Recommendations	
KOP #	Key Observation Point Name	Viewer Groups	Viewer Sensitivity	Quantity of Viewers	Viewer Duration Average	Distance from Viewer to Proposed Project	High Rise Towers	Mid-rise Towers	Elevated Project Platform @ 35'	Blocks View to Unique Viewing Scene	Blocks a Portion of the Ocean Horizon Line	Simulate?	Notes or Suggested Alternative
OLDTOWN													
OT-1	Park in Old Town State Park	5,7,8 & 10	H	MH	M	FG	HV	MV	SV	N	N	Yes	Important public gathering place or use OT-2
OT-2	Old Town Church on Twigg	4,5,7,8 & 10	MH	MH	S	FG	HV	HV	SV	N	N	Yes	Open view of project in context with historical
OT-3	Harney Ave. in core of retail areas	1,2,4,5, 7,8,9 &10	MH	MH	M	FG	HV	MV	SV	8	N	Yes	Center of retail area with slightly higher viewing
OT-4	Heritage Park on Harney St.	1,2,4,5, 7,8,9 &10	H	M	M	FG	HV	MV	SV	8	N	No	Park site is important but visibility out of it is limited
OT-5	Conde Street at core of Old Town retail area	1,2,3,4, 7,8 &10	H	M	M	FG	HV	HV	MV	N	N	No	Covered by simulations from OT-3 or OT-6
OT-6	Old Town Ave. at south end of retail street	1,2,4,5, 7,8,9 &10	MH	ML	S	FG	HV	MV	MV	6,7,8 & 9	Y	Yes	Higher views & high tourist area
OT-7	Moore Street / I-5 off and on-ramp	1,2,3,4, 7,8 &10	M	H	S	FG	HV	HV	HV	N	N	No	Covered by freeway sims as long as IN-2 is used
LIBERTY STATION / CHANNEL / MCRD OPEN SPACE													
LS-1	Walking promenade along channel at Liberty Station	4,5,8,9 & 10	MH	MH	M	MG	MV	Sv	N	4	N	No	Too distant
POINT LOMA / LOMA PORTAL													
PL-1	Leland Street overlook of Midway	1,2,4 & 5	MH	M	S	MG	MV	MV	SV	4	N	No	Too distant of a view

LEGEND

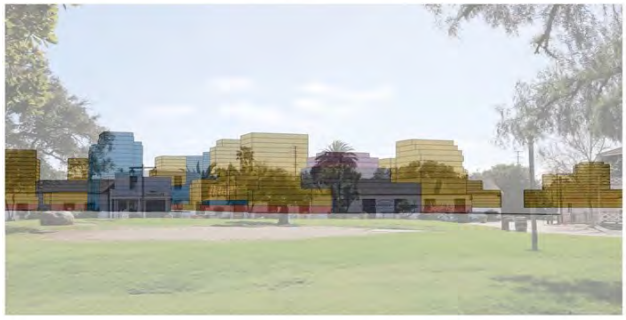
VIEWER GROUPS	SENSITIVE TO CHANGE	# OF VIEWERS	VIEW TIME EXPOSURE	DISTANCE	FEATURE VISIBILITY	VIEWING SCENES	VIEW BLOCKAGE
1. Property Owner / Resident	= High	L=Low: <10	VS=Very Short: less than 5 seconds	FG= Foreground: < 1/2 of a mile (2,640')	SV= Slight Visibility: Sees at least one major project feature	1. San Diego River	N=No Blockage
2. Renting Resident	= Moderate High	ML=Moderate Low: 10-100				2. Mission Bay	D=Distant, part of view scene
3. Freeway Driver	= Moderate	M=Moderate: 100-1,000	S=Short: 5 seconds - 1 minute	MG= Middleground: 1/2 -1 mile (to 5,280')	MV: Moderately Visible: Sees unobstructed views of several of the features	3. Mission Valley Gateway North (USD)	S=Slight < 5% View Blockage
4. General Street Driver	= Low	MH=Mod. High: 1,000-5,000				4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
5. Walker / Jogger / Cyclist	= Moderate High	H=High: 5,000-50,000	M=Moderate: 1 minute to 5 minutes	BG= Background: 1 to 3 mile (out to 15,840')	HV= Highly Visible: Sees unobstructed views of most of the features, with several complete views of major features	5. Ocean to the West	M=Moderate 10-15%
6. Transit User	= Low	VH=Very High: >50,000				6. Ocean to the Southwest	H=High >15%
7. Employee in the Unit	= Low		ML=Moderate Long: 5 minutes to 1 hour	DB= Distant Background: >3 mile	V V: Very Highly Visible: Sees unobstructed views of all the features and these views are dominated by the features	7. San Diego Bay & Coronado Island	
8. Customer in the Unit	= Moderate					8. Pt. Loma Developed Hillside	
9. School Attendee	= Moderate High		L=Long: > 1 hour			9. Cabrillo Point-Undeveloped Hillside	
10. Tourist / Visitor	= Moderate High					10. Downtown Skyline	

OLDTOWN

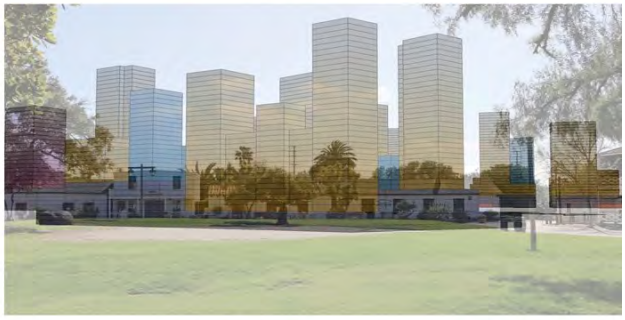


Location

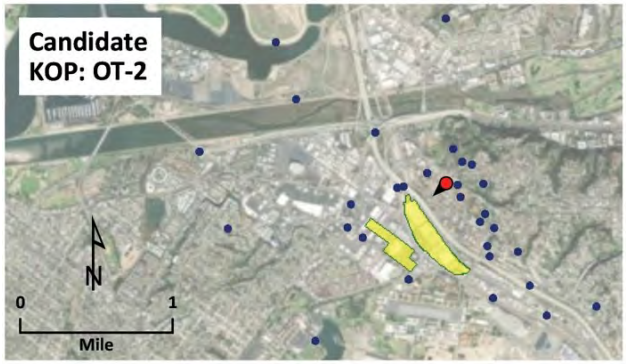
Field Photo



Model Overlay, Alternative 3



Model Overlay, Alternative 4



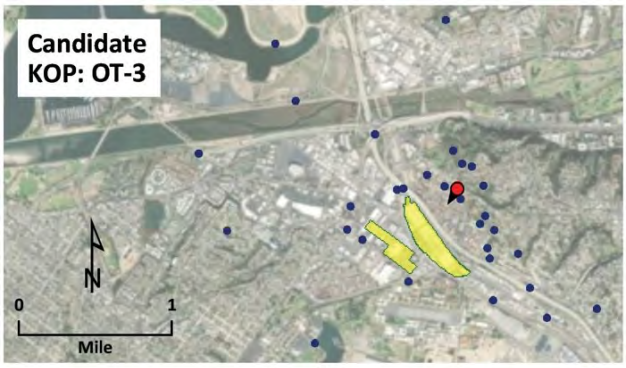
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-9 Model Overlays for KOP OT-1 and OT-2

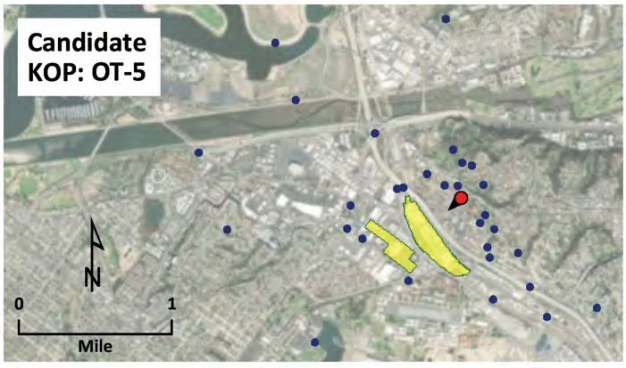


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



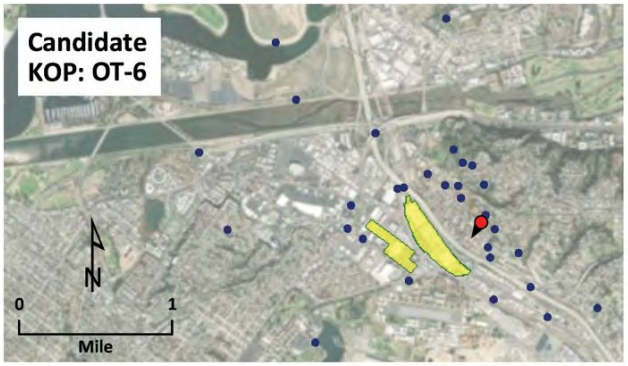
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-10 Model Overlays for KOP OT-3 and OT-5



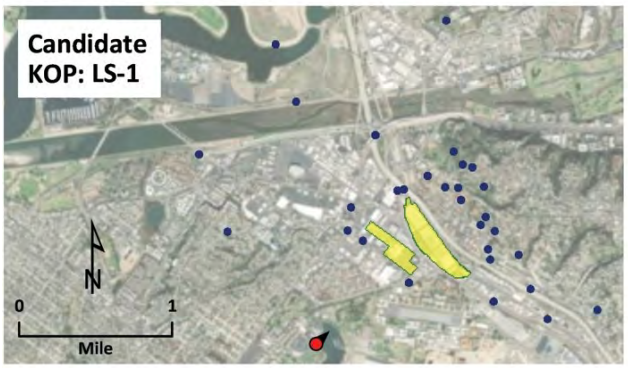
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

LIBERTY STATION / CHANNEL / MCRD OPEN SPACE



Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-11 Model Overlays for KOP OT-6 and LS-1

Table 3.3-4 KOPs for Mission Hills

Key Observation Points		Viewer Conditions				Project Distance	Project Features that May be Visible			View Dynamics		Recommendations	
KOP #	Key Observation Point Name	Viewer Groups	Viewer Sensitivity	Quantity of Viewers	Viewer Duration Average	Distance from Viewer to Proposed Project	High Rise Towers	Mid-rise Towers	Elevated Project Platform @ 35'	Blocks View to Unique Viewing Scene	Blocks a Portion of the Ocean Horizon Line	Simulate?	Notes or Suggested Alternative
NORTH MISSION HILLS /PRESIDIO													
NP-1	Presidio Mormon Memorial Peak	1,2,4,5 & 10	H	M	M	FG	HV	HV	HV	6,7,8 & 9	Y	Yes	Important public park and viewpoint
NP-2	Presidio Park and Cosoy	1,2,4,5 & 10	H	M	M	FG	HV	HV	HV	6,7 & 9	Y	Yes	Important view from public street
NP-3	Altamirano and Presidio Drive	1,2,4,5 & 10	H	M	S	FG	MV	MV	MV	6,7,8 & 9	N	Yes	Important open intersection with substantial views
NP-4	Arista Street (Partially Private View)	1,2,5 & 10	MH	ML	L	FG	HV	MV	SV	6,7 & 9	Y	No	Too limited of access
NP-5	Private view on San Juan Rd. (Private View)	1,2 & 5	H	L	L	FG	HV	MV	MV	6,7,8 & 9	Y	No	Mostly private views use CM-1 instead
CENTRAL MISSION HILLS													
CH-1	Public view at the end of California Street	1,2,4 & 5	H	L	L	FG	HV	HV	HV	1,2,5 & 8	Y	Yes	Good example of view blockage to the north west
CH-2	Hayden and Linwood Public Views down Roadway	1,2,4 & 5	H	L	L	FG	HV	HV	HV	1,2,5 & 8	Y	Yes	Represents typical private view (CH-1 works as well)
CH-3	Curved road along Bandini Street	1,2,4,5, & 10	H	MH	S	FG	MV	SV	N	1,2, & 5	Y	Yes	Important for Central Mission Hills
CH-4	San Diego Avenue along edge of freeway	All viewers	M	M	S	FG	HV	MV	MV	1,2 & 5	N	No	This is covered by CH-1, 2 or IN-2
SOUTH MISSION HILLS / MIDDLETOWN													
SM-1	Middletown views	1,2,4 & 5	MH	ML	ML	MG	MV	SV	N	5	D & S	No	Too distant of a view

LEGEND

VIEWER GROUPS	SENSITIVE TO CHANGE	# OF VIEWERS	VIEW TIME EXPOSURE	DISTANCE	FEATURE VISIBILITY	VIEWING SCENES	VIEW BLOCKAGE
1. Property Owner / Resident	= High	L=Low: <10	Vs=Very Short: less than 5 seconds	FGs Foreground: < 1/2 of A mile (2,640')	SVs Slight Visibility: Sees at least one major project feature	1. San Diego River	N=No Blockage
2. Renting Resident	= Moderate High	ML=Moderate Low: 10-100				2. Mission Bay	DsDistant, part of view scene
3. Freeway Driver	= Moderate	M=Moderate: 100-1,000	S=Short: 5 seconds - 1 minute	MG= Middleground: 1/1 -1 mile (to 5,280')	MV: Moderately Visible: Sees unobstructed views of several of the features	3. Mission Valley Gateway North (USD)	Ss=slight < 5% View Blockage
4. General Street Driver	= Low	MH=Mod. High: 1,000-5,000				4. Mission Valley (Presidio & Mission Hills)	L=Low 5-10%
5. Walker / Jogger / Cyclist	= Moderate High	H=High: 5,000-50,000	Me=Moderate: 1 minute to 5 minutes	BGs Background: 1 to 3 mile (out to 15,840')	HVs Highly Visible: Sees unobstructed views of most of the features, with several complete views of major features	5. Ocean to the West	M=Moderate 10-15%
6. Transit User	= Low	VH=Very High: >50,000				6. Ocean to the Southwest	LsHigh >15%
7. Employee in the Unit	= Low		ML=Moderate Long: 5 minutes to 1 hour	DBs Distant Background: >3 mile	V V: Very Highly Visible: Sees unobstructed views of all the features and these views are dominated by the features	7. San Diego Bay & Coronado Island	
8. Customer in the Unit	= Moderate					8. Pt. Loma Developed Hillside	
9. School Attendee	= Moderate High		L=Long: > 1 hour			9. Cabrillo Point Undeveloped Hillside	
10. Tourist / Visitor	= Moderate High					10. Downtown Skyline	

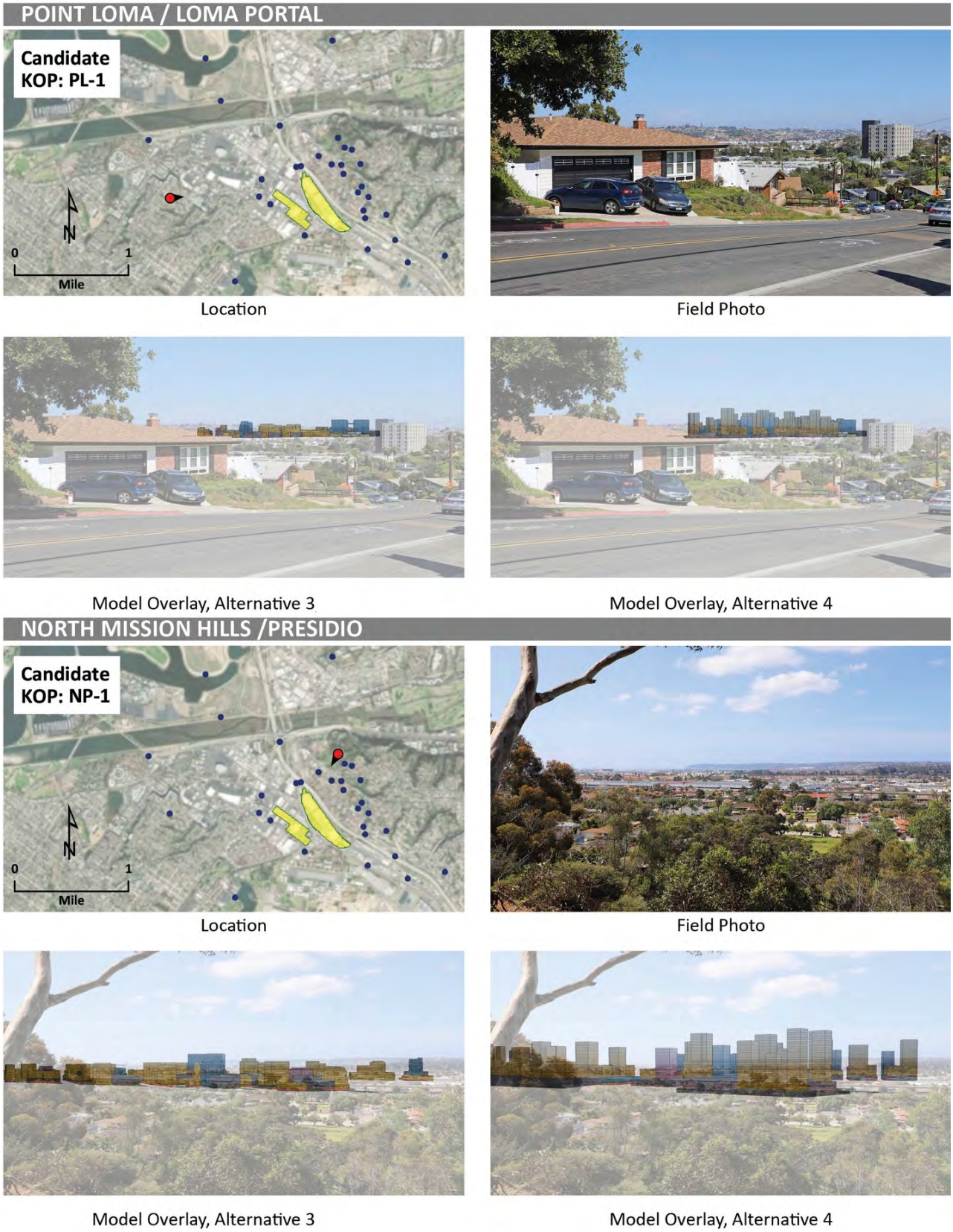
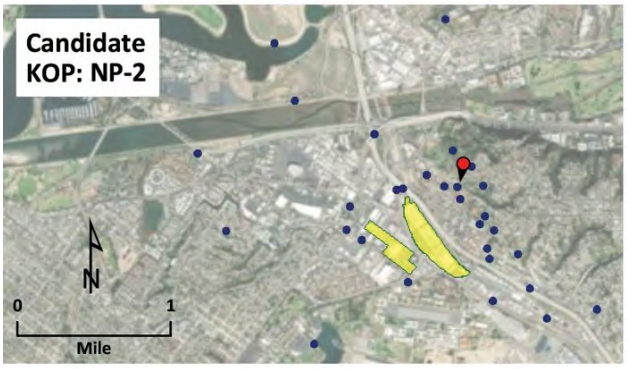


Figure 3.3-12 Model Overlays for KOP PL-1 and NP-1

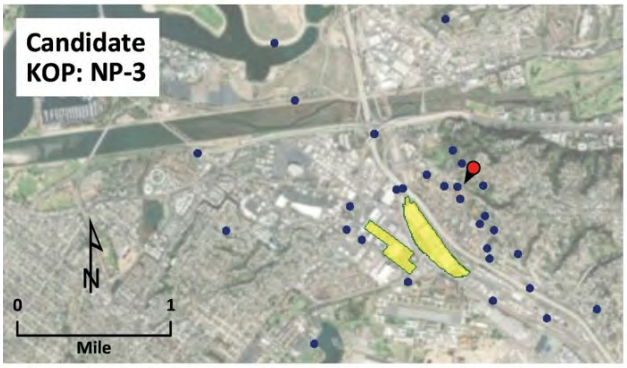


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



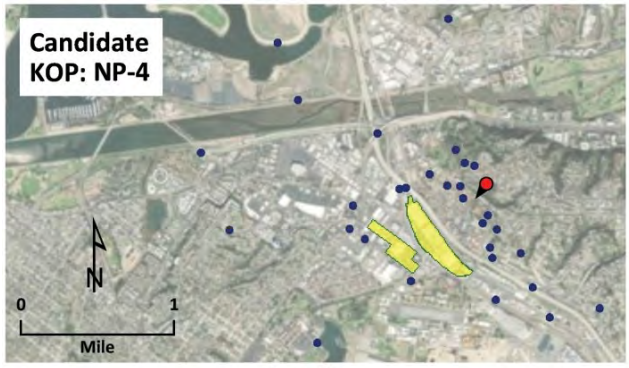
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-13 Model Overlays for KOP NP-2 and NP-3

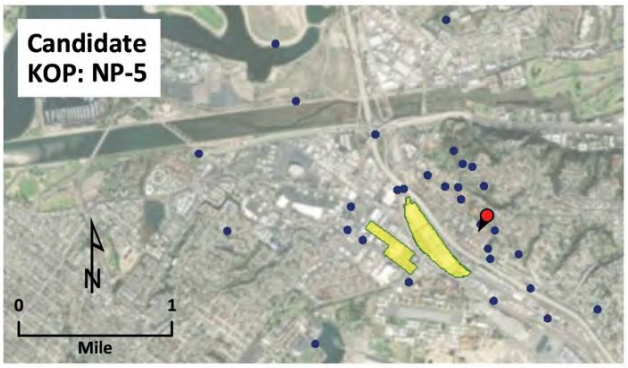


Location

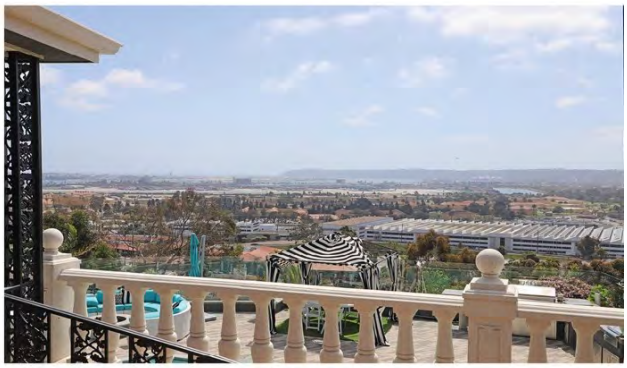
Field Photo

Model Overlay, Alternative 3

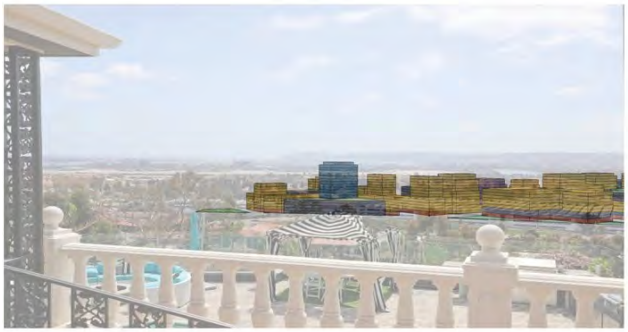
Model Overlay, Alternative 4



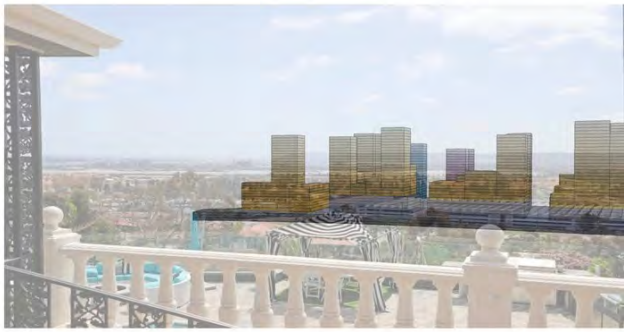
Location



Field Photo



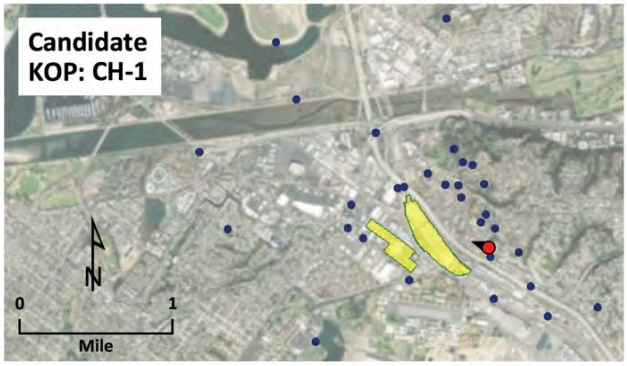
Model Overlay, Alternative 3



Model Overlay, Alternative 4

Figure 3.3-14 Model Overlays for KOP NP-4 and NP-5

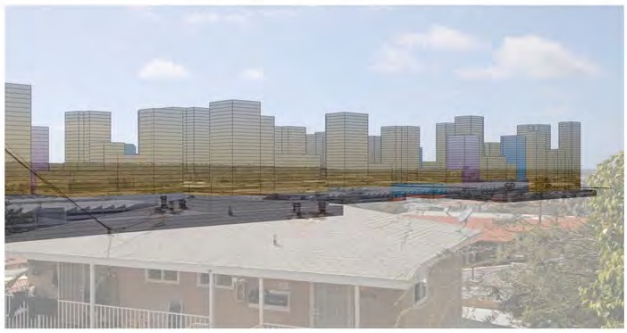
CENTRAL MISSION HILLS



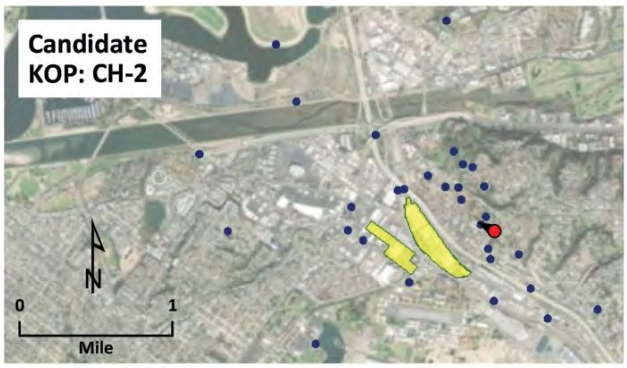
Location

Field Photo

Model Overlay, Alternative 3



Model Overlay, Alternative 4



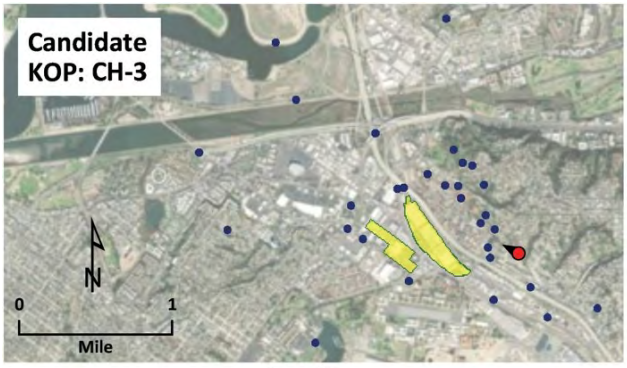
Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-15 Model Overlays for KOP CH-1 and CH-2

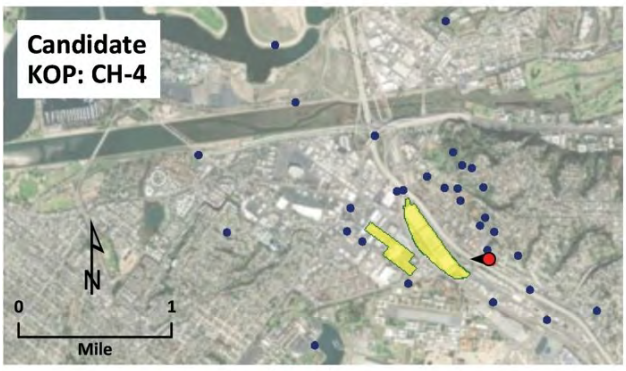


Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4



Location

Field Photo

Model Overlay, Alternative 3

Model Overlay, Alternative 4

Figure 3.3-16 Model Overlays for KOP CH-3 and CH-4

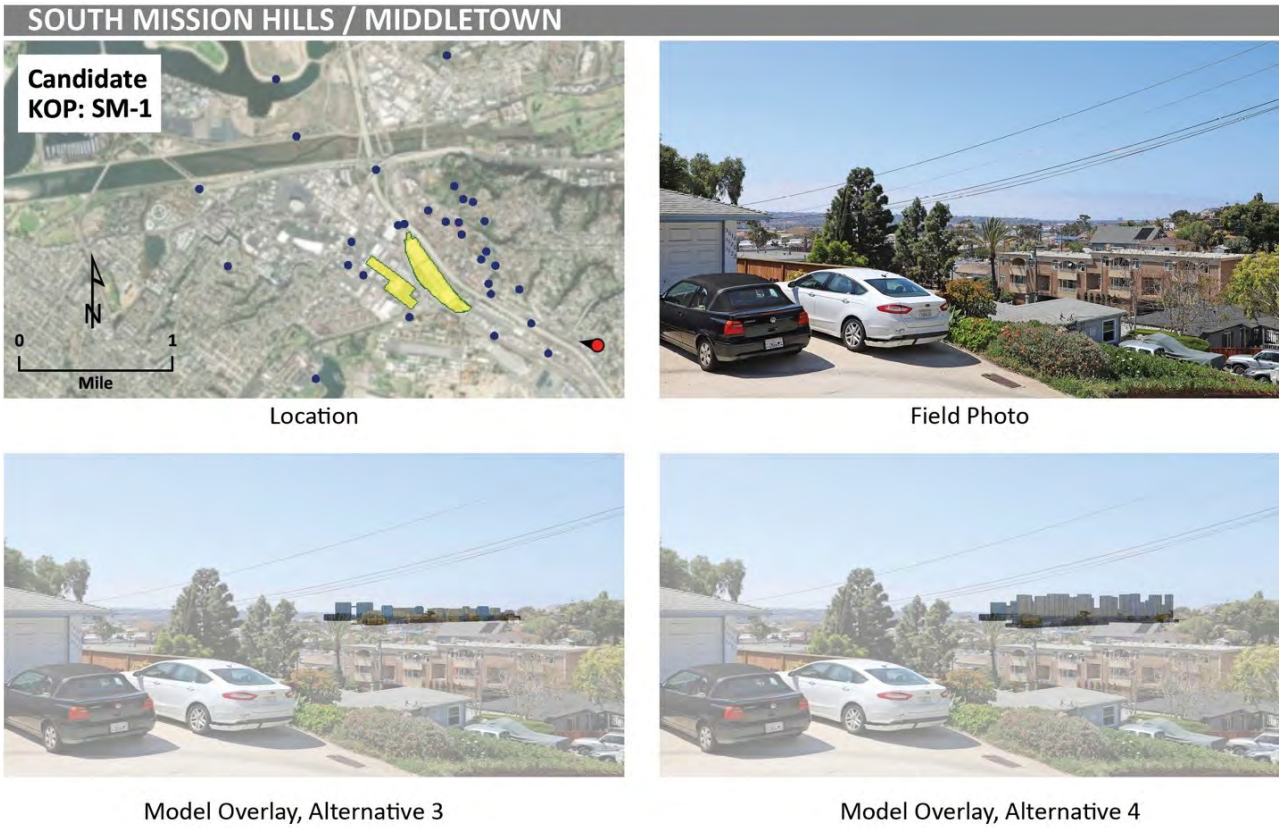


Figure 3.3-17 Model Overlays for KOP SM-1

4 IMPACT ANALYSIS

4.1 Approach to Analysis

The approach to evaluating aesthetic and visual resource effects associated with the Proposed Action Alternatives takes the qualitative and quantitative understanding of the existing visual setting, combines it with the unique dynamics of the sub-region that were discovered through detailed analysis, and determines if any of the alternatives would result in highly noticeable contrasts with the existing setting as seen by the sub-regional viewers identified in previous chapters. A highly noticeable contrast must also be considered potentially negative in the eyes of the sensitive viewers represented by various viewer groups. These viewer groups must have substantial exposure to these changes, be of a large enough grouping of viewers, and represent concerned and engaged viewers that are likely to consider the changes to be negative to the visual setting.

The evaluation process relies on the development of accurate and representative visual simulations to determine the level of contrast with the existing setting (see Attachment B). Although each simulation and each alternative would have a range of contrasts and potentially negative impressions, impacts are not to be determined from a single viewing location. Each simulation ranks the likely reaction from various viewer groups and the contrasts with the existing setting. However, the totality of the various KOP viewing locations must be considered to determine the extent of the overall impact (see Tables B-1 and B-2 in Attachment B).

4.1.1 Assumptions

Although some initial designs have been put forward by SANDAG as a potential Navy development partner, this study does not consider the details of these design efforts in the analysis of alternatives. Alternative 4 has been made to meet or slightly exceed the needs of the proposed plan from SANDAG, but the detail has been minimized to accommodate an equal level of consideration and comparison with the other four alternatives being considered. The focus is on a comprehensive level of review for a defined set of alternatives that are based mostly on quantities of size, height, and massing. Although not detailed, the following assumptions have been used to define the visual components of the comprehensive level of review afforded by the lack of project definition:

These assumptions include:

- Based on the investment required by this project, it is assumed that project designs would represent the industry standard for design aesthetics and architectural quality.
- The proposed buildings are likely to be a combination of concrete, steel, composite architectural materials, and various types and colors of glass.
- Given the potential views that would be available from the proposed new buildings, it is likely that the buildings would utilize a substantial amount of glass and potentially provide balcony areas to take advantage of these views.
- It is anticipated that most of the proposed buildings would include architectural forms that are interesting and iconic and would not likely have flat roofs, or monotonous elevations or fenestration of building design elements.
- Building utilities, storage areas, delivery locations, and other functional elements of a complex of buildings are assumed to be appropriately screened and enclosed.
- Parking structures are assumed to include some level of architectural design and screening. Concrete only materials are not assumed in the modeling. Views into the proposed structure are also assumed to be prevented as a basic requirement of approval.

- Construction staging, storage, and surge areas would be expected to be distributed throughout OTC Site 1 and Site 2. All existing buildings that would be demolished, would likely have surge piles of demolished material sitting for several months.
- Construction on a typical tall building would likely last from 1-2 years per building and likely up to 5 years for a phase of project Alternatives 2, 3, 4, and 5. Typically, any change to an area that remains beyond five years is not considered temporary. Although the overall project phasing could take up to 20 years, individual phases are assumed to be less than 5 years.
- Construction materials are commonly stored in a haphazard and cluttered manner. This analysis assumes that unless required, construction activities and areas are likely to create a negative aesthetic for different areas surrounding OTC Site 1 and Site 2.

4.1.2 Factors used to Determine Contrast with Setting

Contrast with the existing visual setting is the foundation for noticing change in the visual environment. There are many physical elements that compete for a viewer's attention. The amount of visual data often represents an overload for cognitive processing. As a result of this challenge, the human brain tends to notice the extremes and commits to memory only a part of what it processes. A contrast with a setting does not need to be a negative contrast. Positive elements that help to make the visual environment more legible and aesthetically pleasing are noticed when put in a setting that is disorganized and has a dominant negative aesthetic. Contrast simply means that the change is noticed.

Contrasts with a setting will occur if any of the following occurs:

1) The basic color and texture of the proposed project elements would be in contrast with the dominant color and texture of the visual setting.
2) The balance between natural open space and the built environment would be shifted with the addition of visual elements in the setting.
3) Natural resources and natural elements within a space would be replaced by project elements that would be highly noticeable.
4) Proposed landforms would be very different than existing landforms and the proposed project grading is such that it would cut into or disrupt natural lines, shapes, and massing of dominant landforms in the area.
5) The massing and scale of project elements would be dramatically different than the visual setting.
6) The compositional organization of a viewing scene that is well structured, balanced, scaled to humans, and with repeating patterns and geometric arrangements would have new elements added that would disrupt this dominant pattern.
7) The visual organization and structure that recognizes vistas, viewing corridors, landmarks, districts, nodes, and well-defined edges between districts would be obstructed or made less clear.
8) The community character of scale, patterned land use, dominant building materials, architectural themes, landscape architectural treatments, and positive and interesting visual elements would not be recognized by the proposed visual elements of the project.
9) For areas that have a positive visual quality and positive aesthetic treatments, the proposed elements would introduce negative aesthetic that would be different enough to be noticed.
10) It is also possible for a project to positively contrast with a dominant negative visual or chaotic appearance by adding positive visual quality improvements and aesthetics.

4.1.3 Factors used to Determine a Negative Contrast

The objective nature of assessing visual quality and aesthetics effects can become more subjective when predicting how viewer groups would likely process and perceive changes. Although there is common definition of aesthetics, personal backgrounds, values, and tastes can cause a wide shift in perception.

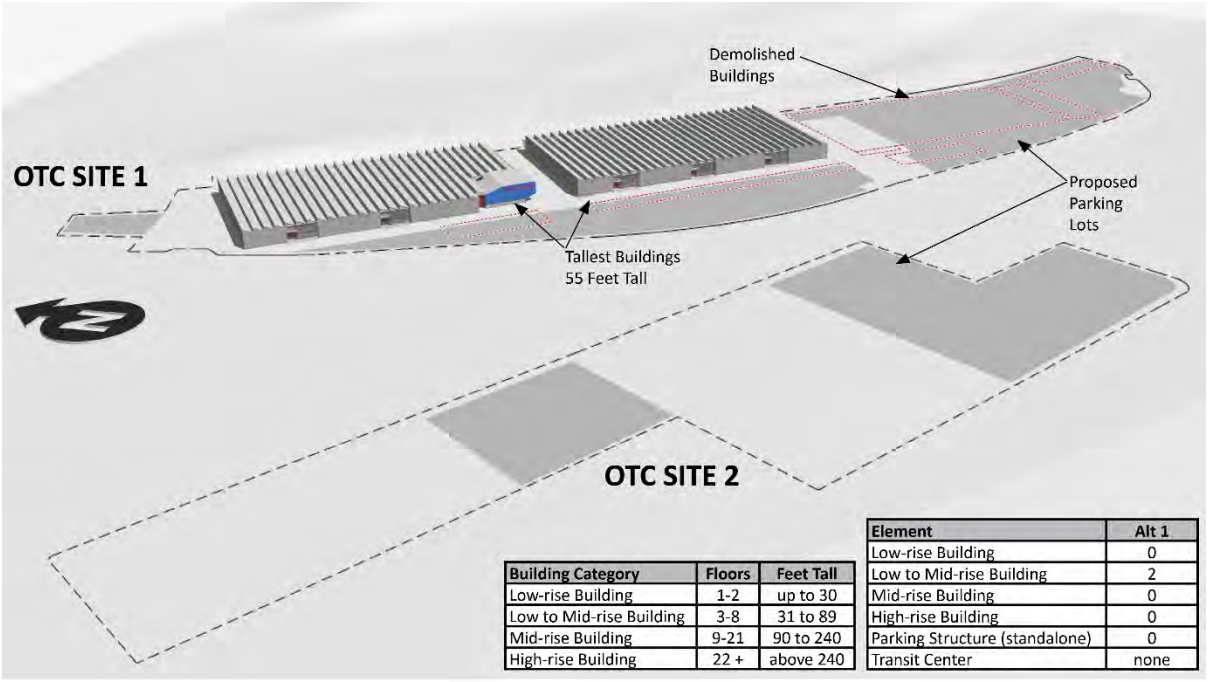
Generally, a contrast would be negative if the following conditions are clearly evident:

1) An organized visual environment exists and the project elements would add a chaotically arranged addition to this organized environment.
2) A naturally appearing environment would be replaced with a dominating man-made environment that ignores the natural setting and/or removes a significant part of the existing natural elements.
3) Project related grading would result in abrupt, angular, flat, or vertical geometric forms that would work in opposition to the dominant natural and curvilinear landforms of the area.
4) A human-scaled environment where physical elements no longer relate to pedestrian scale and where massing and height would be dramatically changed by the proposed project.
5) An interruption of existing organized patterns of site planning and community arrangement that have dominant landmarks, axial vistas that lead to landmarks or nodes, and that have clarity in the patterning of land uses, districts, and other gathering areas.

4.2 Alternative 1: NAVWAR-Only Redevelopment

4.2.1 Visually Prominent Elements

Figure 4.2-1 represents a 3D model of possible massing that would accommodate the program needs of this alternative. This diagram is not intended to show an actual architectural design or to commit to any massing arrangement of these buildings other than indicating the general height, number of floors, and parking structures needed to represent the requirements of the alternatives. The model does show the major physical elements that would be likely to have a high level of visual prominence. See the simulation figures for the proposed alternative in the context of the existing setting of OTC Site 1 and OTC Site 2. Each set of simulations looks at the more detailed model from a variety of KOPs representing different viewer groups and relationships with sub-regionally important viewing scenes. The diagrams on this page and the simulations using this alternative are intended to show how the proposed buildings might typically look, but a final architectural design may be highly variable. The table in Figure 4.2-1 provides a quantitative summary of the major physical features that would be provided by Alternative 1, including floors, heights, and number of total buildings being considered.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 1
Low-rise Building	0
Low to Mid-rise Building	2
Mid-rise Building	0
High-rise Building	0
Parking Structure (standalone)	0
Transit Center	none

Figure 4.2-1 Alternative 1 General Building Massing

The building category definitions listed on the site diagram tables, considers a low rise building that would fit in the current height restrictions around the project site and are typically all wood structure and commonly agreed to as a low scaled building. The mid-rise building is determined mostly by construction structural techniques and building codes for fire ratings as a concrete parking and first floor structure, with 5-6 floors of wood framed and key structural steel supports. It is currently uncommon to achieve 6-8 floors with this type of construction, but some have found structural and fire ratings to potentially reach this height. A mid-high-rise building is usually made of reinforced concrete and steel to achieve heights up to 240 feet. A high-rise building is one that exceeds the normal structural support system for a tall building, making the construction technique and associated costs dependent upon how high the building can go to where it makes this construction technique feasible.

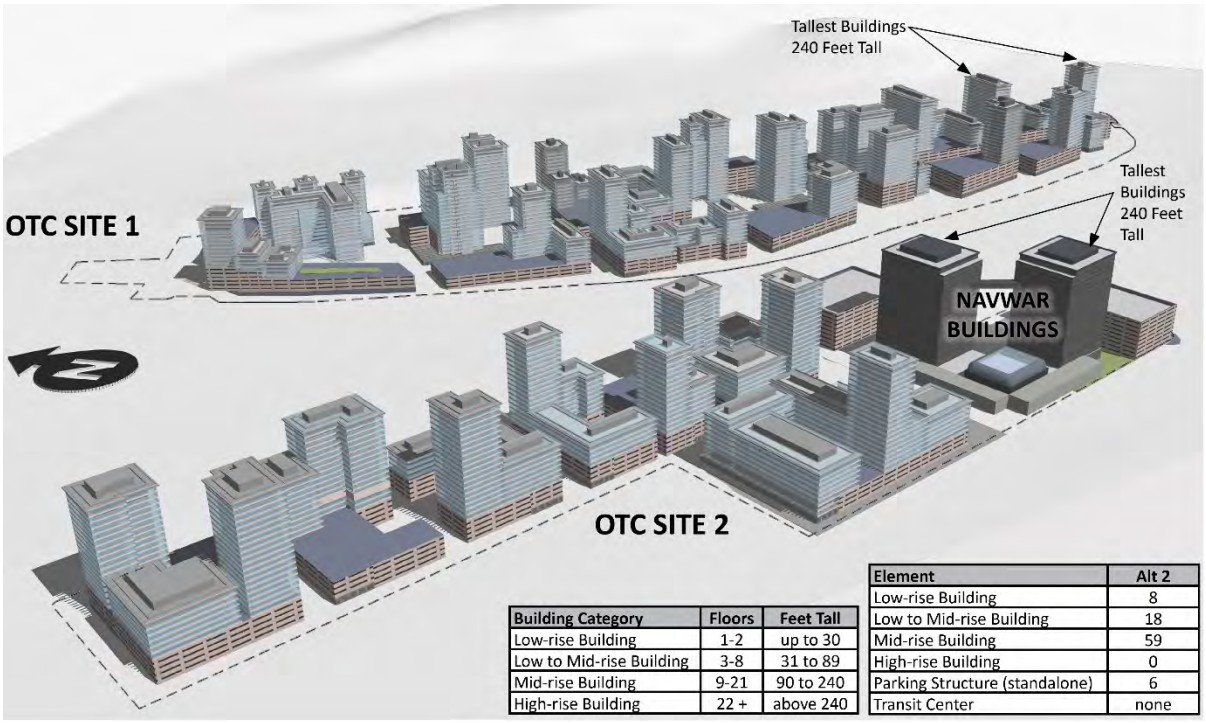
Compared to the other Proposed Action Alternatives, Alternative 1 would have structures with the lowest height. The proposed structures would be similar in height and massing to the existing building complex on the project site. Although one of the major building elements (the warehouse Building 1) would be eliminated and certain design treatments would be added to update the look and character of the building complex, Alternative 1 would not vary highly with existing conditions. The overall height would not change. The two buildings that would remain on the project site would be updated with materials, finishes, and a strong iconic central building entrance and plaza area. No changes would occur to OTC Site 2, with all buildings and parking lots unchanged.

4.3 Alternative 2 Public-Private Development–NAVWAR and Higher Density Mixed Use

4.3.1 Visually Prominent Elements

Figure 4.3-1 represents a 3D model of possible massing that would accommodate the program needs of this alternative. This diagram is not intended to show an actual architectural design or to commit to any massing arrangement of these buildings other than indicating the general height, number of floors, and parking structures needed to represent the requirements of the alternatives. The model does show how

the major physical elements that would likely have a high level of visual prominence. See the simulation figures for the proposed alternative in the context of the existing setting of OTC Site 1 and OTC Site 2. The table in Figure 4.3-1 provides a quantitative summary of the major physical features that would be provided by Alternative 2, including floors, heights, and number of total buildings being considered.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 2
Low-rise Building	8
Low to Mid-rise Building	18
Mid-rise Building	59
High-rise Building	0
Parking Structure (standalone)	6
Transit Center	none

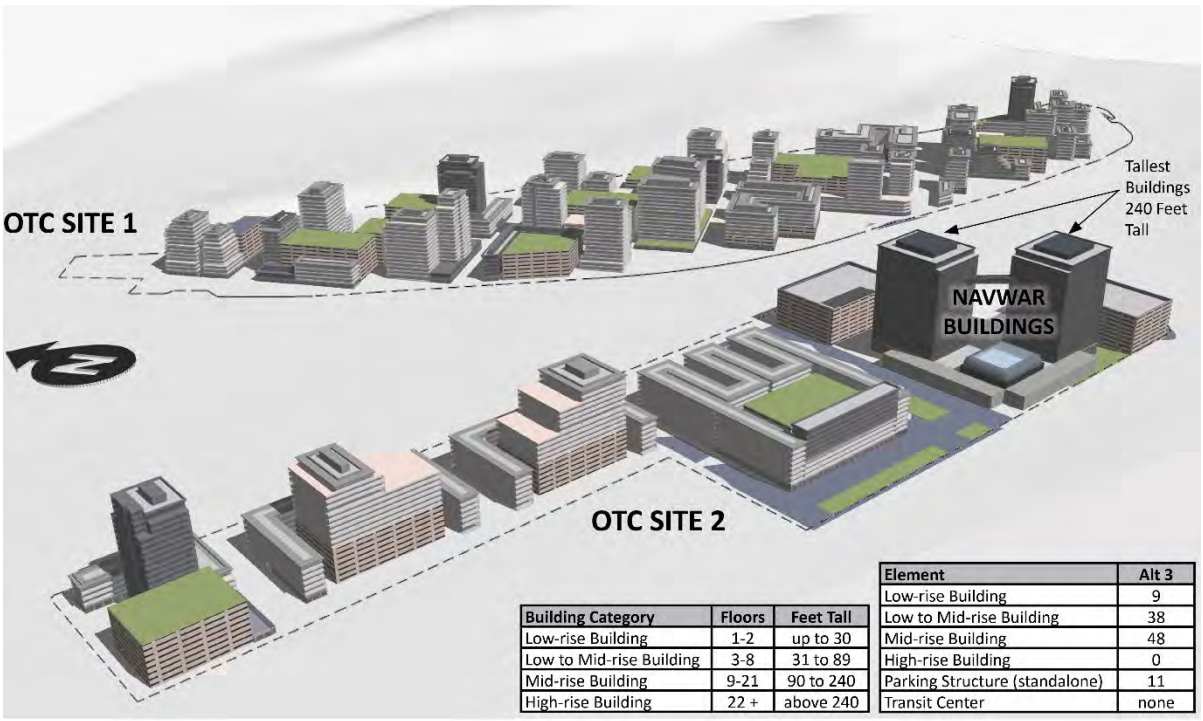
Figure 4.3-1 Alternative 2 General Building Massing

This alternative would include buildings up to 240 feet tall. Major parking lots and structures would be required to support the parking requirements needed for the total gross and net square feet of the proposed building complex. NAVWAR parking requirements would mostly be met by stand-alone parking structures. The NAVWAR administrative and research based facility requirements would be met by space in two towers. Other lab or industrial based fabrication, assembly, and testing would take place in the bottom floors of the two towers. Of the 85 buildings shown, less than 10 percent would be low-rise buildings that are less than 30 feet in height, less than 21 percent would be low- to mid-rise buildings ranging from 31 feet to 89 feet in height, and nearly 69 percent would be mid-rise buildings from 90 feet to 240 feet in height.

4.4 Alternative 3: Public-Private Development–NAVWAR and Lower Density Mixed Use

4.4.1 Visually Prominent Elements

Figure 4.4-1 represents a 3D model of possible massing that would accommodate the program needs of this alternative. This diagram is not intended to show an actual architectural design or to commit to any massing arrangement of these buildings other than indicating the general height, number of floors and parking structures needed to represent the requirements of alternative 3. The diagrams and simulations using this massing are intended to show how the proposed buildings might typically look, but a final architectural design may be highly variable. The table in Figure 4.4-1 provides a quantitative summary of the major physical features that would be provided by Alternative 3, including floors, heights, and number of total buildings being considered.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 3
Low-rise Building	9
Low to Mid-rise Building	38
Mid-rise Building	48
High-rise Building	0
Parking Structure (standalone)	11
Transit Center	none

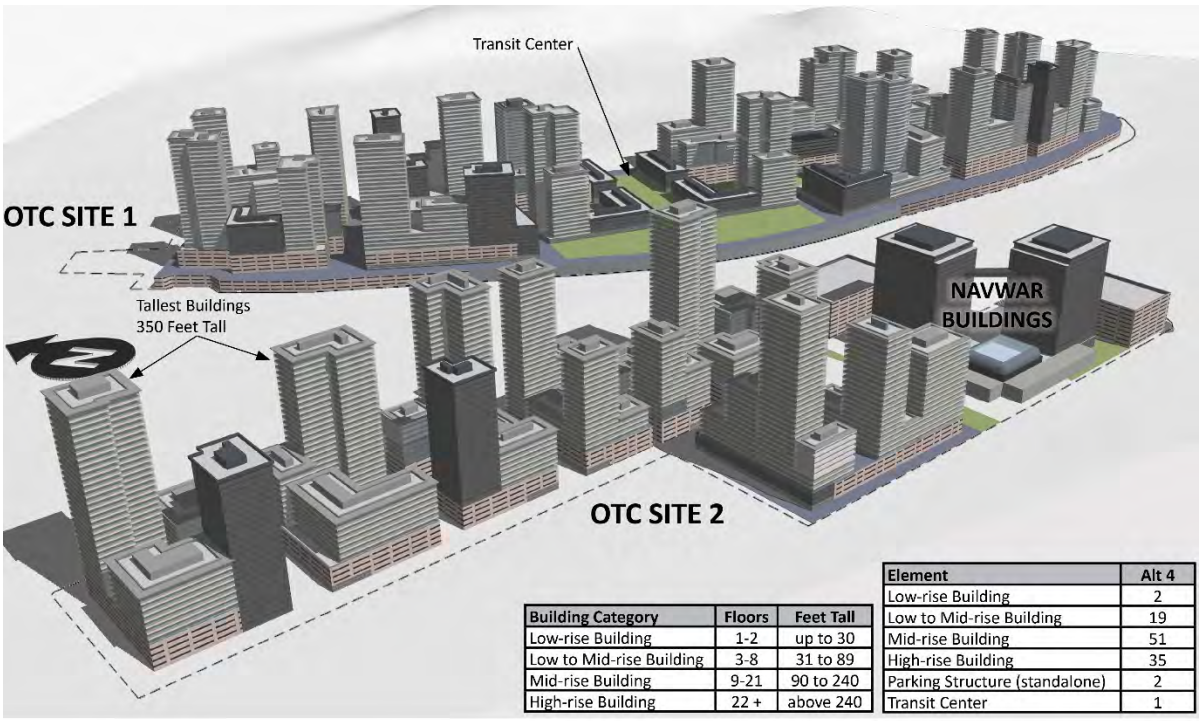
Figure 4.4-1 Alternative 3 General Building Massing

This alternative includes buildings up to 240 feet tall. Major parking lots and structures will be required to support the parking requirements needed for the total gross and net square feet of the building complex. NAVWAR parking requirements would mostly be met by stand-alone parking. The NAVWAR administrative and research-based facility requirements would be met by space in two towers. Other lab or industrial based fabrication, assembly, and testing would take place in the bottom floors of the two towers. Of the 95 buildings shown, nearly 10 percent would be low rise below 30 feet, 40 percent would be low to mid-rise from 31 feet to 89 feet, and nearly 50 percent would be mid-rise from 90 feet to 240 feet.

4.5 Alternative 4: Public-Private Development–NAVWAR and Higher Density Mixed Use with a Transit Center

4.5.1 Visually Prominent Elements

Figure 4.5-1 represents a 3D model of possible massing that would accommodate the program needs of this alternative. This diagram is not intended to show an actual architectural design nor to commit to any massing arrangement of these buildings other than indicating the general height, number of floors, and parking structures needed to represent the requirements of the alternatives. The model does show the major physical elements that would likely have a high level of visual prominence. See the simulation figures for the proposed alternative in the context of the existing setting of OTC Site 1 and OTC Site 2. The table in Figure 4.5-1 is a quantitative summary of the major physical features of the alternative including floors, heights, and number of total buildings being considered.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 4
Low-rise Building	2
Low to Mid-rise Building	19
Mid-rise Building	51
High-rise Building	35
Parking Structure (standalone)	2
Transit Center	1

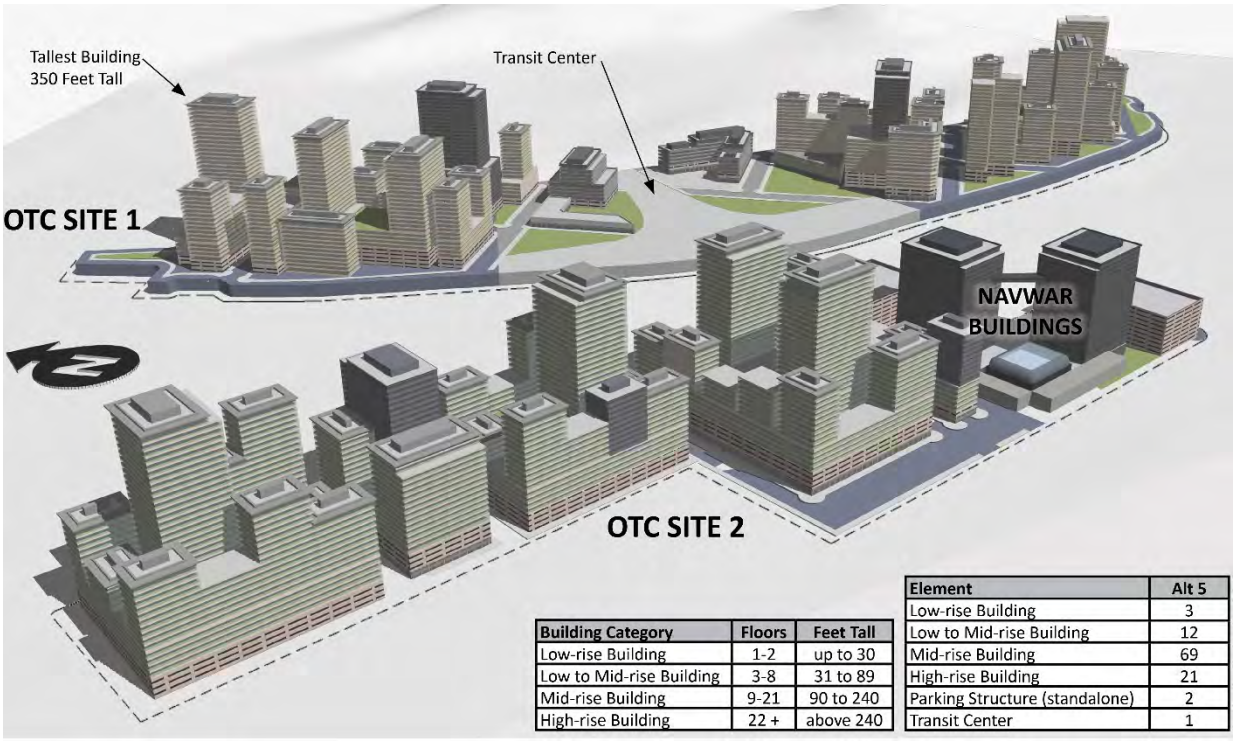
Figure 4.5-1 Alternative 4 General Building Massing

This alternative would include buildings up to 350 feet tall. Major parking lots and structures would be required to support the parking requirements needed for the total gross and net square feet of the building complex. In this alternative, much of the parking would be below a 30-foot deck with much of the vehicular circulation and parking taking place below this deck and plazas, promenades, parks, and smaller streets on top of these decks. This alternative would also accommodate a major transit center and public spaces that would divide the OTC Site 1 into two separated complexes or grouping of buildings. NAVWAR parking requirements would mostly be met by stand-alone parking. The NAVWAR administrative and research based facility requirements would be met by space in two towers. Other lab or industrial based fabrication, assembly, and testing would take place in the bottom floors of the two towers. Of the 107 buildings shown, nearly 2 percent would be low rise below 30 feet, 18 percent would be low to mid-rise from 31 to 89 feet, nearly 48 percent would be mid-rise from 90 to 240 feet, and the remaining 33 percent would be high rise buildings representing a height up to 350 feet tall.

4.6 Alternative 5: Public-Private Development–NAVWAR and Lower Density Mixed Use with a Transit Center

4.6.1 Visually Prominent Elements of Alternative 5

Figure 4.6-1 represents a 3D model of possible massing that would accommodate the program needs of this alternative. This diagram is not intended to show an actual architectural design nor to commit to any massing arrangement of these buildings other than indicating the general height, number of floors, and parking structures needed to represent the requirements of the alternatives. The model does show the major physical elements that would be likely to have a high level of visual prominence. See the simulation figures for the proposed alternative in the context of the existing setting of OTC Site 1 and OTC Site 2. The table in Figure 4.6-1 is a quantitative summary of the major physical features of the alternative including floors, heights, and number of total buildings being considered.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 5
Low-rise Building	3
Low to Mid-rise Building	12
Mid-rise Building	69
High-rise Building	21
Parking Structure (standalone)	2
Transit Center	1

Figure 4.6-1 Alternative 5 General Building Massing

This alternative includes buildings up to 350 feet tall. Major parking lots and structures would be required to support the parking requirements needed for the total gross and net square feet of the building complex. In this alternative, much of the parking would be below a 30-foot deck with much of the vehicular circulation and parking taking place below this deck and plazas, promenades, parks, and smaller streets on top of these decks. This alternative would also accommodate a major transit center and public spaces that would divide the OTC Site 1 into two separated complexes or grouping of buildings. NAVWAR parking requirements would mostly be met by stand-alone parking structures. The NAVWAR administrative and research based facility requirements would be met by space in two towers. Other lab or industrial based fabrication, assembly, and testing would take place in the bottom floors of the two towers. Of the 105 buildings shown, nearly 3 percent would be low rise below 30 feet, 11 percent would be low to mid-rise from 31 to 89 feet, nearly 65 percent would be mid-rise from 90 to 240 feet, and the remaining 20 percent would be high rise buildings representing a height up to 350 feet tall.

4.7 Visually Prominent Elements Summary

Clearly, Alternative 1 (held at 55 feet), would contrast the least with the existing setting since it would maintain the overall height of the complex and the basic form and massing of the existing fabrication/ warehouse style buildings.

Alternatives 2 and 3 (held at 240 feet) would both include a lower number of high-rise towers than Alternatives 4 and 5. Both Alternative 2 and 3 would provide a better scale transition to adjacent development and may provide some over building views. However, at these heights, many of the buildings would block some of the views to certain viewer groups. The height differences alone would make the new development contrast with the existing setting. Alternative 3 would have a greater number of visible parking structures and surface parking lots when compared to the other alternatives.

Alternatives 4 and 5 (up to 350 feet) include the break of massing midway between the two ends of OTC Site 1 as a placeholder for SANDAG's transit center. The scale of any structures associated with the transit center and likely open plaza areas would provide some visual break between building masses at either end of the site. A tabular summary of the buildings and heights by alternative is presented in Table 4.7-1.

A comparison of the number of buildings, including standalone parking structures, includes:

- Alternative 1- 2 buildings
- Alternative 2- 91 buildings
- Alternative 3- 106 buildings
- Alternative 4- 109 buildings
- Alternative 5- 107 buildings

A comparison of the maximum height of buildings includes:

- Alternative 1- up to 55 feet
- Alternative 2- up to 240 feet
- Alternative 3- up to 240 feet
- Alternative 4- up to 350 feet
- Alternative 5- up to 350 feet

Table 4.7-1 Tabular Summary of Buildings and Visually Prominent Elements for All Alternatives

Element	Building Floors / Feet Tall	Alternative 1	Alternative 2	Alternatives 3	Alternative 4	Alternative 5
Low-rise Building	1-2 (up to 20 feet)	0	8	9	2	3
Low to Mid-rise Building	3-8 (31 to 89)	2	18	38	19	12
Mid-rise Building	9-21 (90 to 240)	0	59	48	51	69
High-rise Building	22+ (above 240)	0	0	0	35	21
Parking Structure (standalone)	NA	0	6	11	2	2
Transit Center	NA	NA	NA	NA	1	1

4.8 Potential View Corridor Blockage of the Sub-regionally Significant Viewing Scenes

Each alternative set of building massing models have been run through a GIS analysis tool that determines the potential loss of views in the study area. See Attachment A for 40 maps that show the viewsheds related to the ten viewing scenes for each of four alternatives that would have an effect on view corridors.

To accurately test the potential negative effects on views in the study area, a complex process with multiple steps was developed.

1) First, the limits of each of the viewing scenes was developed. A series of points along the edges of the existing buildings on OTC Site 1 and Site 2 were chosen and a viewshed developed. This helped to identify the locations for the points on landforms that were in turn used to develop the limits of the viewing scene.
2) Second, a set of viewer points was spread across the viewing scene and a viewshed map was then developed from each viewing scene to help identify all of the areas that could see the viewing scene based on topography.
3) Third, a set of viewer points were placed along public roads within the areas of moderate to high visibility from the viewing scene. These viewer points were then used to run another viewshed to determine the degree of visibility of various portions of the viewing scene. These results are displayed using a gradation of colors that represented how many of the viewing location points could see a particular area within the viewing scene polygon.
4) Lastly, the same viewer points created in step three were used to run a viewshed with the mass model of each alternative integrated into the landform to determine the degree of potential view blockage within the view corridor. The corridor was then defined with viewing angles for the most extreme viewing location set to the most extreme portion of the viewing scene.

The resultant maps in the Attachment represent how each alternative's mass would interrupt the viewing corridor given an area identified as the viewing location and the area identified as the viewing scene. The maps show the limits of the outer edge of the corridor affected by the blockage. The tables show the number of acres affected and the population affected. This method is the best way to quantify the overall effect of the blockage on both the area affected as well as the population affected. It should be noted that all analysis of the viewshed is based upon Digital Elevation Models developed from topographic data points. In the real world, buildings, miscellaneous structures, walls, fences, and trees block a substantial amount of views from occurring. In initial studies in the sub-region using Google Earth based LIDAR generated data, the actual real-world views may be as small as 25 percent of the viewshed total acres or population affected. It can be argued that fences, buildings, trees, and structures are temporary improvements on the land and could be moved regularly and frequently. Accurate and available LIDAR data does not exist to run models using this data. So, the actual number of acres and the actual number of persons affected should not be used to describe known quantities. But they can be used to determine the percentage of blockage expected and the relative comparison of percentages between each alternative. Note that Alternative 1 would decrease the amount of blockage of the corridor based on the removal of a major warehouse structure at the south end of OTC Site 1.

Table 4.8-1 shows how each project alternative would affect the number of acres of viewing scenes that are visible to identified viewing locations. Table 4.8-2 shows the same analysis but identifies the number of people that would be affected by these changes both now and in the future.

Table 4.8-1 Summary of Project Massing Consequences on View Corridor Blockage (acres)

Viewing Scene *	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1. San Diego River	7.09%	-55.20%	-44.58%	-61.89%	-59.49%
2. Mission Bay	2.87%	-34.77%	-29.55%	-37.93%	-37.94%
3. Mission Valley North	0.14%	-57.62%	-47.74%	-61.06%	-65.36%
4. Presidio / Mission Hills	0.28%	-27.92%	-20.07%	-32.26%	-32.60%
5. Pacific Ocean West	0.71%	-20.50%	-14.48%	-25.94%	-25.44%
6. Pacific Ocean SW	0.23%	-32.02%	-18.74%	-35.85%	-36.15%
7. SD Bay / Coronado	3.84%	-32.39%	-22.76%	-36.72%	-38.05%
8. Cabrillo	1.58%	-15.99%	-10.85%	-23.30%	-24.68%
9. Pt Loma Hillside	1.90%	-35.40%	-26.84%	-44.16%	-46.01%
10. Downtown Skyline	19.23%	-11.35%	-9.57%	-11.73%	-21.28%
Average %	3.79%	-32.32%	-24.52%	-37.08%	-38.70%

* Acres effected are based upon a topo model only and do not include buildings, structures and trees that may block views

Highest Negative Effect

Table 4.8-2 Summary of Building Massing Consequences on View Corridor Blockage (population in years 2016 and 2035)

Viewing Scene	2016 Pop. In Viewshed Potentially Effected*	Alt. 1 % of Acres	Alt. 1 Persons Effected	Alt. 2 % of Acres	Alt. 2 Persons Effected	Alt. 3 % of Acres	Alt. 3 Persons Effected	Alt. 4 % of Acres	Alt. 4 Persons Effected	Alt. 5 % of Acres	Alt. 5 Persons Effected
1. San Diego River	3,876	7.09%	275	-55.20%	(2,140)	-44.58%	(1,728)	-61.89%	(2,399)	-59.49%	(2,306)
2. Mission Bay	3,876	2.87%	111	-34.77%	(1,348)	-29.55%	(1,145)	-37.93%	(1,470)	-37.94%	(1,470)
3. Mission Valley North	2,143	0.14%	3	-57.62%	(1,235)	-47.74%	(1,023)	-61.06%	(1,309)	-65.36%	(1,401)
4. Presidio / Mission Hills	11,560	0.28%	32	-27.92%	(3,228)	-20.07%	(2,320)	-32.26%	(3,729)	-32.60%	(3,768)
5. Pacific Ocean West	4,220	0.71%	30	-20.50%	(865)	-14.48%	(611)	-25.94%	(1,095)	-25.44%	(1,073)
6. Pacific Ocean SW	2,550	0.23%	6	-32.02%	(817)	-18.74%	(478)	-35.85%	(914)	-36.15%	(922)
7. SD Bay / Coronado	6,038	3.84%	232	-32.39%	(1,956)	-22.76%	(1,374)	-36.72%	(2,217)	-38.05%	(2,298)
8. Cabrillo	4,927	1.58%	78	-15.99%	(788)	-10.85%	(535)	-23.30%	(1,148)	-24.68%	(1,216)
9. Pt Loma Hillside	9,059	1.90%	172	-35.40%	(3,207)	-26.84%	(2,432)	-44.16%	(4,000)	-46.01%	(4,168)
10. Downtown Skyline	1,158	19.23%	223	-11.35%	(131)	-9.57%	(111)	-11.73%	(136)	-21.28%	(246)
Unique Population Effected**	24,154		914		(7,806)		(5,922)		(8,957)		(9,347)
Ave. % of View Blocked ***		3.79%		-32.32%		-24.52%		-37.08%		-38.70%	

* Persons effected were based on SANDAG / Census based estimates for 2016. Persons effected were calculated assuming a similar density across each MGRA

** Populations in the various viewsheds overlap. This number has taken out the double counting of persons

Highest Negative Effect

*** Acres effected are based upon a topographical model only and does not include buildings, structures and trees that already block views

Viewing Scene	2035 Pop. In Viewshed Potentially Effected *	Alt. 1 % of Acres	Alt. 1 Persons Effected	Alt. 2 % of Acres	Alt. 2 Persons Effected	Alt. 3 % of Acres	Alt. 3 Persons Effected	Alt. 4 % of Acres	Alt. 4 Persons Effected	Alt. 5 % of Acres	Alt. 5 Persons Effected
1. San Diego River	3,776	7.09%	268	-55.20%	(2,084)	-44.58%	(1,683)	-61.89%	(2,337)	-59.49%	(2,246)
2. Mission Bay	3,776	2.87%	108	-34.77%	(1,313)	-29.55%	(1,116)	-37.93%	(1,432)	-37.94%	(1,433)
3. Mission Valley North	2,314	0.14%	3	-57.62%	(1,333)	-47.74%	(1,105)	-61.06%	(1,413)	-65.36%	(1,512)
4. Presidio / Mission Hills	13,852	0.28%	38	-27.92%	(3,868)	-20.07%	(2,780)	-32.26%	(4,468)	-32.60%	(4,515)
5. Pacific Ocean West	3,874	0.71%	27	-20.50%	(794)	-14.48%	(561)	-25.94%	(1,005)	-25.44%	(985)
6. Pacific Ocean SW	1,994	0.23%	5	-32.02%	(638)	-18.74%	(374)	-35.85%	(715)	-36.15%	(721)
7. SD Bay / Coronado	6,782	3.84%	260	-32.39%	(2,197)	-22.76%	(1,544)	-36.72%	(2,490)	-38.05%	(2,581)
8. Cabrillo	4,538	1.58%	72	-15.99%	(726)	-10.85%	(492)	-23.30%	(1,058)	-24.68%	(1,120)
9. Pt Loma Hillside	9,162	1.90%	174	-35.40%	(3,243)	-26.84%	(2,459)	-44.16%	(4,046)	-46.01%	(4,215)
10. Downtown Skyline	2,606	19.23%	501	-11.35%	(296)	-9.57%	(249)	-11.73%	(306)	-21.28%	(554)
Unique Population Effected**	25,528		966		(8,250)		(6,259)		(9,467)		(9,879)
Ave. % of View Blocked ***		3.79%		-32.32%		-24.52%		-37.08%		-38.70%	

* Persons effected were based on SANDAG / Census based estimates for 2016. Persons effected were calculated assuming a similar density across each MGRA

** Populations in the various viewsheds overlap. This number has taken out the double counting of persons

Highest Negative Effect

*** Acres effected are based upon a topographical model only and does not include buildings, structures and trees that already block views

4.9 Simulations Summaries and Comparisons for all Project Alternatives

The following sections describe the visual simulations found in Attachment B and discusses the level of contrast, the visibility, view corridor blockage, changes in visual quality, and viewer group reactions.

Tables B-1 and B-2 provide a summary of the individual rankings of the simulations when compared to each of the alternatives. Changes in visual quality and in view corridor blockage are ranked as well.

4.9.1 Simulation 1: KOP IN-1- Southbound Interstate 5

The image shown on this KOP is one of open sky and wide horizontal scales. Although the NAVWAR OTC Site 1 includes some substantial-sized structures, the position of the freeway in relation to the buildings tends to hide a lot of the height of the buildings. Views of downtown do exist and are currently only slightly blocked by the existing structure. The powerlines are distracting and likely perceived to be negative by most viewers. However, the powerlines are relatively well organized and kept in one direction. Although views of the downtown skyline would be partially blocked by all but Alternative 1, the curvature of the freeway would still allow for the distant skyline to be seen around the corner from this location and would slowly unveil itself to driver. The existing visual quality is one of Moderately High Vividness, Moderate Unity, and Moderately Low Intactness (see Table 4.9-1 and Figure B-1: Simulation #1 in Attachment B). The proposed projects would likely improve the visual quality of the area.

4.9.2 Discussion of Contrasts and Viewer Concern

Alternative 1 would not contrast with the setting and viewer response would likely not notice too many changes in the physical site. Alternatives 2, 4, and 5 would all dramatically contrast with the scale, massing, height, and intensity of OTC Site 1. Alternative 3 would also contrast, but the stepping back of buildings and the scale of these buildings would be much less dramatic than Alternatives 2, 4, and 5. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed but they would not likely generate a high level of concern or major negative impressions to the public since the buildings would likely be well-designed and provide visual interest. The visual quality of the immediate site would likely be increased by all alternatives, unless parking structures and building design are not handled appropriately.

4.9.3 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not block any existing views over or near the site. Alternatives 2, 4, and 5 would block the downtown skyline view with a moderately high adversity as well as that of Cabrillo Point. Alternative 3 would still block some of this view, but with only a moderate level of adversity. Because of the contrast and the view blockage, several viewer groups would likely have moderate to high levels of concern, especially adjacent homeowners and residents in Old Town, as well as freeway drivers, walkers, joggers, cyclists, and tourists visiting the area. Although many of these viewers would not see the project from this vantage point, these viewer groups would be nearby and would have similar views.

Table 4.9-1 Simulation #1: KOP IN-1 Southbound I-5

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP IN-1 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation				**YES**		**YES**	**YES**		**YES**	**YES**	
No Project Alternative											
Viewing Blockage Expected				N		N	N		N	N	**1**
Positioning of Blockage				NO		NO	NO		NO	NO	**1**
Project Alternative #1											
Viewing Blockage Expected				N		N	N		N	N	**1**
Positioning of Blockage				NO		NO	NO		NO	NO	**1**
Project Alternative #2											
Viewing Blockage Expected				N		S	S		H	M	**3**
Positioning of Blockage				NO		SB	SB		SB	SB	**2**
Project Alternative #3											
Viewing Blockage Expected				N		S	S		H	M	**2**
Positioning of Blockage				NO		SB	SB		SB	SB	**2**
Project Alternative #4											
Viewing Blockage Expected				N		S	S		H	H	**3**
Positioning of Blockage				NO		SB	SB		SB	SB	**3**
Project Alternative #5											
Viewing Blockage Expected				N		S	S		H	H	**3**
Positioning of Blockage				NO		SB	SB		SB	SB	**3**

Legend for Amount Blockage							**Legend for Blockage Position**				
	N= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%		**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Assessment Units in Simulation							**Adversity Level for Views**				
								1= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**TF-2**	**IP-3**	**NW-1**	**LH-3**	**TR-3**	**RH-4**	**RM-4**	**CS-13**			
Existing Visual Quality of LAU	ML	M	MH	M	ML	MH	ML	ML			
Initial Sensitivity of Viewers	M	M	M	M	L	H	H	M			

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	MH	M	ML	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	MH	M	M	**Plus 1**
Project Alternative #2				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	H	ML	M	**Plus 3**
Project Alternative #3				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	H	ML	M	**Plus 3**
Project Alternative #4				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	H	ML	MH	**Plus 4**
Project Alternative #5				
Existing Quality of View Scene for Sim.	MH	M	ML	
Change for Visual Quality	H	ML	MH	**Plus 4**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive	L	M	M	MH	MH
4) General Street Drivers	L	LM	LM	M	M
5) Walkers, joggers & bikers					
6) Transit Users	L	LM	LM	M	M
7) Employees	L	LM	LM	M	M
8) Customers	L	LM	LM	M	M
9) School Attendees	L	LM	LM	M	M
10) Tourists or Visitors	L	M	M	MH	MH

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.4 Simulation 2: KOP PC-2- Northbound Pacific Coast Highway

The image shown on this KOP is also one of open sky and wide horizontal scales similar to Simulation #1. The west side of the highway is behind the fences of MCRD and the east side is made up of aged business park buildings. The existing visual quality is one of Moderately Low Vividness, Moderate Unity, and Low Intactness (see Table 4.9-2 and Figure B-2: Simulation #2 in the Attachment). The proposed project would not lower any of these quality categories, and based on new investments, would likely improve the visual quality of the area.

4.9.5 Discussion of Contrasts and Viewer Concern

Alternative 1 would not contrast with the setting and the viewer response would likely not notice changes in the physical site. Alternatives 2, 4, and 5 would all contrast with the scale, massing, height, and intensity of OTC Site 1 and OTC 2. Alternative 3 would also contrast, but the stepping back of buildings and the scale of these buildings would be much less dramatic than Alternatives 2, 4, and 5. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed but they are not likely to generate a high level of concern or major negative impressions to the public since the buildings would likely be well designed and provide visual interest. The visual quality of the immediate site would likely be increased by all alternatives.

4.9.6 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not block any existing views over or near the site. Alternatives 2, 4, and 5 would block the Mission Hills/Presidio Park viewing scene with a moderate adversity towards these views. The current visibility is limited to the upper portions of these hillsides. Presidio Park is difficult to see from this direction because of many mature trees found in the park. Alternative 3 would block less of this view, with only a moderate level of adversity. Because of the contrast and the view blockage, several viewer groups would likely have moderate levels of concern, but mostly limited to walkers, joggers, and cyclists, as well as tourists visiting the area.

Table 4.9-2 Simulation #2: KOP PC-2 Northbound Pacific Coast Highway

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP PC-2 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation				YES							
No Project Alternative											
Viewing Blockage Expected				N							1
Positioning of Blockage				NO							1
Project Alternative #1											
Viewing Blockage Expected				N							1
Positioning of Blockage				NO							1
Project Alternative #2											
Viewing Blockage Expected				L							2
Positioning of Blockage				SB							2
Project Alternative #3											
Viewing Blockage Expected				L							1
Positioning of Blockage				SB							1
Project Alternative #4											
Viewing Blockage Expected				M							2
Positioning of Blockage				SB							2
Project Alternative #5											
Viewing Blockage Expected				M							2
Positioning of Blockage				SB							2

Legend for Amount Blockage	**N**= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%

Legend for Blockage Position	**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Assessment Units in Simulation

Adversity Level for Views	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**MI-1**	**IP-7**	**LH-8**	**TF-3**	**OS-4**	**CS-9**	**NW-1**	**NW-2**	**IP-4**	**TF-2**	
Existing Visual Quality of LAU	M	L	M	ML	L	M	MH	MH	L	ML	
Initial Sensitivity of Viewers	M	M	L	M	L	L	M	L	L	M	

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**	**Viewer Concern**	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
No Project Alternative										
Existing Quality of View Scene for Sim.	ML	M	L		1) Residential Prop. Owner					
Change for Visual Quality	ML	M	L	Zero	2) Renting Residents					
Project Alternative #1					3) Freeway / Highway Drive	LM	LM	LM	LM	LM
Existing Quality of View Scene for Sim.	ML	M	L		4) General Street Drivers	LM	LM	LM	LM	LM
Change for Visual Quality	ML	M	ML	Plus 1	5) Walkers, joggers & bikers	M	M	M	M	M
Project Alternative #2					6) Transit Users	LM	LM	LM	LM	LM
Existing Quality of View Scene for Sim.	ML	M	L		7) Employees	L	L	L	L	L
Change for Visual Quality	MH	ML	ML	Plus 2	8) Customers	LM	LM	LM	LM	LM
Project Alternative #3					9) School Attendees	LM	LM	LM	LM	LM
Existing Quality of View Scene for Sim.	ML	M	L		10) Tourists or Visitors	LM	LM	M	M	M
Change for Visual Quality	MH	M	ML	Plus 2						
Project Alternative #4					**Viewer Concern Legend**	L	LM	M	MH	H
Existing Quality of View Scene for Sim.	ML	M	L			Low	Low Mod.	Moderate	Mod. High	High
Change for Visual Quality	MH	ML	M	Plus 3						
Project Alternative #5										
Existing Quality of View Scene for Sim.	ML	M	L							
Change for Visual Quality	MH	ML	M	Plus 3						

4.9.7 Simulation 3: KOP NM-2- Sports Arena and Rosecrans Boulevards

The image shown on this KOP is dominated by commercial strip retail of various ages, as well as wide and often congested streets. Some landscaping and other positive design elements exist; however the KOP is dominated by streets, parking lots, and non-descriptive commercial buildings. The existing visual quality is one of Low Vividness, Low Moderate Unity, and Low Intactness (see Table 4.9-3 and Figure B-3: Simulation #3 in the Attachment). The proposed project would not lower any of the three quality categories, and based on new investments, would likely improve the visual quality of the area.

4.9.8 Discussion of Contrasts and Viewer Concern

Alternative 1 would not contrast with the setting and the viewer response would likely not notice changes in the physical site. Alternatives 2, 4, and 5 would all contrast with the scale, massing, height, and intensity of OTC Site 1 and OTC 2. Alternative 3 would also contrast, but the stepping back of buildings and the scale of these buildings would be much less dramatic than Alternatives 2, 4, and 5. Alternatives 4 and 5 treatments of buildings on OTC Site 2 would bring many more buildings closer to this intersection, thereby increasing contrast. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed, but they would not likely generate a high level of concern or major negative impressions to the public since the buildings would likely be well designed and provide visual interest. The visual quality of the immediate site would likely be increased by all alternatives.

4.9.9 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not dramatically block any existing views over or near the site. All other alternatives would block the Mission Hills/Presidio Park viewing scene with a moderate or low adversity towards this view. The current visibility is limited to the upper portions of these hillsides. Presidio Park is difficult to see from this direction because of many mature trees found in Presidio Park. Views of the downtown skyline are very distant and small in appearance. However, each alternative other than 1 would block some slight portions of the downtown skyline corridor. Alternative 3 would block less of this view, especially at the north end towards Presidio Park. Because of the contrast, and the view blockage, several viewer groups would likely have moderate levels of concern mostly limited to walkers, joggers, and cyclists, as well as tourists visiting the area.

Table 4.9-3 Simulation #3: KOP NM-2 Sports Arena and Rosecrans Boulevards

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP NM-2 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation				**YES**						**YES**	
No Project Alternative											
Viewing Blockage Expected				N						N	**1**
Positioning of Blockage				NO						NO	**1**
Project Alternative #1											
Viewing Blockage Expected				N						N	**1**
Positioning of Blockage				NO						NO	**1**
Project Alternative #2											
Viewing Blockage Expected				M						S	**1**
Positioning of Blockage				SB						SB	**2**
Project Alternative #3											
Viewing Blockage Expected				L						N	**1**
Positioning of Blockage				SB						SB	**1**
Project Alternative #4											
Viewing Blockage Expected				M						S	**1**
Positioning of Blockage				SB						SB	**3**
Project Alternative #5											
Viewing Blockage Expected				M						S	**1**
Positioning of Blockage				SB						SB	**3**

Legend for Amount Blockage							**Legend for Blockage Position**				
	N= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%		**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Landscape Assessment Units in Simulation							**Adversity Level for Views**				
								1= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**CS-2**	**TM-2**	**CC-2**	**CS-4**	**TM-3**	**IP-4**	**NW-2**				
Existing Visual Quality of LAU	ML	M	M	ML	M	L	MH				
Initial Sensitivity of Viewers	L	MH	L	L	MH	L	L				

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	L	LM	L	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	LM	M	M	**Plus 4**
Project Alternative #2				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	LM	L	M	**Plus 2**
Project Alternative #3				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	M	LM	M	**Plus 3**
Project Alternative #4				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	LM	L	M	**Plus 2**
Project Alternative #5				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	LM	L	M	**Plus 2**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive					
4) General Street Drivers	L	L	L	LM	LM
5) Walkers, joggers & bikers	LM	M	M	M	M
6) Transit Users	L	L	L	LM	LM
7) Employees	L	LM	LM	LM	LM
8) Customers	L	L	L	LM	LM
9) School Attendees	LM	LM	LM	LM	LM
10) Tourists or Visitors	LM	M	M	M	M

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.10 Simulation 4: KOP CM-2- Midway and Rosecrans Boulevards

The image shown on this KOP is also dominated by commercial strip retail of various ages, as well as wide and often congested streets. Some landscaping and other positive design elements exist; however the KOP is dominated by streets, parking lots, and non-descriptive commercial buildings. The existing visual quality is one of Low Vividness, Low Moderate Unity, and Low Intactness (see Table 4.9-4 and Figure B-4: Simulation #4 in the Attachment). The proposed project would not lower any of the three quality categories, and based on new investments, would likely improve the visual quality of the area.

4.9.11 Discussion of Contrasts and Viewer Concern

Alternative 1 would not contrast with the setting and the viewer response would likely not notice changes in the physical site. Alternatives 2, 4, and 5 would all contrast with the scale, massing, height, and intensity of OTC Site 1 and OTC 2. Alternative 3 would also contrast, but the stepping back of buildings and the scale of these buildings would be much less dramatic than Alternatives 2, 4, and 5. Alternatives 4 and 5 treatment of buildings on OTC Site 2 would bring many more buildings closer to this intersection, thereby increasing contrast. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed but they are not likely to generate a high level of concern or major negative impressions to the public since the buildings would likely be well designed and provide visual interest. The visual quality of the immediate site would likely be increased by all alternatives.

4.9.12 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not dramatically block any existing views over or near the site. All alternatives would block the Mission Hills/Presidio Park viewing scene with a moderate or low adversity towards this view. The current visibility is limited to the upper portions of these hillsides. Presidio Park is difficult to see from this direction because of many mature trees found in Presidio Park. Views of the downtown skyline are very distant and small in appearance. However, each alternative other than 1 would block some slight portions of the downtown skyline corridor. Alternative 3 would block less of this view, especially at the north end towards Presidio Park. Because of the contrast and the view blockage, several viewer groups would likely have moderate levels of concern mostly limited to walkers, joggers, and cyclists, as well as tourists visiting the area.

Table 4.9-4 Simulation #4: KOP CM-2 Midway Near OTC Site 2

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP CM-2 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation				**YES**						**YES**	
No Project Alternative											
Viewing Blockage Expected				N						N	**1**
Positioning of Blockage				NO						NO	**1**
Project Alternative #1											
Viewing Blockage Expected				N						N	**1**
Positioning of Blockage				NO						NO	**1**
Project Alternative #2											
Viewing Blockage Expected				M						S	**1**
Positioning of Blockage				SB						SB	**2**
Project Alternative #3											
Viewing Blockage Expected				L						S	**1**
Positioning of Blockage				SB						SB	**1**
Project Alternative #4											
Viewing Blockage Expected				M						S	**2**
Positioning of Blockage				SB						SB	**3**
Project Alternative #5											
Viewing Blockage Expected				M						S	**2**
Positioning of Blockage				SB						SB	**3**

Legend for Amount Blockage	**N**= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%

Legend for Blockage Position	**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Assessment Units in Simulation	**Adversity Level for Views**	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**CS-8**	**CC-3**	**TM-6**	**NW-2**	**IP-5**						
Existing Visual Quality of LAU	L	M	M	MH	ML						
Initial Sensitivity of Viewers	L	L	MH	L	L						

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	L	LM	L	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	M	M	M	**Plus 5**
Project Alternative #2				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	M	L	M	**Plus 3**
Project Alternative #3				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	M	L	M	**Plus 3**
Project Alternative #4				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	MH	L	M	**Plus 4**
Project Alternative #5				
Existing Quality of View Scene for Sim.	L	LM	L	
Change for Visual Quality	MH	L	M	**Plus 4**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive					
4) General Street Drivers	L	L	M	M	M
5) Walkers, joggers & bikers	L	M	M	MH	MH
6) Transit Users	L	L	LM	LM	LM
7) Employees	L	L	L	L	L
8) Customers	L	L	LM	LM	LM
9) School Attendees	L	L	LM	M	M
10) Tourists or Visitors	L	L	M	MH	MH

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.13 Simulation 5: KOP SP-2- Trolley Station at Hancock and Washington Streets

The image shown on this KOP is dominated by the rail line as well as some of the immediate high-quality developments. However, a lot of the immediate area is not developed and tends to look underdeveloped or abandoned. The existing visual quality is one of Moderate Vividness, Moderately High Unity, and Moderately High Intactness (see Table 4.9-5 and Figure B-5: Simulation #5 in the Attachment). The proposed project would not lower any of the three quality categories, and based on new investments, would likely improve the visual quality of the area.

4.9.14 Discussion of Contrasts and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not contrast with the setting and the viewer response would likely not notice changes in the physical site. Alternatives 2, 4, and 5 would all have a low contrast with the scale, massing, height, and intensity of OTC Site 1 and OTC 2. Alternative 3 would have a slight contrast, but the stepping back of buildings and the scale of these buildings would be less dramatic than Alternatives 2, 4, and 5. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed but they would not likely generate a high or moderate level of concern or major negative impressions to the public since the buildings would likely be well designed and provide visual interest. The visual quality of the immediate site would likely be increased by all alternatives.

4.9.15 Discussion of View Blockage of Viewing Scenes and Viewer Concern

No views of sub-regionally important viewing scenes would be affected as seen from this viewpoint.

Table 4.9-5 Simulation #5: KOP SP-2 Trolley Station at Washington and Hancock Streets

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP SP-2 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation											
No Project Alternative											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #1											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #2											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #3											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #4											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #5											
Viewing Blockage Expected											1
Positioning of Blockage											1
Legend for Amount Blockage	**N**= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%	**Legend for Blockage Position**	**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon
Landscape Assessment Units in Simulation							**Adversity Level for Views**	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse
LAU in Simulation	**TF-3**	**MI-1**	**IP-7**	**LH-8**	**NW-1**						
Existing Visual Quality of LAU	ML	M	L	M	MH						
Initial Sensitivity of Viewers	M	M	M	L	M						

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	Vividness	Unity	Intactness & Appearance	Visual Quality Change
No Project Alternative				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	M	MH	MH	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	MH	H	H	**Plus 3**
Project Alternative #2				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	MH	M	H	**Plus 1**
Project Alternative #3				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	H	MH	H	**Plus 3**
Project Alternative #4				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	MH	M	H	**Plus 1**
Project Alternative #5				
Existing Quality of View Scene for Sim.	M	MH	MH	
Change for Visual Quality	MH	M	H	**Plus 1**

Viewer Concern	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive					
4) General Street Drivers	L	L	LM	LM	LM
5) Walkers, joggers & bikers	L	L	LM	LM	LM
6) Transit Users	L	L	LM	LM	LM
7) Employees	L	L	L	L	L
8) Customers	L	L	LM	LM	LM
9) School Attendees	L	L	LM	LM	LM
10) Tourists or Visitors	L	L	M	M	M
Viewer Concern Legend	L Low	LM Low Mod.	M Moderate	MH Mod. High	H High

4.9.16 Simulation 6: KOP OT-1- Park in Old Town State Park

Old Town State Park is a classic example of a pioneer town square from the early days of San Diego's development history. Original storefronts, hotels, and horse stables are found around the square. The space is mostly enclosed by a ring of historic buildings, modified as retail shops and restaurants. Mature trees can be found on the park site with period street furnishings and a historically correct flagpole. The existing visual quality is one of Moderately High Vividness, High Unity, and High Intactness (see Table 4.9-6 and Figure B-6: Simulation #6 in the Attachment). With the exception of Alternative 1, the proposed project would lower all three quality categories because of the stark contrast between scale, character, and materials.

4.9.17 Discussion of Contrasts and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Alternative 1 would not contrast with the setting since it would not be visible from this location. Alternatives 2, 4, and 5 would all have a high contrast with the scale, massing, height, and intensity of OTC Site 1. Alternative 3 would have a moderate contrast, but the stepping back of buildings and the scale of these buildings would be less dramatic than Alternatives 2, 4, and 5. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed and would likely generate a high to moderate level of concern from most viewers. The contrast and its associated concern would be noticed by tourists, walkers, joggers, and cyclists, as well as by customers at these shops. The existing unity of the visual elements in the immediate site is high and the character is intact and well maintained to support long term appearance requirements. The contrast would not be between a well maintained and designed historic environment and the aesthetic design treatments of the proposed development. It would be specifically a contrast of scale, character, and massing. It would be much more likely for a person to feel they are in the midst of what was the historic origins of San Diego when the background has few signs of modern day life and development adjacent to it. The only visual clues of being in modern times is the appearance of a large utility line silhouetted against the sky in the background.

4.9.18 Discussion of View Blockage of Viewing Scenes and Viewer Concern

No views of sub-regionally important viewing scenes would be affected as seen from this viewpoint.

Table 4.9-6 Simulation #6: KOP OT-1 Park in Old Town State Park

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP OT-1 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	Adversity Level Summary
Viewing Scene in Simulation											
No Project Alternative											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #1											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #2											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #3											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #4											
Viewing Blockage Expected											1
Positioning of Blockage											1
Project Alternative #5											
Viewing Blockage Expected											1
Positioning of Blockage											1

Legend for Amount Blockage	**N=** None	**D=** Distant, becomes part of view scene	**S=** Slight < 5% view blockage	**L=** Low 5-10%	**M=** Moderate 10-15%	**H=** High > 15%

Legend for Blockage Position	**NO=** Position of massing is low & subservient	**LV=** Blocks lower view / upper view clear	**SB=** silhouettes against sky backdrop	**SO=** Silhouettes against ocean horizon

Landscape Assessment Units in Simulation											
LAU in Simulation	**PP-3**	**CH-2**	**OU-2**								
Existing Visual Quality of LAU	H	H	ML								
Initial Sensitivity of Viewers	H	H	M								

Adversity Level for Views	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	MH	H	H	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	MH	H	H	**Zero**
Project Alternative #2				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	H	L	M	**Minus 5**
Project Alternative #3				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	H	ML	MH	**Minus 3**
Project Alternative #4				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	H	L	M	**Minus 5**
Project Alternative #5				
Existing Quality of View Scene for Sim.	MH	H	H	
Change for Visual Quality	H	L	M	**Minus 5**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive					
4) General Street Drivers	L	MH	M	MH	MH
5) Walkers, joggers & bikers	L	MH	M	MH	MH
6) Transit Users	L	M	M	M	M
7) Employees	L	LM	LM	M	M
8) Customers	L	MH	M	MH	MH
9) School Attendees	L	M	M	MH	MH
10) Tourists or Visitors	L	H	MH	H	H

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.19 Simulation 7: KOP OT-6 Old Town Avenue

This view starts to remove itself from the mystique and character of Old Town State Park. The slightly elevated position begins to afford the area with views to the west. The views are characteristic of a large number of residential units and hotels that look out over Old Town and Interstate 5 towards the west. Existing visual quality is one of High Vividness, Moderately High Unity, and Moderately High Intactness (see Table 4.9-7 and Figure B-7: Simulation #7 in the Attachment). With the exception of Alternative 1, the proposed project would lower all three quality categories because of stark contrasts between scale, character, and materials.

4.9.20 Discussion of Contrasts and Viewer Concern

All alternatives, including Alternative 1 would be visible from this viewpoint, although it would not be noticed because of new construction, it would be noticed by the removal of the most southerly warehouse structure. A parking lot would likely be in this area, allowing the view of the older office building complex on the other side of Pacific Coast Highway and other elements of MCRD to be seen. Alternatives 2, 4, and 5 would all have a high contrast with the scale, massing, height, and intensity of OTC Site 1. Alternative 3 would have a moderately high contrast since the stepping back of buildings and the scale of these buildings would be less dramatic than Alternatives 2, 4, and 5. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed and would likely generate a moderate to high level of concern from most viewers, especially those that own or reside in houses located along this height above Old Town. The contrast would be specifically a contrast of scale, character, and massing.

4.9.21 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Three sub-regionally important views can be seen from this site and sites like it in the immediate area. The views of the Point Loma Hillside, Cabrillo Point, and portions of San Diego Bay and Coronado can be seen from this area, although views of San Diego Bay are limited and more prevalent from north and south of this photo's location. Alternatives 2 and 3 would have some views seen through the site, whereas Alternatives 4 and 5 would be mostly blocked. Alternative 3 would avoid the buildings being silhouetted against the open sky, and in some cases, the Point Loma hillside and Cabrillo Point would still be seen above it. The loss of views would be noticed by all viewers, but it would be particularly of high concern by those that own property or businesses that benefit financially from these views.

Table 4.9-7 Simulation #7: KOP OT-6 Old Town Avenue

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP OT-6 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation							**YES**	**YES**	**YES**		
No Project Alternative											
Viewing Blockage Expected							N	N	N		**1**
Positioning of Blockage							NO	NO	NO		**1**
Project Alternative #1											
Viewing Blockage Expected							N	N	N		**1**
Positioning of Blockage							NO	NO	NO		**1**
Project Alternative #2											
Viewing Blockage Expected							M	M	M		**2**
Positioning of Blockage							SB	SB	SB		**3**
Project Alternative #3											
Viewing Blockage Expected							L	L	L		**2**
Positioning of Blockage							LV	LV	LV		**1**
Project Alternative #4											
Viewing Blockage Expected							M	H	M		**4**
Positioning of Blockage							SB	SB	SB		**4**
Project Alternative #5											
Viewing Blockage Expected							M	H	M		**4**
Positioning of Blockage							SB	SB	SB		**4**

Legend for Amount Blockage	**N**= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%

Legend for Blockage Position	**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Landscape Assessment Units in Simulation							**Adversity Level for Views**	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**OU-6**	**CH-3**	**OU-7**	**LH-7**	**TF-1**	**TR-2**	**NW-1**	**OS-4**	**MA-2**		
Existing Visual Quality of LAU	M	M	M	MH	M	ML	MH	L	H		
Initial Sensitivity of Viewers	M	L	M	MH	M	L	M	L	M		

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	MH	MH	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	MH	MH	**Zero**
Project Alternative #2				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	ML	MH	**Minus 2**
Project Alternative #3				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	MH	H	**Plus 1**
Project Alternative #4				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	ML	MH	**Minus 2**
Project Alternative #5				
Existing Quality of View Scene for Sim.	H	MH	MH	
Change for Visual Quality	H	ML	MH	**Minus 2**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner	L	MH	M	H	H
2) Renting Residents	L	M	M	MH	MH
3) Freeway / Highway Drive					
4) General Street Drivers	L	LM	M	MH	MH
5) Walkers, joggers & bikers	L	M	LM	H	H
6) Transit Users					
7) Employees					
8) Customers					
9) School Attendees					
10) Tourists or Visitors					

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.22 Simulation 8: KOP NP-1 Presidio Mormon Memorial Park

The views from Presidio Park are perhaps the highest elevation of public views in the area. Most of the topography and park features are oriented to the views to the west as well as to the southwest, northwest, and north. Five sub-regionally important viewing scenes can be seen from this location. The views themselves look out over the park in the foreground, Old Town, and the NAVWAR OTC Sites 1 and 2 in the middle ground, with San Diego Bay, Coronado, Point Loma, and Cabrillo Point in the background, and the Pacific Ocean in the distant background. Existing visual quality is one of High Vividness, High Unity, and High Intactness (see Table 4.9-8 and Figure B-8: Simulation #8 in the Attachment). With the exception of Alternatives 1 and 3, the proposed project would lower all three quality categories because of stark contrasts between scale, character, and materials.

4.9.23 Discussion of Contrasts and Viewer Concern

All alternatives, including Alternative 1, would be visible from this viewpoint. Although it would not be noticed because of new construction, it would be noticed because of the removal of the most southerly warehouse structure as well as modifications to some of the building entrances with material and color changes. Alternatives 4 and 5 would all have a high contrast with the scale, massing, height, and intensity of OTC Site 1 and Site 2. Alternatives 2 and 3 would have a moderately high contrast since the stepping back of buildings and the height of these buildings would be less dramatic than Alternatives 4 and 5 that pierce the horizon line by silhouetting against the background sky. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed by all viewer groups and would likely generate a moderate to high level of concern from most viewers, especially park users, tourists, and those that own or reside in houses located along this height above Old Town.

4.9.24 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Five sub-regionally important views can be seen from this site. Alternative 2 would have some views seen through the site or over the lower buildings, whereas Alternatives 4 and 5 would be mostly blocked with the exception of the transit plaza area in the middle of the project. Alternative 3 avoids the buildings being silhouetted against the open sky, and in some cases, the Point Loma Hillside and Cabrillo Point would still be seen above it. The loss of views would be noticed by all viewers but would be of high concern for those that drive the scenic road or visit Presidio Park.

Table 4.9-8 Simulation #8: KOP NP-1 Presidio Mormon Memorial Park

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP NP-1 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	Adversity Level Summary
Viewing Scene in Simulation						YES	YES	YES	YES	YES	
No Project Alternative											
Viewing Blockage Expected						N	N	N	N	N	1
Positioning of Blockage						NO	NO	NO	NO	NO	1
Project Alternative #1											
Viewing Blockage Expected						N	N	N	N	N	1
Positioning of Blockage						NO	NO	NO	NO	NO	1
Project Alternative #2											
Viewing Blockage Expected						H	H	H	M	N	3
Positioning of Blockage						SO	SO	SB	SO	NO	3
Project Alternative #3											
Viewing Blockage Expected						M	M	H	M	N	2
Positioning of Blockage						LV	LV	LV	LV	NO	1
Project Alternative #4											
Viewing Blockage Expected						H	H	MH	H	N	4
Positioning of Blockage						SO	SO	SB	SB	NO	4
Project Alternative #5											
Viewing Blockage Expected						MH	MH	H	H	N	4
Positioning of Blockage						SO	SO	SB	SB	NO	4

Legend for Amount Blockage	N= None	D= Distant, becomes part of view scene	S= Slight < 5% view blockage	L= Low 5-10%	M= Moderate 10-15%	H= High > 15%

Legend for Blockage Position	NO= Position of massing is low & subservient	LV= Blocks lower view / upper view clear	SB= silhouettes against sky backdrop	SO= Silhouettes against ocean horizon

Landscape Assessment Units in Simulation	Adversity Level for Views	1= None or Low Adversity	2= Moderate Adversity	3= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	PD-1	PP-1	CH-1	VA-1	CH-2	TR-2	RH-1	TM-10	TF-1		
Existing Visual Quality of LAU	H	M	H	NA	H	ML	M	M	M		
Initial Sensitivity of Viewers	H	MH	M	MH	H	L	MH	MH	M		

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	Vividness	Unity	Intactness & Appearance	Visual Quality Change
No Project Alternative				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	Zero
Project Alternative #1				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	Zero
Project Alternative #2				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	ML	MH	Minus 4
Project Alternative #3				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	M	MH	Minus 3
Project Alternative #4				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	L	MH	Minus 5
Project Alternative #5				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	L	MH	Minus 5

Viewer Concern	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1) Residential Prop. Owner					
2) Renting Residents					
3) Freeway / Highway Drive					
4) General Street Drivers	L	MH	M	MH	MH
5) Walkers, joggers & bikers	L	H	MH	H	H
6) Transit Users					
7) Employees					
8) Customers					
9) School Attendees	L	M	M	MH	MH
10) Tourists or Visitors	L	H	MH	H	H

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.25 Simulation 9: KOP NP-3 Altamirano and Presidio Drive

The views from this historic neighborhood are perhaps the highest elevation of private views in the area. Some views can be seen from public streets however most are blocked by existing development. Four sub-regionally important viewing scenes can be seen from this location. The views themselves look out over the neighborhood in the foreground, Old Town, and the NAVWAR OTC Sites 1 and 2 in the middle ground, with San Diego Bay, Coronado, Point Loma, and Cabrillo Point in the background, and the Pacific Ocean in the distant background. Existing visual quality is one of High Vividness, High Unity, and High Intactness (see Table 4.9-9 and Figure B-9: Simulation #9 in the Attachment). With the exception of Alternatives 1 and 2, the proposed project would lower all three quality categories.

4.9.26 Discussion of Contrasts and Viewer Concern

All the alternatives, except Alternative 1, would be visible from this viewpoint. Alternatives 4 and 5 would all have a high contrast with the scale, massing, height, and intensity of OTC Site 1 and Site 2. Alternatives 2 and 3 would have a moderately high contrast since the stepping back of buildings and the height of these buildings would be less dramatic than Alternatives 4 and 5 that pierce the horizon line by silhouetting against the background sky. Alternatives 2, 4, and 5 would provide some views through the project site since the transit plaza or spacing of buildings holds this corridor open. Alternative 3 would place the buildings in an area that would block views more extensively than the other alternatives. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed by all viewer groups and would likely generate a moderate to high level of concern from most viewers, especially scenic highway tourists and those that own or reside in houses in North Mission Hills.

4.9.27 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Four sub-regionally important views can be seen from this site and sites like it in the immediate area. Alternatives 2, 4, and 5 would have some limited views seen through the site due to the transit plaza area in the middle of the project. From this viewing location, Alternative 3 would block the views more than the other alternatives that would keep this part of the project site open to the transit center and plazas. The loss of views would be noticed by all viewers but would be of high concern from those that own property or live in homes along this part of North Mission Hills.

Table 4.9-9 Simulation 9: KOP NP-3 Altamirano and Presidio Drive

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP NP-3 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	Adversity Level Summary
Viewing Scene in Simulation						YES	YES	YES	YES		
No Project Alternative											
Viewing Blockage Expected						N	N	N	N		1
Positioning of Blockage						NO	NO	NO	NO		1
Project Alternative #1											
Viewing Blockage Expected						N	N	N	N		1
Positioning of Blockage						NO	NO	NO	NO		1
Project Alternative #2											
Viewing Blockage Expected						M	H	H	H		4
Positioning of Blockage						SO	SO	SB	SB		4
Project Alternative #3											
Viewing Blockage Expected						L	M	M	L		2
Positioning of Blockage						L	LV	LV	LV		1
Project Alternative #4											
Viewing Blockage Expected						H	H	H	MH		4
Positioning of Blockage						SB	SO	SB	SB		4
Project Alternative #5											
Viewing Blockage Expected						M	H	MH	H		4
Positioning of Blockage						SB	SO	SB	SB		4

Legend for Amount Blockage	**N**= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%

Legend for Blockage Position	**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Landscape Assessment Units in Simulation	**Adversity Level for Views**	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	RH-2	RH-1	MA-2	RF-1	RF-2	RH-5	MR-1				
Existing Visual Quality of LAU	H	M	H	MH	H	H	H				
Initial Sensitivity of Viewers	H	MH	M	MH	MH	M	H				

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	Vividness	Unity	Intactness & Appearance	Visual Quality Change
No Project Alternative				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	Zero
Project Alternative #1				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	Zero
Project Alternative #2				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	M	M	MH	Minus 5
Project Alternative #3				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	MH	M	MH	Minus 4
Project Alternative #4				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	M	M	MH	Minus 5
Project Alternative #5				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	M	M	MH	Minus 5

Viewer Concern	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1) Residential Prop. Owner	L	H	MH	H	H
2) Renting Residents	L	MH	M	MH	MH
3) Freeway / Highway Drive					
4) General Street Drivers	L	M	M	M	M
5) Walkers, joggers & bikers	L	MH	M	MH	MH
6) Transit Users					
7) Employees					
8) Customers					
9) School Attendees					
10) Tourists or Visitors	L	H	MH	H	H

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.9.28 Simulation 10: KOP CH-2 Hayden and Linwood from Public Roads

The views from this mid-century modern architecture Central Mission Hills neighborhood are lower than those in North Mission Hills. Views to the west of the Pacific Ocean, Mission Bay, and the San Diego River are unique from these lower to middle level hillside sites. The orientation of houses tends to be directly to the west and landforms of North Mission Hill do not block views to the northwest. Three sub-regionally important viewing scenes can be seen from this location. The views themselves look out over the neighborhood in the foreground, Old Town, and the NAVWAR OTC Site 1 and 2 in the middle ground, with Mission Bay and San Diego River in the background, and the Pacific Ocean in the distant background. Existing visual quality is one of High Vividness, High Unity, and High Intactness (see Table 4.9-10 and Figure B-10: Simulation #10 in the Attachment). With the exception of Alternatives 1 and 2, the proposed project would lower all three quality categories.

4.9.29 Discussion of Contrasts and Viewer Concern

All the alternatives, including Alternative 1, would be visible from this viewpoint. Although it would not be noticed because of new construction, it would be noticed by the removal of the most southerly warehouse structure as well as modifications to some of the building entrances with material and color changes. Alternatives 4 and 5 would all have a high contrast with the scale, massing, height, and intensity of OTC Sites 1 and Site 2. Alternatives 2 and 3 would have a moderately high contrast since the stepping back of buildings and the height of these buildings would be less dramatic than Alternatives 4 and 5 that would pierce the horizon line by silhouetting against the background ocean and sky. Based on the viewer groups, duration, exposure, and viewer quantities, these contrasting changes would be noticed by all viewer groups and would likely generate a moderate to high level of concern from most viewers, although viewer groups are mostly limited to private residences as well as walkers, joggers, and cyclists or arterial drivers including tourists.

4.9.30 Discussion of View Blockage of Viewing Scenes and Viewer Concern

A view of existing conditions is shown in the photo below, simulations for the Proposed Action Alternatives are available in Appendix B. Three sub-regionally important views can be seen from this site. Alternatives 2 and 3 would have some limited views seen through the site due to lower building heights and building gaps. Alternatives 4 and 5 would block two of the three important views almost completely. The loss of views would be noticed by all viewers but would be of high concern from those that own property or live in homes along this part of Central Mission Hills.

Table 4.9-10 Simulation 10: KOP CH-2 Hayden and Linwood

Summary of View and Visual Quality Contrasts with Viewer Concerns

KOP CH-2 View Quality Ranking	1. San Diego River	2. Mission Bay	3. Mission Valley North (USD)	4. Mission Valley, Presidio & Mission Hills	5. Ocean to the West	6. Ocean to the Southwest	7. SD Bay & Coronado Island	8. Pt. Loma Hillside	9. Cabrillo Point-Hillside	10. Downtown Skyline	**Adversity Level Summary**
Viewing Scene in Simulation	**YES**	**YES**			**YES**						
No Project Alternative											
Viewing Blockage Expected	N	N			N						**1**
Positioning of Blockage	NO	NO			NO						**1**
Project Alternative #1											
Viewing Blockage Expected	N	N			N						**1**
Positioning of Blockage	NO	NO			NO						**1**
Project Alternative #2											
Viewing Blockage Expected	M	S			M						**3**
Positioning of Blockage	SO	SO			SO						**3**
Project Alternative #3											
Viewing Blockage Expected	S	N			M						**2**
Positioning of Blockage	LV	NO			SO						**1**
Project Alternative #4											
Viewing Blockage Expected	M	N			H						**4**
Positioning of Blockage	SO	NO			SO						**4**
Project Alternative #5											
Viewing Blockage Expected	M	L			H						**4**
Positioning of Blockage	SO	NO			SO						**4**

Legend for Amount Blockage							**Legend for Blockage Position**				
	N= None	**D**= Distant, becomes part of view scene	**S**= Slight < 5% view blockage	**L**= Low 5-10%	**M**= Moderate 10-15%	**H**= High > 15%		**NO**= Position of massing is low & subservient	**LV**= Blocks lower view / upper view clear	**SB**= silhouettes against sky backdrop	**SO**= Silhouettes against ocean horizon

Landscape Assessment Units in Simulation	**Adversity Level for Views**	**1**= None or Low Adversity	**2**= Moderate Adversity	**3**= Mod. High Adversity	4= Highly Adverse

LAU in Simulation	**RM-4**	**RH-4**	**CS-13**	**OU-8**	**TR-3**	**TF-1**	**OU-7**	**NW-1**	**IP-4**	**NW-2**	**CS-9**
Existing Visual Quality of LAU	ML	MH	ML	ML	ML	M	M	MH	L	MH	M
Initial Sensitivity of Viewers	H	H	M	M	L	M	M	M	L	L	L

Legend for LAUs & Visual Quality L= Low ML= Moderate Low M= Moderate MH= Moderate High H= High

Visual Quality Ranking	**Vividness**	**Unity**	**Intactness & Appearance**	**Visual Quality Change**
No Project Alternative				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	**Zero**
Project Alternative #1				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	H	H	**Zero**
Project Alternative #2				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	MH	MH	MH	**Minus 3**
Project Alternative #3				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	H	MH	H	**Minus 1**
Project Alternative #4				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	MH	MH	MH	**Minus 3**
Project Alternative #5				
Existing Quality of View Scene for Sim.	H	H	H	
Change for Visual Quality	MH	MH	MH	**Minus 3**

Viewer Concern	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**	**Alt. 5**
1) Residential Prop. Owner	L	H	MH	H	H
2) Renting Residents	L	MH	M	MH	MH
3) Freeway / Highway Drive					
4) General Street Drivers	L	M	ML	M	M
5) Walkers, joggers & bikers	L	MH	M	MH	MH
6) Transit Users					
7) Employees					
8) Customers					
9) School Attendees	L	LM	LM	M	M
10) Tourists or Visitors	L	MH	MH	MH	MH

Viewer Concern Legend	L	LM	M	MH	H
	Low	Low Mod.	Moderate	Mod. High	High

4.10 Visual Impact Assessment and Determinations

The following sections discusses the predicted impacts associated with each of the project alternatives. These findings are based on the review of the following tables and maps:

- Simulations (see Attachment B: simulations and predicted impacts with viewer groups likely reactions on Tables B-1 and B-2) as well as a summary table per simulation (Table 1.5-1 in Chapter 1)
- Comparison of the visual assessment units adjacent to the site with the new project elements (Tables 1.3-6 through 1.3-11 and Figures 1.3-2 through 1.3-4 in the Chapter 1 with particular attention to Figure 1.3-4 for a summary of visual quality)
- Scenic Highway Designations or Eligibility (Figure 2.2-1)
- Model overlays on 30 KOPs (see Tables 3.3-1 through 3.3-4 and Figures 3.3-2 through 3.3-17 in Chapter 3)
- Viewing scene and viewing corridor blockage (see Attachment A: View Scene Corridor Maps as well as Figure 3.1-1 through Figure 3.1-10 in Chapter 3 and Table 4.8-1 and 4.8-2 in this chapter); and
- Changes in visual quality of Vividness, Unity, and Intactness (as well as Tables 4.9-1 through 4.9-10 in this chapter)

The new federal 2015 FHWA guidance suggests using impact categories as Adverse, Beneficial, or Neutral. Table 4.9-11 cross references the terms used for the FHWA 2015 guidance and the Caltrans guidance.

Table 4.9-11 Cross Reference Caltrans VIA Impact Terms to 2015 FWHA VIA Terms

Caltrans VIA	*FHWA VIA*
Low	Neutral or Beneficial
Moderately Low	Neutral
Moderate	Adverse
Moderately High	Adverse
High	Adverse

4.11 Alternative "No Action" Impacts

By definition, the no build or no action alternative would not have any changes to the visual environment. This lack of change, however, would keep the aging buildings and surface lots in their current condition. As discussed in the Landscape Assessment Unit sections, the existing visual quality of OTC Site 1 and OTC Site 2 do have some quality issues associated with them and therefore will be discussed for visual quality and aesthetic impacts within later sections of this study.

4.11.1 Discussion of KOP Locations and Viewer Groups

This section does not apply to the "No Action" Alternative since no physical change would occur**.**

4.11.2 Discussion of Contrasts with Setting

This section does not apply to the "No Action" Alternative since no physical change would occur.

4.11.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.11.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? **(no)**
- Would the degree to which a proposed zone change results in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(no)**
- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(yes, see Future Community Character discussion in section 4.13.6)**

4.11.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(no)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(no)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(no)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(no)**

4.11.4 Discussion of View Quality Impacts

This section does not apply to the "No Action" Alternative since no physical change will occur.

4.11.5 Discussion of Visual Quality Impacts

This section does not apply to the "No Action" Alternative since no physical change will occur.

4.11.6 Anticipated Aesthetic and Visual Impacts

1- **View Quality: No view impacts** would be expected with the "No Action" Alternative.

2- **Scenic Highway Impacts: No scenic highway impacts** would be expected with the "No Action" Alternative.

3- **Visual Quality:** With the "No Action" Alternative, there would be no change on the project site that would improve the overall visual quality of any part of OTC Site 1 or Site 2. Therefore, with a lack of a built project, the existing visual quality would remain the same. **Impact 3: This would only be considered a low adverse impact on the existing visual quality.** It would also represent a lost opportunity to make a positive change.

4- **Landform Quality: No landform impacts** would be expected with the "No Action" Alternative.

5- **Aesthetic Quality: No aesthetic impacts** would be expected with the "No Action" Alternative.

6- **Existing Community Character:** With the "No Action" Alternative, there would be no change on the project site that would improve the overall visual quality of any part of OTC Site 1 or Site 2**. Impact 6a: This would only be considered a low adverse impact on the existing community character** since the quality of the existing Navy's built environment is of a higher quality than the existing community character to the south, southwest, west, northwest, and north. For the visual environment to the northeast, east, and southeast, the appearance of the existing NAVWAR structures are not negatively affecting the character of these areas. **Impact 6b-therefore this impact would only be low adverse impact since it represents a lost opportunity to make a positive change to this character.**

7- **Future Community Character and Goal Attainment:** With the "No Action" Alternative, the financial and development incentive for increased investment in the local area would no longer be present and the lack of investment could actually be considered a detriment to desired change in the community. **Impact 7: This change would only be considered a low adverse impact on the ability for the community to obtain changes for areas outside of OTC Site 1 and Site 2**. It would also represent a lost opportunity to make a positive change to this character.

4.12 Alternative 1 Project Impacts

4.12.1 Discussion of KOP Locations and Viewer Groups

Based on a full understanding of the areas that can see Alternative 1, critical key viewpoints for seeing the proposed project alternative include all only two of the selected KOPs that have had simulations prepared for this study (see Attachment B - Simulation #7), as well as four additional KOPs found in Figures 3.3-16, 3.3-17, 3.3-18, 3.3-24, and 3.3-25 and Tables 3.3-2 through 3.3-4. For each of the simulations, potential viewer groups have been identified and ranked as to their likely response to visual changes (see Table 1.5-1 and Tables 4.9-1 through 4.9-7). Since the project is related to recapitalization of the existing buildings and the most southerly of the three warehouse buildings would be demolished to make room for surface parking, none of the viewer groups would have any concerns over these changes.

4.12.2 Discussion of Contrasts with Setting

Given the small changes of the existing buildings, and improved entrance and plaza area and the removal of one of the three structures, the contrast with the existing setting is too low to consider impacts for this project. While analyzing all ten simulations, Simulation #7 is the only one where any change would be noticeable. Alternative 1 would not contrast with the existing visual setting and no viewer groups would likely have concerns with the project.

4.12.2.1 During Construction

The scale of Alternative 1 is such that major construction will occur over several years of construction and the scale of the contractor laydown areas, staging area, and construction areas will be large and likely highly visible. The demolition of other buildings will also last over several months of demolition activity. In addition, construction related rigging, scaffolding, and mobile construction cranes are also expected to be visible and will last several years with demolition and construction both occurring during this timeframe. Given that many viewing locations around the site, are substantially higher than the project site, fencing and screening may not be effective. Therefore, a temporary significant impact to visual quality, community character, and aesthetics would be expected.

4.12.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.12.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community or localized are be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? **(no)**
- Would the degree to which a proposed zone change result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(no)**
- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(no)**

4.12.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(no)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(no)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(no, a slight view would open up with the demolition of the most southerly of the three warehouse buildings)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(no)**

4.12.4 Discussion of View Quality Impacts

Tables 4.8-1 and 4.8-2 show how Alternative 1 may affect viewing scenes that would be considered sub-regionally important. Alternative 1 would increase some visibility through the site because of the reduction in the building massing found on site. Viewing scene acreage would go up for the overall viewing scenes by an average of 3.8 percent with increased views affecting about 900 persons. Given this positive increase in viewing scenes, the project would not need to be analyzed further for view impacts.

4.12.5 Discussion of Visual Quality Impacts

The LAUs around the site to the south, west, and north have an overall lower visual quality than LAUs to the east. Therefore, the contrast with the quality of the adjacent areas would not create a significant visual quality impact to these areas. This conclusion is based in Figure 1.5-1 and Tables 1.3-8 through 1.3-13 in Chapter 1, along with Tables 4.9-1 through 4.9-10 in this chapter. The areas to the south, southwest, west, northwest, and north do not have a high visual quality associated with them. Therefore, Alternative 1 would be expected to have no impact or a slight increase in visual quality affecting these adjacent areas and on the overall visual environment for this part of the study area**.** The LAUs around the site to the northeast, east, and southeast do have a higher visual quality. Since the

project would have some improvements that would upgrade and enhance OTC Site 1, it would be expected to increase the visual quality of this area and have a positive impact on the setting.

4.12.6 Anticipated Aesthetic and Visual Impacts

1) **View Quality:** With no new structures creating view blockage and with one of the three warehouses removed no adverse impacts are expected. **Impact 1: Alternative 1 would have no impacts other than a positive impact on some limited views resulting from one of the warehouse buildings being removed**.

2) **Scenic Highway Impacts:** With no new structures creating view blockage and with one of the three warehouses removed and with an overall upgrade of the visual elements of OTC Site 1, **Impact 2: Alternative 1 would have no impacts other than a positive impact on eligible scenic highway of I-5 and with the existing City of San Diego's designated scenic route.**

3) **Visual Quality:** No existing visual assets would be removed by the project, although the historic character of the World War II era fabrication plant would be a moderately low loss of visual resources. **Impact 3: Based on the visual simulations and associated tables, no negative impact would result on the existing visual quality of the site. In fact, the proposed changes would result in a potential slight improvement to the area's visual quality, increasing each of the project site's LAU by at least one quality level.**

4) **Landform Quality:** No grading of existing landforms that are considered to be of moderate to high quality are associated with this alternative, **therefore no landform quality impacts would be considered to occur.**

5) **Aesthetic Quality:** Given the large investment, the level of expectation of the community, requirements of the Navy and the City of San Diego, as well as the market conditions for the private development portions of the project. **Impact 5: the project would likely improve the aesthetics of the site which is considered as currently having only a moderate level of aesthetic quality.**

6) **Existing Community Character:** Since there are no dominant community characteristics be found around the south, southwest, west, northwest, and north sides of the project site**. Impact 6a: no existing community character impact would be likely.** The distance that areas to the northeast, east, and southeast are from the project and the fact that a freeway intercedes minimizes this impact. **Impact 6b: an impact on community character in this area would only have a low level of adversity.**

7) **Future Community Character and Goal Attainment:** None of the listed goals in the local community plan would be negatively affected by Alternative 1. The project investment, improved quality, and value associated with Alternative 1 would likely encourage a limited amount of investment and development that could help the community reach some results sought in the adopted community plans. **Impact 7: would therefore have a very slight positive impact on future community character compared to the "No Action" Alternative.**

4.13 Alternative 2 Project Impacts

4.13.1 Discussion of KOP Locations and Viewer Groups

Based on a full understanding of the areas that can see Alternative 2, critical key viewpoints for seeing the proposed project alternative include all ten selected KOPs that have had simulations prepared for this study (see Attachment B), as well as the twenty additional KOPs found in Tables 3.3-1 through 3.3-4 and Figure 3.3-2 through 3.3-17. For each of the simulations, potential viewer groups have been identified and ranked as to their likely response to visual changes (see Table 1-5.1 and Tables 4.9-1 through 4.9-10 with particular attention to the tables associated with Simulations #6, #8, #9, and #10).

Residential property owners and those that rent housing in the area, as well as tourists, walkers, joggers, and bikers, would likely have high or moderately high concerns about the changes shown in the simulations. Because of viewers concerns, the project would likely result in adverse impacts associated with Alternative 2.

4.13.2 Discussion of Contrasts with Setting

A project may either improve the overall visual quality in an area, or it can be neutral or damaging to an area's visual quality. To have a high or moderately high adverse impact to the visual quality for areas within one-half mile of OTC Site 1 or 2, the proposed project elements would need to demonstrate that they contrast highly with the existing setting. If an adjacent area has a high visual quality associated with it, and if the project has a lower visual quality, this change in quality of the immediate area would be considered to have an adverse change. From an aesthetics perspective, the project would be assumed to be of a moderately high or high level of aesthetics. This assumption is based on the investment levels expected, the assumed positive design efforts, and the rigorous reviews likely to be required. Given these assumptions, the project could have a positive impact on the visual quality of an area. This is especially true when the project induces growth and sets a higher design standard for the immediate area. Alternative 2 would contrast with the existing visual setting and a number of viewer groups would likely have concerns with these contrasts.

4.13.2.1 During Construction

The scale of Alternative 2 is such that major construction will occur over several years of construction and the scale of the contractor laydown areas, staging area, and construction areas will be large and likely highly visible. The demolition of other buildings will also last over several months of demolition activity. In addition, construction related rigging, scaffolding, and mobile construction cranes are also expected to be visible and will last over several year phasing of demolition and construction. Given that many viewing locations around the site, are substantially higher than the project site, fencing and screening may not be effective. Therefore, a temporary significant impact to visual quality, community character, and aesthetics would be expected.

4.13.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.13.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? (**yes, see Visual Quality discussion in section 4.13.5)**
- Would the degree to which a proposed zone change result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(yes, see Community Character discussion in section 4.13.6)**

- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(yes, see Future Community Character discussion in section 4.13.6)**

4.13.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(yes)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(yes)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(yes)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(yes)**

4.13.4 Discussion of View Quality Impacts

Visual quality is a distant second level of concern for aesthetic impacts compared to view quality. Views in this sub-region are part of the character and value of the neighborhoods within the community. Land values are as much determined by views as they are by zip code or house size. Based on analysis of the viewsheds, of the approximately 72,000 persons living in the study area, nearly 25,000 residents live in areas where views of the project exist. Based on Table 1-2.2 in Chapter 1, this number may drop to less than 16,000 persons that may have a view. This drop is due to the fact that many of these views are likely to be already blocked by other buildings, structures, or trees found in this area. Existing three-dimensional data is not available to fully test visibility for these obstructions. Although private views are not nearly as important as public views, the total number of viewers potentially affected is very high. All the simulations have created using photos of the existing conditions taken from public viewing locations.

Both Interstate 8 and Interstate 5 are eligible for scenic designation, but the City of San Diego has not requested Caltrans to designate the freeways in the study area. The City of San Diego has a designated 59-mile scenic route that passes through Old Town, Presidio Park, and North Mission Hills.

Tables 4.8-1 and 4.8-2 show how Alternative 2 may affect viewing scenes that are considered sub-regionally important. Alternative 2 would potentially block from 11 percent to 55 percent of the total views, with special concern for affected views of the San Diego River, Mission Valley North, San Diego Bay, and the Point Loma Hillside. Simulations # 3, #4, #5, and #6 are not considered to have adverse impacts associated with Alternative 2. Of the ten simulations shown on Table B-1, a Moderate and Moderately High adversity would occur in Simulations #1, # 2, #7, #8, and #10. A High adversity would be expected for Simulation #9 with views affected of San Diego Bay, Coronado, Cabrillo Point, and the Point Loma Hillside. Contributing to this level of view impact is the silhouetting of the buildings into the sky.

It should be noted that most of these view corridor impacts are from private views, with only three or four public viewing locations from North Mission Hills affected. Simulation #8 from Presidio Park is a very public viewing location which would have major view blockage. Buildings appear more in scale from this location compared with Simulation #10, and ocean views would not be as dramatically affected.

4.13.5 Discussion of Visual Quality Impacts

Visual quality is determined by the combination of an area's vividness, unity, and intactness. The LAUs around the site to the south, west, and north have an overall lower visual quality than LAUs to the east. Therefore, the contrast with the quality of the adjacent areas would not create a significant visual quality impact to these areas. This conclusion is based in Figure 1.4-11 and Tables 1.4-8 through 1.4-13 in Chapter 1, along with Tables 4.9-1 through 4.9-10 in this chapter. The areas to the south, southwest, west, northwest, and north do not have a high visual quality associated with them. Therefore, Alternative 2 could be expected to have a positive impact on these adjacent areas and on the overall visual environment for this part of the study area**.** The LAUs around the site to the northeast, east, and southeast do have a higher visual quality. As indicated in Simulation #6, #7, #8, #9, and #10 and shown on Table B-2, Alternative 2 could lower the visual quality of the area.

4.13.6 Anticipated Aesthetic and Visual Impacts

1) **View Quality:** Given the range of view blockage but tempered with the fact that the proposed buildings are not as high as other alternatives, **Impact 1: Alternative 2 would have a moderately high adverse impact on viewing scenes resulting from blockage of the view corridor.**

2) **Scenic Highway Impacts:** No designation of I-5 or I-8 has occurred although the roadway segments in the study area would qualify for designation if the City of San Diego decided to process the designation and prepare a set of design guidelines. In addition, the City of San Diego's scenic route would be affected by the project and by this alternative. **Impact 2: Therefore, Alternative 2 would have a moderate adverse impact on existing or potential designations in the area.**

3) **Visual Quality:** No existing visual assets would be removed by the project, although the historic character of the World War II era fabrication plant would be a moderately low loss of visual resources. Based on Table B-1 in Attachment B and as displayed in Simulations #1, #3, and #4, and for areas south, southwest, west, northwest, and north, a positive impact would occur. **Impact 3a: Alternative 2 would increase the existing Moderate and Low visual quality to Moderately High and Moderate resulting in a slight positive impact** for changes shown on Simulations #1, #3, and #4. For the visual quality of areas to the northeast, east, and southeast, as shown on Simulations #6 through #10, **Impact 3b: a visual quality impact associated with this alternative would be considered a moderate level of adversity.**

4) **Landform Quality:** No grading of existing landforms that are considered to be of moderate to high quality would be associated with this alternative. **Impact 4: therefor no landform quality impacts would be considered to occur.**

5) **Aesthetic Quality:** Given the large investment, the level of expectation of the community, requirements of the Navy and the City of San Diego, as well as the market conditions for the private development portions of the project, quality is likely to be achieved. **Impact 5: the project would likely improve the aesthetics of the site which is considered as currently having only a moderate level of aesthetic quality.**

6) **Existing Community Character:** There are no dominant community characteristics to be found around the south, southwest, west, northwest, and north sides of the project site. **Impact 6a: no existing community character impact would be likely.** The distance that areas to the northeast, east, and southeast are from the project and the fact that a freeway intercedes, impacts will be kept to a minimum. **Impact 6b: an impact on community character in this area would only have a moderately low level of adversity.**

7) **Future Community Character and Goal Attainment:** None of the listed goals in the local community plan, other than maintaining view corridors, would be negatively affected by Alternative 2. Based on

the mandated design quality associated with the project and with investment in the study area, the project would likely encourage other development and community improvements that would help the community meet the urban design, aesthetic, community development, and infrastructure goals in these plans. The project investment, quality and value associated with Alternative 2 would likely encourage or support the development patterns and results sought in these adopted community plans. **Impact 7: Alternative 2 would therefore have a positive impact on future community character.**

4.14 Alternative 3 Project Impacts

4.14.1 Discussion of KOP Locations and Viewer Groups

Based on a full understanding of the areas that can see Alternative 3, critical key viewpoints for seeing the proposed project alternative include all ten selected KOPs that have had simulations prepared for this study (see Attachment B), as well as the twenty additional KOPs found in Tables 3.3-1 through 3.3-4 and Figure 3.3-2 through 3.3-17. For each of the simulations, potential viewer groups have been identified and ranked as to their likely response to visual changes (see Table 1-5.1 and Tables 4.9-1 through 4.9-10 with particular attention to the table associated with Simulation #9 where the view blockage is perhaps greater for Alternative 3 than Alternative 2). Viewer concerns would be highest for residential property owners and those that rent housing in the area, as well as tourists, walkers, joggers, and bikers. These viewers would be more likely to be sensitive to changes that are demonstrated on Simulation #6 (Table 4.9-6), Simulation #8 (Table 4.9-8), Simulation #9 (Table 4.9-9), and Simulation #10 (Table 4.9-10). All these viewer groups would likely have moderately high concerns about the changes shown in the simulations. Because of viewers concerns, the project would likely result in adverse impacts associated with Alternative 3.

4.14.2 Discussion of Contrasts with Setting

A project may either improve the overall visual quality in an area, or it can be neutral or damaging to an area's visual quality. To have a high or moderately high adverse impact to the visual quality for areas within one-half mile of OTC Sites 1 or 2, the proposed project elements would need to demonstrate that they contrast highly with the existing setting. If an adjacent area has a high visual quality associated with it, and if the project has a lower visual quality, this change in quality of the immediate area would be considered to have an adverse change. From an aesthetics perspective, the project would be assumed to be of a moderately high or high level of aesthetics. This assumption is based on the investment levels expected, the assumed positive design efforts, and the rigorous reviews likely to be required. Given these assumptions, the project could have a positive impact on the visual quality of an area. This is especially true when the project induces growth and sets a higher design standard for the immediate area. Alternative 3 would contrast with the existing visual setting and a number of viewer groups would likely have concerns with these contrasts.

4.14.2.1 During Construction

Alternative 3 would have the same types of visual impacts during construction as Alternative 2 but would be slightly less in magnitude and potential duration due to the shorter building heights and less development being proposed. A temporary significant impact to visual quality, community character, and aesthetics would still be expected.

4.14.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.14.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? (**yes, see Visual Quality discussion in section 4.13.5)**
- Would the degree to which a proposed zone change result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(yes, see Community Character discussion in section 4.13.6)**
- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(yes, see Future Community Character discussion in section 4.13.6)**

4.14.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(yes)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(yes)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(yes)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(yes)**

4.14.4 Discussion of View Quality Impacts

Views in this sub-region are part of the character and value of the neighborhoods within the community. Land values are as much determined by views as they are by zip code or house size. Based on analysis of the viewsheds, of the approximately 72,000 persons living in the study area, nearly 25,000 residents live in areas where views of the project exist. Based on Table 1.2-1 in Chapter 1, this number may drop to less than 16,000 persons that may have a view. This drop is due to the fact that many of these views are likely to be already blocked by other buildings, structures, or trees found in this area. Existing three-dimensional data is not available to fully test visibility for these obstructions. Although private views are not nearly as important as public views, the total number of viewers potentially affected is very high. All the simulations have been created from photos of existing conditions taken from public viewing locations.

Both Interstate 8 and Interstate 5 are eligible for scenic designation, but the City of San Diego has not requested Caltrans to designate the freeways in the study area. The City of San Diego has a designated 59-mile scenic route that passes through Old Town, Presidio Park, and North Mission Hills.

Tables 4.8-1 and 4.8-2 show how Alternative 3 may affect viewing scenes that are considered sub-regionally important. Alternative 3 would potentially block from 10 percent to 47 percent of the total views, with special concern for affected views of San Diego Bay, Cabrillo Point, and the Point Loma Hillside. Simulations #2, # 3, #4, #5, and #6 are not considered to have adverse impacts associated with Alternative 3. Of the ten simulations shown in Table B-1, a Moderate adversity is shown for Simulations #1, #7, 8, #9, and #10. Since this alternative generally has lower heights and massing of buildings compared to Alternatives 2, 4, and 5, the impacts would be less. This can be seen in Simulations #4, #6, #7, #8, and #10 where the heights of the buildings do not silhouette against the sky or into the ocean horizon line. However, a slight number of buildings do slightly silhouette at their upper limits of height.

It should be noted that most of these view corridor impacts are from private views, with only three or four public viewing locations from North Mission Hills affected. Simulation #8 from Presidio Park is a very public viewing location with moderate view blockage. However, the buildings appear more in scale and all but one building sits below the open sky, just below the horizon line formed by Point Loma.

4.14.5 Discussion of Visual Quality Impacts

Visual quality is determined by the combination of an area's vividness, unity, and intactness. The LAUs around the site to the south, west, and north have an overall lower visual quality than LAUs to the east. Therefore, the contrast with the quality of the adjacent areas would not create a significant visual quality impact to these areas. This conclusion is based in Figure 1.3-4 and Tables 1.3-6 through 1.3-11 in Chapter 1, along with Tables 4.9-1 through 4.9-10 in this chapter. The areas to the south, southwest, west, northwest, and north do not have a high visual quality associated with them. Therefore, Alternative 3 could be expected to have a positive impact on these adjacent areas and on the overall visual environment for this part of the study area**.** The LAUs around the site to the northeast, east, and southeast do have a higher visual quality. As indicated in Simulations #6, #8, and #9 and shown in Table B-2, Alternative 3 could lower the visual quality of the area.

4.14.6 Anticipated Aesthetic and Visual Impacts

1) **View Quality:** Given the range of view blockage but tempered with the fact that the proposed buildings are not as high as Alternatives 4 and 5. **Impact 1: Alternative 3 would have a moderately high adverse impact on viewing scenes resulting from blockage of view corridors.**

2) **Scenic Highway Impacts:** No designation of I-5 or I-8 has occurred although the roadway segments in the study area would qualify for designation if the City of San Diego decided to process the designation and prepare a set of design guidelines. In addition, the City of San Diego's scenic route would be affected by the project and by this alternative. **Impact 2: Therefore, Alternative 3 would have a moderate adverse impact on existing or potential designations in the area.**

3) **Visual Quality:** No existing visual assets would be removed by the project. Based on Table B-1 in Attachment B, Figure 1.4-4, and as displayed in Simulations #1, #2, #3, #4, and #5 for areas south, southwest, west, northwest, and north, a positive impact would occur. **Impact 3a: Alternative 3 would increase the existing Moderate and Low visual quality to Moderately High and Moderate.** The visual quality of areas to the northeast, east, and southeast, as shown on Simulations #6 through #10 and in Figure 1.3-4 and Tables 1.3-4 through 1.3-11will be impacted. **Impact 3b: visual quality impact associated with this alternative would be considered a moderate level of adversity.**

4) **Landform Quality:** No grading of existing landforms that are considered to be of moderate to high quality are associated with this alternative, **therefore no landform quality impacts would occur.**

5) **Aesthetic Quality:** Given the large investment, the level of expectation of the community, and requirements of the Navy and the City of San Diego, as well as the market conditions for the private

development portions of the project will likely achieve a quality project. **Impact 5: the project would likely improve the aesthetics of the site which is considered as currently having only a moderate level of aesthetic quality.**

6) **Existing Community Character:** Since there are no dominant community characteristics found around the south, southwest, west, northwest, and north sides of the project site impacts would be small. **Impact 6a: the community character impact would only be low.** The distance that areas to the northeast, east, and southeast are from the project and the fact that a freeway intercedes will limit impacts. **Impact 6b: an impact on community character in this area would only have a moderately low level of adversity.**

7) **Future Community Character and Goal Attainment:** None of the listed goals in the local community plan, other than maintaining view corridors, would be negatively affected by Alternative 3. Based on the mandated design quality associated with the project and with investment in the study area, the project would likely encourage other development and community improvements that would help the community meet the urban design, aesthetic, community development, and infrastructure goals in these plans. The project investment, quality, and value associated with Alternative 3 would likely encourage or support the development patterns and results sought in these adopted community plans. **Impact 7: Alternative 3 would have a positive impact on future community character.**

4.15 Alternative 4 Project Impacts

4.15.1 Discussion of KOP Locations and Viewer Groups

Based on a full understanding of the areas that can see Alternative 4, critical key viewpoints for seeing the proposed project alternative include all ten selected KOPs that have had simulations prepared for this study (see Attachment B), as well as the twenty additional KOPs found in Tables 3.3-1 through 3.3-4 and Figures 3.3-2 through 3.3-17. For each of the simulations, potential viewer groups have been identified and ranked as to their likely response to visual changes (see Table 1-5.1 and Tables 4.9-1 through 4.9-10 with particular attention to the table associated with Simulations #6, #7, #8, #9, and #10 where the view blockage is perhaps greater for Alternative 4 than any other alternative). Viewer concerns would be highest for residential property owners and those that rent housing in the area, as well as tourists, walkers, joggers, and bikers. These viewers would be more likely to be sensitive to changes that are demonstrated on Simulation #6 (Table 4.9-6), Simulation #7 (Table 4.9-87), Simulation #8 (Table 4.9-8), Simulation #9 (Table 4.9-9), and Simulation #10 (Table 4.9-10). All viewer groups would likely have at least a moderately low level of concern about the changes shown in Simulation #1 but only a low to moderately low concerns for Simulations #2, #3, #4, #5. Viewers in general will have a high level of concern for Simulations #6, #7, #8, #9, and #10. Because of viewers concerns, the project would likely result in adverse impacts associated with Alternative 4.

4.15.2 Discussion of Contrasts with Setting

A project may either improve the overall visual quality in an area, or it can be neutral or damaging to an area's visual quality. To have a high or moderately high adverse impact to the visual quality for areas within one-half mile of OTC Sites 1 or 2, the proposed project elements would need to demonstrate that they contrast highly with the existing setting. If an adjacent area has a high visual quality associated with it, and if the project has a lower visual quality, this change in quality of the immediate area would be considered to have an adverse change. From an aesthetics perspective, the project would be assumed to be of a moderately high or high level of aesthetics. This assumption is based on the investment levels expected, the assumed positive design efforts, and the rigorous reviews likely to be required. Given these assumptions, the project could have a positive impact on the visual quality of an area. This is especially true when the project induces growth and sets a higher design standard for the immediate

area. Alternative 4 would contrast with the existing visual setting and a number of viewer groups would likely have concerns with these contrasts.

4.15.2.1 During Construction

Alternative 4 would have the same types of visual impacts during construction as Alternative 2 but would be significantly more in magnitude and potential duration due to the taller building heights and more development being proposed. A temporary significant impact to visual quality, community character, and aesthetics would still be expected.

4.15.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.15.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? (**yes, see Visual Quality discussion in section 4.13.5)**
- Would the degree to which a proposed zone change result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(yes, see Community Character discussion in section 4.13.6)**
- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(yes, see Future Community Character discussion in section 4.13.6)**

4.15.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(yes)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(yes)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(yes)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(yes)**

4.15.4 Discussion of View Quality Impacts

Views in this sub-region are part of the character and value of the neighborhoods within the community. Land values are as much determined by views as they are by zip code or house size. Based on analysis of the viewsheds, of the approximately 72,000 persons living in the study area, nearly 25,000 residents live in areas where views of the project exist. Based on Table 1.2-1 in Chapter 1, this number may drop to less than 16,000 persons that may have a view. This drop is due to the fact that many of these views are

likely to be already blocked by other buildings, structures, or trees found in this area. Existing three-dimensional data is not available to fully test visibility for these obstructions. Although private views are not nearly as important as public views, the total number of viewers potentially affected is very high. All the simulations have been created from photos of existing conditions taken from public viewing locations.

Both Interstate 8 and Interstate 5 are eligible for scenic designation, but the City of San Diego has not requested Caltrans to designate the freeways in the study area. The City of San Diego has a designated 59-mile scenic route that passes through Old Town, Presidio Park, and North Mission Hills.

Tables 4.8-1 and 4.8-2 shows how Alternative 4 may affect viewing scenes that are considered sub-regionally important. Alternative 4 would potentially block from 11 percent to 62 percent of the total views, with special concern for affected views of San Diego Bay, Coronado, Mission Bay, San Diego River, Cabrillo Point, and the Point Loma Hillside. Simulations #3, #5, and #6 are not considered to have adverse impacts associated with Alternative 4. Of the ten simulations shown on Table B-1, a Moderate adversity is shown for Simulations #2 and #4, with a Moderately High adversity on Simulation #1 and High Adversity on Simulations #7, #8, #9, and #10.

4.15.5 Discussion of Visual Quality Impacts

Visual quality is determined by the combination of an area's vividness, unity, and intactness. The LAUs around the site to the south, west, and north have an overall lower visual quality than LAUs to the east. Therefore, the contrast with the quality of the adjacent areas would not create a significant visual quality impact to these areas. This conclusion is based on Figure 1.4-11 and Tables 1.4-8 through 1.4-13 in Chapter 1, along with Tables 4.9-1 through 4.9-10 in this chapter. The areas to the south, southwest, west, northwest, and north do not have a high visual quality associated with them. Therefore, Alternative 4 could be expected to have a positive impact on these adjacent areas and on the overall visual environment for this part of the study area**.** The LAUs around the site to the northeast, east, and southeast do have a higher visual quality. As indicated in Simulation #6, #8, and #9 and shown on Table B-2, Alternative 4 could lower the visual quality of the area.

4.15.6 Anticipated Aesthetic and Visual Impacts

1) **View Quality:** Given the range of view blockage and the height and placement of these buildings in the viewing corridor, view quality will be impacted. **Impact 1: Alternative 4 would have a high adverse impact on viewing scenes resulting from blockage of view corridors. Especially impactful effects on views can be seen on Simulation #6, #7, #8, and #10.**

2) **Scenic Highway Impacts:** No designation of I-5 or I-8 has occurred although the roadway segments in the study area would qualify for designation if the City of San Diego decided to process the designation and prepare a set of design guidelines. In addition, the City of San Diego's scenic route would be affected by the project and by this alternative. **Impact 2: Therefore, Alternative 4 would have a moderate adverse impact on existing or potential designations in the area.**

3) **Visual Quality:** No existing visual assets will be removed by the project. Based on Table B-1 in Attachment B, Figure 1.3-4, and as displayed in Simulations #1, #2, #3, #4, and #5, for areas south, southwest, west, northwest, and north, a positive impact would occur. **Impact 3a: Alternative 4 would increase the existing Moderate and Low visual quality to Moderately High and Moderate which would be a slight positive impact.** The visual quality of areas to the northeast, east, and southeast, as shown on Simulations #6 through #10 and in Figure 1.3-4 and Tables 1.3-6 through 1.3-11 will be negatively changed, **Impact 3: a visual quality impact associated with this alternative would be considered a moderately high level of adversity.**

4) **Landform Quality:** No grading of existing landforms that are considered to be of moderate to high quality are associated with this alternative, **therefore no landform quality impacts would be considered to occur.**

5) **Aesthetic Quality:** Given the large investment, the level of expectation of the community, and requirements of the Navy and the City of San Diego, as well as the market conditions for the private development portions of the project would assure a quality project. **Impact 5: the project would likely improve the aesthetics of the site which is considered as currently having only a moderate level of aesthetic quality, this would be a slight positive impact.**

6) **Existing Community Character:** Since there are no dominant community characteristics found around the south, southwest, west, northwest, and north sides of the project site impacts would be low. **Impact 6a: only a low adverse community character impact would occur.** The distance that areas to the northeast, east, and southeast are from the project and the fact that a freeway intercedes impacts would be low**. Impact 6b: an impact on community character in this area would only have a moderately low level of adversity.**

7) **Future Community Character and Goal Attainment:** None of the listed goals in the local community plan, other than maintaining view corridors, would be negatively affected by Alternative 4. Based on the mandated design quality associated with the project and with investment in the study area, the project would likely encourage other development and community improvements that would help the community meet the urban design, aesthetic, community development, and infrastructure goals in these plans. The project investment, quality, and value associated with Alternative 4 would likely encourage or support the development patterns and results sought in these adopted community plans. **Impact 7: Alternative 4 would therefore have a positive impact on future community character.**

4.16 Alternative 5 Project Impacts

4.16.1 Discussion of KOP Locations and Viewer Groups

Based on a full understanding of the areas that can see Alternative 5, critical key viewpoints for seeing the proposed project alternative include all ten selected KOPs that have had simulations prepared for this study (see Attachment B), as well as the twenty additional KOPs found in Tables 3.3-1 through 3.3-4 and Figures 3.3-2 through 3.3-17. For each of the simulations, potential viewer groups have been identified and ranked as to their likely response to visual changes (see Table 1-5.1 and Tables 4.9-1 through 4.9-10 with particular attention to the table associated with Simulations #6, #7, #8, #9, and #10 where the view blockage is perhaps greater for Alternative 5 than any other Alternative). Viewer concerns would be highest for residential property owners and those that rent housing in the area, as well as tourists, walkers, joggers, and bikers. These viewers would be more likely to be sensitive to changes that are demonstrated on Simulation #6 (Table 4.9-6), Simulation #7 (Table 4.9-7), Simulation #8 (Table 4.9-8), Simulation #9 (Table 4.9-9), and Simulation #10 (Table 4.9-10). All viewer groups would likely have at least a moderately low opinion about the changes shown in Simulation #1 but only a low to moderately low for Simulations #2, #3, #4, and #5. Viewers in general will have a high level of concern for Simulations #6, #7, #8, #9, and #10. Because of viewers concerns, the project would likely result in adverse impacts associated with Alternative 5.

4.16.2 Discussion of Contrasts with Setting

A project may either improve the overall visual quality in an area, or it can be neutral or damaging to an area's visual quality. To have a high or moderately high adverse impact to the visual quality for areas within one-half mile of OTC Sites 1 or 2, the proposed project elements would need to demonstrate that they contrast highly with the existing setting. If an adjacent area has a high visual quality associated with

it, and if the project has a lower visual quality, this change in quality of the immediate area would be considered to have an adverse change. From an aesthetics perspective, the project would be assumed to be of a moderately high or high level of aesthetics. This assumption is based on the investment levels expected, the assumed positive design efforts, and the rigorous reviews likely to be required. Given these assumptions, the project could have a positive impact on the visual quality. This is true if the project induces growth and sets a higher standard for the immediate area. Alternative 5 would contrast with the existing setting and a number of viewer groups would likely have concerns.

4.16.2.1 During Construction

Alternative 5 would have the same types of visual impacts during construction as Alternative 2 but would be significantly more in magnitude and potential duration due to the taller building heights and more development being proposed. A temporary significant impact to visual quality, community character, and aesthetics would still be expected.

4.16.3 Discussion on NEPA Thresholds

The following thresholds are initially responded to with references to more detailed discussions.

4.16.3.1 Aesthetics- (see Aesthetics discussion in section 4.13.6)

Would the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, be removed, altered, or demolished? Additional metrics to consider include:

- Would any substantial amount of natural open space be graded or developed? **(no)**
- Would proposed structures in natural open space areas be effectively integrated into the aesthetics of the site through appropriate design? **(no open space exists)**
- Would a degree of contrast occur between proposed features and existing features that represent the area's valued aesthetic image? (**yes, see Visual Quality discussion in section 4.13.5)**
- Would the degree to which a proposed zone change result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements? **(yes, see Community Character discussion in section 4.13.6)**
- Would the degree to which the project contributes to the area's aesthetics, applicable guidelines, or regulations be impacted? **(yes, see Future Community Character discussion in section 4.13.6)**

4.16.3.2 Obstruction of Views - (see View Quality discussion in section 4.13.4)

Would the project result in any of the following?

- Would an impact to the nature and quality of recognized or valued views occur including features such as topography, man-made or natural features of visual interest, and resources such as mountains or the ocean? **(yes)**
- Would the project negatively affect views from a scenic highway, corridor, or parkway? **(yes)**
- Would the extent of a view obstruction (e.g., total blockage, partial interruption, or minor diminishment) block existing views? **(yes)**
- Would the project negatively affect recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single or a fixed vantage point? **(yes)**

4.16.4 Discussion of View Quality Impacts

Based on analysis of the viewsheds, of the approximately 72,000 persons living in the study area, nearly 25,000 residents live in areas where views of the project exist. Based on Table 1.3-1 in Chapter 1, this number may drop to less than 16,000 persons that may have a view. This drop is due to the fact that many of these views are likely to be already blocked by other buildings, structures, or trees found in this area. Existing three-dimensional data is not available to fully test visibility for these obstructions. Although private views are not nearly as important as public views, the total number of viewers potentially affected is very high. All the simulations have been created based on photos of existing conditions taken from public viewing locations.

Both Interstate 8 and Interstate 5 are eligible for scenic designation, but the City of San Diego has not requested Caltrans to designate the freeways in the study area. The City of San Diego has a designated 59-mile scenic route that passes through Old Town, Presidio Park, and North Mission Hills.

Tables 4.8-1 and 4.8-2 show how Alternative 5 may affect viewing scenes that are considered sub-regionally important. Alternative 5 would potentially block from 21 percent to 65 percent of the total views, with special concern for affected views of San Diego Bay, Coronado, Mission Bay, San Diego River, Cabrillo Point, and the Point Loma Hillside. Simulations #3, #5, and #6 are not considered to have adverse view impacts associated with Alternative 5. Of the ten simulations shown on Table B-1, a Moderate adversity is shown for Simulations #2 and #4, with a Moderately High Adversity on Simulation #1 and High Adversity on Simulations #7, #8, #9, and #10.

4.16.5 Discussion of Visual Quality Impacts

Visual quality is determined by the combination of an area's vividness, unity, and intactness. The LAUs around the site to the south, west, and north have an overall lower visual quality than LAUs to the east. Therefore, the contrast with the quality of the adjacent areas would not create a significant visual quality impact to these areas. This conclusion is based on Figure 1.3-4 and Tables 1.3-6 through 1.3-11 in Chapter 1, along with Tables 4.9-1 through 4.9-10 in this chapter. The areas to the south, southwest, west, northwest, and north do not have a high visual quality associated with them. Therefore, Alternative 5 could be expected to have a positive impact on these adjacent areas and on the overall visual environment for this part of the study area**.** The LAUs around the site to the northeast, east, and southeast do have a higher visual quality. As indicated in Simulations #6, #8, and #9 and shown on Table B-2, Alternative 5 could lower the visual quality of the area.

4.16.6 Anticipated Aesthetic and Visual Impacts

1) **View Quality:** Given the range of view blockage and the height and placement of these buildings in the viewing corridor, Alternative 5 would impact views. **Impact 1: Alternative 5 will have a high adverse impact on viewing scenes resulting from blockage of view corridors. Especially impactful effects on views can be seen on Simulations #6, #7, #8 and #10.**

2) **Scenic Highway Impacts:** No designation of I-5 or I-8 has occurred although the roadway segments in the study area would qualify for designation if the City of San Diego decided to process the designation and prepare a set of design guidelines. In addition, the City of San Diego's scenic route would be affected by the project and by this alternative. **Impact 2: Therefore, Alternative 5 would have a moderate adverse impact on existing or potential designations in the area.**

3) **Visual Quality:** No existing visual assets will be removed by the project. Based on Table B-1 in Attachment B, Figure 1.3-4, and as displayed in Simulations #1, #2, #3, #4, and #5 for areas south, southwest, west, northwest, and north, a positive impact would occur. **Impact 3a: Alternative 5 would increase the existing Moderate and Low visual quality to Moderately High and Moderate**

resulting in a slight positive. The visual quality of areas to the northeast, east, and southeast, as shown on Simulations #6 through #10 and in Figure 1.4-4 and Tables 1.4-6 through 1.4-13 will be impacted. **Impact 3b: a visual quality impact associated with this alternative would be considered a moderately high level of adversity.**

4) **Landform Quality:** No grading of existing landforms that are considered to be of moderate to high quality are associated with this alternative, **therefore no landform quality impacts would occur.**

5) **Aesthetic Quality:** Given the large investment, the level of expectation of the community, requirements of the Navy and the City of San Diego, as well as the market conditions for the private development portions of the project, quality is likely to be achieved. **Impact 5: the project would likely improve the aesthetics of the site which is considered as currently having only a moderate level of aesthetic quality.**

6) **Existing Community Character:** Since there are no dominant community characteristics found around the south, southwest, west, northwest, and north sides of the project site, impacts would be low. **Impact 6a, a small community character impact would be likely resulting only in a low adverse impact.** The distance that areas to the northeast, east, and southeast are from the project and the fact that a freeway intercedes, impacts would be kept low. **Impact 6b: an impact on community character in this area would only have a moderately low level of adversity.**

7) **Future Community Character and Goal Attainment:** None of the listed goals in the local community plan, other than maintaining view corridors, would be negatively affected by Alternative 5. Based on the mandated design quality associated with the project and with investment in the study area, the project would likely encourage other development and community improvements that would help the community meet the urban design, aesthetic, community development, and infrastructure goals in these plans. The project investment, quality, and value associated with Alternative 5 would likely encourage or support the development patterns and results sought in these adopted community plans. **Impact 7: Alternative 5 would therefore have a positive impact on future community character.**

4.17 Shade and Shadow Impacts

Most of the proposed project alternatives include very tall buildings and very large massing of structures that could have the potential for casting shade or heavy shadows on adjacent land uses. Alternative 1 is the exception, which would maintain current building heights. The potential sensitive receptors that should be considered in determining impacts for this category of impacts include:

1) Residential uses that include outdoor areas where social, play, and relaxation may take place. Depending on the time of year, shade is sought out while at other times, sunshine is preferred during the winter, late fall, and early spring. Residential units, based on solar access laws, do have a need for sunshine to power photo-electric panels as well.
2) Outdoor public spaces, plazas, and parks. As is the case listed above, it all depends on the time of day and year as to if sunshine is beneficial or creates uncomfortably warm conditions. There are a few of these types of facilities, namely several native plants gardens, public parks, outdoor plazas, courtyards, and promenades that are related to Old Town State Historic Park.
3) Hotels or motels with swimming pools, where too much shade can reduce outdoor use.
4) Restaurants with outside seating would be another sensitive receptor, however most of these establishments have shade and heaters to make these areas more comfortable to patrons.
5) A growing grounds like Walter Andersons Nursery next to OTC Site 2. Plant growth for certain types of plants requires near full sun throughout most of the day.

6) Childcare, pre-schools, schools, or vocational schools with any type of outside exercise, recreation, or community gardens would also be sensitive.

4.17.1 Methodology

Shade and shadow concerns are more spatially limited than visual concerns. To determine an appropriate assessment area, the maximum building height (350 feet) from all the proposed alternatives was used to calculate potential shadow lengths during the winter (October-April 9am-3pm) and summer (April-October 9am-5pm) analysis periods. The winter (December 21st) and summer (June 20th) solstices were used to determine maximum shadow lengths. A maximum shadow length of 1,076 feet occurs on December 21st at 9:00am. An 1,100 feet buffer is used to determine the location of potentially sensitive land use receptors as shown in Figure 4.17-1. These dates and hours correspond to the City of San Diego's thresholds for CEQA review. The specifics of the threshold for shade or shadow impact analysis include:

Winter shade analysis dates must be tested between late October and early April

- Between 9:00 a.m. and 3:00 p.m. Pacific Standard Time
- To be considered an impact on sensitive land uses or receptors, the site must be in the shade for more than three hours.

Summer analysis dates must be tested between early April and late October

- Between 9:00 a.m. and 5:00 p.m. Pacific Standard Time
- To be considered an impact on sensitive land uses or receptors, the site must be in the shade for more than four hours.

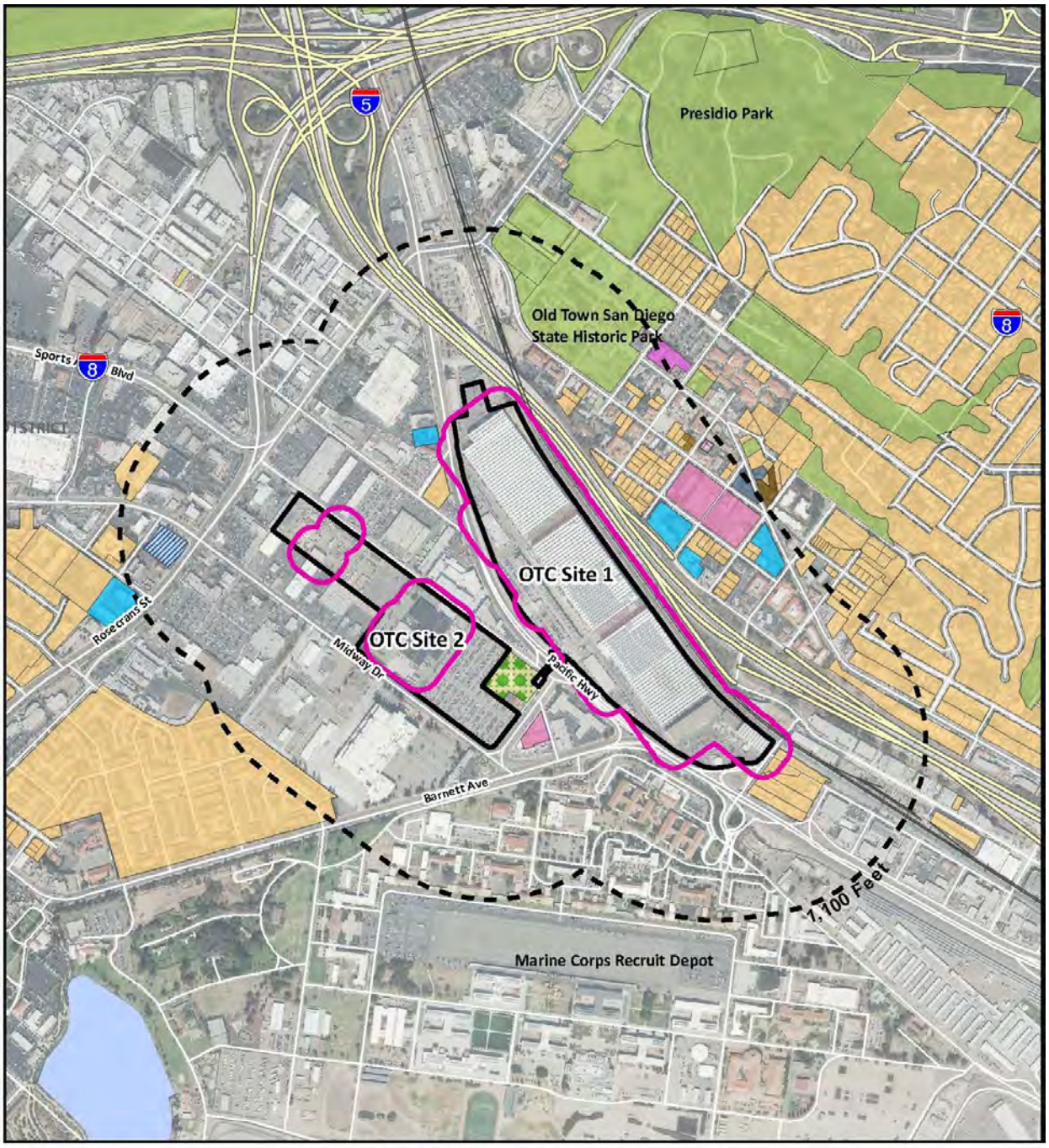


Figure 3.3-23. Sensitive Land Use Receptors

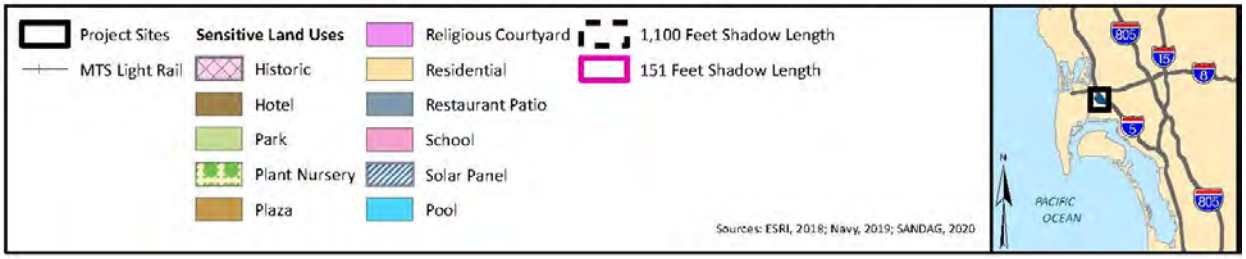


Figure 4.17-1 Shade / Shadow and Light / Glare Sensitive Land Use Receptors

4.17.2 Shade and Shadow Existing Conditions

The existing large warehouse buildings have relatively short heights at 47 feet tall and only cast a maximum shadow length of 151 feet on December 21st at 9:00 a.m. as shown in Table 4.17-1 and in Figure 3.3-23. Most of the shadows are contained within OTC or fall onto the adjacent rail and transportation corridors. The only sensitive receptor within 151 feet of an existing building is the Veteran's Village to the south of OTC. Since shadows in San Diego are cast to the west, north, and east of objects, they would not impact the outdoor spaces along the northern portion of the Veteran's Village.

Table 4.17-1 Shadow lengths for existing OTC buildings

Time of Day	*Shadow Length June 20th*	*Shadow Length December 21st*
9:00	44	151
10:00	28	100
11:00	16	80
Noon	9	73
1:00	12	77
2:00	23	92
3:00	37	130
4:00	57	NA
5:00	91	NA

Legend: NA = not applicable.

4.17.3 Shade and Shadow Analysis

Instead of modeling shadows based on the 3D model developed for the simulations, a simple mass model was developed by using the OTC site boundary and extruding it up to 240 feet (Alternatives 2 and 3) and 350 feet (Alternatives 4 and 5). This allows for an assessment of all potential impacts for any future development configuration as long as it does not exceed the identified heights. The "No Action" and Alternative 1 were not modeled as they do not change the massing or height of the current buildings,

The shadow analysis was completed for December 21st and June 20th. The winter solstice results are shown in Figure 4.17-2 and 4.17-3 and the summer solstice results are shown in Figure 4.17-4 and 4.17-5. The results of the shade and shadow modeling show a series of colors of increasing gradient representing total shade time for that area. The 3-hour cumulative shade time for winter and the 4-hour cumulative shade time for summer are shown in the figures.

For Alternatives 2 and 3, while shadows are cast over a large area, the duration of those shadows do not exceed the more than 3 or 4 or more hours of shade thresholds. During both time frames, only a portion of Walter Anderson nursery exceeds the more than 3 or 4 or more hours of shade thresholds.

For Alternatives 4 and 5, during the winter months, the sensitive receptors east of Interstate 5 could be affected by more than 3 hours of shade. These include a couple of hotels, a few single-family homes, a few small apartment complexes, and a portion of Walter Anderson nursery. During the summer months, only a portion of Walter Anderson nursery would be affected by more than 4 hours of shade.

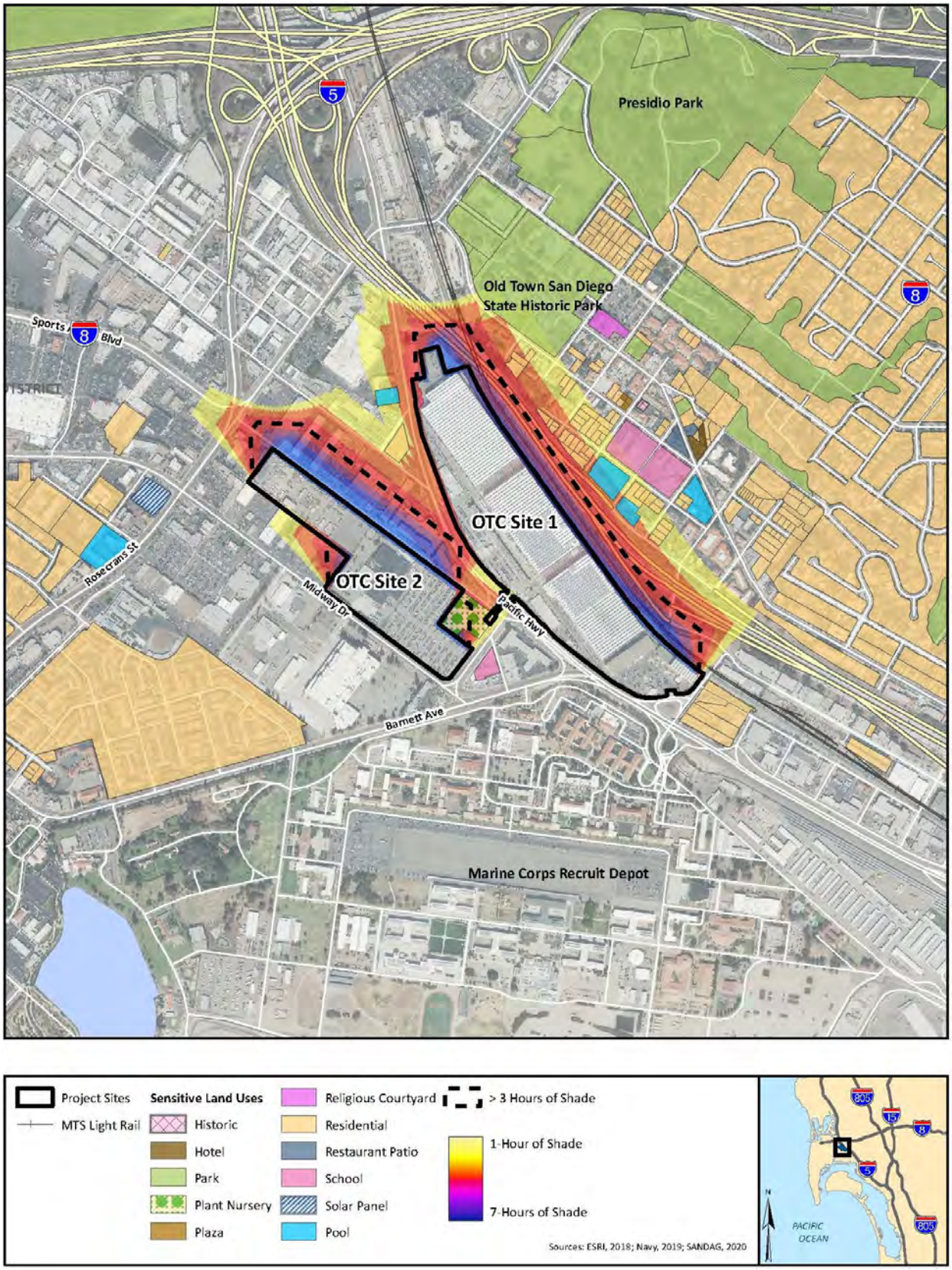


Figure 4.17-2 Shadow Study: Alternative 2 and 3 - Winter Solstice, December 21

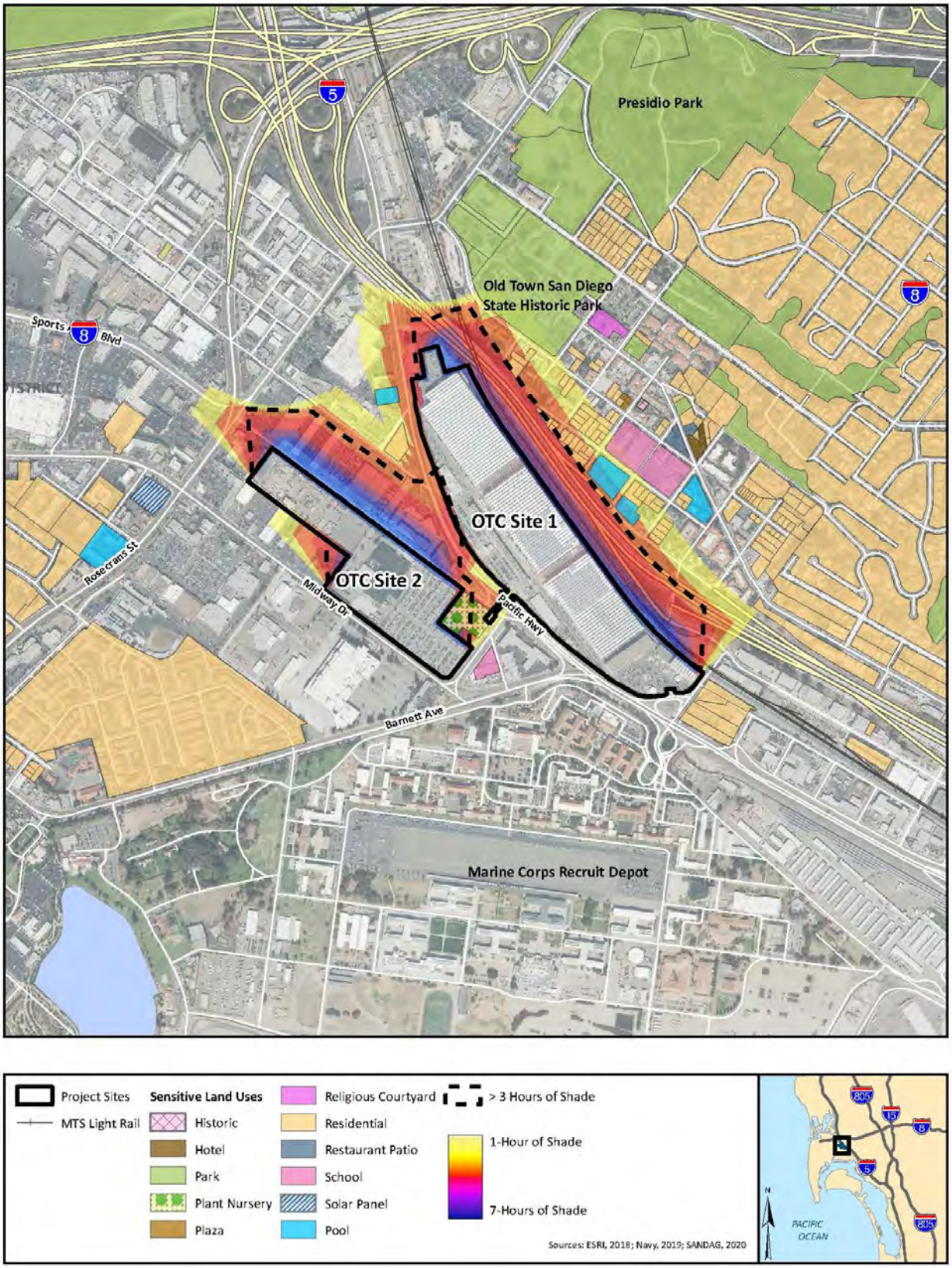


Figure 4.17-3 Shadow Study: Alternative 4 and 5 - Winter Solstice, December 21

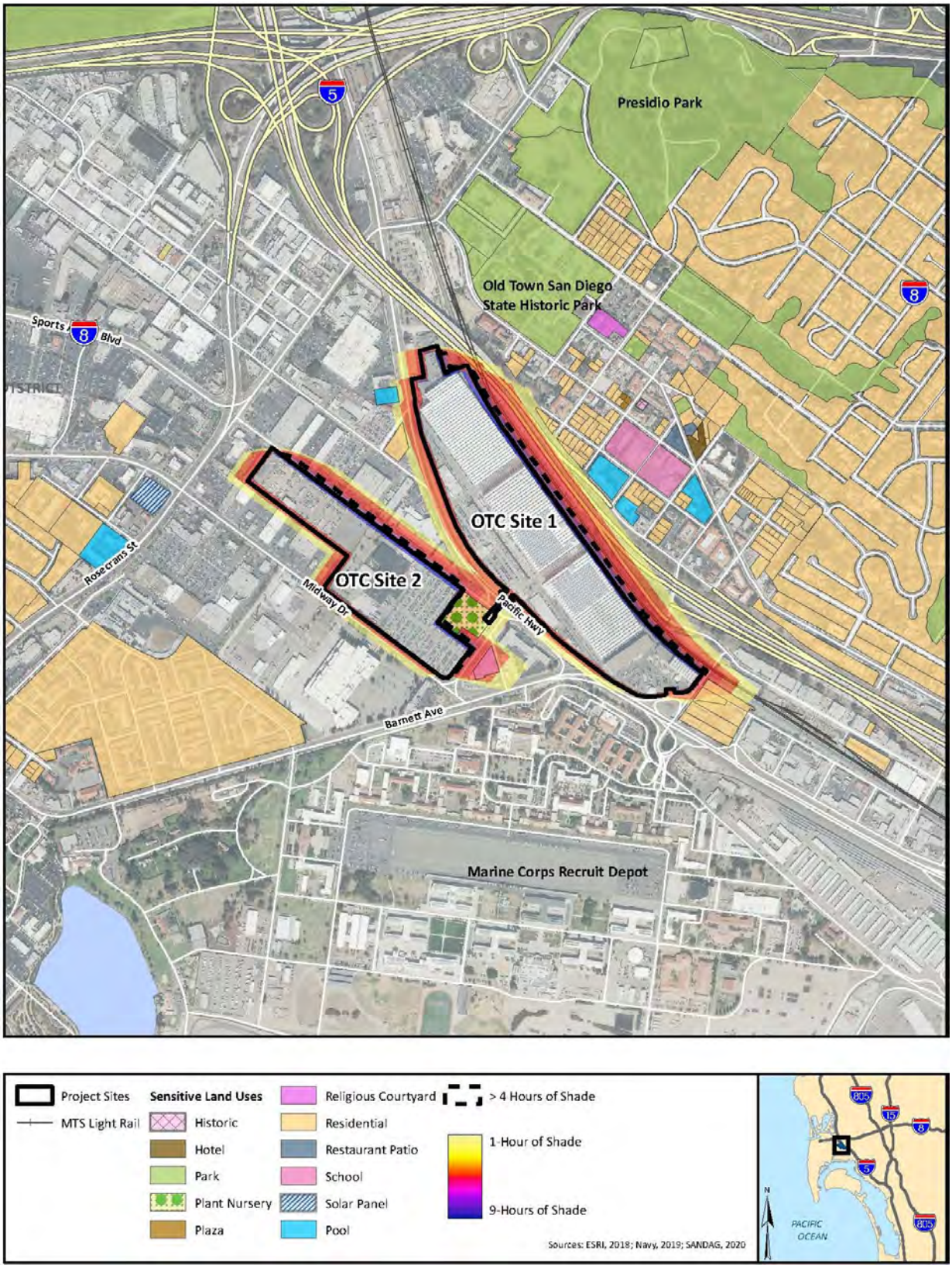


Figure 4.17-4 Shadow Study: Alternative 2 and 3- Summer Solstice, June 20

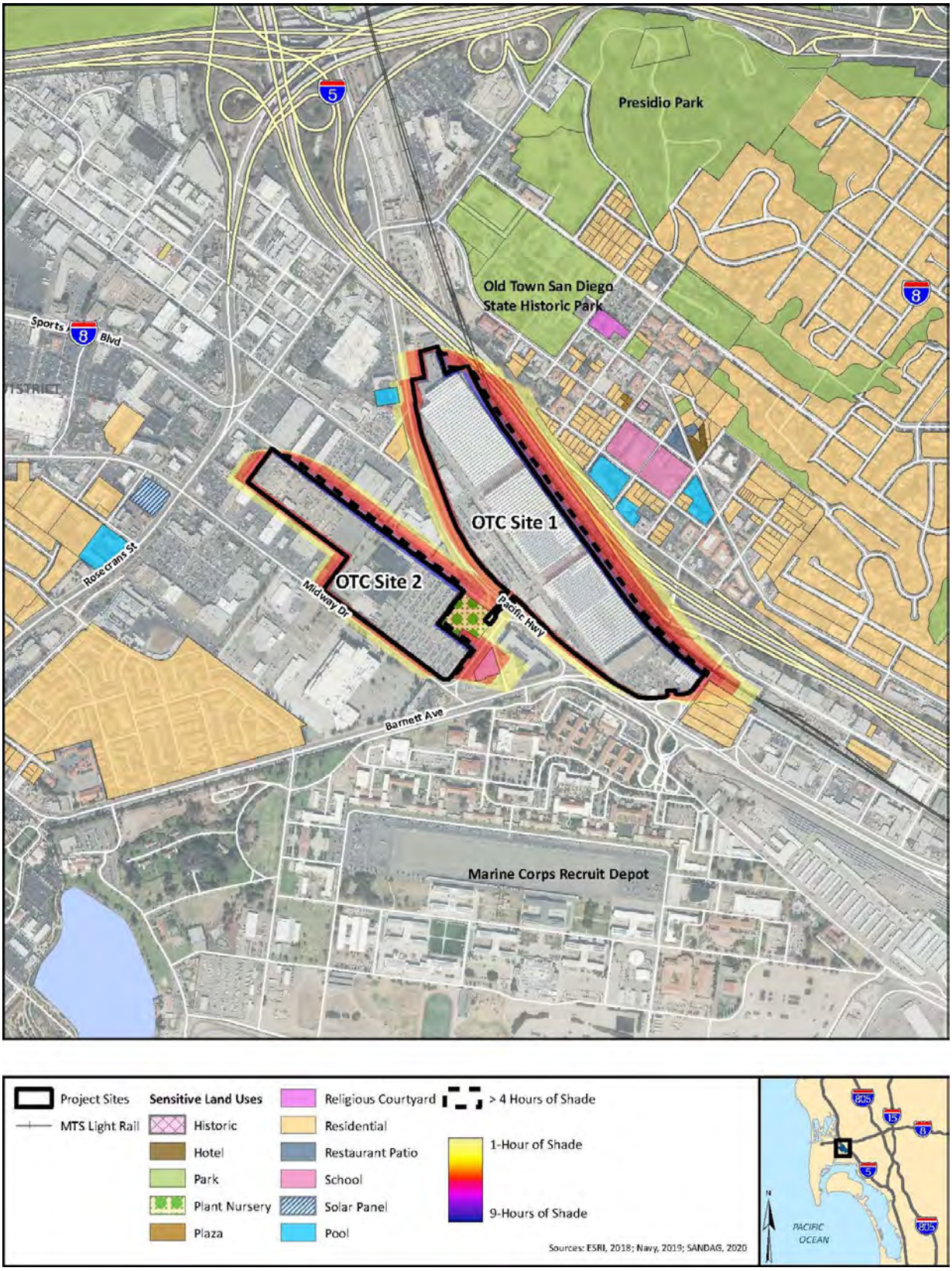


Figure 4.17-5 Shadow Study: Alternative 4 and 5- Summer Solstice, June 20

4.17.4 Summary of Shade and Shadow Impacts

Based on the modeling, several parcels of residential land uses, parcels with swimming pools, outdoor gathering areas, and some small areas of outside seating or eating, would be under new shade compared to the current conditions. **Impact 8: However, since the length of time of this shade is below the threshold for a highly adverse impact, this study shows that only a moderate adverse impact would occur for Alternatives 4 and 5, with no impacts for the "No Action" and a Low Adversity for Alternatives 2 and 3.**

4.18 Light and Glare Impact Discussion

The basic question that sets the framework for a light and glare impact is: would the project create a new source of substantial light or glare which would adversely affect day or nighttime uses in the area? Yes. The change in ambient illumination levels of an existing site can be increased from project sources that spill out of the project site and in turn negatively effects an adjacent sensitive use or activity. New sources of light can come from exterior lighting or from the headlights of vehicles.

Large buildings can also result in high-shine surfaces such as building windows (glass), polished metal, or high-gloss painted surfaces that can contribute to a glare impact.

There are two types of man-made light sources: 1) point sources (e.g., illuminated signage, streetlight poles, vehicle headlights); and 2) indirect sources that reflect light onto adjacent properties from reflective or light-colored surfaces. The effect produced by indirect light sources is commonly referred to as "glare." Point sources are addressed in the analysis of nighttime illumination impacts, while indirect sources are addressed in the analysis of daytime and nighttime glare impacts. Ambient light levels are measured in foot-candles. "Horizontal" foot-candles measure light that lands on a horizontal surface, such as a sidewalk or parking lot and "vertical" foot-candles measure light illumination that is projected or reflected from a vertical building surface.

The character of lighting is defined in terms of the types of lighting present and the pattern of illumination. Illumination may be described in terms of:

1) Ambient Lighting, the general overall level of lighting in a given area due to the various light sources present;
2) Corona, which is the diffuse halo of light that exists above a lit area, usually against a dark background and discerned only at substantial distances; and
3) Glare, as defined above: focused, intense, point-source or reflected light. Being a negative occurrence of direct or reflected light glare is not normally described as part of the inherent character of lighting in an area.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare.

Glare occurs during both daytime and nighttime hours. Daytime glare is caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass or reflective materials, and, to a lesser degree, from broad expanses of light-colored surfaces.

Daytime glare generation is common in urban areas and is typically associated with mid to high-rise buildings with exterior façades largely or entirely comprised of highly reflective glass or mirror-like

materials from which the sun can reflect, particularly following sunrise and prior to sunset. Daytime glare generation is typically related to sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare can also be produced during evening and nighttime hours by artificial light directed toward a light-sensitive land use.

4.18.1 Light and Glare Existing Conditions

Existing sources of light can include streetlights along project roadways, lights in parking lots, lights along walkways, and lights on the exteriors of buildings. In general, considering the size of both OTC Site 1 and Site 2, a lower than normal amount of night lighting exists. The fabrication warehouse buildings have had the skylights painted and the window system was blacked-out for security reasons. Parking and its associated lighting on the east side of the three warehouse buildings is minimal. The west side of OTC Site 1 has extensive surface parking with some limited lighting. The pedestrian bridge and adjacent Pacific Highway has regularly spaced light poles, but lighting levels are generally low for an urban area.

OTC Site 2 includes extensive parking lots and a few structures. Parking lots do have tall parking lot light poles spaced widely. Existing site lighting that spills over to the east is almost non-existent due to the elevated nature of the freeway that blocks a fair amount of lighting towards the north of the site, with less blockage to the south.

Adjacent lighting to OTC Sites 1 and 2 comes from adjacent transportation systems such as the I-5 freeway, Pacific Highway, and the adjacent light rail and heavy rail system, as well as adjacent roadways and development. The three hotels on the east side of I-5 north of Old Town Avenue tend to have a fair amount of up-lighting and site lighting. Residential development in this part of Old Town contains a normal amount of urban lighting and no impacts to these residential areas are likely to occur, except for around the hotels. New nighttime light sources have the potential to increase ambient nighttime illumination levels and result in spillover of light onto adjacent properties. These effects have the potential to interfere with certain functions including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. The significance of the impact depends on the type of use affected, proximity to the affected use, the intensity of the light source, and the existing ambient light environment.

Glare from any of the architectural elements found on OTC Site 1 or Site 2 does not appear to exist. Almost all buildings are painted a matte or low reflective gray or white. The acrylic window block-outs added to the buildings over the past 15 years do have a sheen, but no observed glare was encountered. Although the buildings are up to 47 feet tall, they sit low on the site compared to the freeway and therefore any glare from morning sun towards residential units or other land uses in Old Town is not likely.

Sensitive receptors and land uses can be seen in Figure 4.17-1. This map also shows the relative distance that these sensitive receptors are from the edge of OTC Site 1 and Site 2.

4.18.2 Environmental Threshold Questions and Impact Responses for Light and Glare

According to local standards, best industry practices, and the City of San Diego CEQA thresholds for light and glare, the following requirements should be used to test impacts:

- Is the project moderate to large in scale, have more than 50 percent of any single elevation of a building's exterior built with a material with a light reflectivity greater than 30 percent, and is the project adjacent to a major public roadway or public area? **Response**: **Yes**

- Does the project potentially shed substantial light onto adjacent, light-sensitive properties or land uses, or would it emit a substantial amount of ambient light into the nighttime sky? Uses considered to be light-sensitive to nighttime light include residential, some commercial, and natural areas. They are recognized as light-sensitive because they are typically occupied by persons who have expectations for privacy during evening hours and who are subject to disturbance by bright light sources. **Response**: The project is likely to create these conditions, however, until site design and detail can be prepared, these impacts are presumed to occur based on the size and position of the buildings and its lighting needs. **Given this assumption, the project is assumed to have a moderately high adverse effect on adjacent sensitive receptors and this adversity would be considered significant.**
- Does the project cause spill over light, per the measurement procedures outlined by the Illuminating Engineering Society of North America (IESNA) that hits at the property line of a residence or other sensitive receptor that produces a light intensity exceeding 21.5 lux (2.0 fc) at the property line of a residence or other sensitive receptor? **Response**: Without detailed analysis of photometrics, light sources, and light systems proposed, determining the level of impact at this time would be difficult. **Impact 9: This analysis assumes that the threshold for a light and glare impact would be met for a significant impact under Alternatives 2 through Alternative 5.** The mitigation section would require mitigation to lessen the foot candles to below this standard.
- Does the project propose mid to high-rise buildings, signage, or thematic elements that incorporate substantial amounts of reflective building materials that could reflect into areas that are highly visible to off-site glare-sensitive uses? **The project could include these conditions, however, until site design and detail can be prepared, it is best to assume that they will be included but suggest that impacts can be mitigated based on adopting design guidelines and other development policies assured through a design review process.**

4.18.3 Anticipated Temporary Construction Impacts

- Visual Quality / Community Character / Aesthetics: The visual quality, community character, and aesthetics of OTC Site 1 and Site 2 will be negatively impacted by contractor laydown areas, staging areas, and construction areas during the implementation of Alternatives 1, 2, 3, 4, and 5. **Impact 10: the project will have a significant temporary impact on visual quality, community character, and aesthetics during construction.**

4.19 Description of Minimization Measures/Design Guidelines to be Considered

As a NEPA requirement, minimization of impacts is highly suggested with the avoidance having the first priority, followed by minimizing the impacts by incorporating project specific treatments into the basic project from the beginning as this effort moves into later stages of design and decision making. Finally, recommended mitigations to lower the level of adversity of the project would be the third method for minimizing impacts.

It is too early in the planning process for decisions on design treatments given the multi-year efforts and intensive land use planning, site planning, architecture, landscape architecture, and engineering required for a large project such as this one. However, it is difficult to determine the extent of impacts without being able to evaluate the level of detail that is often needed to assess a project. This review makes an assumption that given the size and profile of this project and the partnerships that are engaged, the design and engineering process likely to happen in the future will result in well-designed and organized architecture that can be refined to minimize visual quality and view quality impacts. It is

also assumed that refined site plans would produce spaces that would be activated and would encourage a gradational range of private, semi-private, secured, semi-public, and fully public spaces that would be an asset to the project, the Navy, and the broader San Diego region. It is equally clear that although existing public and private views would be negatively affected by this project, a potentially larger number of public and private stakeholders and users would benefit from dramatic views of the same sub-regionally specific viewing scenes that this study strives to determine understanding how they may be impacted by the project. It is assumed that industry level best management practices for wayfinding, landscape architectural design, park design, and circulation planning would all be done in a positive manner. The focus of minimization and guidelines should not be on the detail, but upon the factors that would help to minimize the visual and view quality impacts of the project.

4.19.1 Minimization Method #1: Limitations to Avoid Silhouetting against the Ocean Horizon

Any efforts that can be done to limit the number of buildings that are silhouetted against the horizon line of the Pacific Ocean would be instrumental in lowering the adversity of view impacts. This type of intrusion into the horizon line causes the rare occurrence of a very open and unimpeded view over the ocean to be impacted. As can be seen in some areas with offshore drilling rigs that are relatively small from a distance, they are very impactful in breaking the continuous line of the horizon. The ability to step down buildings with perhaps some buildings still piercing the horizon line would be an alternative to consider that would minimize this impact. A single tower or multiple tall towers that break this line without a transition of other buildings around it that are shorter focusses the attention on a stark contrast in scale change. Specific areas of concern include the northwest views from North, Central and South Mission Hills sub-areas looking towards the Pacific Ocean to the west. If the north end of OTC Site 1 is tapered and pulled back from this location, many public and private views would still see the Pacific Ocean to the west and northwest, although much of the view may still be blocked by buildings.

4.19.2 Minimization Method #2: Height Limitation to Avoid Silhouetting against the Sky

Of lesser impact, but still important to consider, would be any buildings that push above the natural landforms of the area. A building that extends above the top of landforms from various viewpoints would be more impactful than a building that is low enough to see landforms to the west (Cabrillo Point and the Point Loma Peninsula as seen from the east) and to the east (Mission Hills/Presidio and North Mission Valley landforms as seen from the west). It would not be possible to avoid sky silhouetting in all areas of the viewshed. Only those viewing locations at higher elevations would be positively affected by this change. Particular areas of concern would include buildings seen from the Midway District area around Sports Arena, Rosecrans, and Midway. The Old Town State Park area would benefit by lowered building heights for State Park gathering locations where the stark contrast in heights are emphasized by the existing low building heights and the significant amount of open sky blockage the complex of buildings would likely represent (see Simulations #6 and #7). See Alternative 3 in Simulation #7 to see how the horizon line and overall impression of this area would look when compared to Alternative 2, 4, or 5. The Presidio Park simulations (see Simulations #8 and #9) would benefit from having some of the buildings be lowered to see over them to the background viewing scenes such as San Diego Bay, Cabrillo Point, and the Point Loma Hills.

4.19.3 Minimization Method #3: Stepping Down Building Heights to Adjacent Areas

If some buildings were kept tall and pierced the ocean's horizon line or those of adjacent landforms, it would still be effective to lower the overall sense of scale dominance by stepping down buildings in all directions. As seen from the I-5 freeway, having buildings on the north end step upward to the taller buildings would assist in minimizing the stark contrast of scale (see Simulation #1 and compare

Alternative 4 with Alternative 3). Stepping down building heights would help in the Midway District (see Simulation #3 and #4 and compare Alternatives 2 and 3 with Alternatives 4 and 5). Because of the high level of impact that would be seen from Old Town (see Simulation #6 and #7 and compare Alternatives 4 and 5 with Alternatives 2 and 3). Views from Mission Hills could be improved as well. As seen from the Presidio, the stepping down of buildings would help with the transition for Alternatives 4 and 5, although lowering the northern most building would help with this transition even more. As can be clearly seen from Central Mission Hills, a better transition would be very helpful in minimizing view impacts if the north end were adjusted to taper these buildings more in the northerly direction (see Simulation #10 and compare Alternatives 2 and 3 with Alternatives 4 and 5).

4.19.4 Minimization Method #4: View Corridors to be Kept Open

Making a tower taller and creating gaps between other buildings may resolve some view corridor problems. However, what may allow some view corridors to be more open may force the bulk of the massing to another location that may increase the view blockage in another area view corridor. But the San Diego sub-region has specific viewing locations with public and major private views in known areas. It has clear sub-regionally important viewing scenes that are most visible to these viewing locations. So, with some level of effort, it would be possible to find the best locations for building gaps and building orientation. The important viewing scenes of greatest concern tend to be from the northeast looking to the southwest with views of San Diego Bay, Coronado, Cabrillo Point, and the Pacific Ocean (see Simulation #8 with attention on Alternative 4 which currently blocks most of the view compared with Alternative 5 that has more of a gap, almost in the proper location). The gap where the transit center is proposed for Alternatives 4 and 5 is probably too far south to catch the view of Cabrillo Point where it meets the ocean horizon line. Areas in Central and South Mission Hills would not have this southwest looking view blocked. But North Mission Hills would. For those views from the southwest looking back to the Presidio and Mission Valley, the angle of the view corridor left open for the North Mission Hills area would benefit those looking back to Mission Hills as well. The other important view corridor tends to be in Central Mission Hills, looking to the northwest with views of Mission Bay, the San Diego River, and the Pacific Ocean to the west (see Simulation #10 with the difference between Alternatives 4 and 5 with Alternative 3). This corridor could be kept more open with the transition downward of some of the heights of the buildings at the north end of the building complex instead of a gap between buildings.

4.19.5 Minimization Method #5: Centralized Massing to Minimize the Number of Buildings

Many of the alternatives seem to have too many building towers. These narrow but tall buildings tend to make the complex look like a city downtown instead of a major complex of related buildings. This phenomenon is caused by the fact that it is difficult to tell the scale of buildings. A tall building is more often a full city block size, so many may perceive of the size of a complex like this to be as many blocks long as there are individual buildings (see Simulations #2, #3, #6, #8, #9, and #10 focused on the difference between Alternative 4 and Alternative 5 that has slightly less buildings). In addition, the offsets of buildings that are not aligned with each other can contribute to more of the corridors being blocked. This would be similar to a forest of trees that are not aligned with each other compared to an agricultural orchard where a person can see unobstructed down through certain viewing angles, but not at all from other angles. To avoid this phenomenon, less towers that are more massive in bulk and that are aligned with the northeast to southwest corridor alignment would improve the opening of view corridors and lower the sense of scale that the multiple buildings may be exaggerating.

4.19.6 Minimization Method #6: Conceal or Integrate Parking Garages

Looking from the west side of OTC Site 2 or from many parts of OTC Site 1, the presence of parking structures would not be that significant of a visual quality issue. This assumes that parking structures do not allow for large openings in the elevations that allow a person to see parked cars and hanging lights and utility piping. A lower parapet style wall to conceal parked cars and a brow from the upper floor are both essential to limit visual penetration into the structure and vehicle light and parking garage lighting to spill out. The exterior materials must be made to relate to the adjacent building elevations and materials. The use of a vertical perforated screens or patterned laser cut metal panels or offsetting planes that allow air and light in, but that obscure clear views in would be essential. Design treatments on the east facing edge of the complex must receive even more integration with the architecture. The proposed 30 foot high elevated plaza with parking under the plaza as proposed by SANDAG in their conceptual architectural plans would be an appropriate solution to partially exposed parking structures that are shown on the mass models used in this study (see Simulation #1 for all alternatives where the parking structures are clearly different than the rest of the architecture). The modeling shown in this study does have the appropriate minimal gap for each floor of the garage. However, the material changes between the lower portion of the building with parking and the rest of the building should be less noticeable.

4.19.7 Minimization Method #7: Maintain Horizontal Banding and Fenestration on Buildings

It is common for architecture to portray dynamic vertical elements to accentuate the overall scale and iconic power of the building. However, the overall structure of tall buildings is already strongly vertical. Horizontal banding and fenestration that sets each floor as a horizontal design element helps to reduce the apparent size of the building.

4.19.8 Minimization Method #8: Integrate and Connect a Series of Plazas, Streets and Spaces

A strong foundation of an elevated or terraced set of open air spaces at the ground levels of buildings would be important to make the project feel as though it is a campus-like setting instead of a series of buildings and streets like many downtown areas. The park and recreation requirements and pedestrian circulation needs of the project should require a substantial amount of the ground-plane to be landscaped and contain pedestrian-scaled spaces. The elevated 30’ plaza structure proposed by SANDAG would go a long way to create this integrated and connected public space. This space would also help in creating and maintaining some of the view corridors across the site.

4.20 Minimization Measures to Avoid Aesthetic, Visual, or View Impacts

The following minimization measures should be considered as part of a formal set of design guidelines that would evolve into development requirements, assured by design and site planning review by the Navy, SANDAG, and the City of San Diego. The measures considered by this study include:

Minimization Method #1: Limitations to Avoid Silhouetting against the Ocean Horizon

- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #8 as seen from Presidio Park
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills
- To be applied to Simulation #10 as seen from Hayden/Linwood from Central Mission Hills

Minimization Method #2: Height Limitation to Avoid Silhouetting against the Sky

- To be applied to Simulation #3 as seen from Sports Arena Boulevard and Rosecrans Street
- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #8 as seen from Presidio Park
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills

- To be applied to Simulation #10 as seen from Hayden/Linwood from Central Mission Hills

Minimization Method #3: Stepping Down Building Heights to Adjacent Areas

- To be applied to Simulation #3 as seen from Sports Arena Boulevard and Rosecrans Street
- To be applied to Simulation #6 as seen from Old Town State Park
- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #8 as seen from Presidio Park
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills
- To be applied to Simulation #10 as seen from Hayden/Linwood from Central Mission Hills

Minimization Method #4: View Corridors to be Kept Open

- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #8 as seen from Presidio Park
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills

Minimization Method #5: Centralized Massing to Minimize the Number of Buildings

- To be applied to Simulation #3 as seen from Sports Arena Boulevard and Rosecrans Street
- To be applied to Simulation #6 as seen from Old Town State Park
- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #8 as seen from Presidio Park
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills

Minimization Method #6: Conceal or Integrate Parking Garages

- To be applied to Simulation #1 as seen from southbound I-5 traffic
- To be applied to Simulation #4 as seen from Midway Drive
- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills

Minimization Method #7: Maintain Horizontal Banding and Fenestration on Buildings

- As already shown on all simulations

Minimization Method #8: Integrate and Connect a Series of Plazas, Streets and Spaces

- To be applied to Simulation #7 as seen from Old Town Avenue
- To be applied to Simulation #9 as seen from Altamirano in North Mission Hills
- To be applied to Simulation #10 as seen from Hayden/Linwood from Central Mission Hills

4.21 Minimization of Lighting Impacts/Suggested Mitigation Measures

1) Exterior lighting would be architecturally integrated with the character of all structures, energy-efficient, and shielded or recessed so that direct glare and reflections would be confined, to the maximum extent feasible, within the boundaries of the site. Exterior lighting would be directed downward and away from adjacent properties and public rights-of-way. Shielded means that the light rays would be directed onto the site and the light source, whether bulb or tube, would not be visible from an adjacent property. All parking and security lighting would consist of full cutoff fixtures unless a different cutoff classification is specifically authorized through the architectural review process.
2) Obtrusive light would be minimized by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and light required for the development would be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare or up-lighting.
3) The project would be required to meet the lighting standards contained in the CALGreen Code for green building standards. This code is issued by the Building Standard Commission of the

California Department of General Services. The project would comply with standards contained in the CALGreen Code for reducing light pollution.

4) The lighting plan would need to be consistent with the U.S. Green Building Council's LEED Green Building Rating System requirements. The project would need to achieve at least the U.S. Green Building Council's LEED v4 Silver certification. Consistency with LEED requirements would reduce both the generation of exterior light and the potential for light trespass to affect off-site areas.
5) LED (light-emitting diode) light fixtures would be used for all interior and exterior lighting and fixtures and would be selected based on architectural aesthetic, efficiency, maintenance, and glare control.
6) Professionally recommended lighting levels should be determined for each activity areas to prevent over-lighting and reduce electricity consumption.
7) Shielded fixtures with efficient light bulbs would be used in the parking lot to prevent any glare and light spillage beyond the property line. Shielded fixtures would also help in preventing light pollution of the dark sky.
8) To protect spill-over on I-5 and the Pacific Highway, luminaires would be shielded, reduced in intensity, or otherwise protected from view such that the brightness of a light source within 10 degrees from a driver's normal line of sight would not be more than 1,000 times the minimum measured brightness in the driver's field of view, except when minimum values are less than 10 foot-lambert (fL). If minimum values are below 10 fL, the source brightness would not exceed 500 fL plus 100 times the angle, in degrees, between the driver's line of sight and the light source.
9) The maximum measurable luminance of the illuminated building façade would not exceed 40 candela per square meter (cd/m^2). Additionally, an area weighted average of field measurements would not exceed 10 cd/m^2 for any single contiguous façade area greater than 7,500 square feet in area.

4.22 Minimization of Glare Impacts/Suggested Mitigation Measures

1) Glass used in building façades would be anti-reflective or treated with an anti-reflective coating in order to minimize glare.
2) The following treatments would not be allowed as part of the proposed project materials:
   - Reflective glass that exceeds 50 percent of any building surface and none on the bottom three floors
   - Mirrored glass
   - Black glass that exceeds 25 percent of any surface of a building
   - Metal building materials that exceed 50 percent of any street facing surface
   - Exposed concrete that exceeds 50 percent of any building
3) The following use of building materials would be encouraged:
   - Natural stone
   - Galvanized metal
   - Matte or low gloss painted materials including steel, metal, and wood
   - Precast concrete panels with low reflectivity
   - Clear or lightly tinted glass
   - Brushed stainless steel versus polished stainless steel
   - Anodized aluminum
   - Composite panels that are not pure or bright white

4.23 Minimization of Temporary Construction Impacts/Suggested Management Measures

1) All staging and storage areas that contain material that is left over night, shall utilize construction fencing with green fabric screening. Care will be provided to make sure that these storage areas are reasonably organized to avoid a haphazard and chaotic appearance.
2) Storage of demolished materials that are not intended to be recycled, will be removed from the site and disposed of properly on a weekly basis Materials that are being recycled should be processed and removed or re-incorporated into the project within a six-month period.
3) Dust control, litter control, and flat surface areas will be cleaned on a weekly basis.

4.24 Summary of Project Impacts Before and After Minimizations

Table 4.23-1 provides a summary of the identified impacts for the broad range of potential impacts related to the No Action and the five project build alternatives. The table shows both the pre-mitigation impact level as well as the post-mitigation impact levels assuming the implementation of the proposed mitigations or minimizations as proposed in Sections 4.20, 4.21 and 4.22. As can be seen in this table, the "No Action" and Alternative 1 fall in the same general range of impacts. Alternative 2 and Alternative 3 are in the next grouping of impacts, all falling below a level of significance if mitigations/ minimizations are implemented. Finally, Alternative 4 and Alternative 5 represent the next grouping of similar impacts. This grouping would also benefit by the proposed minimization recommendations.

Table 4.23-1 Impact Summary of Alternatives Pre-Mitigation and Post-Mitigation

	Impact 1	Impact 2	Impact 3a	Impact 3b	Impact 4	Impact 5	Impact 6a	Impact 6b	Impact 7	Impact 8	Impact 9	Impact 10
	VIEW QUALITY	SCENIC HIGHWAY	VISUAL QUALITY- West Side	VISUAL QUALITY- East Side	LANDFORM QUALITY	AESTHETIC QUALITY	EXISTING COMMUNITY CHARACTER- West Side	EXISTING COMMUNITY CHARACTER- East Side	FUTURE COMMUNITY CHARACTER	SHADE AND SHADOW	LIGHT AND GLARE	TEMPORARY CONSTRUCTION
No Project Alternative												
Pre-mitigation Impact	No Impact	None	Low	No Impact	None	No Impact	Low	Low	Low	None	None	Mod. High
Post- mitigation Impact	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	None
Project Alternative #1												
Pre-mitigation Impact	None	Slight Positive	Slight Positive	Slight Positive	None	Slight Positive	None	Low	Slight Positive	None	None	Mod. High
Post- mitigation Impact	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	None
Project Alternative #2												
Pre-mitigation Impact	Mod. High	Moderate	Slight Positive	Moderate	None	Slight Positive	Low	Mod. Low	Slight Positive	Low	Mod. High	Mod. High
Post- mitigation Impact	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	Moderate	None
Project Alternative #3												
Pre-mitigation Impact	Mod. High	Moderate	Slight Positive	Slight Positive	None	Slight Positive	None	Mod. Low	Slight Positive	Low	Mod. High	Mod. High
Post- mitigation Impact	Moderate	Mod. Low	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	Moderate	None
Project Alternative #4												
Pre-mitigation Impact	High	Mod. High	Slight Positive	Mod. High	None	Slight Positive	Low	Mod. Low	Slight Positive	Moderate	High	Mod. High
Post- mitigation Impact	Mod. High	Moderate	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	Moderate	None
Project Alternative #5												
Pre-mitigation Impact	High	Mod. High	Slight Positive	Mod. High	None	Slight Positive	Low	Mod. Low	Slight Positive	Moderate	High	Mod. High
Post- mitigation Impact	Mod. High	Moderate	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	Moderate	None

Adversity Levels	Slight Positive	No Impact	Low Adversity	Moderate Adversity	Moderately Low Adversity	Moderate High Adversity	High Adversity
	NOT SIGNIFICANT						SIGNIFICANT

4.25 Unavoidable Adverse Environmental Effects

The "No Action" and Alternative 1 represent project solutions that would have all impacts below a level of significance. Alternatives 2 and 3, although with some significant View Quality impacts, these are within the range of lowering the significant impacts to below a level of significance by utilizing the proposed minimization measures to mitigate the impacts. Alternatives 4 and 5 would result in Highly Adverse View Quality impacts that would not be mitigable by the proposed minimization treatments.

The buildings and massing of Alternatives 4 and 5 are too high and the level of development creates a massing that would permanently and unavoidably create a significant impact on the project study area. The proposed minimizations for Alternatives 4 and 5 would help lower the View Quality impacts. But even with these minimizations, the impacts would remain significant and unavoidable.

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Attachment A
View Corridor Blockage Studies and Map Products

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Attachment A: View Corridor Blockage Studies and Map Products

Views found throughout the study area, are the most important aspect of aesthetics and visual impacts that may result from the proposed project. This is due to the unique and highly varied set of sub-regionally important viewing scenes of high visual quality. It is also due to the unique set of topographic features of the sub-region, making many locations have substantial view opportunities given the hillsides and mesa tops of Mission Hills, the Presidio, Mission Valley North, the Point Loma Hills as well as those of Cabrillo Point. The topography of the sub-region provides numerous higher locations to see from and to be seen, and the low areas also contain important and highly valued views of water. This includes the Pacific Ocean, San Diego Bay, Mission Bay and the San Diego River. Another unique characteristic of the sub-region is the dominant amount of development being held below the 30-feet in height based on local initiatives to limit building heights within the Coastal Zone. All of these factors combine to make this particular topic very relevant and complex. To accurately test the potential negative effects on views in the study area, a complex process with multiple steps had to be developed.

1) First, the limits of each of the viewing scenes had to be developed. A series of points along the edges of the existing buildings on OTC Site 1 and Site 2 were chosen and a viewshed developed. This helped to identify the locations for the points on landforms that were in turn used to develop the limits of the viewing scene.
2) Second, a set of viewer points was spread across the viewing scene and a viewshed map was then developed from each viewing scene to help identify all of the areas that could see the viewing scene based on topography.
3) Third, a set of viewer points were placed along public roads within the areas of moderate to high visibility from the viewing scene. These viewer points were then used to run another viewshed to determine the degree of visibility of various portions of the viewing scene. These results are displayed using a gradation of colors that represented how many of the viewing location points could see a particular area within the viewing scene polygon.
4) Lastly, the same viewer points created in step three were used to run a viewshed with the mass model of each alternative integrated into the landform to determine the degree of potential view blockage within the view corridor. The corridor was then defined with viewing angles for the most extreme viewing location set to the most extreme portion of the viewing scene.

The resultant maps in this Attachment represent how each alternative's mass will interrupt the viewing corridor given an area identified as the viewing location and the area identified as the viewing scene. The maps show the limits of the outer edge of the corridor affected by the blockage. The tables show the number of acres affected and the population affected. This method is the best way to quantify the overall effect of the blockage on both the area affected as well as the population affected. It should be noted that all analysis of the viewshed is based upon Digital Elevation Models developed from topographic data points. In the real world, buildings, misc. structures, walls, fences and trees block a substantial amount of views from occurring. In initial studies in the sub-region using Google Earth based LIDAR generated data, the actual real world views may be as small as 25% of the viewshed total acres or population affected. It can be argued that fences, buildings, trees and structures are temporary improvements on the land and can be moved regularly and frequently. Accurate and available LIDAR data does not exist to run models using this data. So, the actual number of acres and the actual number of persons affected should not be used to describe known quantities. But they can be used to determine the percentage of blockage expected and the relative comparison of percentages between each alternative. Note that Alternative 1 would actually decrease the amount of blockage of the corridor based on the removal of a major warehouse structure at the south end of OTC Site 1.

Figure A-1: Alt. 1 Potential View Corridor Blockage of the San Diego River Viewing Scene

Figure A-2: Alt. 1 Potential View Corridor Blockage of Mission Bay Viewing Scene

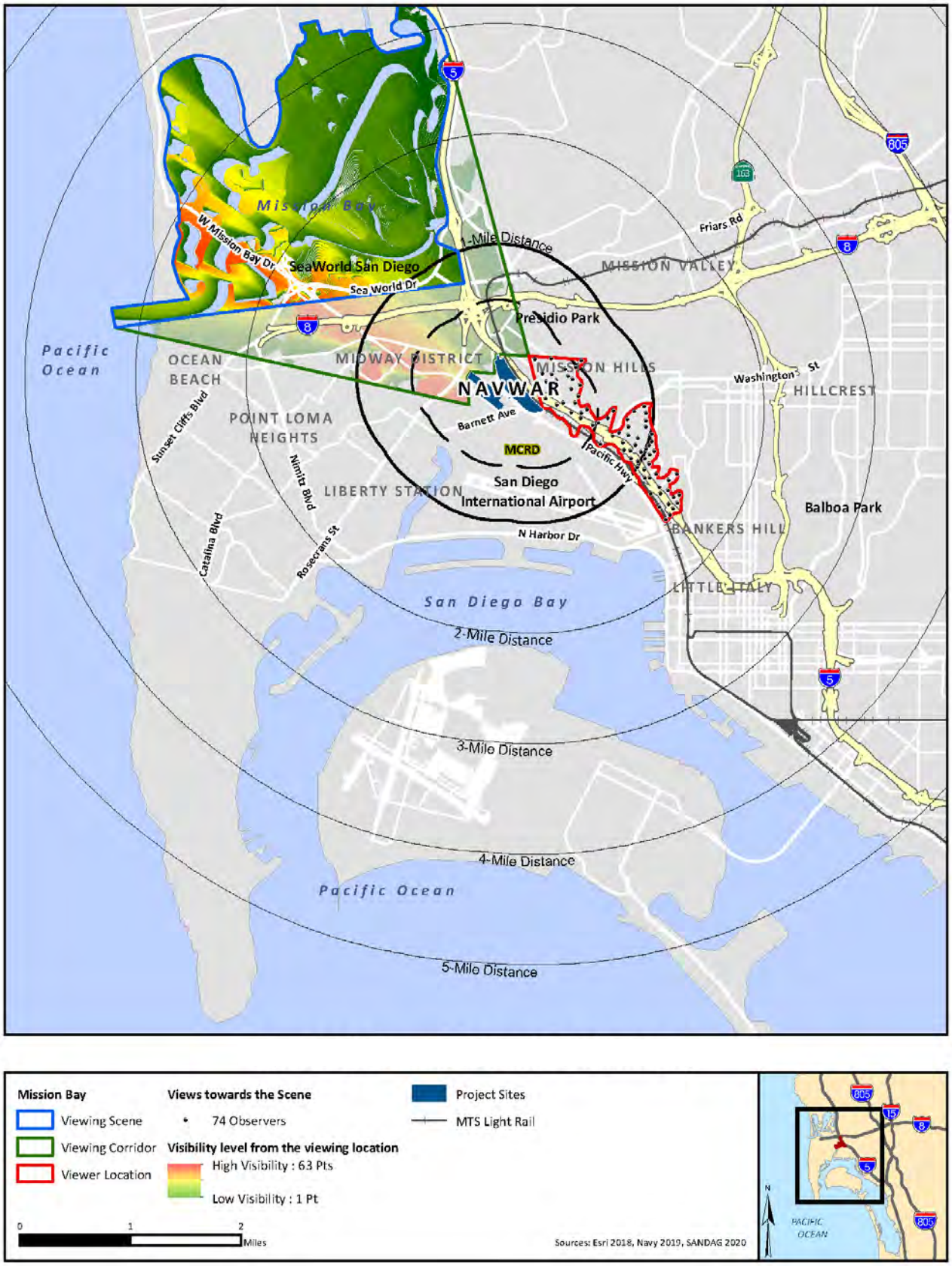


Figure A-3: Alt. 1 View Corridor Blockage of the Mission Valley North Viewing Scene

Figure A-4: Alt. 1 View Corridor Blockage of the Mission Valley / Mission Hills Viewing Scene

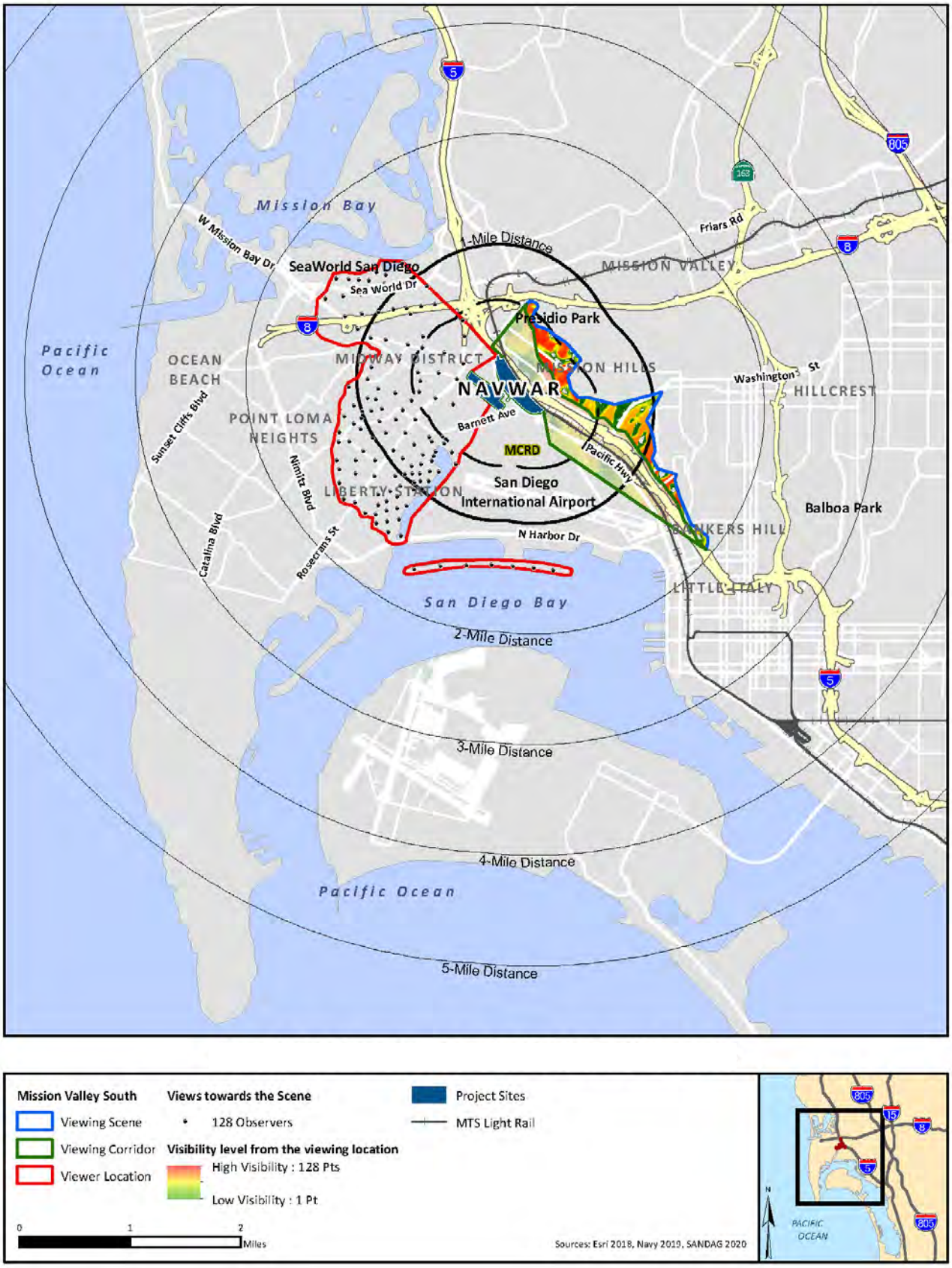


Figure A-5: Alt. 1 View Corridor Blockage of the West Facing Pacific Ocean Viewing Scene

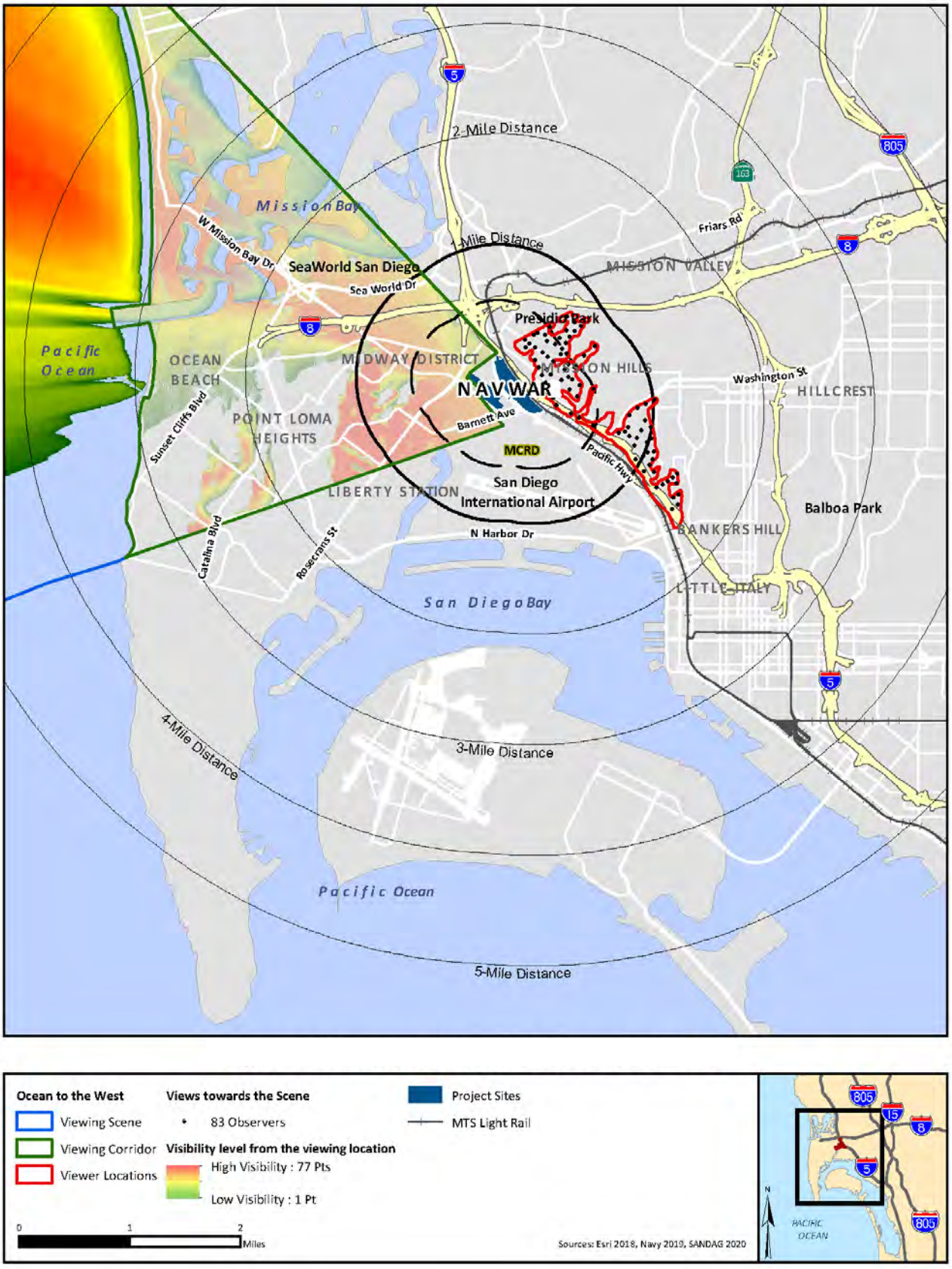


Figure A-6: Alt. 1 View Corridor Blockage of the Southwest Facing Pacific Ocean Viewing Scene

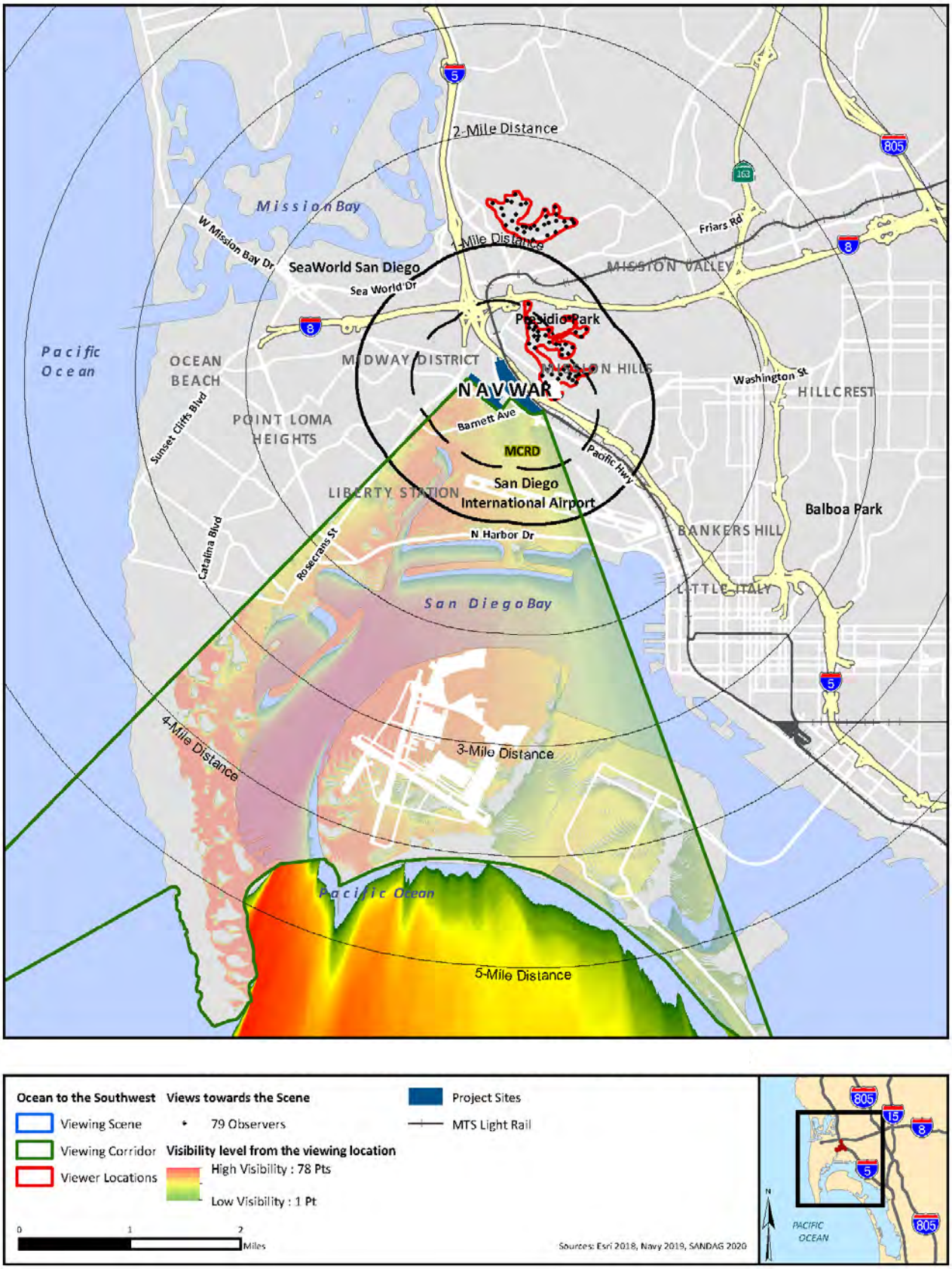


Figure A-7: Alt. 1 View Corridor Blockage of the San Diego Bay and Coronado Viewing Scene

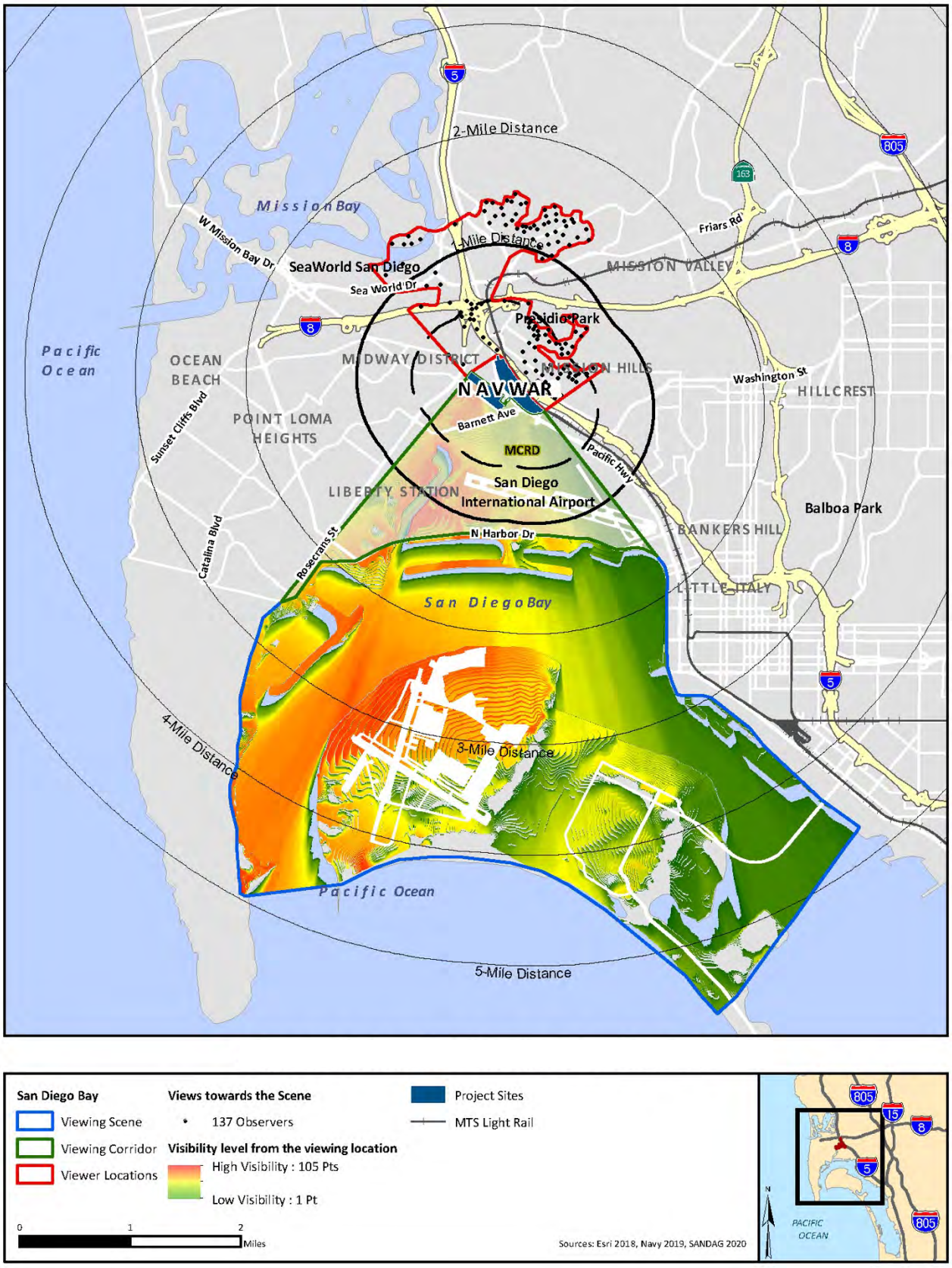


Figure A-8: Alt. 1 View Corridor Blockage of the Cabrillo Point Viewing Scene

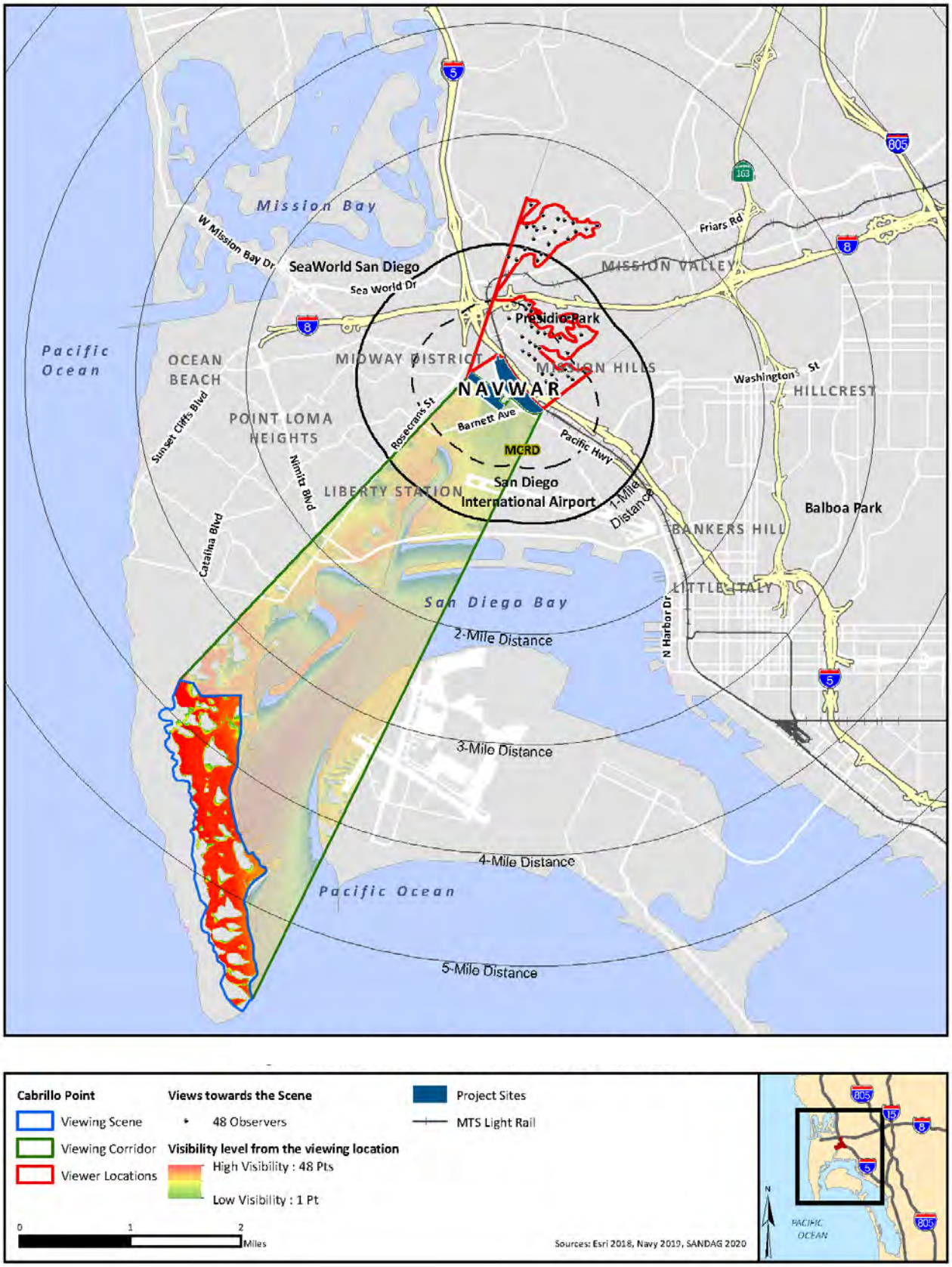


Figure A-9: Alt. 1 View Corridor Blockage of the Point Loma Hillside Viewing Scene

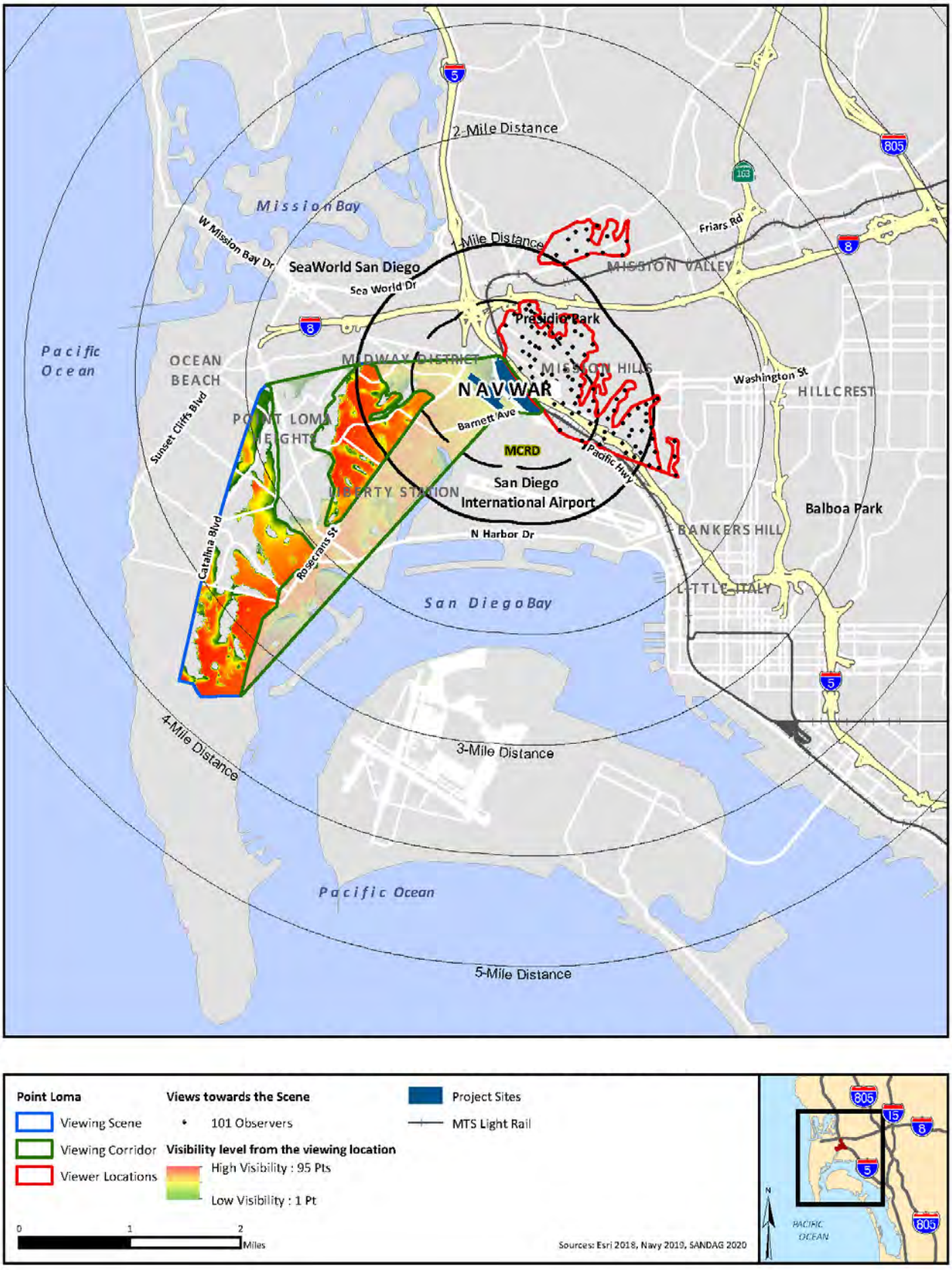


Figure A-10: Alt. 1 View Corridor Blockage of the Downtown Skyline Viewing Scene

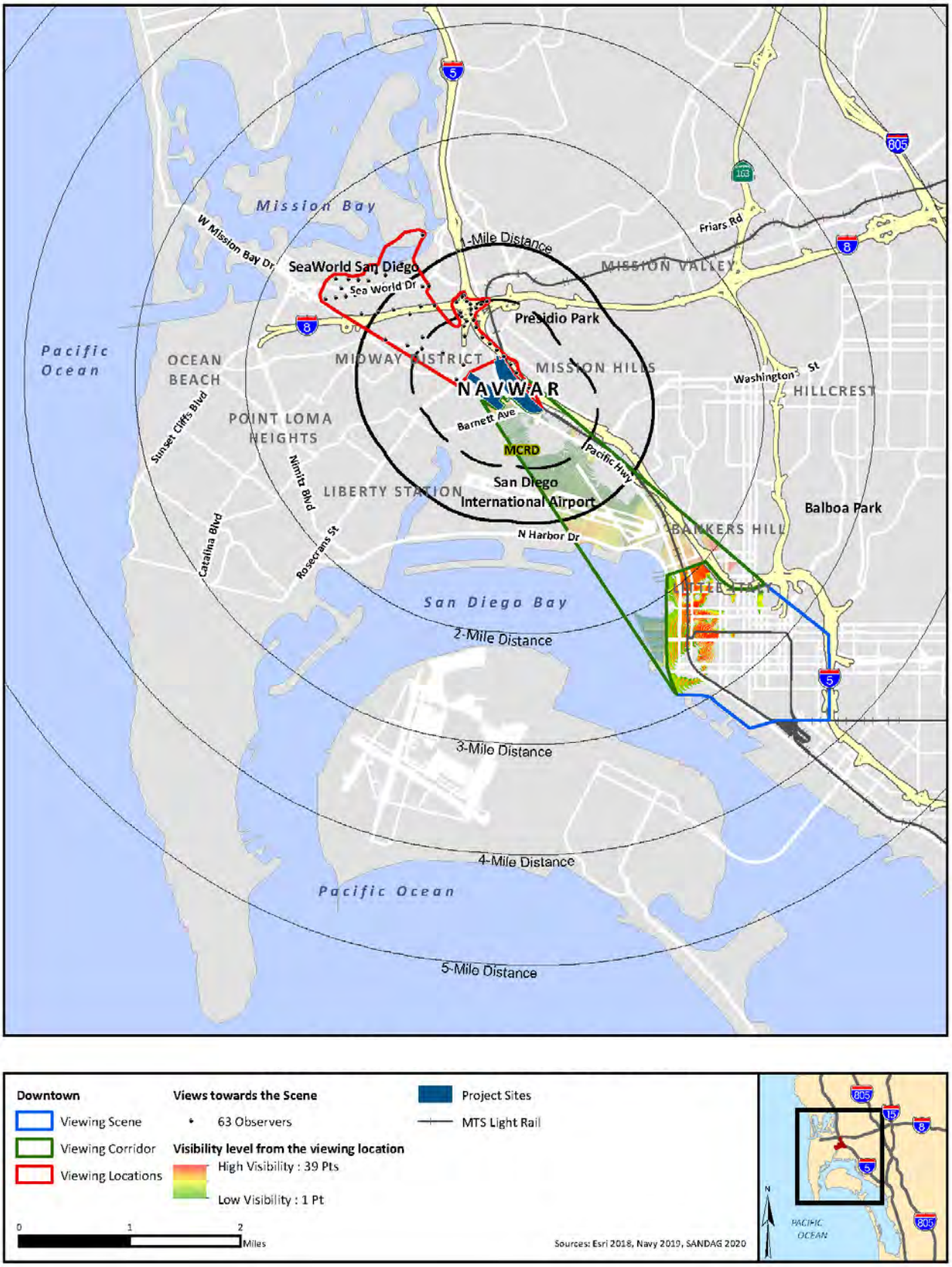


Figure A-11: Alt. 2 Potential View Corridor Blockage of the San Diego River Viewing Scene

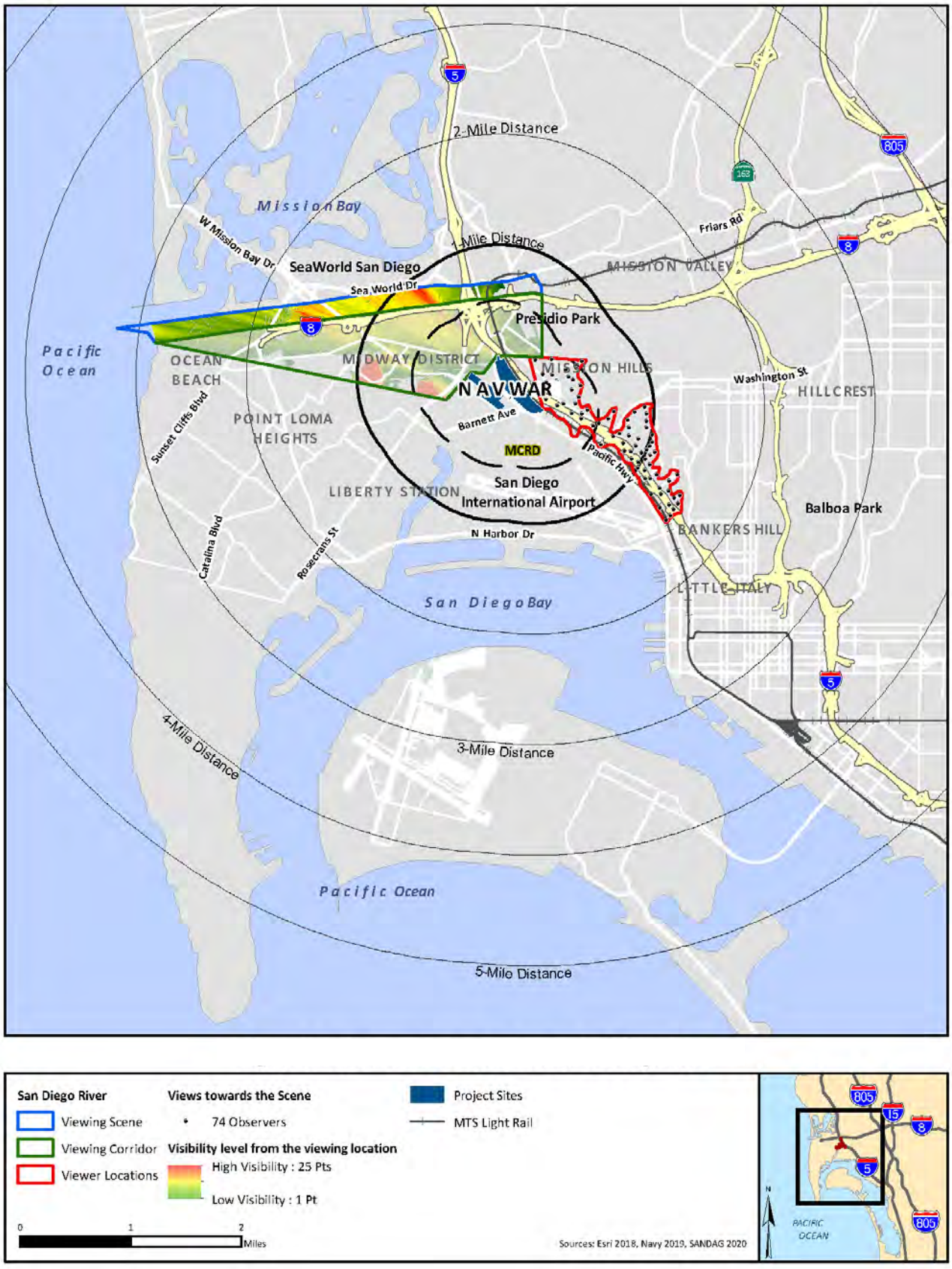


Figure A-12: Alt. 2 Potential View Corridor Blockage of Mission Bay Viewing Scene

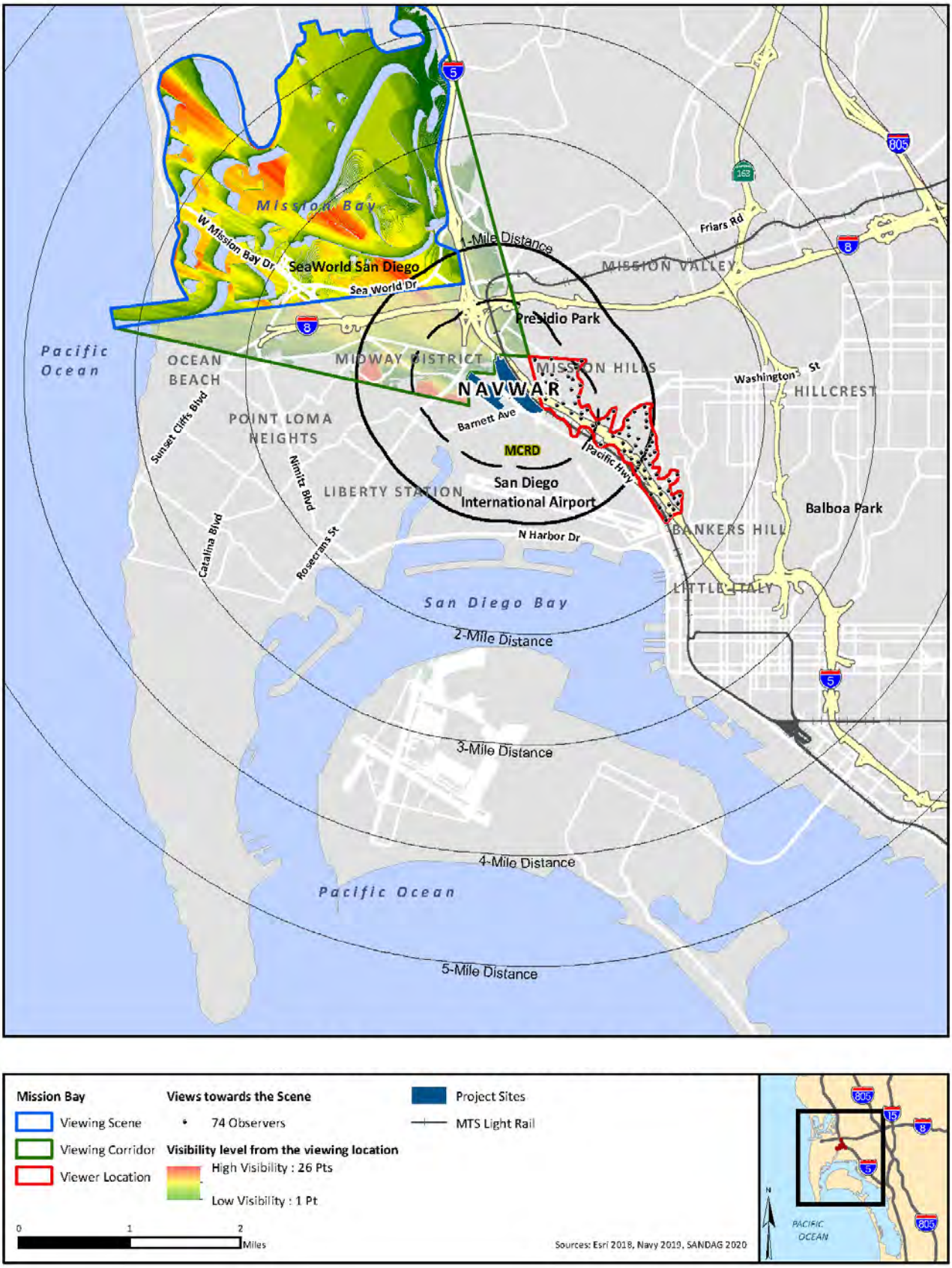


Figure A-13: Alt. 2 View Corridor Blockage of the Mission Valley North Viewing Scene

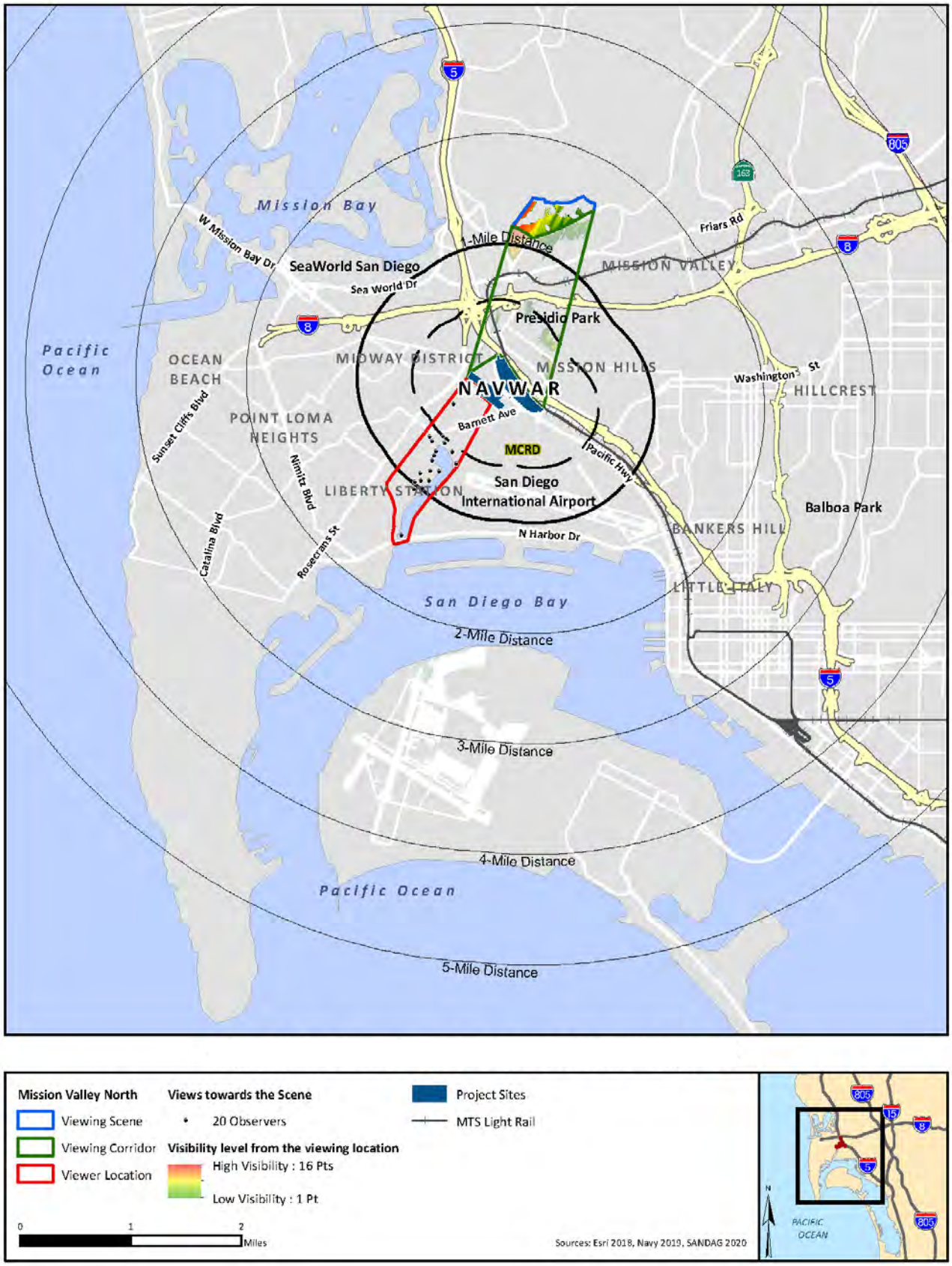


Figure A-14: Alt. 2 View Corridor Blockage of the Mission Valley / Mission Hills Viewing Scene

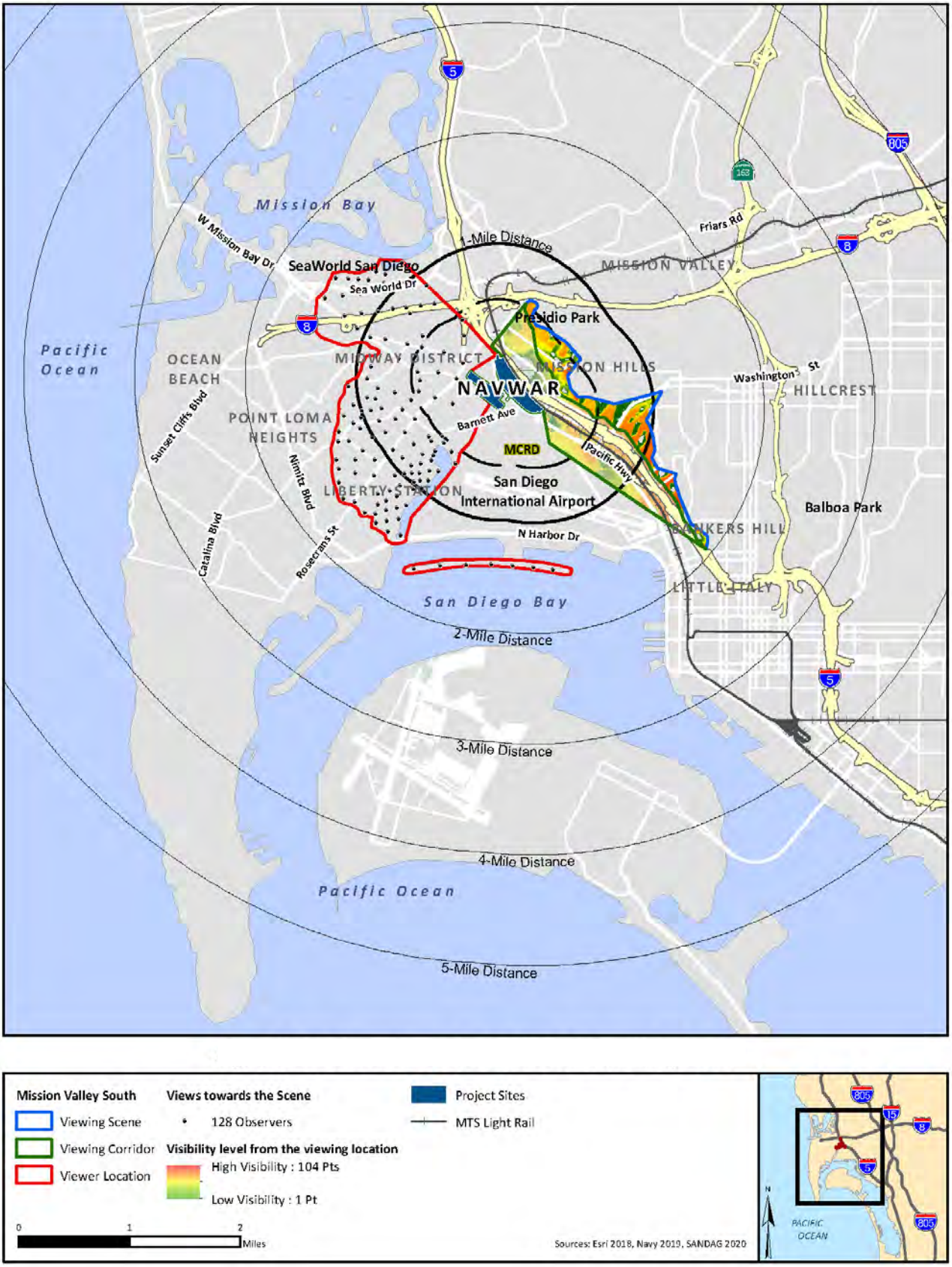


Figure A-15: Alt. 2 View Corridor Blockage of the West Facing Pacific Ocean Viewing Scene

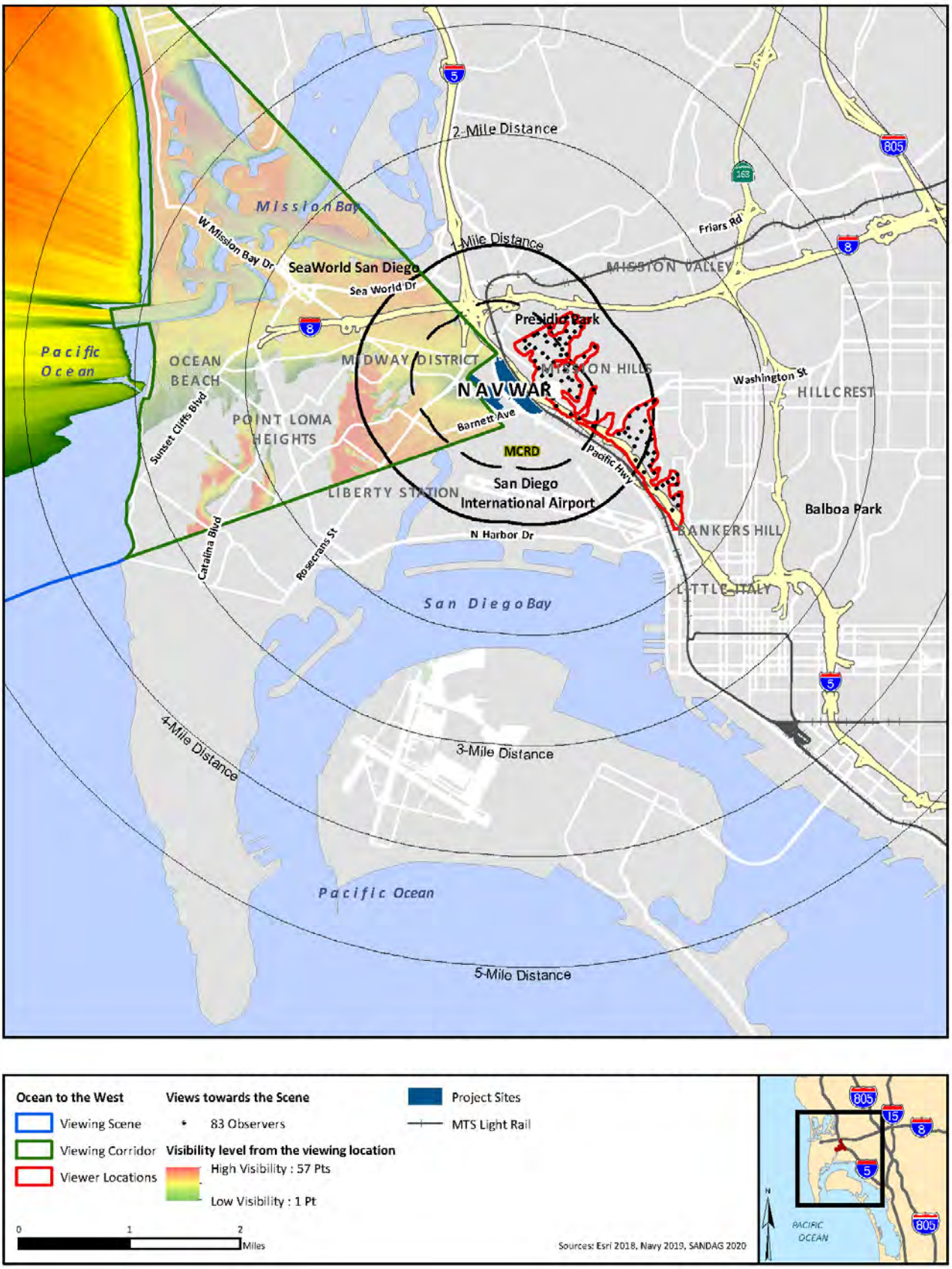


Figure A-16: Alt. 2 View Corridor Blockage of the Southwest Facing Pacific Ocean Viewing Scene

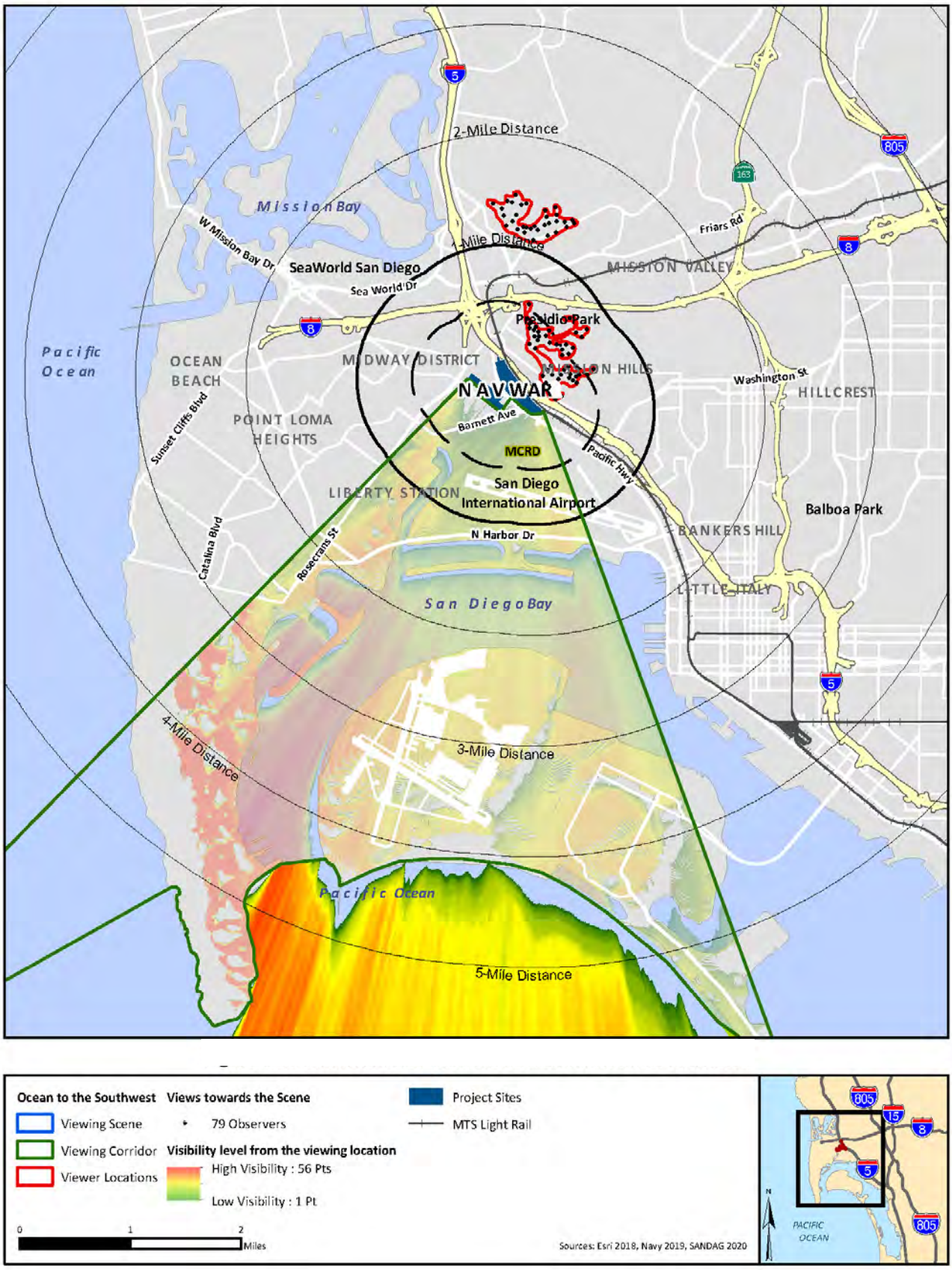


Figure A-17: Alt. 2 View Corridor Blockage of the San Diego Bay and Coronado Viewing Scene

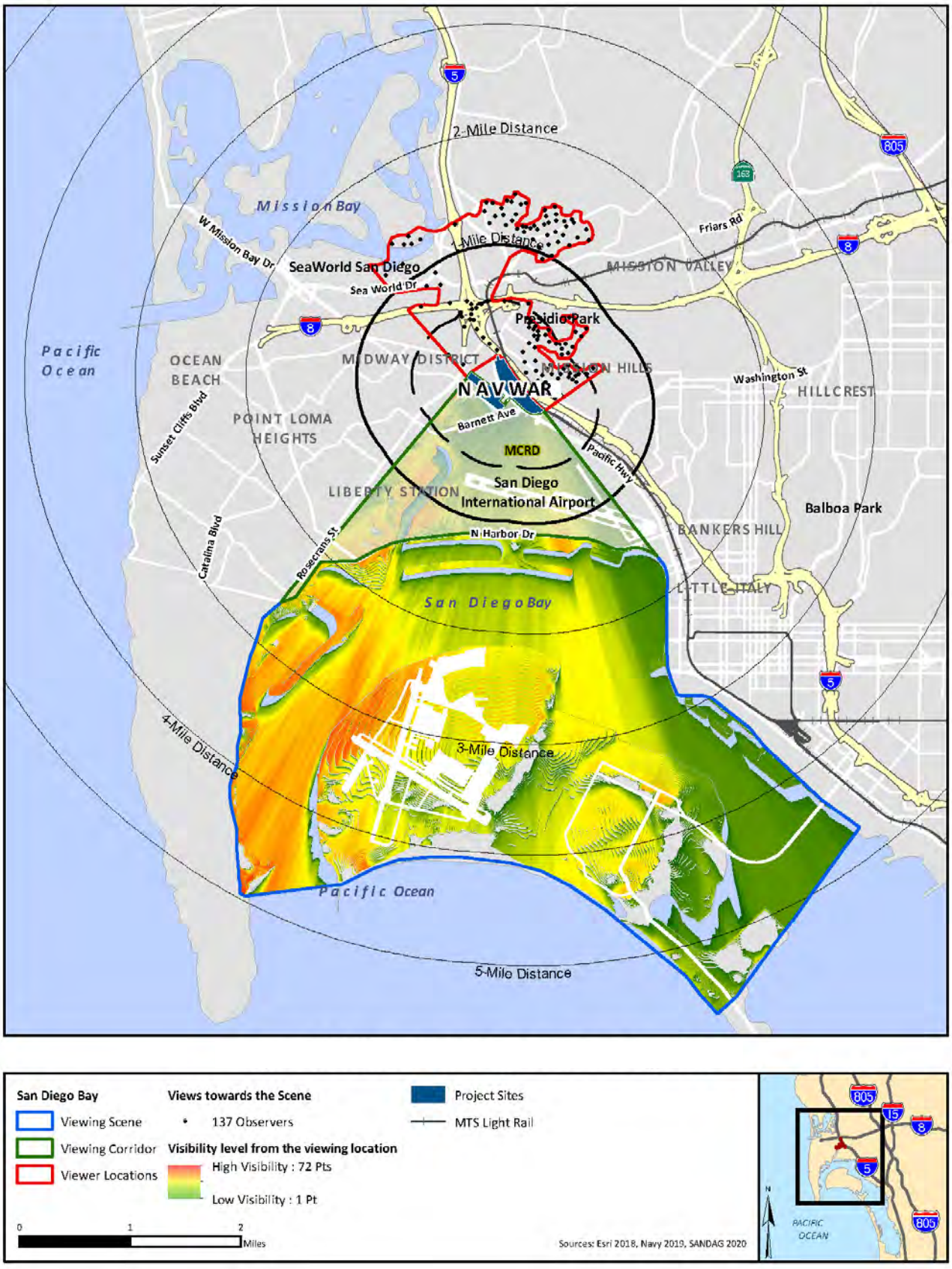


Figure A-18: Alt. 2 View Corridor Blockage of the Cabrillo Point Viewing Scene

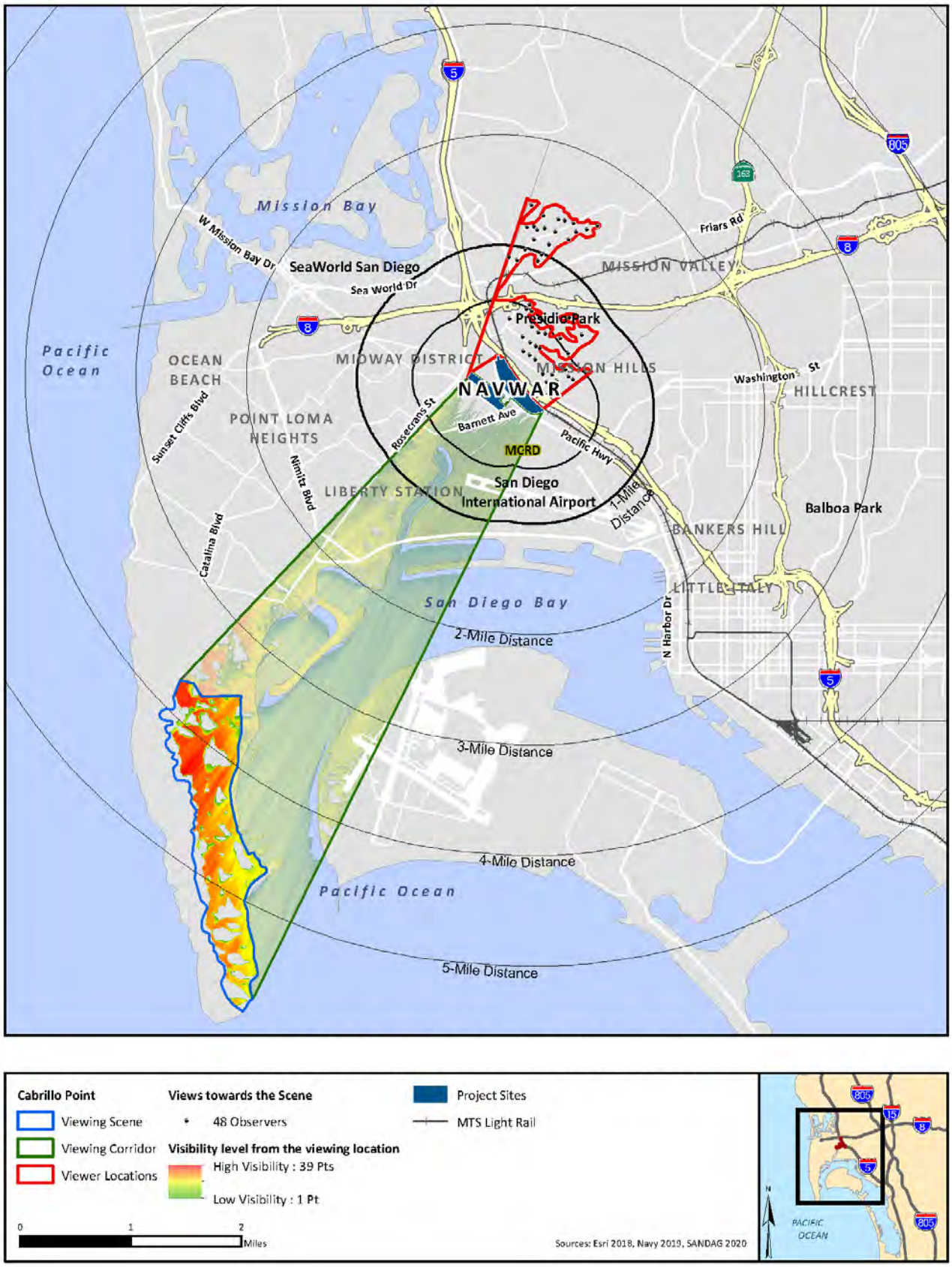


Figure A-19: Alt. 2 View Corridor Blockage of the Point Loma Hillside Viewing Scene

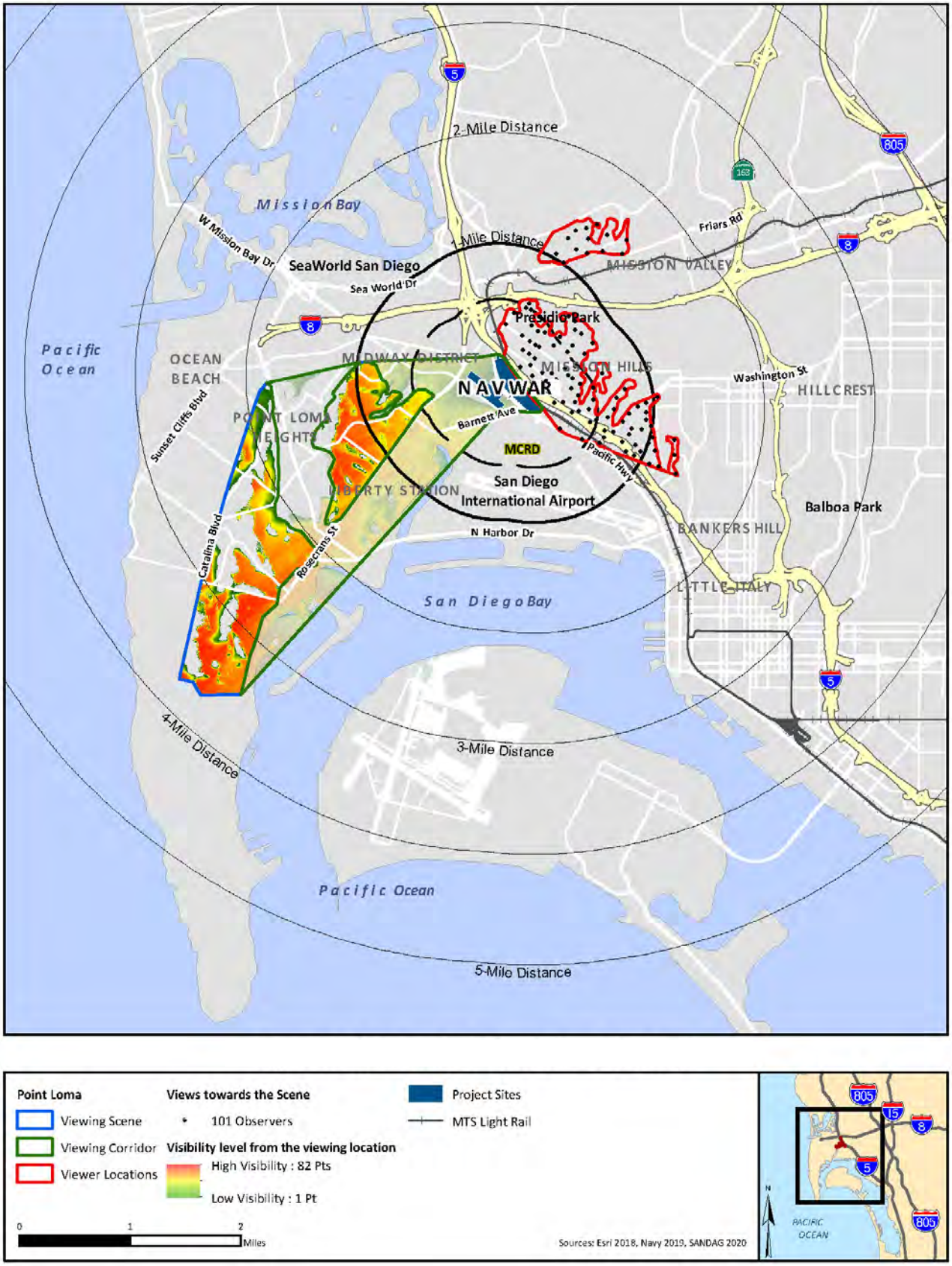


Figure A-20: Alt. 2 View Corridor Blockage of the Downtown Skyline Viewing Scene

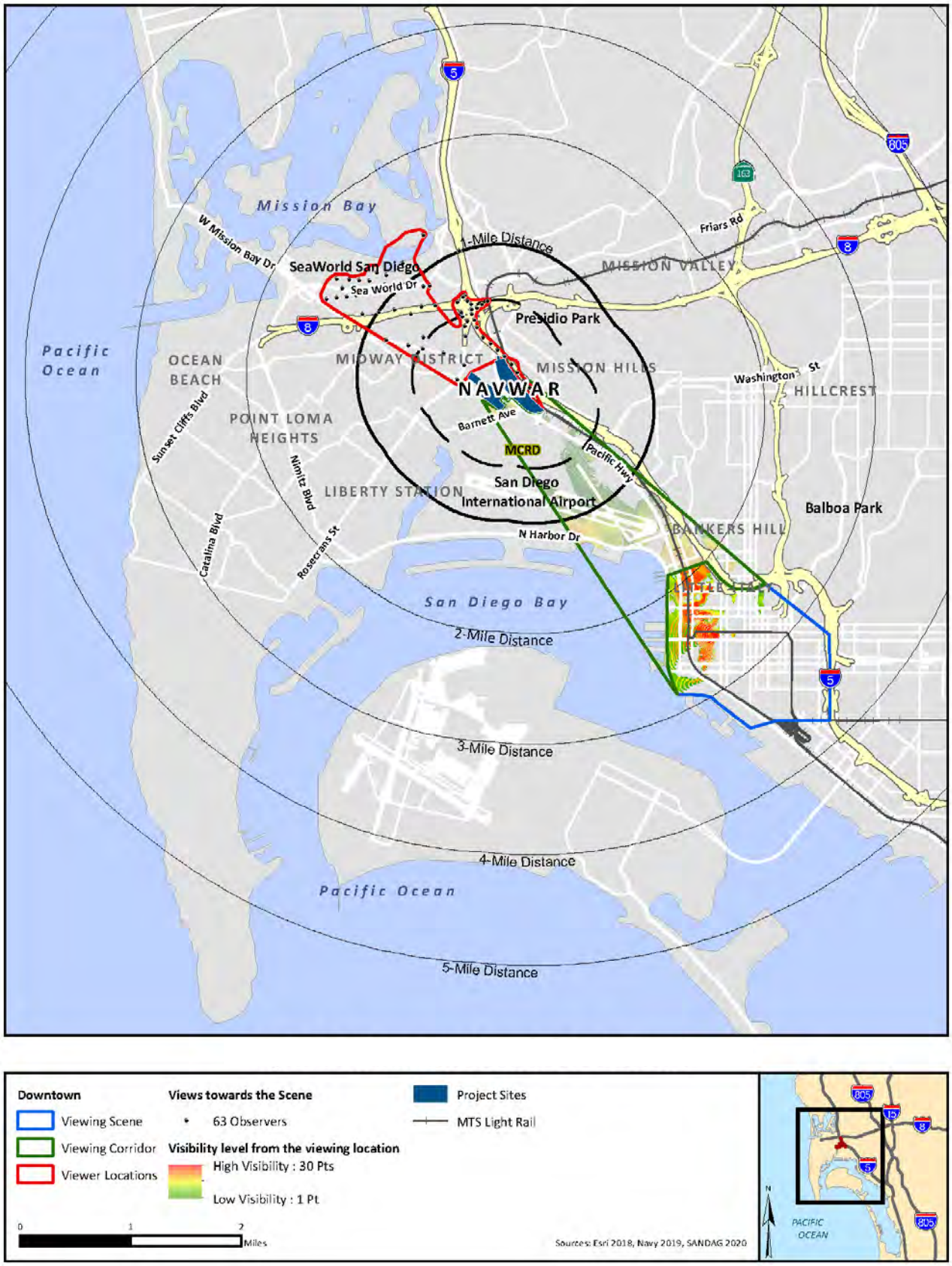


Figure A-21: Alt. 3 Potential View Corridor Blockage of the San Diego River Viewing Scene

Figure A-22 Alt. 3 Potential View Corridor Blockage of Mission Bay Viewing Scene

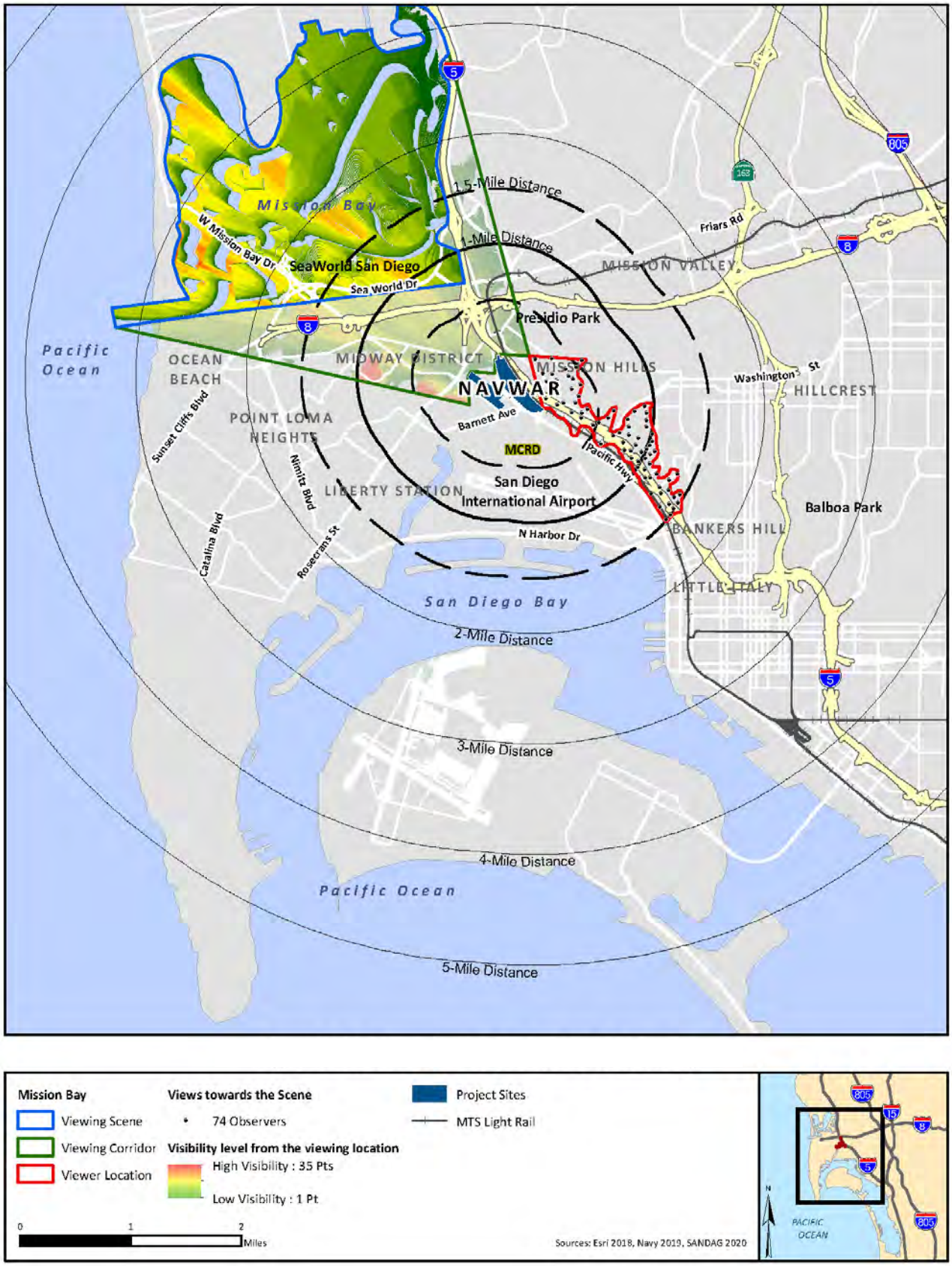


Figure A-23: Alt. 3 View Corridor Blockage of the Mission Valley North Viewing Scene

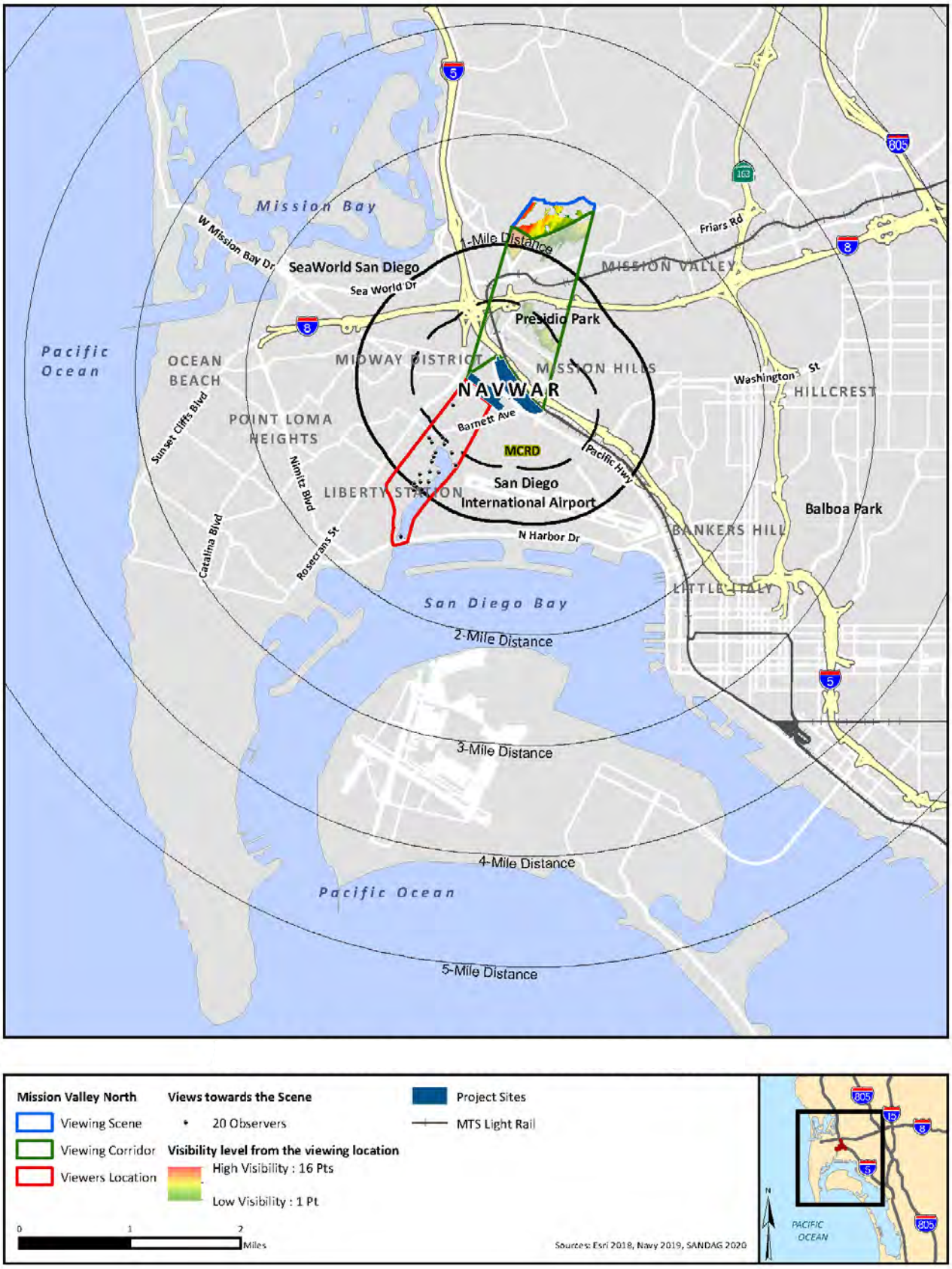


Figure A-24: Alt. 3 View Corridor Blockage of the Mission Valley / Mission Hills Viewing Scene

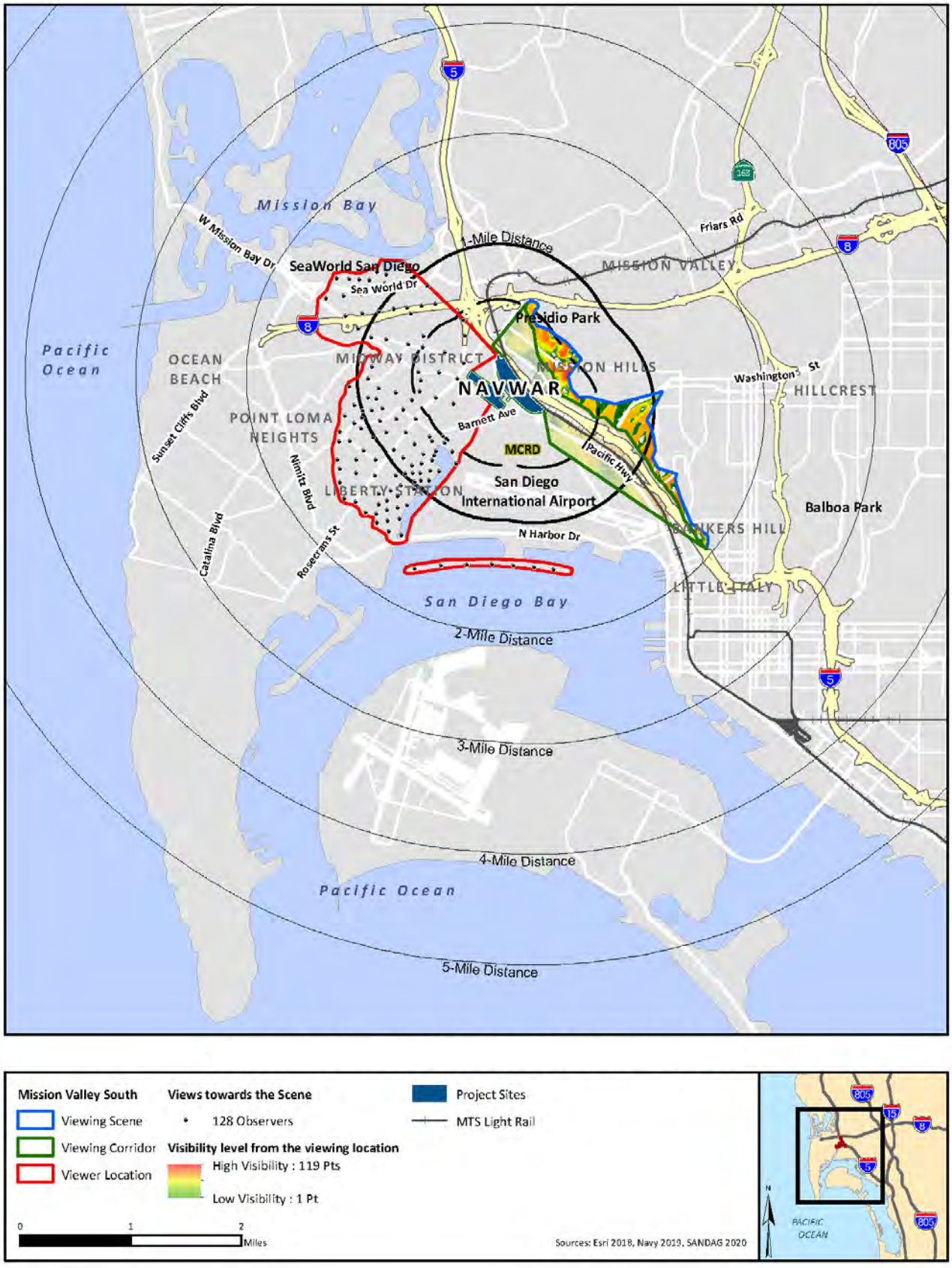


Figure A-25: Alt. 3 View Corridor Blockage of the West Facing Pacific Ocean Viewing Scene

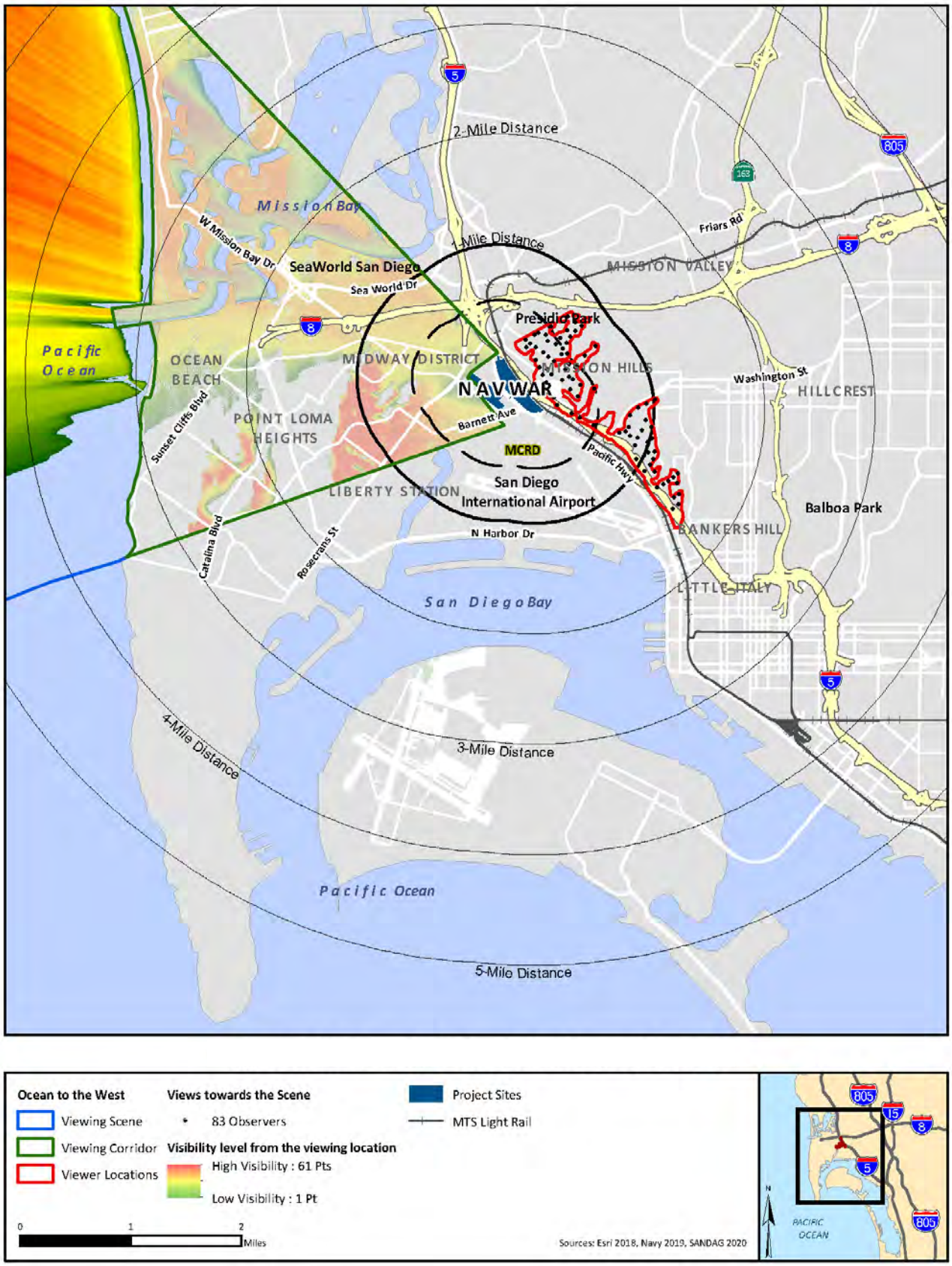


Figure A-26: Alt. 3 View Corridor Blockage of the Southwest Facing Pacific Ocean Viewing Scene

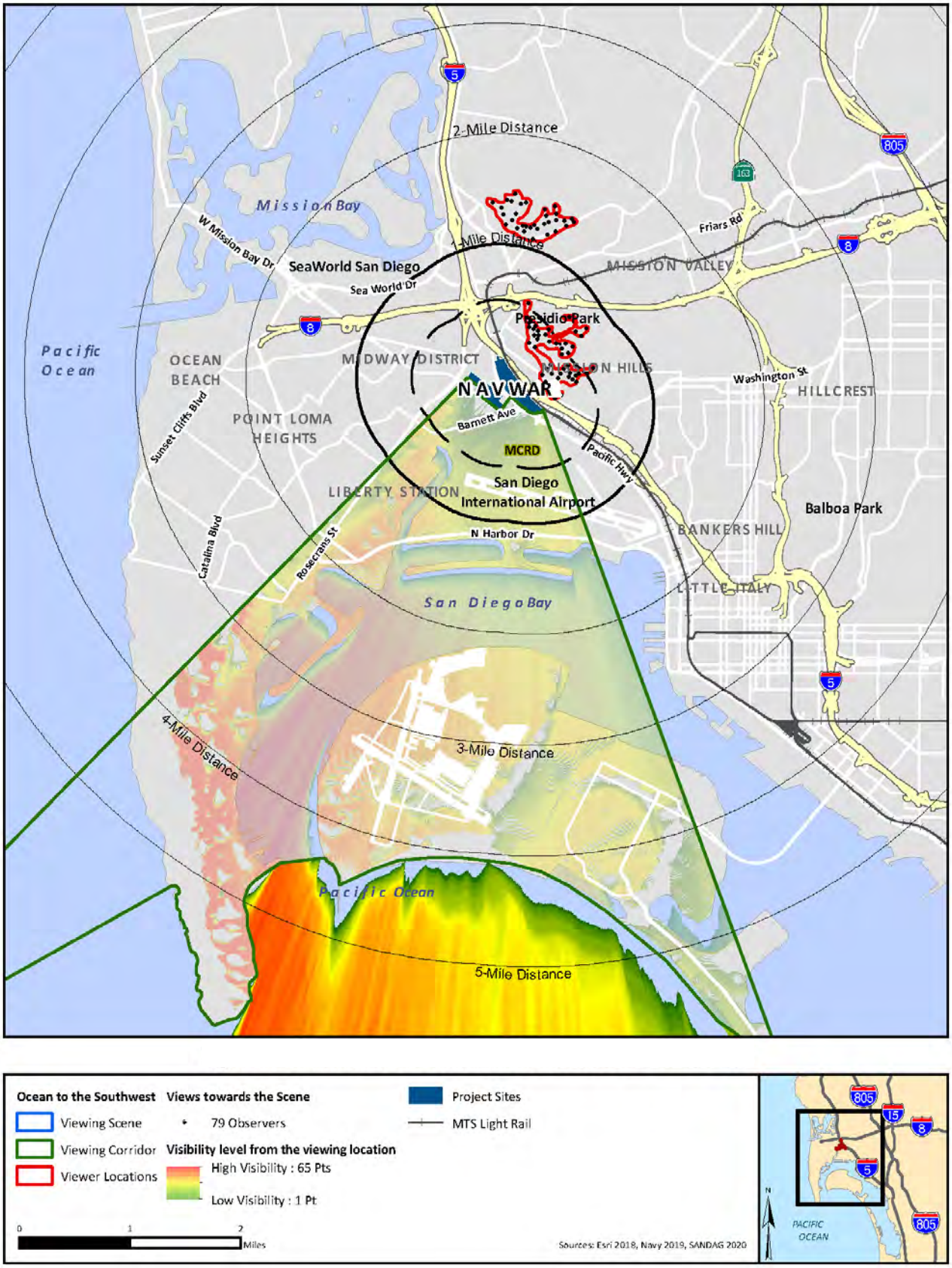


Figure A-27: Alt. 3 View Corridor Blockage of the San Diego Bay and Coronado Viewing Scene

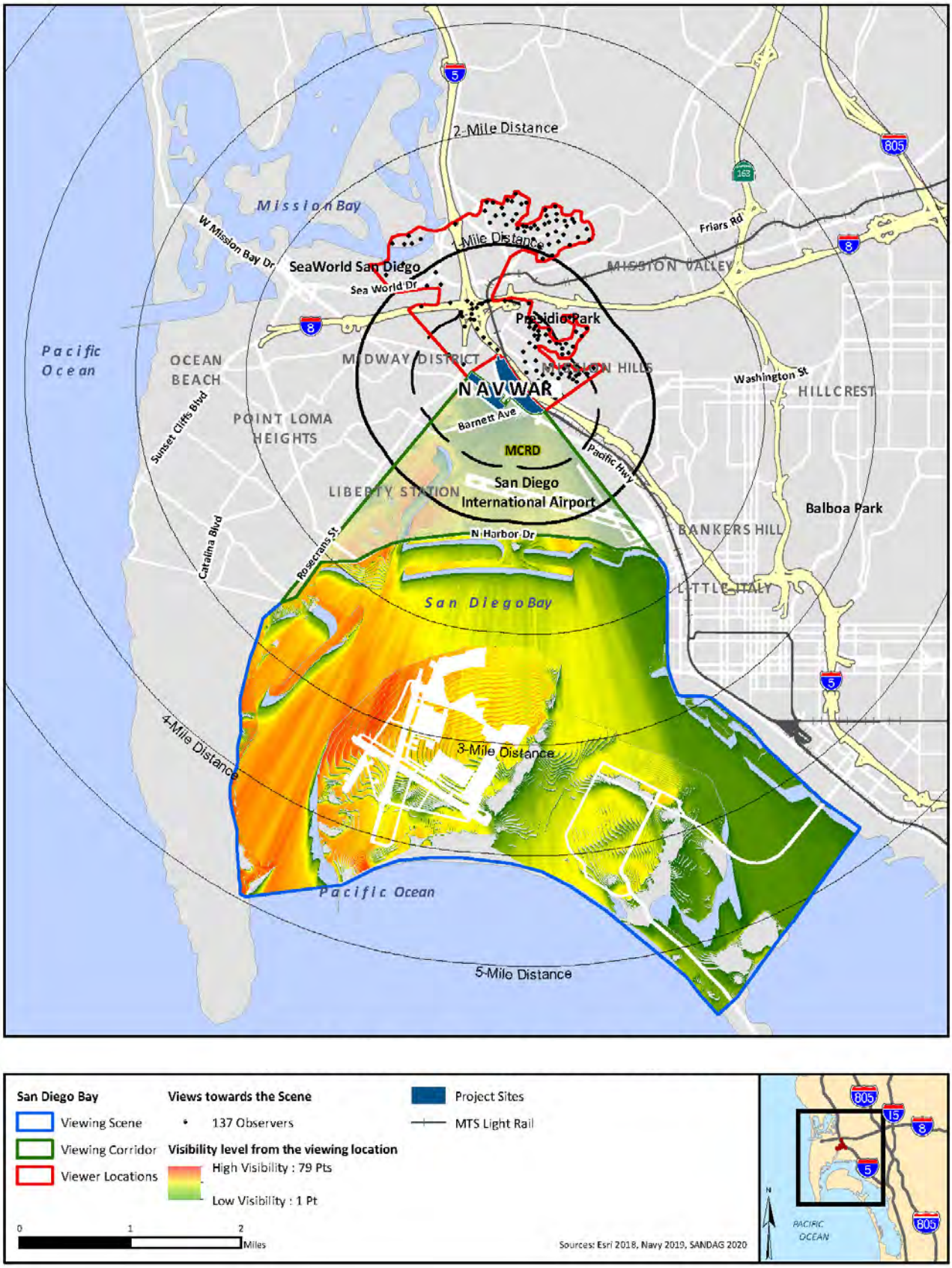


Figure A-28: Alt. 3 View Corridor Blockage of the Cabrillo Point Viewing Scene

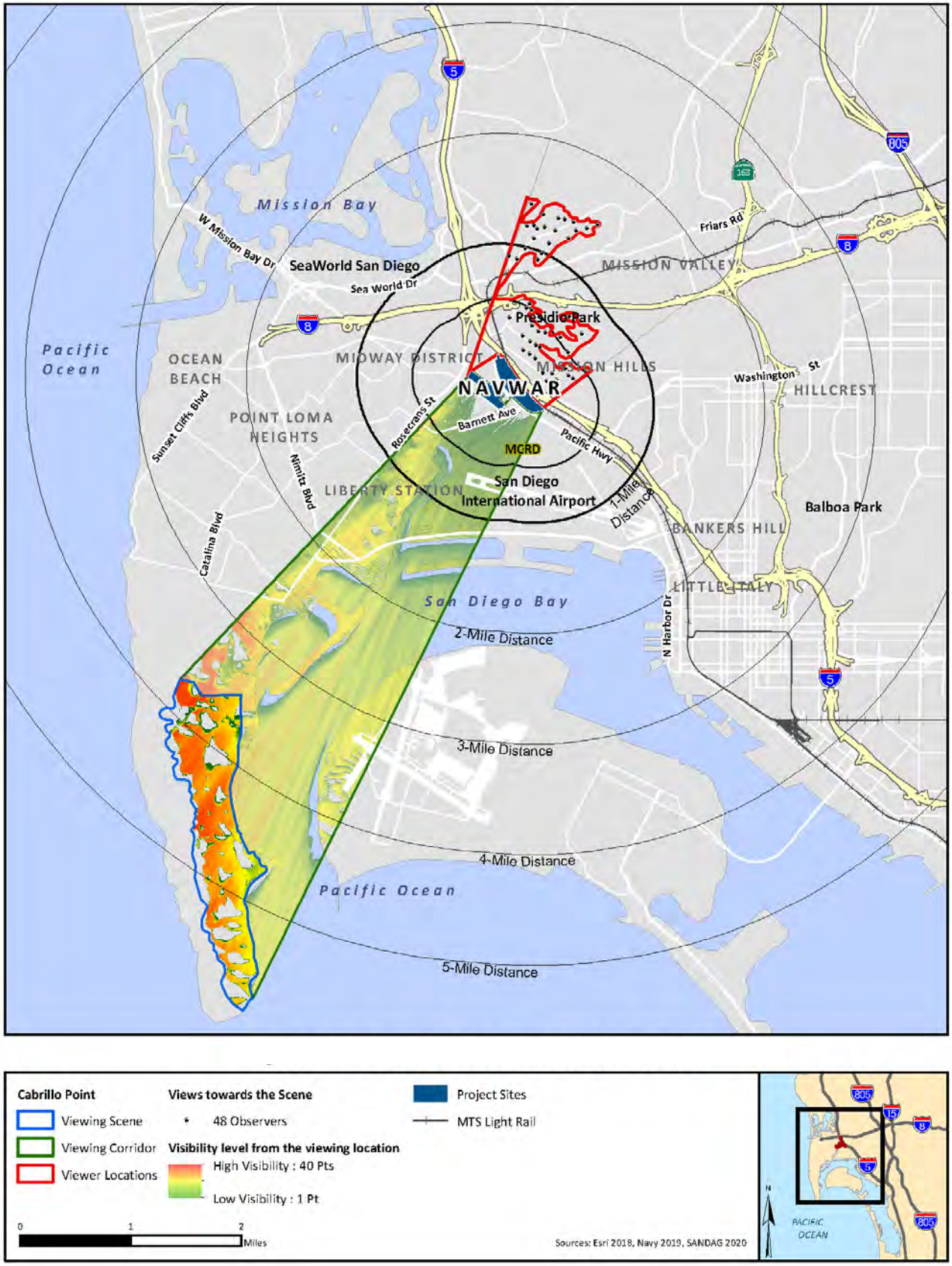


Figure A-29: Alt. 3 View Corridor Blockage of the Point Loma Hillside Viewing Scene

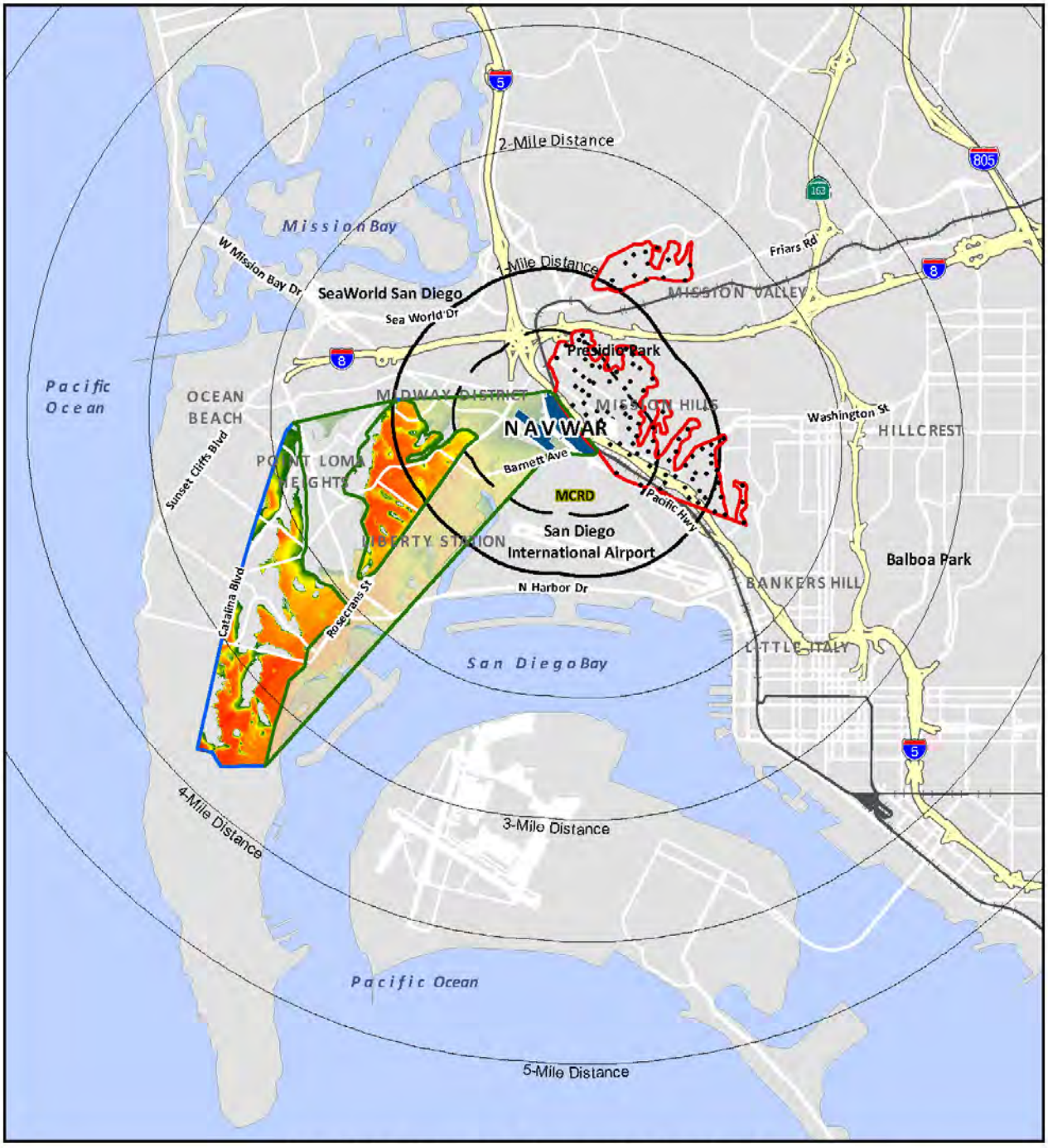


Figure A-30: Alt. 3 View Corridor Blockage of the Downtown Skyline Viewing Scene

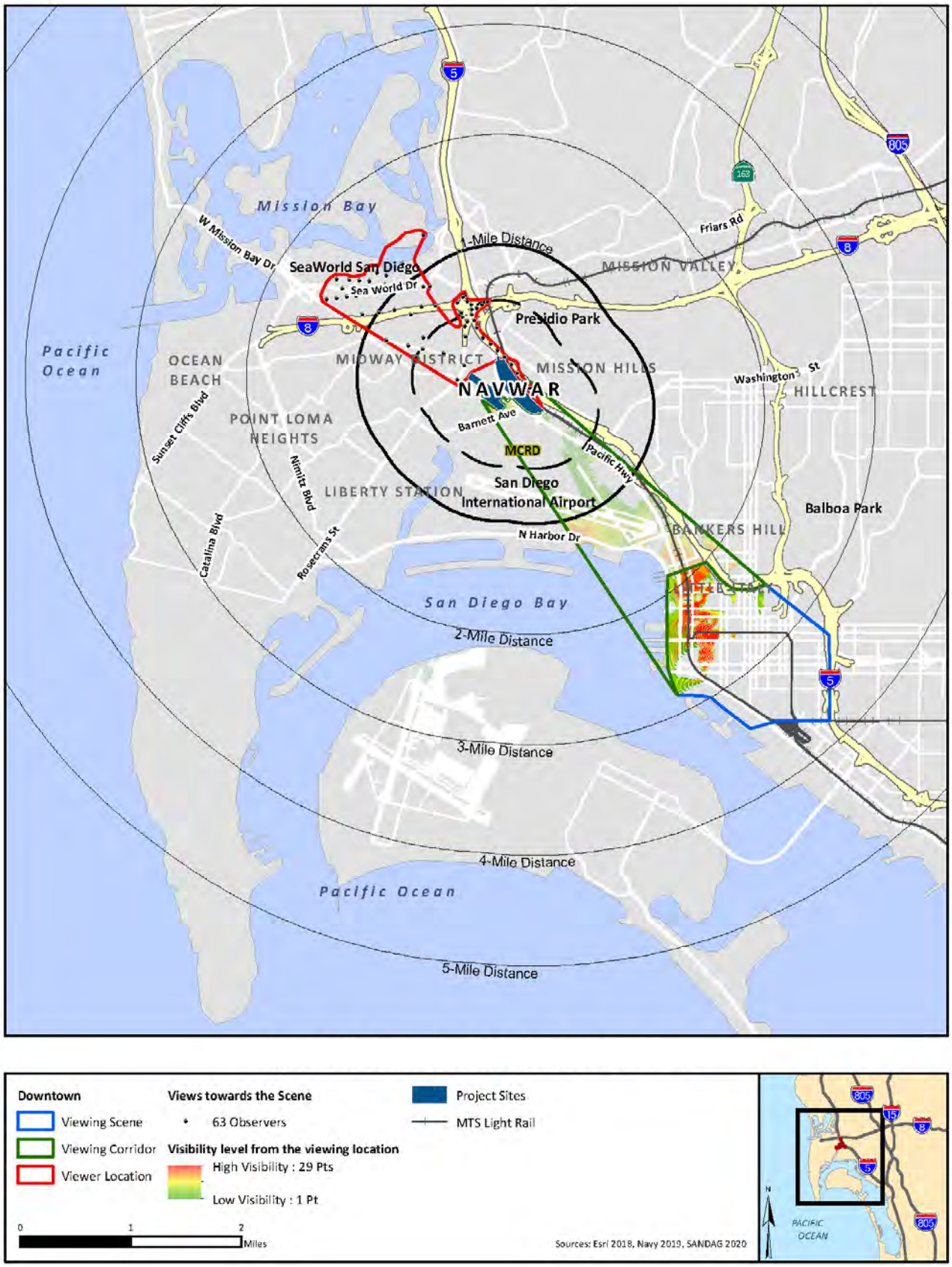


Figure A-31: Alt. 4 Potential View Corridor Blockage of the San Diego River Viewing Scene

Figure A-32: Alt. 4 Potential View Corridor Blockage of Mission Bay Viewing Scene

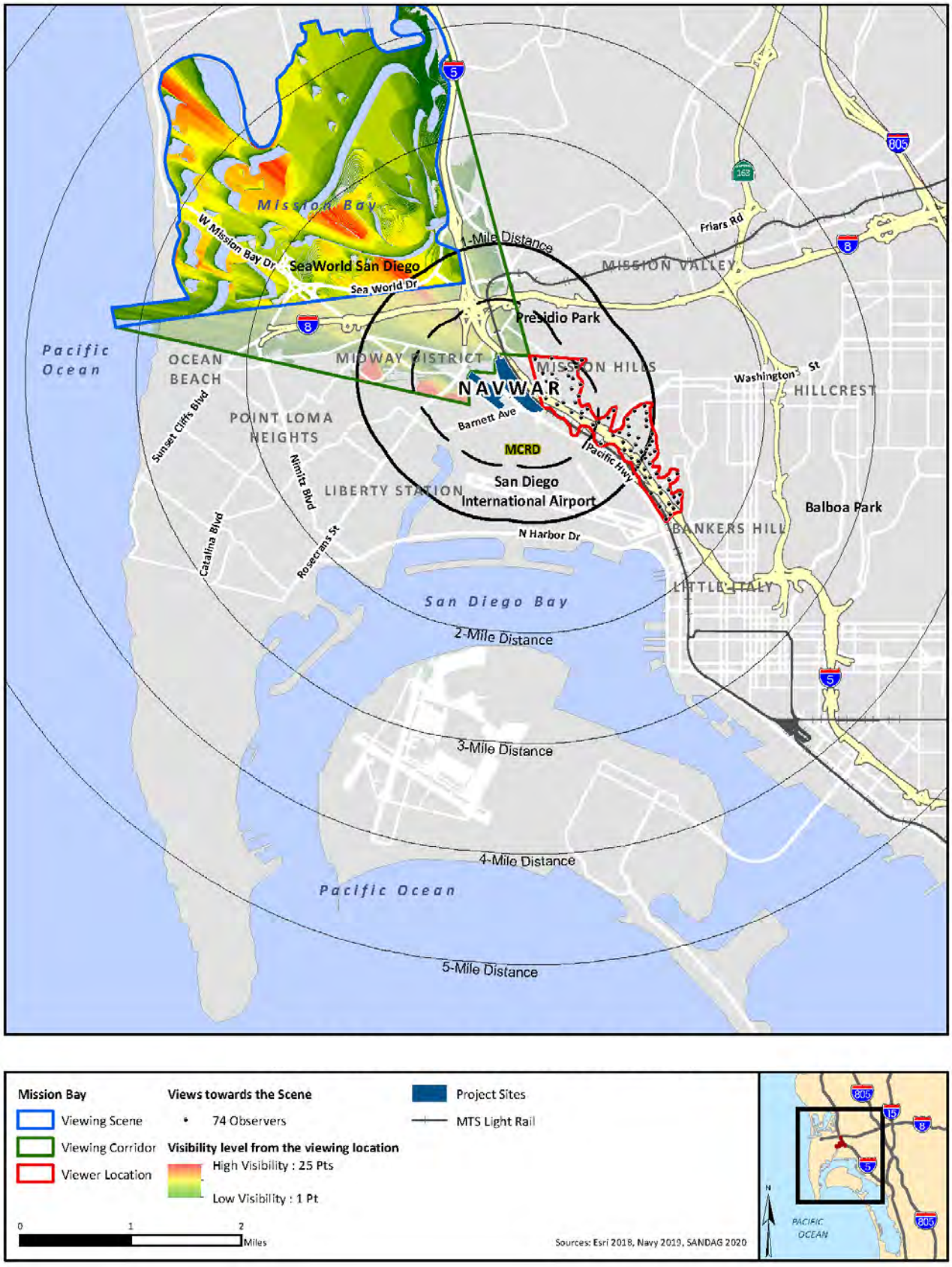


Figure A-33: Alt. 4 View Corridor Blockage of the Mission Valley North Viewing Scene

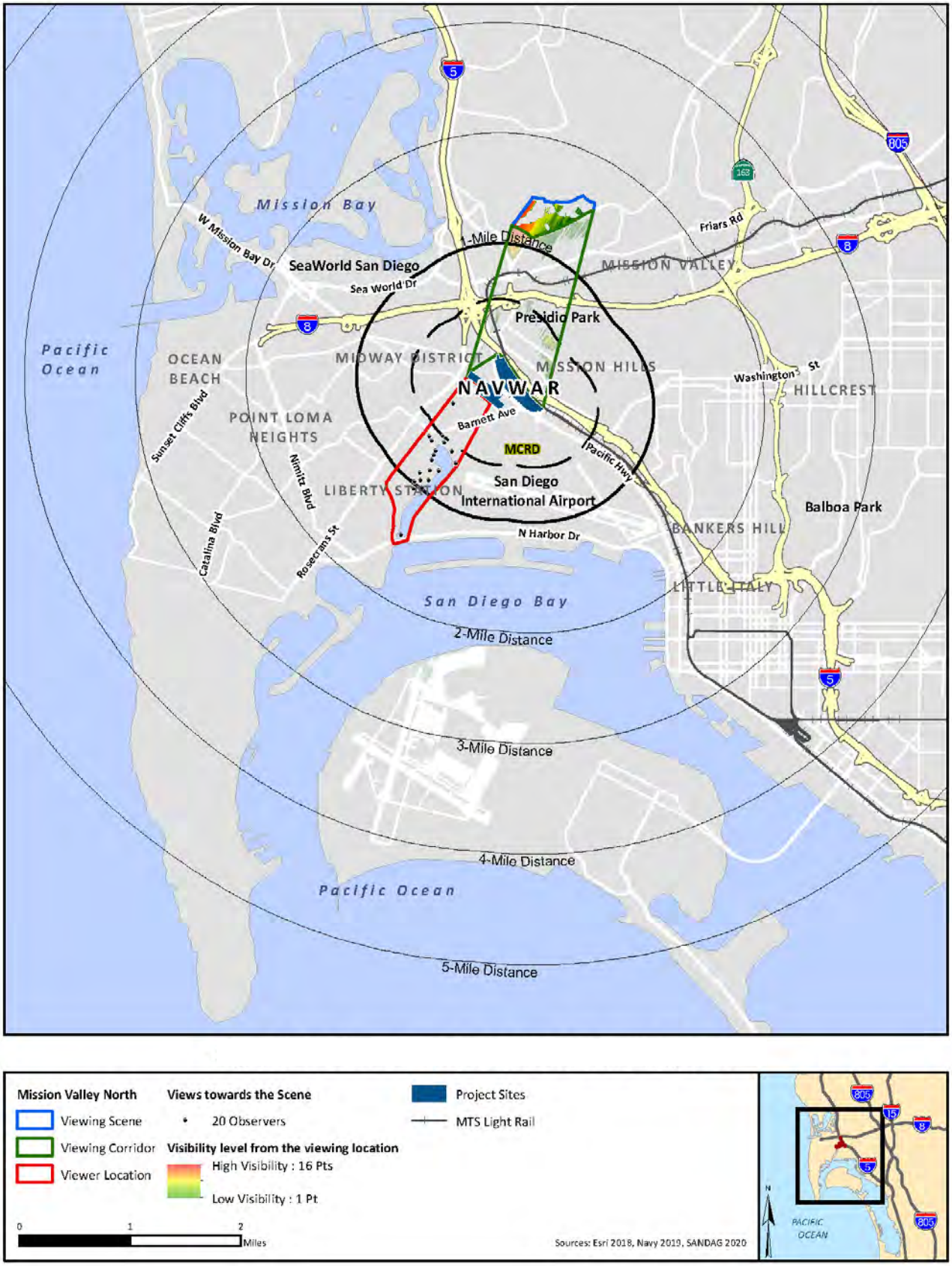


Figure A-34: Alt. 4 View Corridor Blockage of the Mission Valley / Mission Hills Viewing Scene

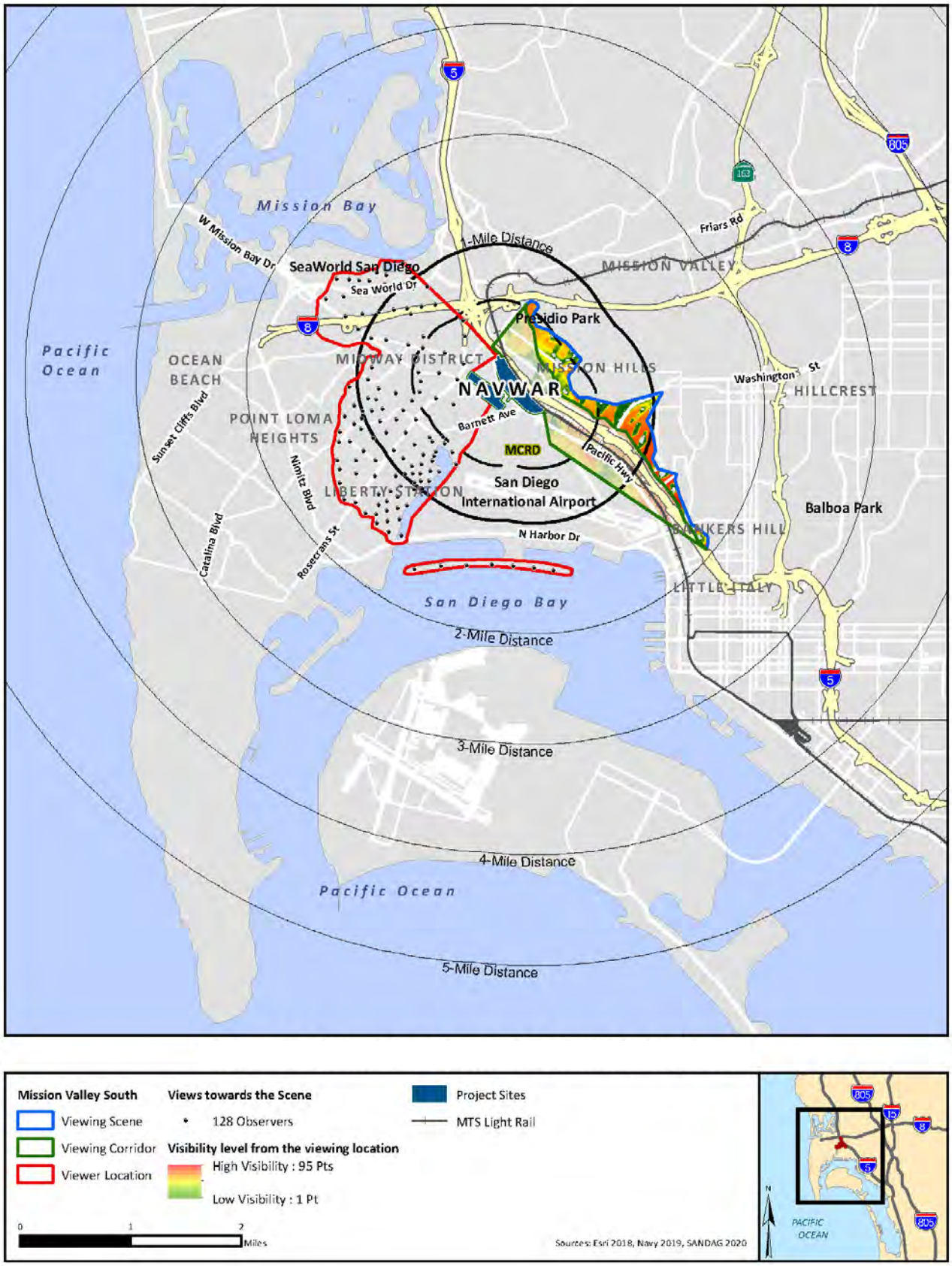


Figure A-35: Alt. 4 View Corridor Blockage of the West Facing Pacific Ocean Viewing Scene

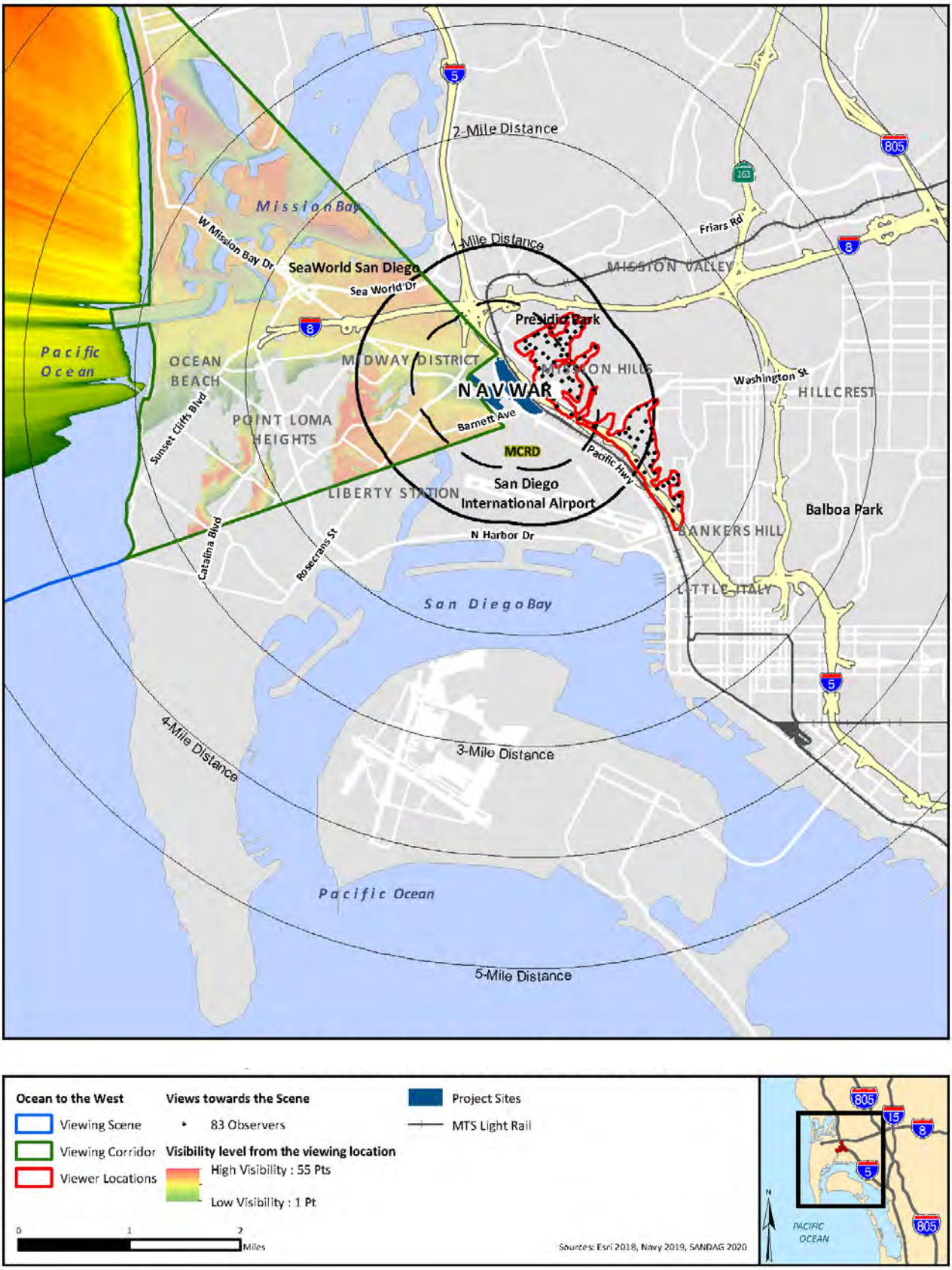


Figure A-36: Alt. 4 View Corridor Blockage of the Southwest Facing Pacific Ocean Viewing Scene

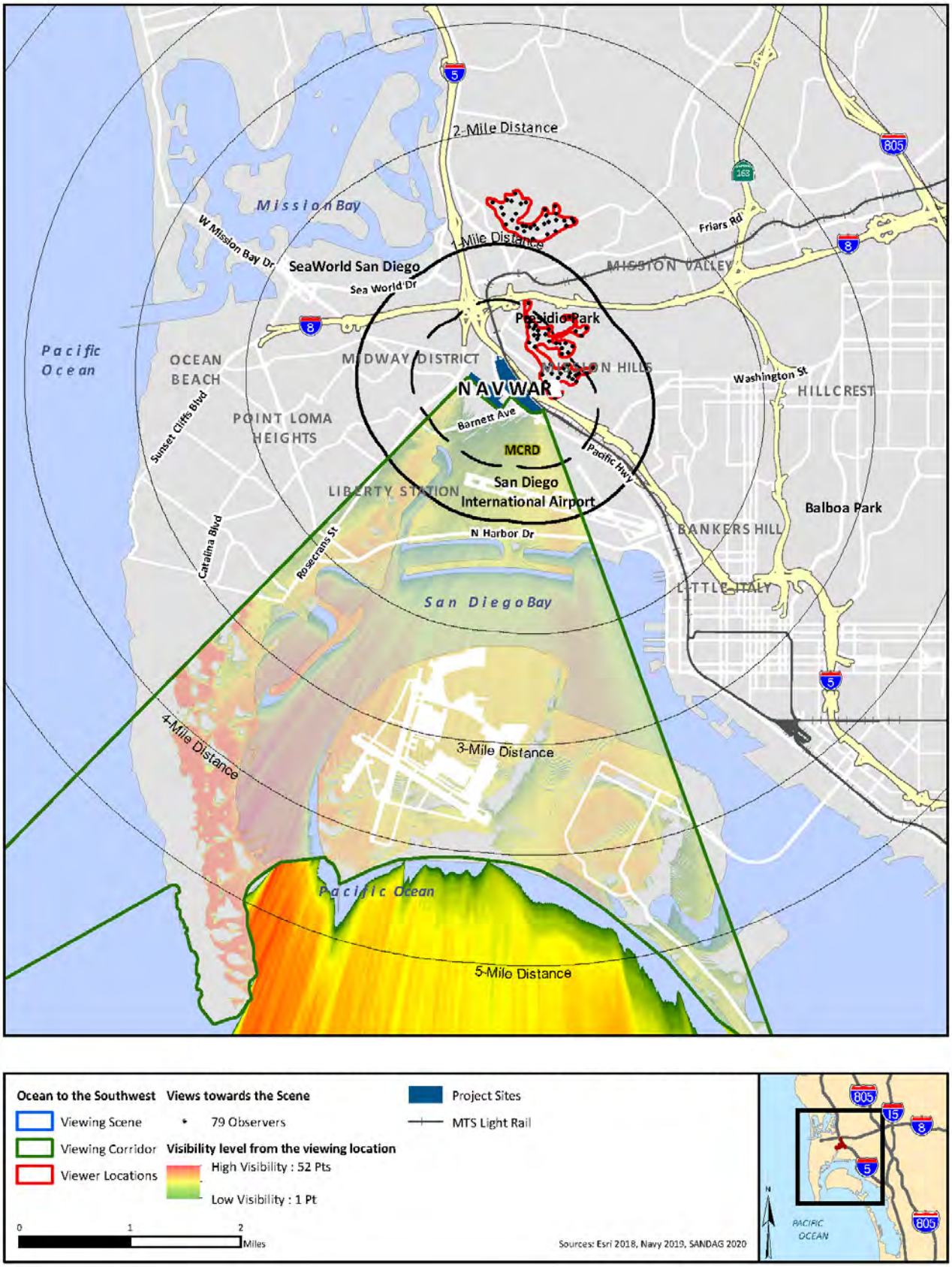


Figure A-37: Alt. 4 View Corridor Blockage of the San Diego Bay and Coronado Viewing Scene

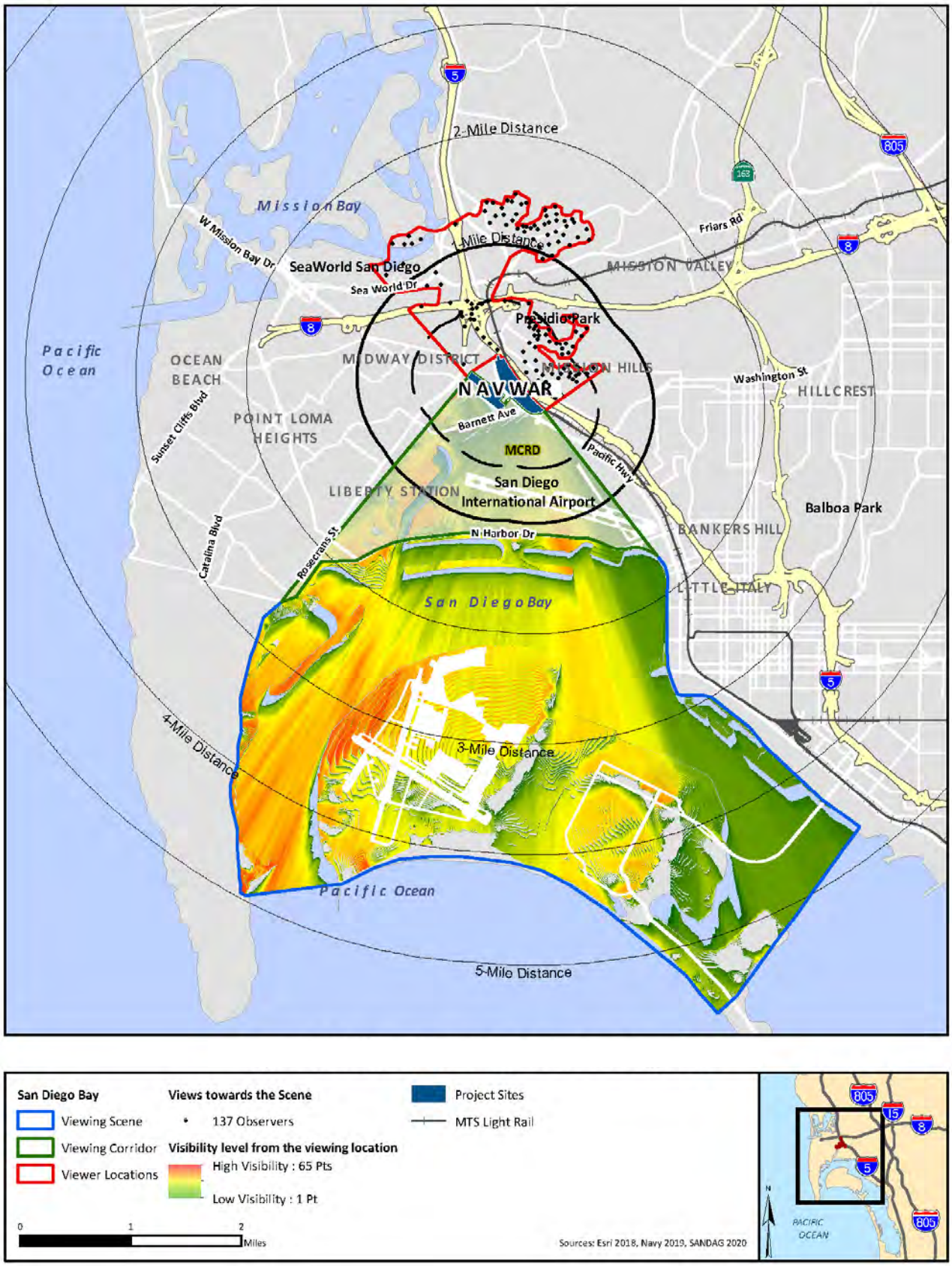


Figure A-38: Alt. 4 View Corridor Blockage of the Cabrillo Point Viewing Scene

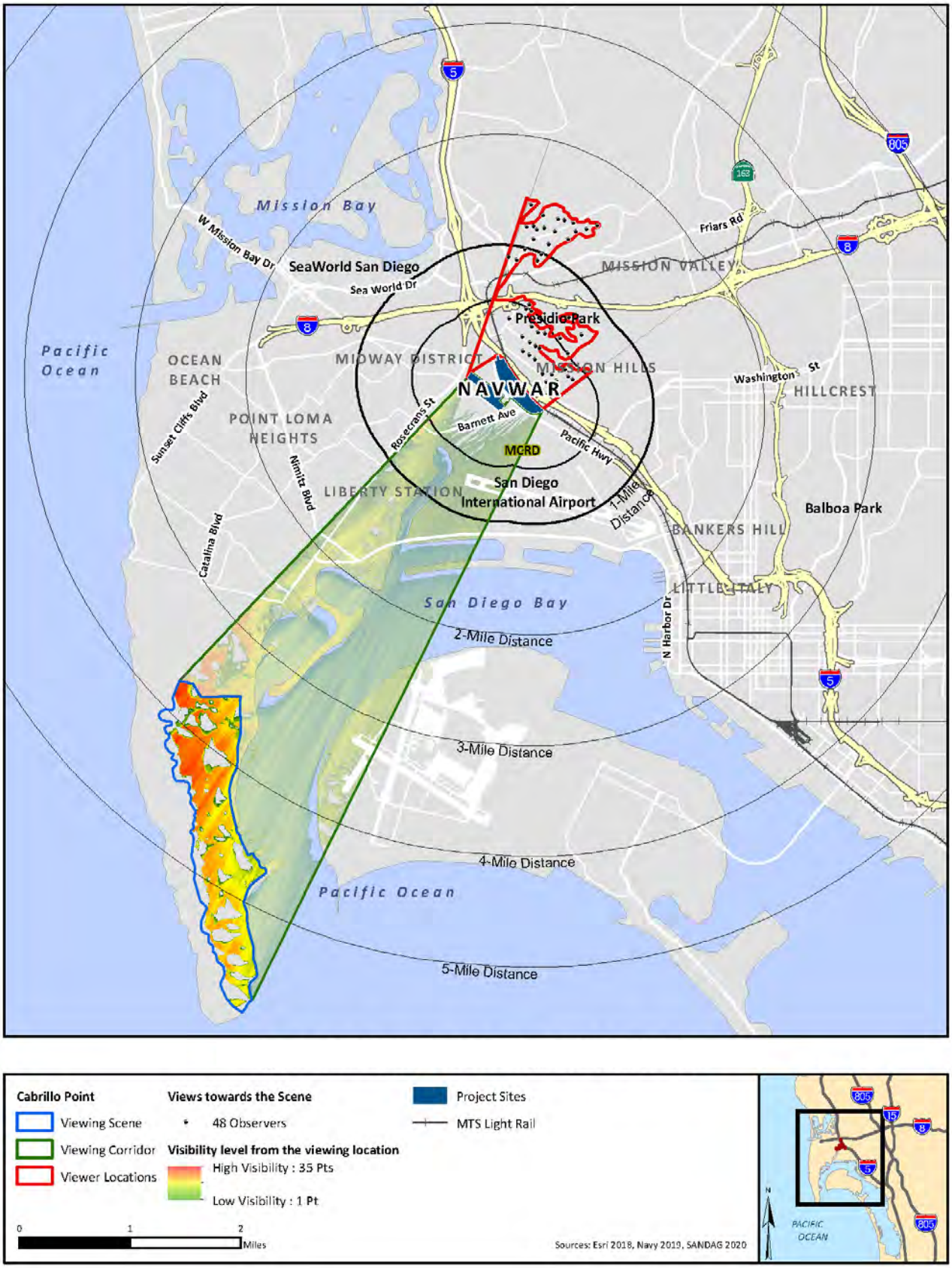


Figure A-39: Alt. 4 View Corridor Blockage of the Point Loma Hillside Viewing Scene

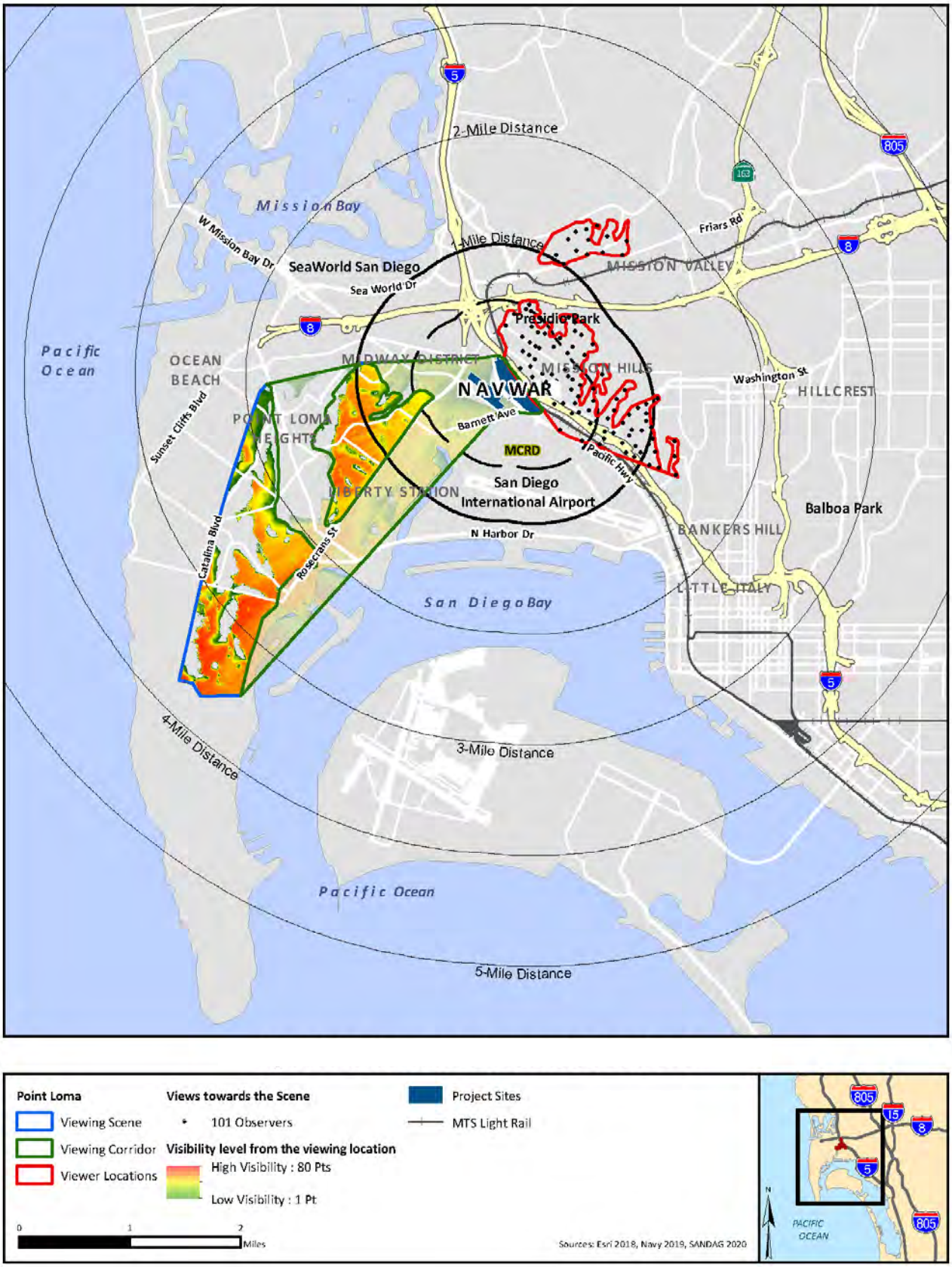


Figure A-40: Alt. 4 View Corridor Blockage of the Downtown Skyline Viewing Scene

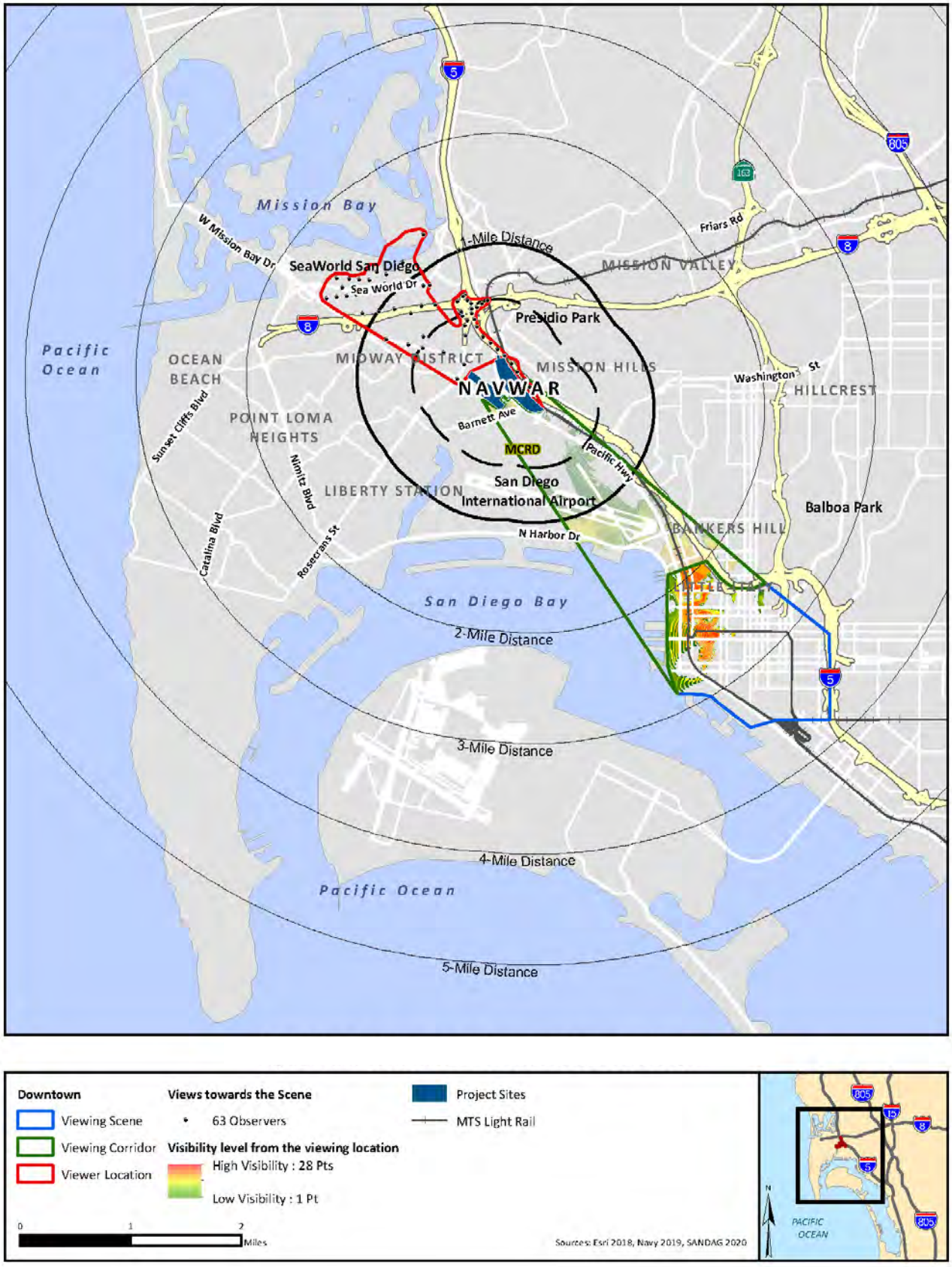


Figure A-41: Alt. 5 Potential View Corridor Blockage of the San Diego River Viewing Scene

Figure A-42: Alt. 5 Potential View Corridor Blockage of Mission Bay Viewing Scene

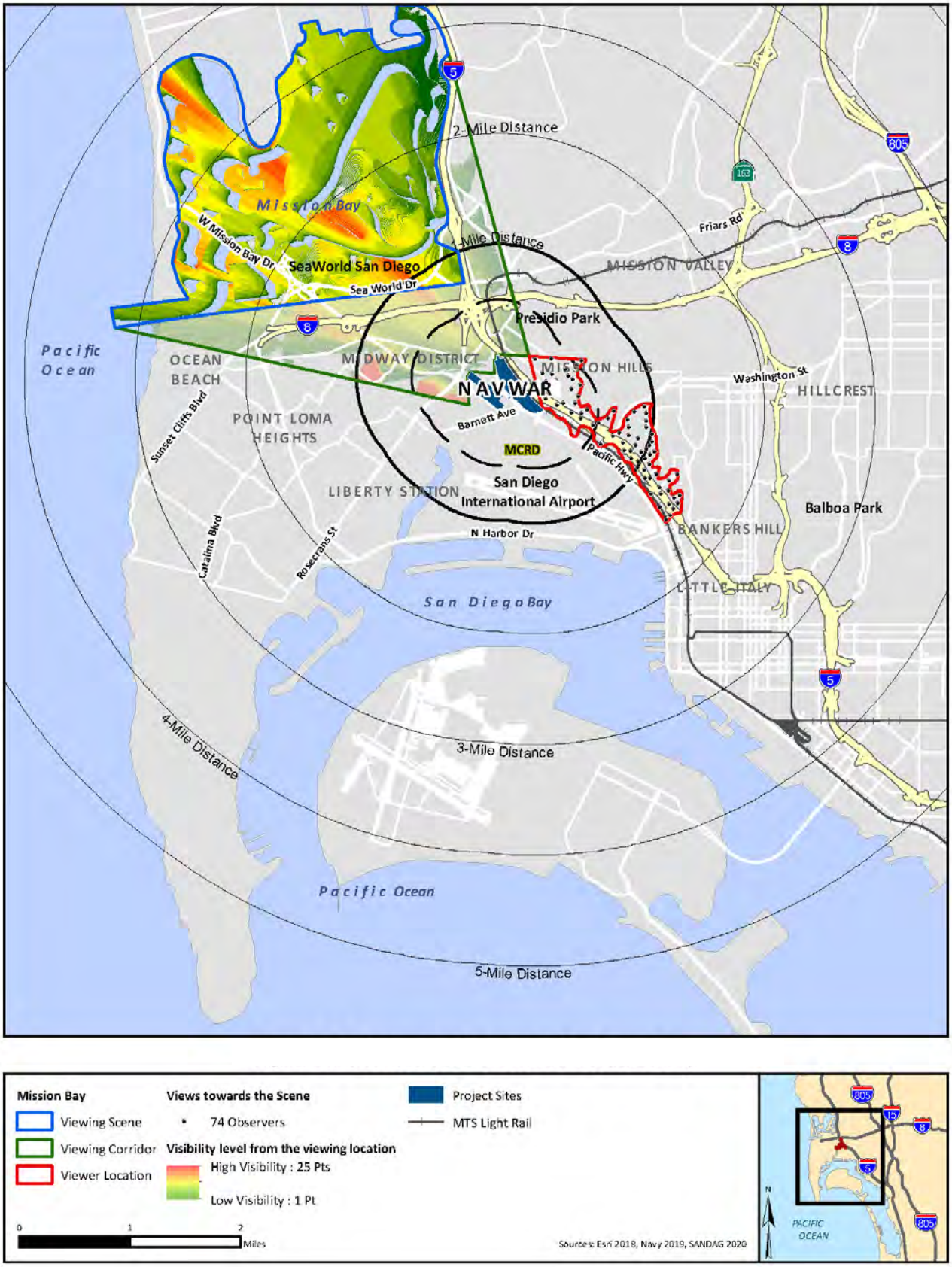
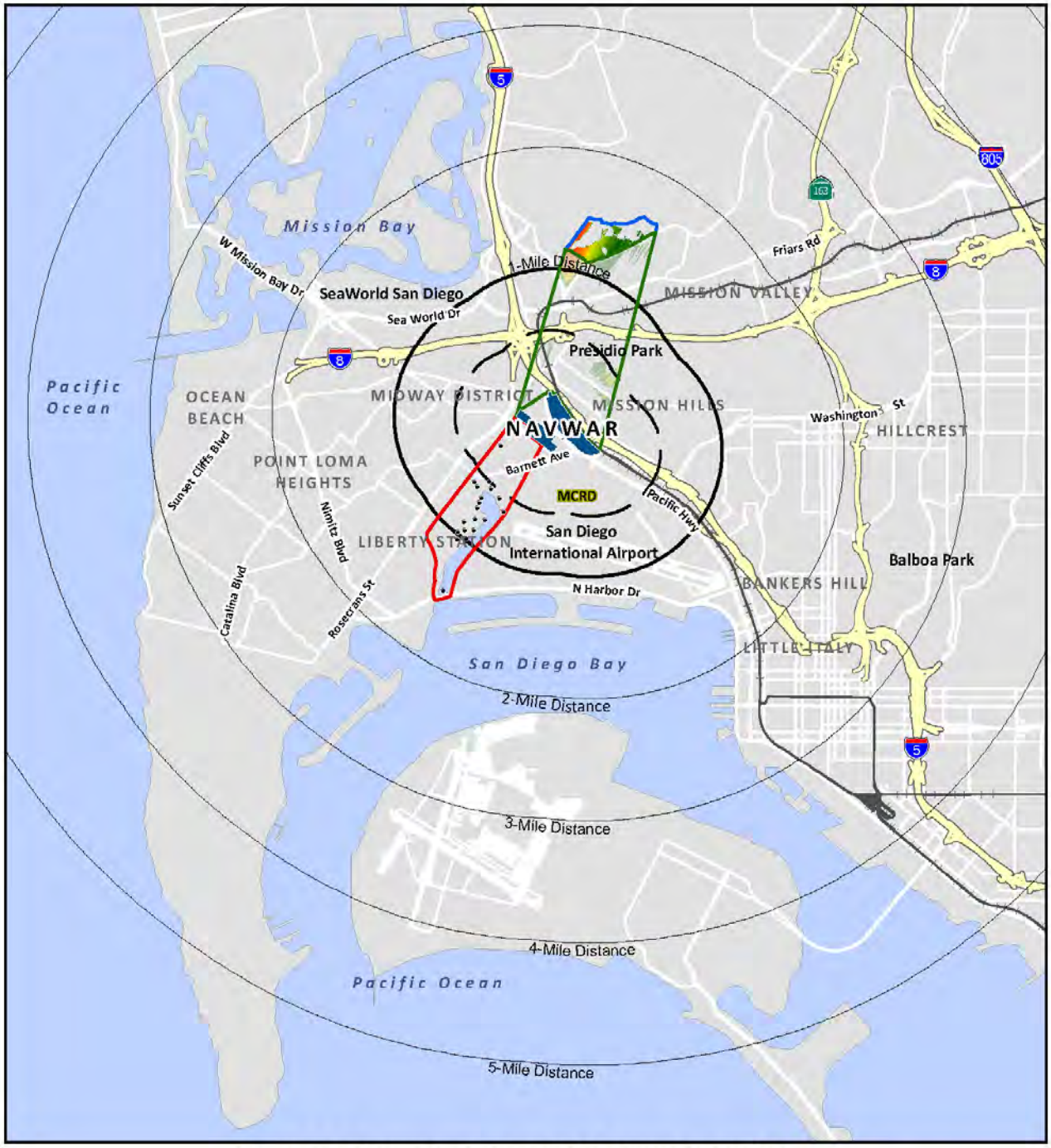


Figure A-43: Alt. 5 View Corridor Blockage of the Mission Valley North Viewing Scene



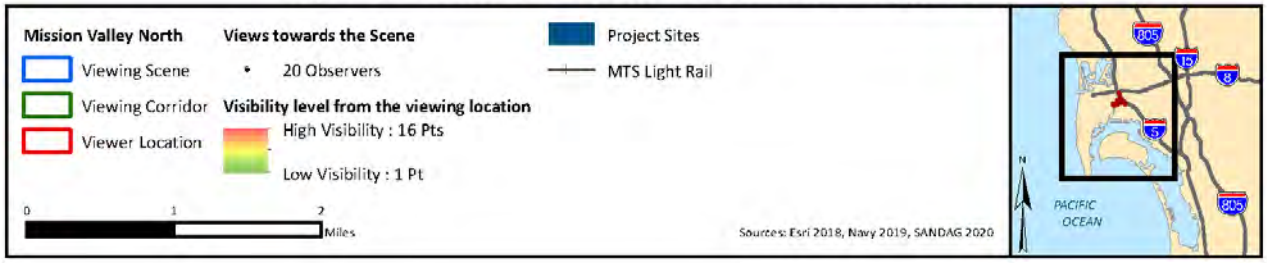


Figure A-44: Alt. 5 View Corridor Blockage of the Mission Valley / Mission Hills Viewing Scene

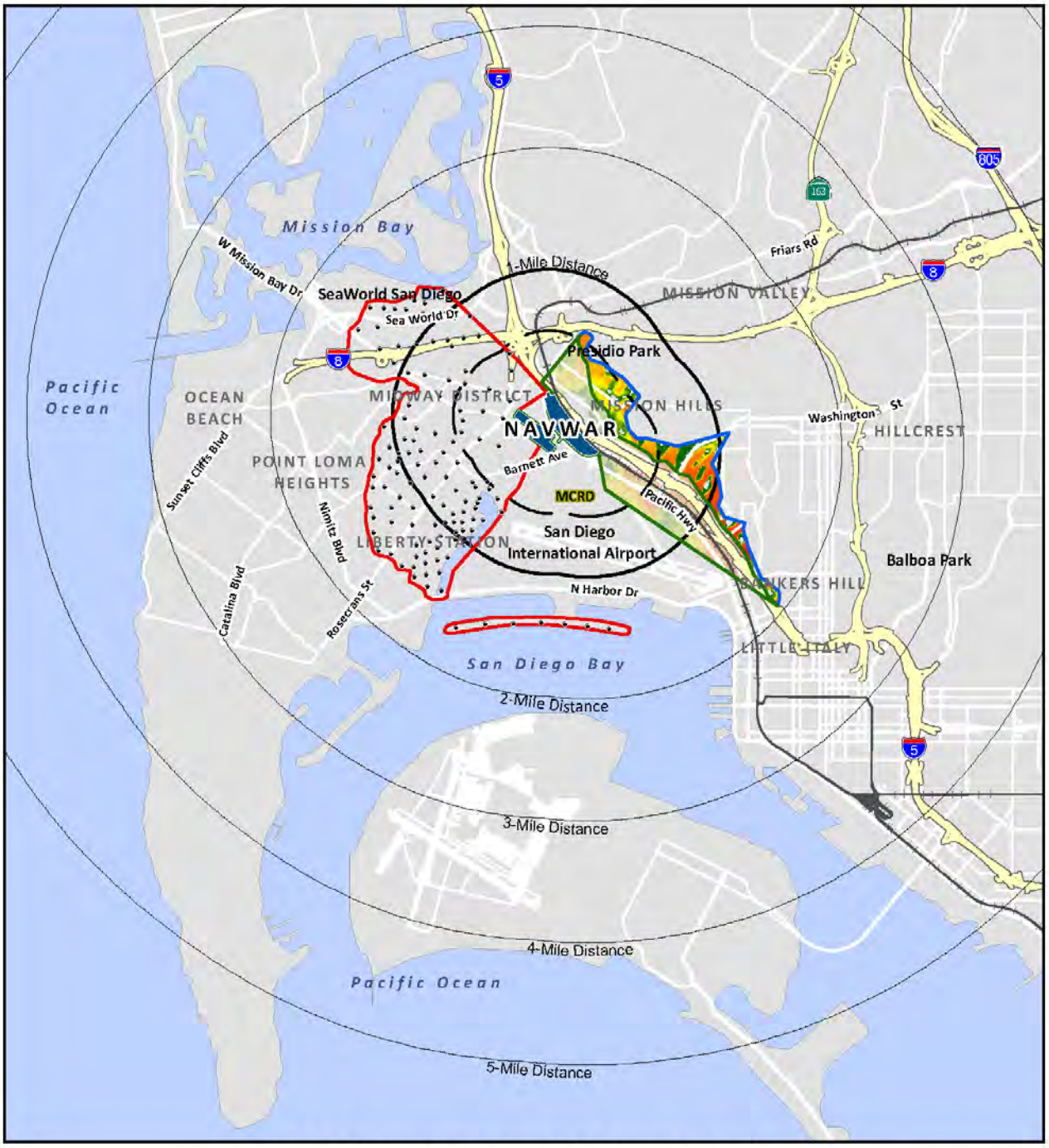


Figure A-45: Alt. 5 View Corridor Blockage of the West Facing Pacific Ocean Viewing Scene

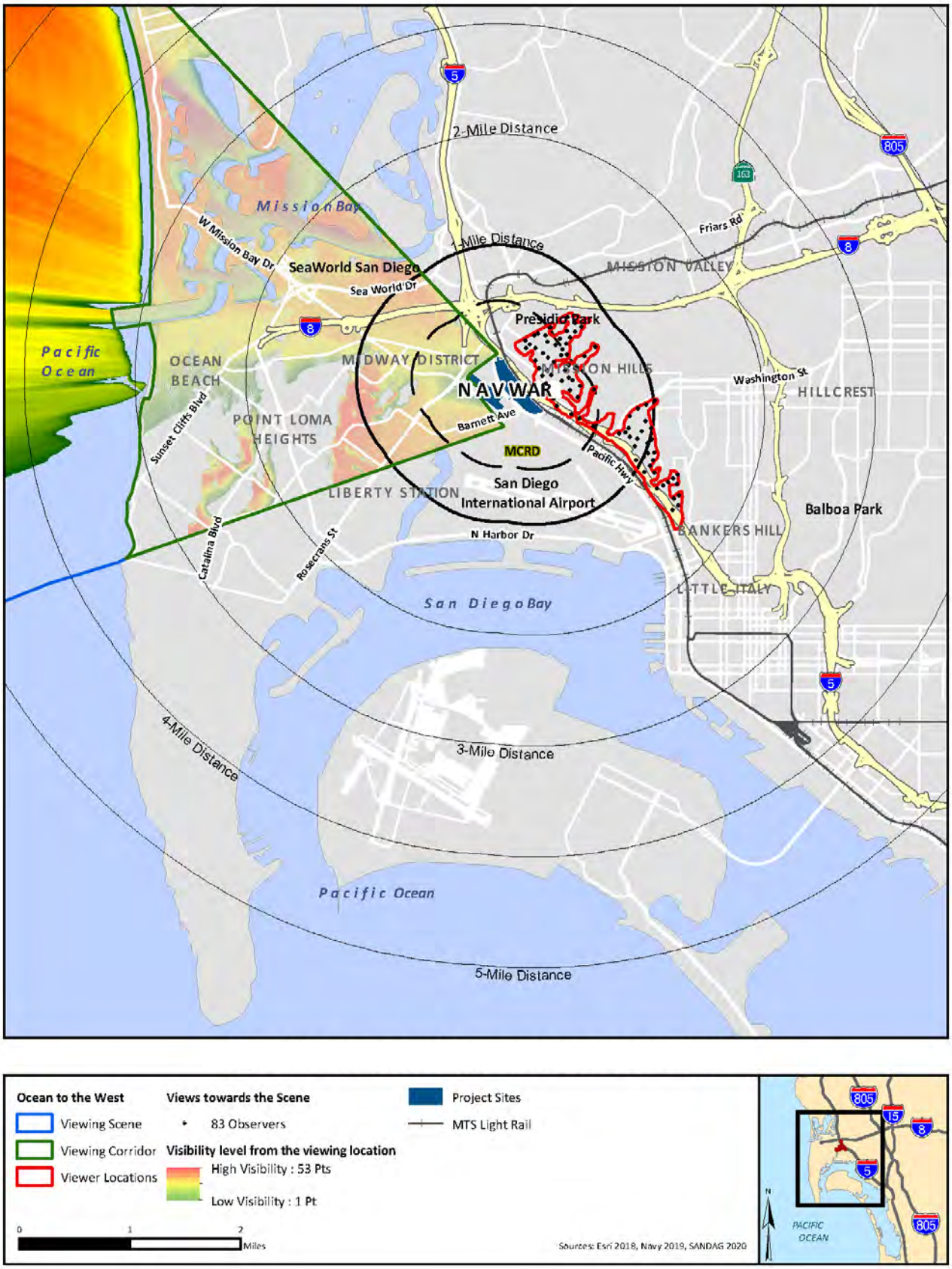


Figure A-46: Alt. 5 View Corridor Blockage of the Southwest Facing Pacific Ocean Viewing Scene

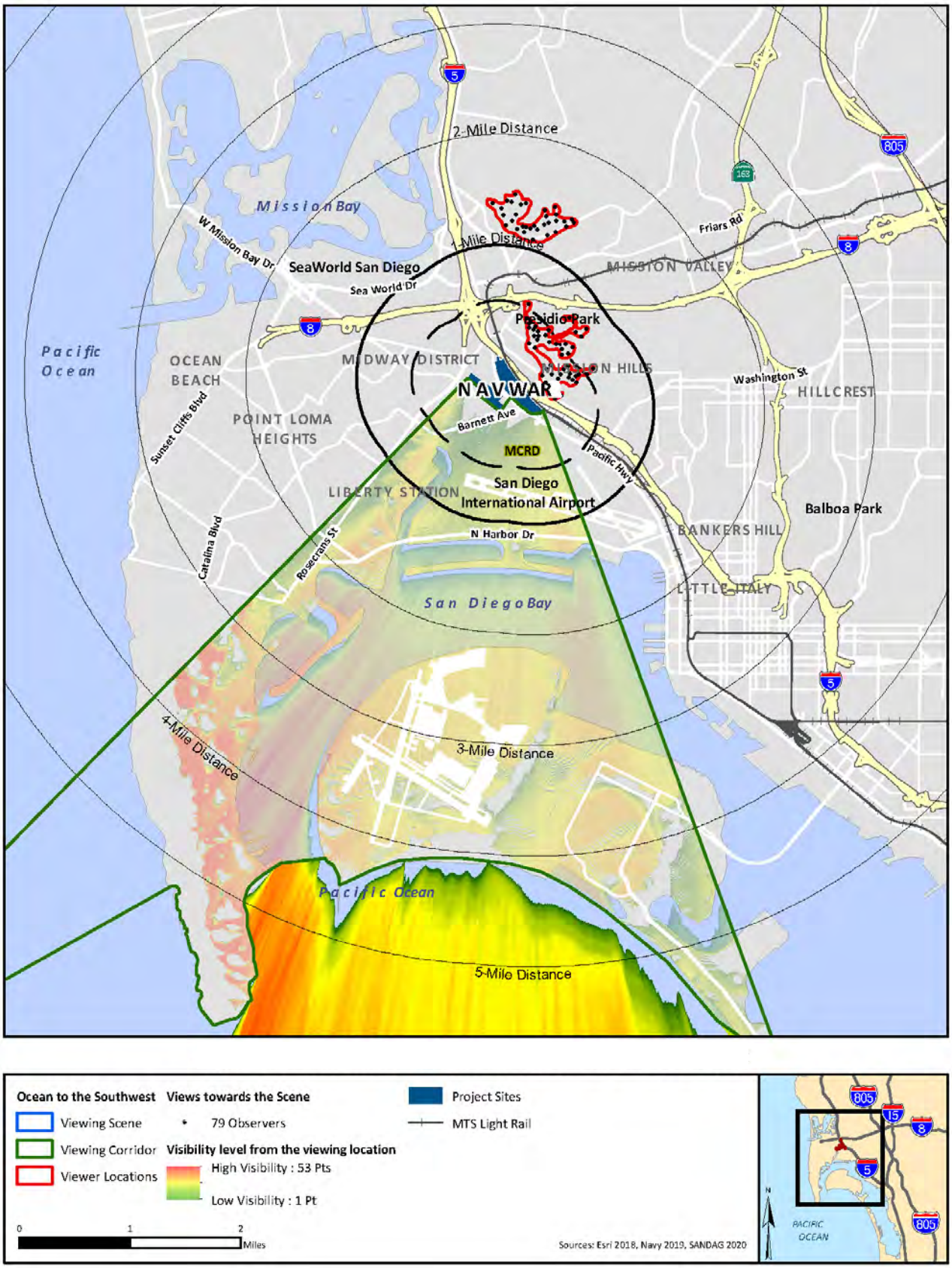


Figure A-47: Alt. 5 View Corridor Blockage of the San Diego Bay and Coronado Viewing Scene

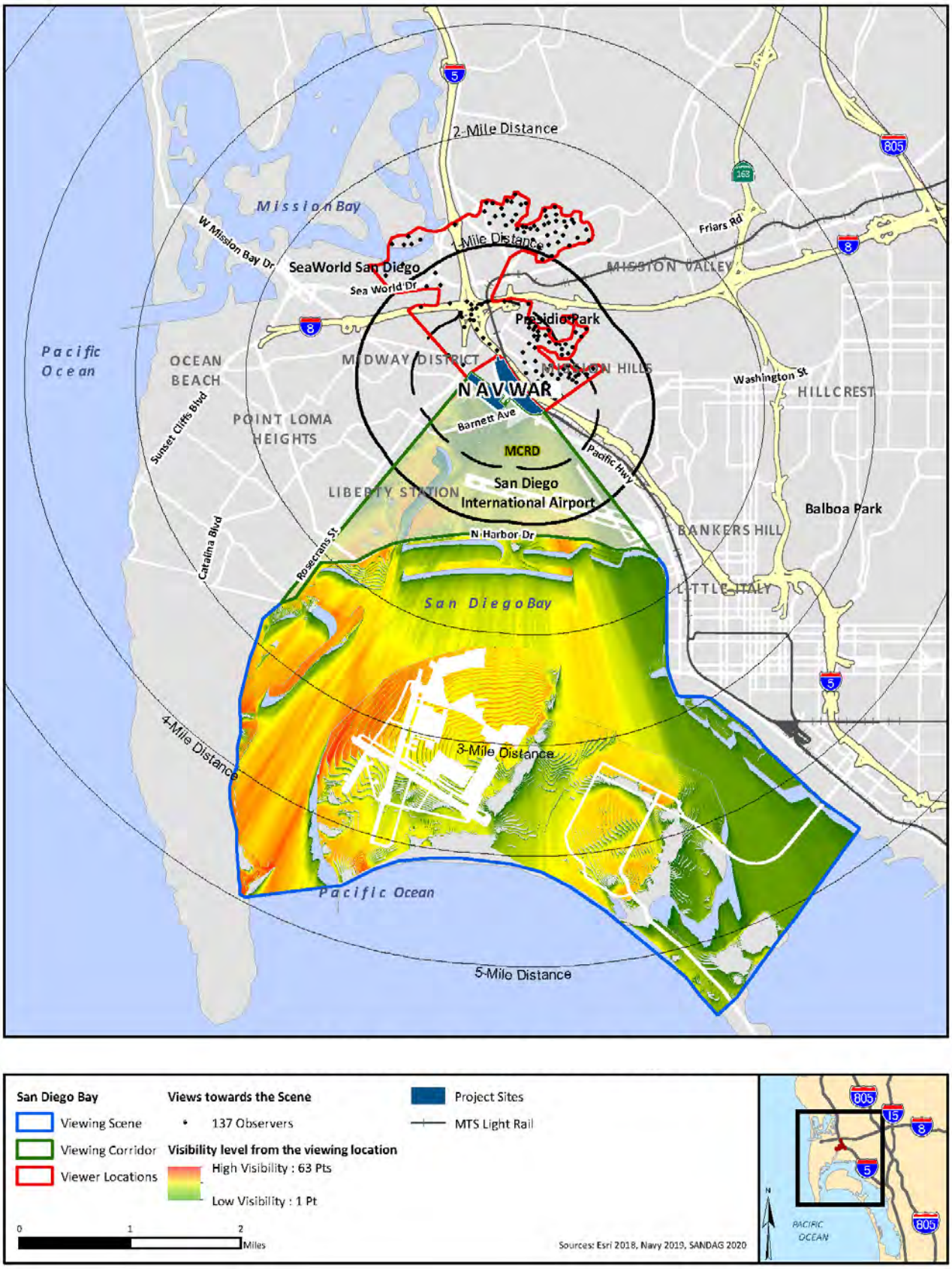


Figure A-48: Alt. 5 View Corridor Blockage of the Cabrillo Point Viewing Scene

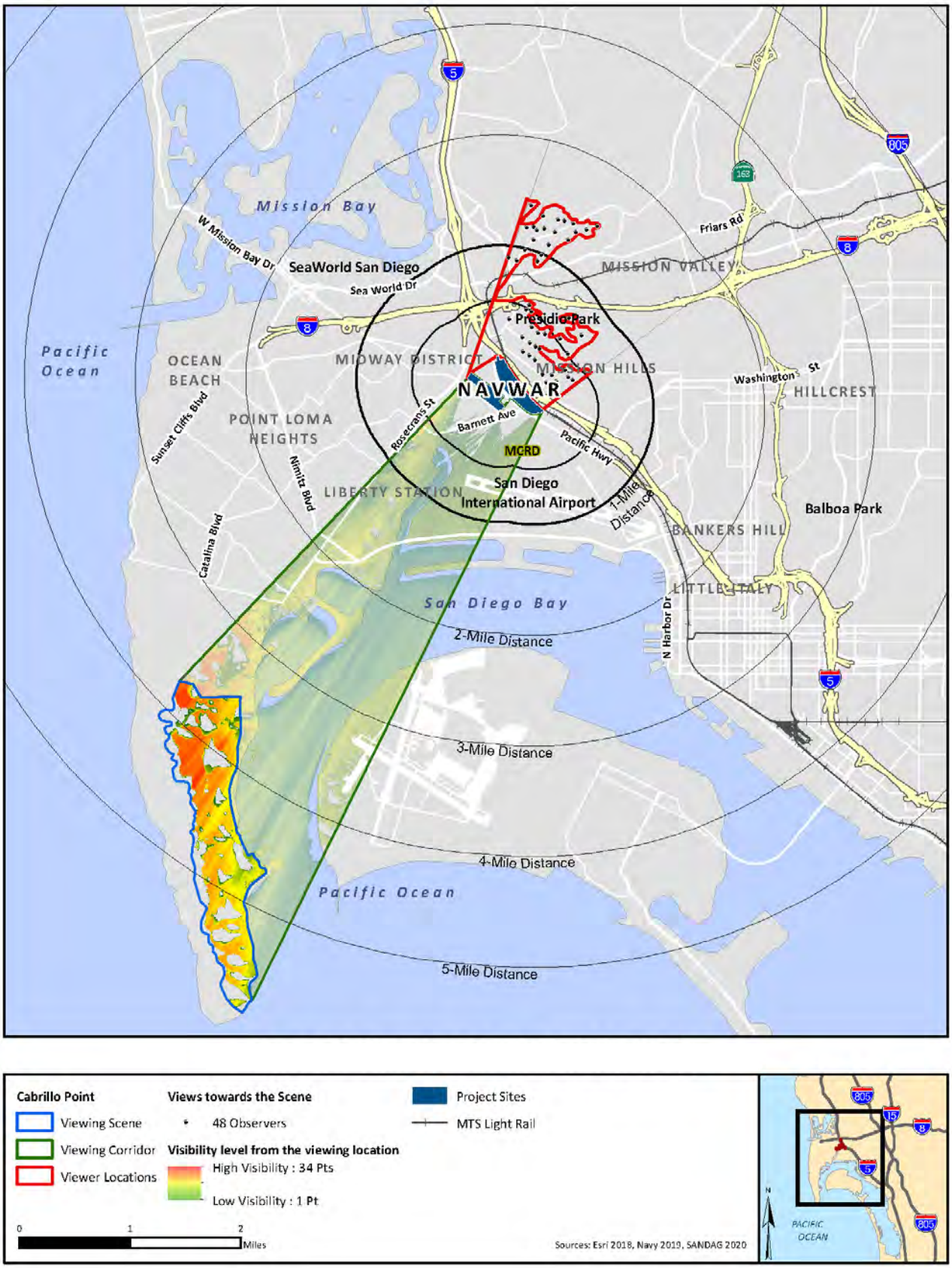


Figure A-49: Alt. 5 View Corridor Blockage of the Point Loma Hillside Viewing Scene

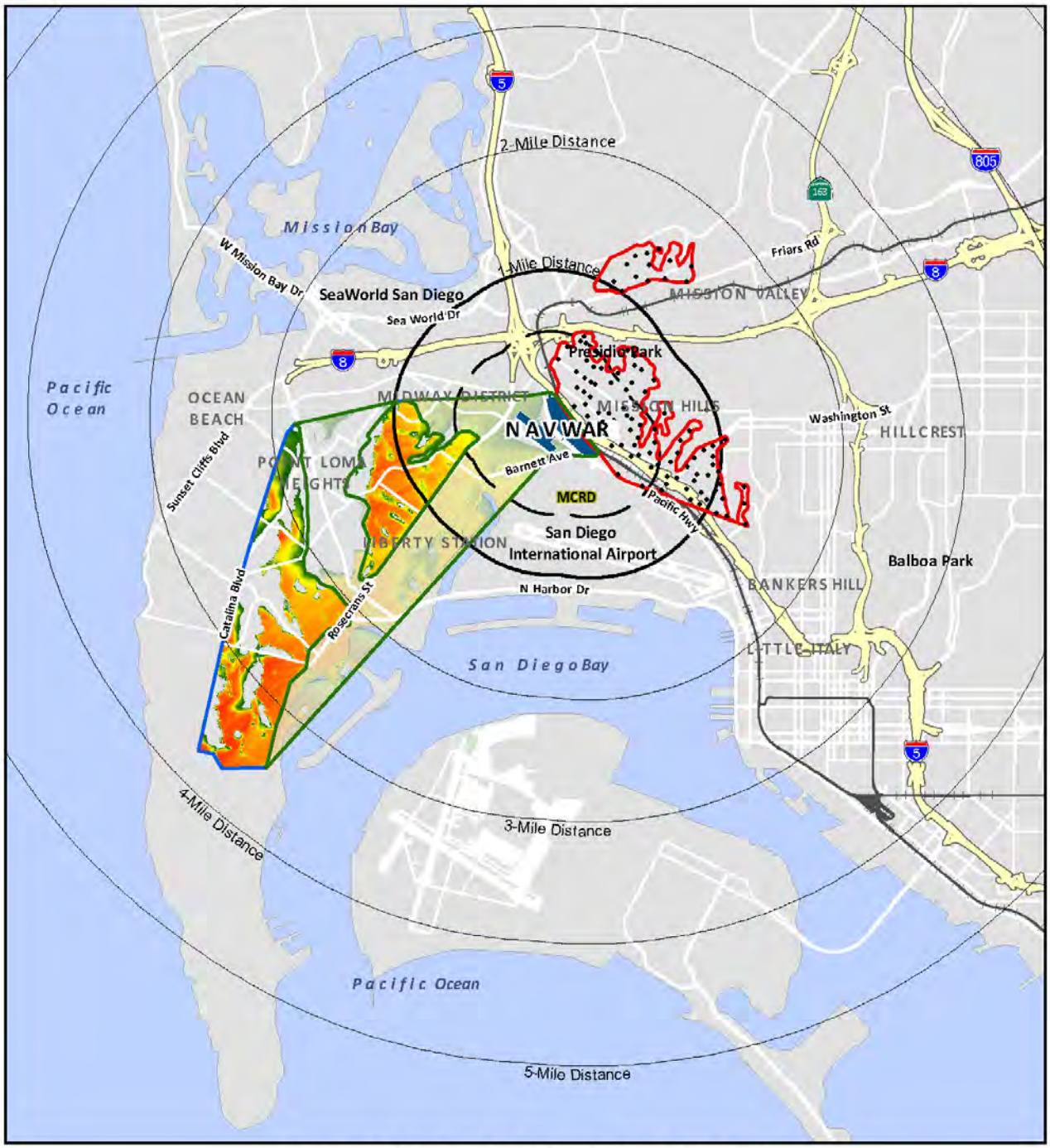
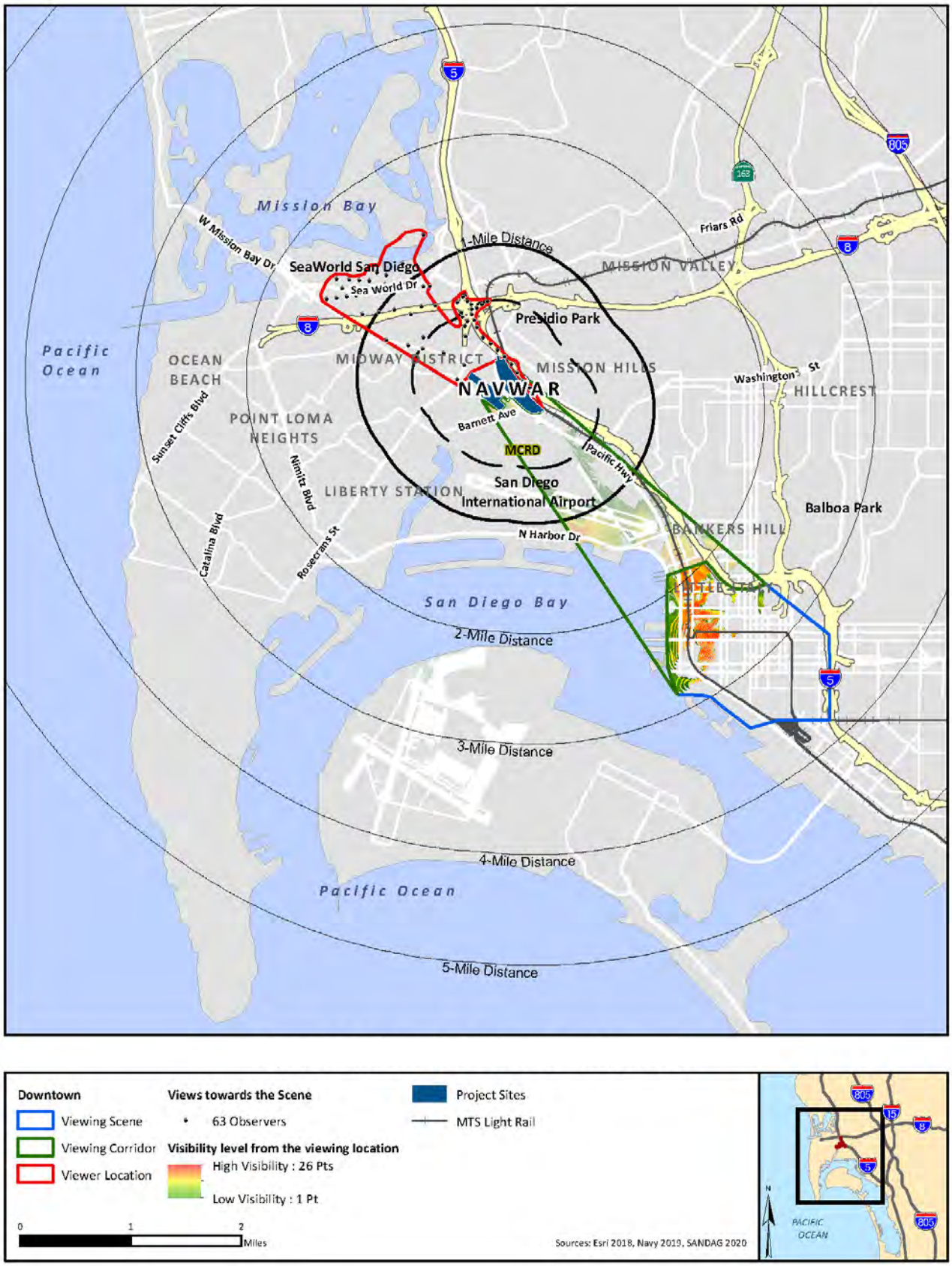


Figure A-50: Alt. 5 View Corridor Blockage of the Downtown Skyline Viewing Scene



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Attachment B
Simulations

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Attachment B

This attachment is a reference to be used for evaluating the conclusions of the visual impacts associated with the proposed project for the redevelopment of the NAVWAR OTC Site 1 and Site 2. Simulations that are accurate models of the proposed project, set directly into real world photographs of the project site, are the best and only way to demonstrate the visual changes that the project may have on the existing visual setting of the area.

The simulations were prepared by taking accurate and appropriately scaled photographs of the ten agreed upon Key Observation Points that were determined based on analysis of visual settings, view corridors, viewer groups, and public viewing locations around the OTC campus. These photos were taken using a 55mm lens to accurately portray the perspective and scale of the proposed buildings and development features. Although the human eye can see both peripheral wide angle vision as well as very focused views of only a few degrees of angles, the most appropriate recreation of the majority of what a person sees is based upon a viewing angle that is best approximated by the 55mm lens of a camera.

The proposed alternatives are represented by three-dimensional models that were developed in SketchUp with accurate scaled elements. The photographs were then integrated into the SketchUp three-dimensional environment and the angle of view of the program was matched with the typical angle of view of the camera. These watermarked images are used to line up the model with the photograph. Accurately placed 3D models of the adjacent buildings were also added in SketchUp so that a variety of measurement items could be used to scale the model to the image. In addition, the 3D SketchUp models were exported in a .kmz format and brought into Google Earth Pro to make sure all elements are appropriately aligned. Once all elements were aligned and measured, the image of the models were exported as .jpgs and brought into a multi-layered PhotoShop file for merging with the image. The model exports include a layer of existing building forms to assure that the model and the photograph are appropriately aligned.

Summary of Potential Changes

The primary intent of the simulations is to provide tools to evaluate how the existing view quality and visual quality are likely to be affected by the project alternative physical changes to the existing visual setting. Each simulations set is used to range the existing visual quality (as determined by the existing visual organization) and how it is ranked by its vividness (how memorable the image is), its unity (how well the visual composition contributes to a well organized and dynamic viewing scene) and its intactness and appearance (how well is the condition and cohesion of the visual environment put together and maintained). Then with the changes that the visual simulation represents, a ranking of potential changes of the visual quality (either made better or worse) are noted. At the same time, the view corridors are analyzed to determine how the viewing scene is potentially blocked by the proposed project, as seen from an accessible and public viewing location. The summary of each simulations was discussed in Chapter 4. Table B-1 represents the combined ranking of each alternative for each of the ten simulations. Colors and text notes help to spot where the greatest disturbance of viewing corridors is likely to occur. Table B-2 summarizes how the changes in visual quality are likely to occur. Note that due to the context of the adjacent areas, in some cases the proposed project will improve the visual quality and in other cases the visual change will be made worse than its current condition.

Table B-1: View Quality Impacts per Alternative

View Quality Impacts*	Simulation 1 **KOP IN-1** I-5 Southbound	Simulation 2 **KOP PC-2** PCH Northbound in South Midway Sub-Area	Simulation 3 **KOP NM-2** Sports Arena & Rosecrans North Midway Sub-Area	Simulation 4 **KOP CM-2** Midway Dr. & OTC Site 2 in Central Midway Sub-Area	Simulation 5 **KOP SP-2** Trolley Station @ Washington In South Midway Sub-Area	Simulation 6 **KOP OT-1** Park at Old Town State Park in Old Town Sub-Area	Simulation 7 **KOP OT-6** Old Town Avenue in Old Town Sub-Area	Simulation 8 **KOP NP-1** Presidio Park in North Mission Hills Sub-Area	Simulation 9 **KOP NP-3** Altamirano & Presidio Dr. in North Mission Hills Sub-Area	Simulation 10 **KOP CH-2** Hayden & Linwood in Central Mission Hills Sub-Area
No Project Alternative										
Viewing Blockage Expected	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low
Positioning of Blockage	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact
Project Alternative #1										
Viewing Blockage Expected	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low	None or Low
Positioning of Blockage	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact
Project Alternative #2										
Viewing Blockage Expected	Mod. High Adversity	Moderate Adversity	None or Low	None or Low	None or Low	None or Low	Moderate Adversity	Mod. High Adversity	High Adversity	Mod. High Adversity
Positioning of Blockage	Can See Over Some	Can See Over Some	Can See Over Some	Can See Over Some	No Position Impact	No Position Impact	Silhouette with Sky	Silhouette with Sky	Silhouette Horizon	Silhouette with Sky
Project Alternative #3										
Viewing Blockage Expected	Moderate Adversity	None or Low	None or Low	None or Low	None or Low	None or Low	Moderate Adversity	Moderate Adversity	Moderate Adversity	Moderate Adversity
Positioning of Blockage	Can See Over Some	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact	No Position Impact
Project Alternative #4										
Viewing Blockage Expected	Mod. High Adversity	Moderate Adversity	Moderate Adversity	Moderate Adversity	None or Low	None or Low	High Adversity	High Adversity	High Adversity	High Adversity
Positioning of Blockage	Silhouette with Sky	Can See Over Some	Silhouette with Sky	Silhouette with Sky	No Position Impact	No Position Impact	Silhouette Horizon	Silhouette Horizon	Silhouette Horizon	Silhouette Horizon
Project Alternative #5										
Viewing Blockage Expected	Mod. High Adversity	Moderate Adversity	None or Low	Moderate Adversity	None or Low	None or Low	High Adversity	High Adversity	High Adversity	High Adversity
Positioning of Blockage	Silhouette with Sky	Can See Over Some	Silhouette with Sky	Silhouette with Sky	No Position Impact	No Position Impact	Silhouette Horizon	Silhouette Horizon	Silhouette Horizon	Silhouette Horizon

* Impacts determined by Amount of View Blockage as well as the Position of the Blockage based on Context (i.e. silhouetting of building against the sky or ocean horizon line)

Table B-2: Visual Quality Impacts per Alternative

Visual Quality Level Change **	Simulation 1 **KOP IN-1** I-5 Southbound	Simulation 2 **KOP PC-2** PCH Northbound in South Midway Sub-Area	Simulation 3 **KOP NM-2** Sports Arena & Rosecrans North Midway Sub-Area	Simulation 4 **KOP CM-2** Midway Dr. & OTC Site 2 in Central Midway Sub-Area	Simulation 5 **KOP SP-2** Trolley Station @ Washington In South Midway Sub-Area	Simulation 6 **KOP OT-1** Park at Old Town State Park in Old Town Sub-Area	Simulation 7 **KOP OT-6** Old Town Avenue in Old Town Sub-Area	Simulation 8 **KOP NP-1** Presidio Park in North Mission Hills Sub-Area	Simulation 9 **KOP NP-3** Altamirano & Presidio Dr. in North Mission Hills Sub-Area	Simulation 10 **KOP CH-2** Hayden & Linwood in Central Mission Hills Sub-Area
No Project Alternative										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Project Alternative #1										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	Moderate	Moderate Low	Moderate	Moderate High	Moderate High	Moderate High	Moderate High	High	High	High
Project Alternative #2										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	Moderate High	Moderate Low	Moderate Low	Moderate	Moderate High	Low	Moderate	Moderate Low	Moderate Low	Moderate
Project Alternative #3										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	Moderate High	Moderate	Moderate	Moderate	High	Moderate Low	Moderate	Moderate	Moderate Low	Moderate High
Project Alternative #4										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	High	Moderate High	Moderate Low	Moderate High	Moderate High	Low	Moderate	Moderate Low	Moderate Low	Moderate
Project Alternative #5										
Existing Average Quality	Moderate	Moderate Low	Low	Low	Moderate High	Moderate High	Moderate High	High	High	High
Resulting Predicted Visual Quality	High	Moderate High	Moderate Low	Moderate High	Moderate High	Low	Moderate	Moderate Low	Moderate Low	Moderate
** Categories for Visual Quality Using an Average of Vividness, Unity and Intactness Rankings:						Low	Moderate Low	Moderate	Moderate High	High

Visual Quality Change Legend	Major Quality Improvement	Moderately Improved Quality	Slightly Improved Quality	No Change	Slightly Lowered Quality	Moderately Lowered Quality	Major Lowered Quality
Determined by the Existing and Predicted Changes:	Up 3 or more levels	Up 2 levels	Up 1 level		Down 1 level	Down 2 levels	Down 3 or more levels

Figure B-1

SIMULATION #1: KOP IN-1 - Alternative 4 from Southbound I-5

Alternative 1

Alternative 2

Alternative 3

Alternative 5

SIMULATION #1: KOP IN-1 - Other Alternatives

Figure B-3

SIMULATION #2: KOP PC-2 - Alternative 4 from Northbound Pacific Coast Highway

Alternative 1

Alternative 2

Alternative 3

Alternative 5

SIMULATION #2: KOP PC-2 - Other Alternatives

Figure B-5

SIMULATION #3: KOP NM-2 - Alternative 4 from Sports Arena and Rosecrans Boulevards

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-6

SIMULATION #3: KOP NM-2 - Other Alternatives

Figure B-7

SIMULATION #4: KOP CM-2 - Alternative 4 from Midway Near OTC Site 2

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-9

SIMULATION # 5: KOP SP-2 - Alternative 4 from Trolley Station at Hancock and Washington St.

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-11

SIMULATION #6: KOP OT-1 - Alternative 4 from Park in Old Town State Park

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-12

SIMULATION #6: KOP OT-1 - Other Alternatives

Figure B-13

SIMULATION #7: KOP OT-6 - Alternative 4 from Old Town Ave.- South of Primary Retail Street

Alternative 1

Alternative 2

Alternative 3

Alternative 5

SIMULATION #7: KOP OT-6 - Other Alternatives

Figure B-15

SIMULATION #8: KOP NP-1 - Alternative 4 from Presidio Mormon Memorial Park

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-16

SIMULATION #8: KOP NP-1 - Other Alternatives

Figure B-17

SIMULATION #9: KOP NP-3 - Alternative 4 from Altamirano and Presidio Drive

Alternative 1

Alternative 2

Alternative 3

Alternative 5

Figure B-19

SIMULATION #10: OP CH-2 - Alternative 4 from Hayden and Linwood - Public Views Down Roadway

Alternative 1

Alternative 2

Alternative 3

Alternative 5

SIMULATION #10: KOP CH-2 - Other Alternatives

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Appendix G

Socioeconomic Study

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DRAFT

Socioeconomic Study

For

NAVY OLD TOWN CAMPUS REVITALIZATION

At

SAN DIEGO, CALIFORNIA

May 2021

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EXECUTIVE SUMMARY

ES.1 Overview

This socioeconomic study evaluates potential socioeconomic impacts from the proposed Navy Old Town Campus (OTC) Revitalization. Revitalization efforts could include Navy recapitalization of the site or redevelopment through a public-private partnership. As the property owner, the Navy (represented by Naval Base Point Loma) would enter into a lease (pursuant to 10 U.S. Code [U.S.C.] section 2667) or a public-private partnership agreement to redevelop the OTC. Naval Information Warfare Systems Command (NAVWAR) is the action proponent for the revitalization.

The purpose of this socioeconomic study is to identify and assess any effects that the Proposed Action alternatives might have on social and economic conditions in San Diego County. Information presented in this study, in conjunction with other information, will be used by decision makers to assess the overall beneficial and adverse impacts on socioeconomics associated with the Proposed Action alternatives.

This socioeconomic study identifies and assesses potential effects that the Proposed Action alternatives could have on the socioeconomic conditions in San Diego County with focus on potentially affected populations and public services located nearby the site of the Proposed Action alternatives. In doing so, the following topics were analyzed:

- Population Change
- Economic impacts
- Impacts to public services

This socioeconomic study does not specifically address environmental justice, cumulative or other impacts unrelated to the Proposed Action alternatives, significance of impacts, or potential mitigations. Such issues are addressed in appropriate sections of the Environmental Impact Statement (EIS). This study was prepared using the most current and best available data for relevant issues such as construction costs, number of new potential housing units, amount of new commercial space, project implementation schedules, and other factors that may change over time. This analysis represents a snapshot in time; however ongoing planning, scheduling, and federal legislative activities could result in changes to various input assumptions, and therefore to the impact conclusions as well.

ES.2 Key Findings

The Proposed Action alternatives are composed of multiple parts that would occur over various timeframes:

1. Navy-only OTC redevelopment (Alternative 1) or new construction (all other alternatives), from 2021 to 2025
2. Transit center construction (Alternatives 4 and 5), from 2026 to 2034
3. Construction of residential units (Alternatives 2, 3, 4, and 5), from 2026 to 2049
4. Construction of commercial space (Alternatives 2, 3, 4, and 5), from 2026 to 2049
5. Residential operations (Alternatives 2, 3, 4, and 5), starting in 2028 with growth until 2050 and continuing in a steady state for the foreseeable future

6. Commercial operations (Alternatives 2, 3, 4, and 5), starting in 2028 with growth until 2050 and continuing in a steady state for the foreseeable future

It is also anticipated that Navy and San Diego transit capabilities will continue to grow over time and the Proposed Action alternatives would provide capacity for that to happen. However, the Proposed Action alternatives would not in and of themselves spur additional growth in those operations and, therefore no operations impacts are attributed to Navy or transit center operations.

ES.2.1 Population Change

The construction industry of San Diego County, and surrounding areas, is sufficient to supply the necessary workforce to complete construction projects without additional population relocating to the county on a permanent basis; therefore, no permanent population increase is anticipated in association with construction for the Proposed Action alternatives.

A permanent population increase in San Diego County is anticipated, over time, with the development of new residential units, as shown in Table ES-1 and Figure ES-1.

Table ES-1 Population Change[1,2] by Alternative, 2025-2050

	2025	*2035*	*2045*	*2050*
Alternative 2	0	3,156	7,943	9,480
Alternative 3	0	2,104	5,295	6,320
Alternative 4	0	4,782	12,034	14,364
Alternative 5	0	3,826	9,627	11,491

Notes:[1] Each value represents a point in time. Therefore, values cannot be added. Values for the year 2050 represents the maximum anticipated occupancy of newly developed residential units, and these values would be expected to continue in a steady state for the foreseeable future.

[2] Values apply to population in project-related housing units, the Region of Influence (ROI), the City of San Diego, and San Diego County.

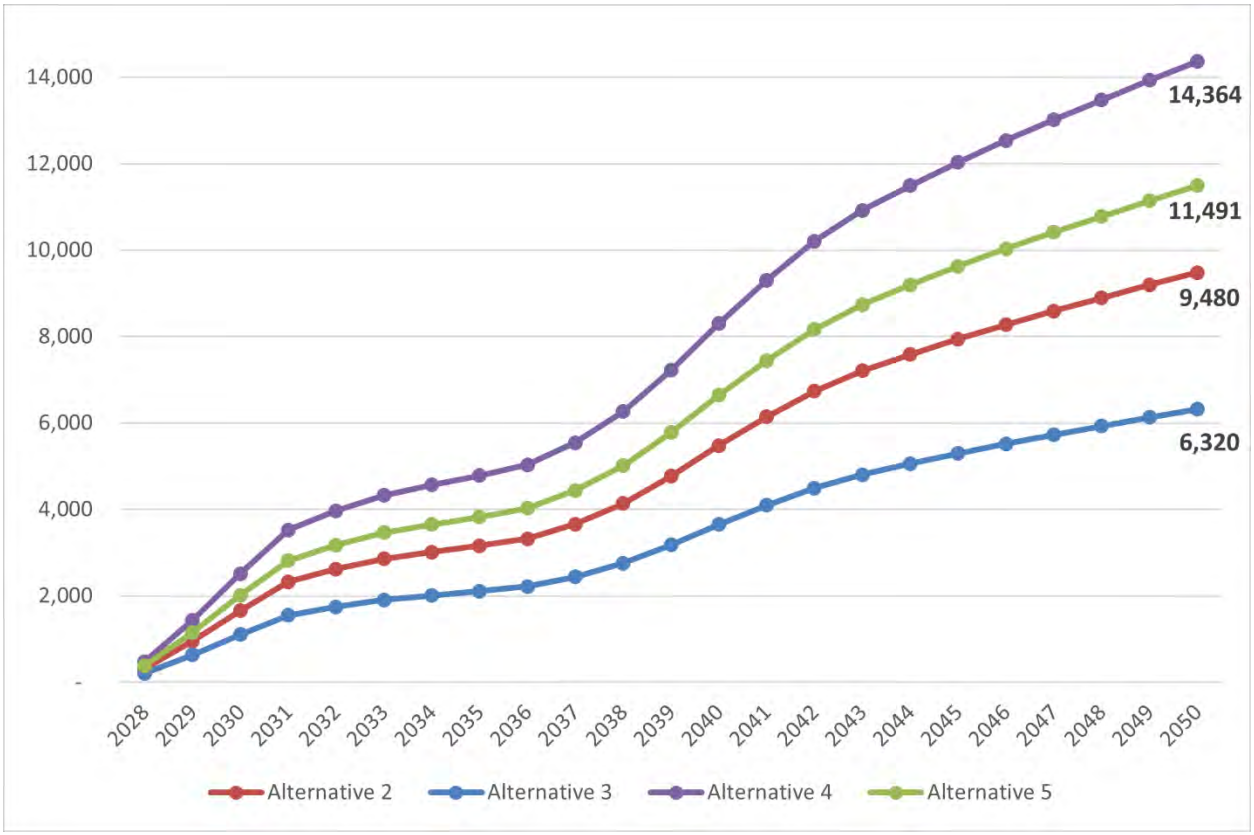

Figure ES-1 Population Change by Alternative, 2028-2050

Figure ES-2 shows year-over-year population change by alternative and illustrates the notional growth pattern for development of the Proposed Action alternatives. It is anticipated that housing units would initially become available for occupancy in 2028 with large growth in occupancy (and associated population) culminating in a peak in 2030. Growth in new units (and associated population) would begin to taper off with the lowest levels of growth occurring in the 2032 to 2036 timeframe, as the market digests the additional units and while, under Alternatives 4 and 5, transit center construction consumes some construction capacity. After transit center construction, notionally, transportation-oriented development related housing growth would kick-in and growth in new units (and associated population) would pick back up and remain at a relatively high level through 2044, and then taper off again until culmination in new unit construction (in 2049) and population growth (in 2050).

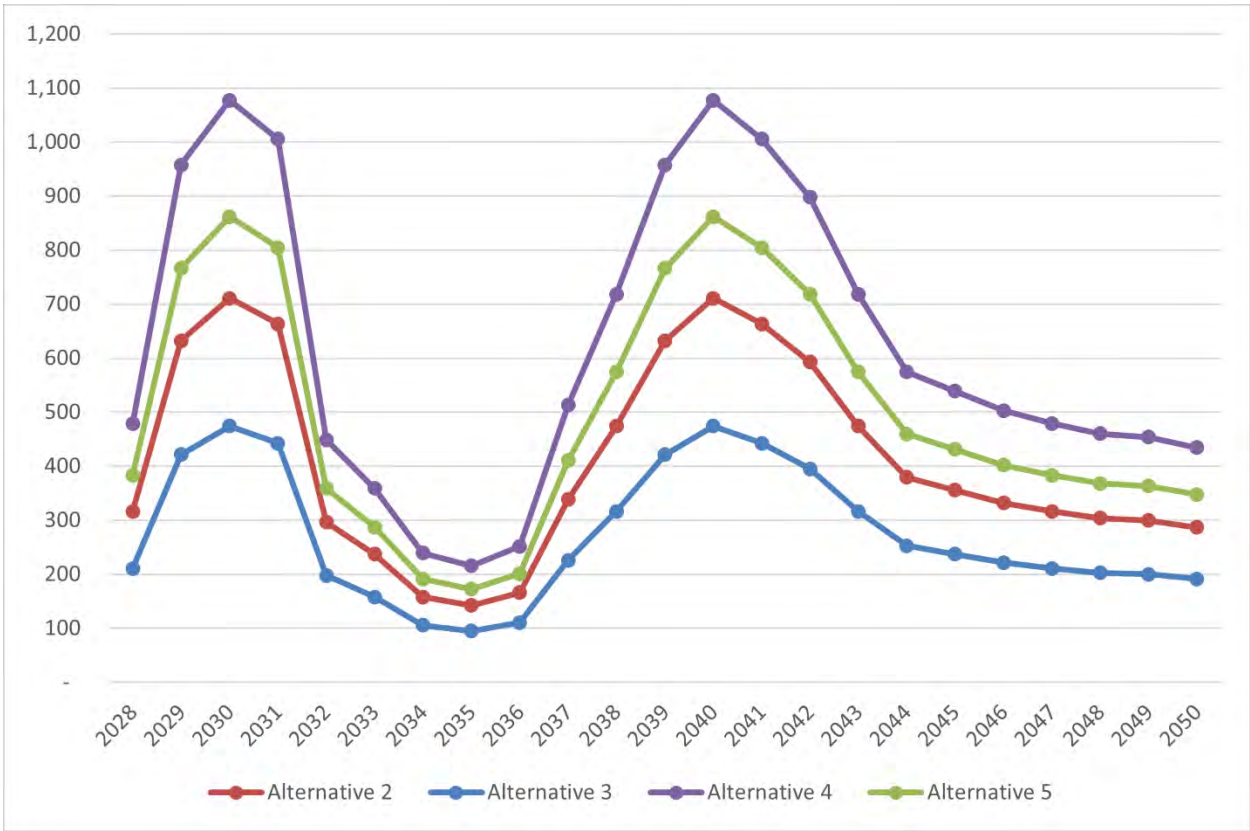

Figure ES-2 Annual Population Change by Alternative, 2028-2050

ES.2.2 Economic Impacts

Similar to population, Alternative 4 (being the highest density alternative) would have the largest effects on the number of jobs, income earned from those jobs, Gross County Product (GCP), and state and local government revenue. This would be the case for both construction and operations phases. For construction, the largest effects would be expected to occur in the 2026 to 2034 timeframe, after construction of the Navy facilities is complete but while the transit center, residential, and commercial construction would be underway. Table ES-2 shows annual average economic effects of construction over relevant timeframes for Alternative 4.

Table ES-2 Economic Impacts for Alternative 4 Construction, Average Annual, 2021-2049

	2021-2025[1]	***2026-2034[2]***	***2035-2049[3]***
Jobs[3]	2,651	3,955	1,501
Labor Income[3,4]	$165,531,513	$256,777,069	$93,526,152
GCP[3,4]	$232,290,728	$316,602,181	$144,675,934
Government Revenue[3,4]	$13,511,804	$20,784,582	$8,088,318

Notes: [1] 2021-2025 timeframe includes Navy OTC construction only.
[2] 2026-2034 timeframe includes transit center, residential, and commercial construction.
[3] 2035-2049 timeframe residential and commercial construction.
[4]All values are total impacts that include direct, indirect, and induced effects.
[5]Dollar based values are shown in year 2020 $s.

Like population, there are no anticipated economic impacts related to Navy or transit center operations; all operational impacts would be expected to stem from residential and commercial development. Table ES-3 shows these impacts for Alternative 4 on an annualized basis for the year 2050 when residential and commercial developments would be fully operational – these impacts would be expected to continue in a steady state for the foreseeable future.

Table ES-3 Economic Impacts[1,2] for Alternative 4 Operations, Annual, 2050 Forward

	Residential	*Commercial*	*Total*
Jobs	7,331	10,910	**18,241**
Labor Income	$379,367,373	$708,301,506	**$1,087,668,879**
GCP	$745,779,872	$1,144,236,779	**$1,890,016,651**
Government Revenue	$81,852,343	$72,216,715	**$154,069,058**

Notes: [1]All values are total impacts that include direct, indirect, and induced effects.
[2]Dollar based values are shown in year 2020 $s.

Upon review of recent literature, which indicates that empirical evidence shows that an increase in supply of market rate housing does not push prices higher, this study generally accepts that the Proposed Action alternatives would not substantially reduce housing affordability in San Diego County. Furthermore, while expectations for future prices near the Proposed Action alternatives (in the socioeconomic Region of Influence [ROI]) would have a tendency to push higher in anticipation of mixed use and transient oriented development, it may be difficult for that long-term expectation to filter into near-term rents while the area is in the midst of major construction (with associated noise and traffic). If rents in the ROI grow at a relatively slow rate during construction then, unless there are improvements to property that demand higher rent, rents there may grow at a rate below the city trend for an extended period, making the ROI less expensive relative to the region over that period, which would suggest that current ROI residents would not be displaced. This study also considers what would happen if no market rate units are built and expects that with less market rate development in San Diego, over time, there would be more displacement and more homelessness. There is a California State Law that requires a certain number of affordable units be built as a percentage of market rate units; if no market rate units are built then the number of associated affordable units is always zero. There are no other proposals for residential development of OTC Site 1 or OTC Site 2, and hence no other proposals to build affordable housing units on the sites. So, the Proposed Action alternatives would increase the number of affordable units relative to a condition without it, would not be likely to result in gentrification or displacement, and would tend to improve local housing affordability in the short, medium, and long-term.

ES.2.3 Impacts to Public Services

Due to the increase in population that is anticipated, public services agencies would require additional personnel in order to maintain their current levels of service. Figures ES-3, ES-4, and ES-5 show the additional personnel that would be needed to maintain current levels of service over time.

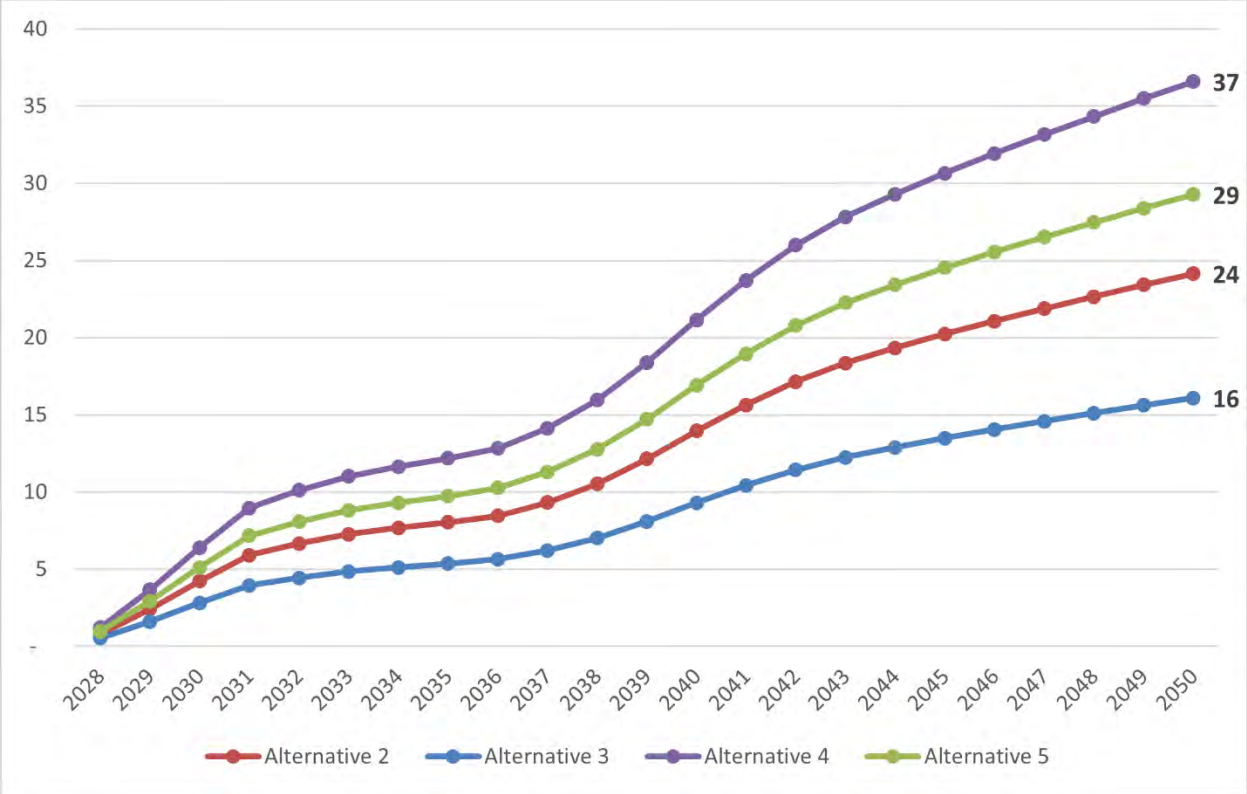

Figure ES-3 Additional Teachers Required to Maintain Level of Service, 2028-2050

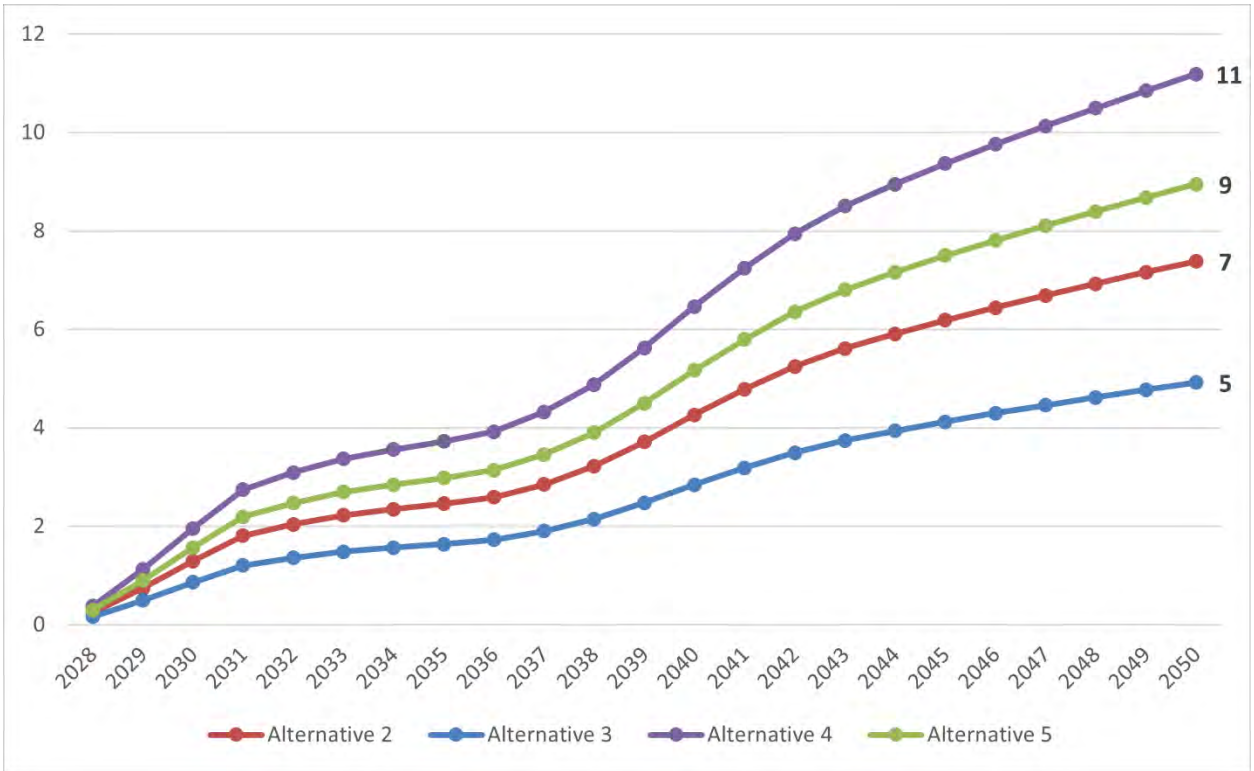

Figure ES-4 Additional Uniformed Officers Required to Maintain Level of Service, 2028-2050

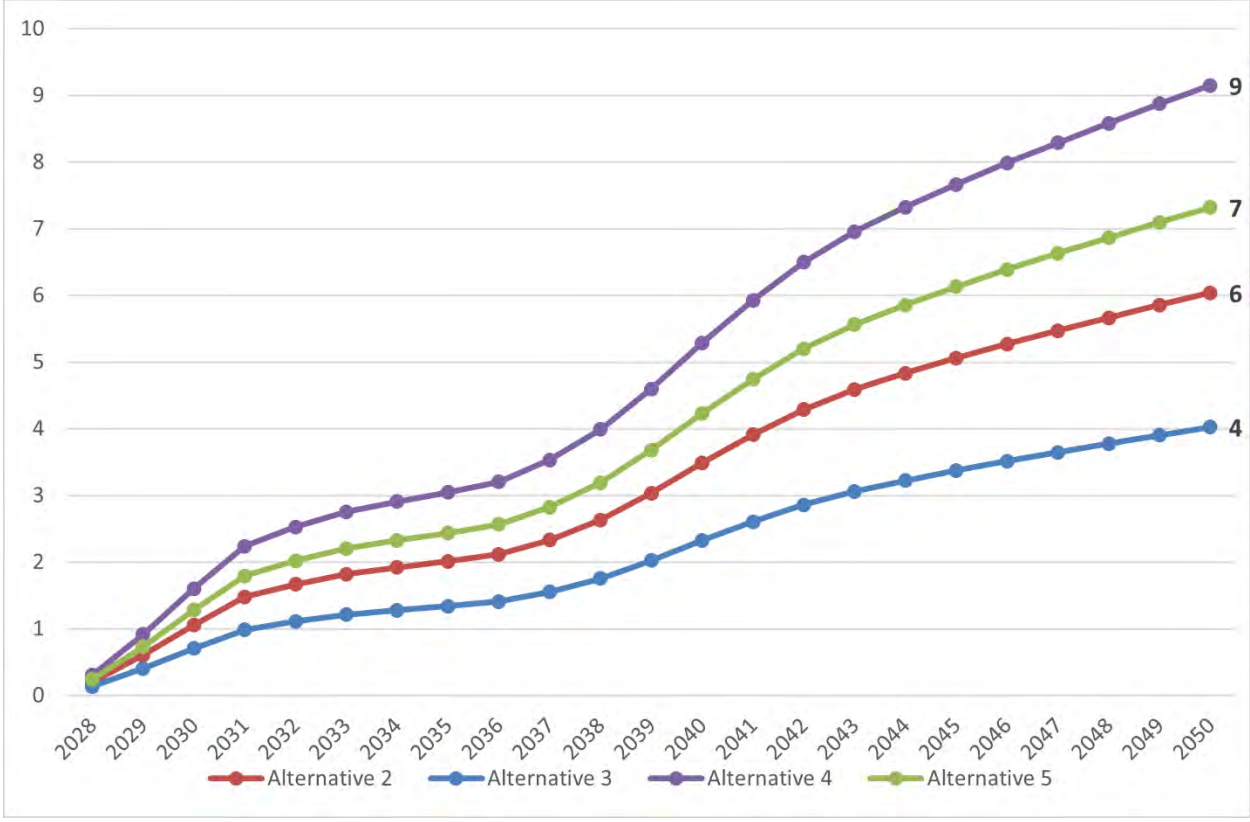

Figure ES-5 Additional Fire/EMT Personnel Required to Maintain Level of Service, 2028-2050

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Socioeconomic Study for Environmental Impact Statement NAVY OLD TOWN CAMPUS REVITALIZATION San Diego, California

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Abbreviations and Acronyms

Acronym	Definition
BEA	Bureau of Economic Analysis
EIS	Environmental Impact Statement
GCP	Gross County Product
GDP	Gross Domestic Product
NAVWAR	Naval Information Warfare Systems Command
OTC	Old Town Campus
ROI	Region of Influence
SANDAG	San Diego Association of Governments
TOPI	Taxes on Production and Imports
U.S.	United States
U.S.C.	U.S. Code

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1 Introduction

1.1 Overview of the Proposed Action Alternatives

Naval Information Warfare Systems Command (NAVWAR) proposes to revitalize Naval Base Point Loma's Old Town Campus (OTC), which would include the construction of buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR, Naval Information Warfare Command Pacific, and other tenant commands on OTC. Revitalization efforts could include Navy recapitalization of the site or redevelopment through a public-private partnership. As the property owner, the Navy (represented by Naval Base Point Loma) would enter into a lease (pursuant to 10 United States [U.S.] Code [U.S.C.] section 2667) or a public-private partnership agreement to redevelop OTC. NAVWAR is the action proponent for the revitalization.

As part of the process to identify revitalization alternatives, the Navy entered into an agreement with the San Diego Association of Governments (SANDAG) on September 19, 2019 to consider locating a regional transit center on OTC as part of the revitalization effort. The agreement outlined a planning process and proposed timeline to study redevelopment of OTC to provide mission capable facilities for NAVWAR including consideration of a transit center on OTC that could improve transportation options for the people of San Diego, including Department of Defense employees, to access the San Diego International Airport (see Appendix J). The agreement is designed to provide flexibility in designing and delivering a mixed use development compatible with the military missions of NAVWAR. If an alternative including a transit center is selected, the ultimate development of the transit center will be the responsibility of SANDAG, who may seek funding or collaboration from other stakeholders, including the U.S. Department of Transportation and State of California, to assist with the cost of public improvements.

The Proposed Action alternatives include:

- Alternative 1: NAVWAR-Only Redevelopment
- Alternative 2: Public-Private Redevelopment–NAVWAR and Higher Density Mixed Use
- Alternative 3: Public-Private Redevelopment–NAVWAR and Lower Density Mixed Use
- Alternative 4: Public-Private Redevelopment–NAVWAR and Higher Density Mixed Use with a Transit Center
- Alternative 5: Public-Private Redevelopment–NAVWAR and Lower Density Mixed Use with a Transit Center

1.2 Purpose of the Socioeconomic Study

This socioeconomic study was conducted to assess the impacts that the proposed OTC revitalization would have on the regional economy of San Diego, specifically San Diego County. Beneficial economic and fiscal impacts are anticipated to be generated by both construction of new facilities (Navy facilities development, residential development, commercial development, and the development of a new transit center), the personal expenditures of new population to the county as a result of an expansion in the housing supply, and employment and expenditures of businesses that occupy new commercial space.

1.3 Topics Covered

In order to identify and assess potential effects of the Proposed Action alternatives on socioeconomic conditions, data on the existing social and economic conditions of San Diego were studied. Numerous potential interactions between the Proposed Action alternatives and socioeconomic conditions, including those named during the scoping process, were identified. These potential interactions were used to develop the detailed socioeconomic topics that are covered in this study. For continuity in reporting structure, each of the detailed topics was considered as part of a broader category. These broader categories include population, economic conditions, and public services. General descriptions of each category are provided below. Note that environmental justice issues are not addressed in this socioeconomic study; these issues are addressed in the Environmental Impact Statement (EIS) Section 3.9.

1.3.1 Population

The study of population includes a count and demographic characterization of people in a region. The number of people in a region changes almost constantly while demographic characteristics tend to be much more stable over time. Because there can be both benefits and disbenefits associated with changes in population, population change is neither a good nor a bad thing in and of itself. Detailed topics studied under the population category include overall population trends and demographics. A change in population is not considered an adverse or beneficial impact itself. However, population change has the potential to drive positive or negative impacts to other socioeconomic factors discussed in the following subsections.

1.3.2 Economic Conditions

When people buy something, sell something, go to work, hire someone, or do just about anything that involves production, exchange, or financial interaction, they are participating in the economy. These various interactions in an economy constitute economic conditions. Economic conditions are measured by a variety of statistical economic indicators. When the numeric values of most economic indicators increase, it is generally seen as a sign of improving economic conditions. Improving economic conditions indicate that people are more active in participating in an economy and is generally thought to be beneficial to the people of a region. Detailed topics studied under the economic condition's category include employment and income, economic activity (measured as county gross domestic product [GDP]), housing, and state and local government revenue.

1.3.3 Public Services

Public services such as education, police protection, fire-rescue, libraries, and parks have historically been under-provided by the private sector. Since they tend to benefit everyone, they are usually provided or subsidized by governments. Public services are a key part of any relationship between citizens and their governments. They represent the primary benefits that individuals receive from payment of taxes. In theory, a change in the quality of public service is a function of a change in government revenues and a change in population. Holding population constant, an increase in government revenues should improve the quality of public services. Likewise, holding government revenues constant, an increase in population would reduce the quality of public services. In most situations though, increases in population go hand-in-hand with increases in economic activity, which tends to increase state and local government revenue, so when population increases the level of public services that are provided tends to increase.

2 Approach to Analysis

2.1 Approach to Analysis: Existing Conditions

Information presented in the existing conditions section establishes a baseline to which the Proposed Action alternatives are compared in impacts sections to identify and evaluate potential impacts. In preparing this section, analysts gathered and reviewed relevant reports, studies, and data sets prepared by and for the U.S. federal government, state and local governments, and independent parties. While analysts evaluated all reasonably available information related to the existing environment and factored such information into the evaluation of potential impacts, the existing conditions describes only the information that is most relevant to understanding and substantiating the impacts later described.

2.2 Approach to Analysis: Impacts of the Proposed Action Alternatives

Economic variables that are presented as results include jobs, labor income, and Gross County Product (GCP). Each of these variables consists of a direct, indirect, and induced element. Estimates of these variables are calculated by the IMPLAN (Impact Analysis for Planning) model. The IMPLAN model is an industry standard computer software subscription service that consists of procedures for estimating local input-output models and associated databases. IMPLAN was originally developed by the U.S. Forest Service in cooperation with the Federal Emergency Management Agency and the U.S. Department of the Interior's Bureau of Land Management to assist in land and resource management planning in the mid-1970s. Since 1993, the IMPLAN software has undergone continual development and marketing by a private company, the IMPLAN Group (Mulkey, 2012).

The IMPLAN Group recently published 2018 data sets for counties, including San Diego County. The San Diego County data set was utilized within the IMPLAN economic modeling interface to calculate economic impacts associated with the Proposed Action alternatives, to include construction employment and income, GCP, and government state and local government revenue. While the IMPLAN model is based on 2018 data, estimates of financial impacts are presented in year 2020 dollars.

The economic data for IMPLAN comes from the system of national accounts for the U.S. based on data collected by the U.S. Department of Commerce, the U.S. Bureau of Labor Statistics, and other federal and state government agencies. Data are collected for distinct producing industry sectors of the national economy corresponding to industry sectors. Industry sectors are classified on the basis of the primary commodity or service produced. Corresponding data sets are also produced for each county in the U.S., allowing analyses at the county level and for geographic aggregations such as clusters of contiguous counties, individual states and territories, or groups of states (Mulkey, 2012).

Direct impacts are associated with the proposed development itself and include construction and operations jobs, the incomes earned by those workers, the economic output associated with initial purchases of local construction materials and supplies, and goods and services that facilitate personal consumption and business operations.

Indirect impacts are the jobs, income, and GCP generated by the businesses that would supply goods and services that facilitate construction and operations. Indirect jobs include jobs at companies that supply construction materials and supplies, or support jobs related to operations. Indirect jobs extend to include jobs related to the manufacture of products used to construct facilities and support business operations. Indirect labor income includes the income earned by people working indirect jobs. Indirect GCP includes the total sales volume related to the supply of goods and services.

Induced impacts are the result of spending of the wages and salaries of the direct and indirect new population and employees on items such as food, housing, transportation, and medical services. This spending creates induced employment in nearly all sectors of the economy, especially service sectors.

Economic impact variables are discussed below. Importantly, not all jobs, labor income and GCP would be new to the county. While construction and operations at the project site would provide additional work for the current construction workforce and provide increased capacity for business to expand, some of the workers and businesses would already be present in San Diego County. Therefore, economic impacts are presented in terms of "generated or sustained" rather than with an implication that all effects would be entirely new but instead have a focus on economic activity at the project site.

Jobs. Jobs impacts represent the number of jobs that would be created or sustained within San Diego County as a result of construction and operations at the project site. Jobs would be related to construction of new developments and the operations of new residential, commercial, and transit center facilities. No new Navy operations jobs are anticipated in association with the Proposed Action alternatives.

Labor Income. Labor income impacts represent the income generated through the jobs that would be created or sustained within San Diego County as a result of construction and operations.

Gross County Product. Based on the IMPLAN measure of value added, GCP equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported). The measure approximates measures of national GDP in that it generally calculates the value of consumption, investment, government spending, and net exports.

2.2.1 Construction

These impacts would be from the construction of recapitalized (for Alternative 1) or new (for all other alternatives) Navy facilities, a new transit center (under Alternatives 4 and 5 only), new residential development (Alternatives 2, 3,4, and 5), and new commercial development (Alternatives 2, 3,4, and 5).

Data on construction costs were gathered or estimated. Recapitalization costs were gathered from the Navy; construction costs related to a new Navy OTC facility were estimated by SANDAG (with review by the Navy); construction costs for the transit center were gathered from estimates developed by SANDAG; and construction costs for residential and commercial development were estimated using square footage data from Chapter 2 of the EIS and construction cost per square foot, by building type, data from RSMeans. Table 2.2-1 shows the cost per square foot data that was used to prepare cost estimates.

Table 2.2-1 Cost Per Square Foot Estimates for Residential and Commercial Development (2019 Dollars)

Building Type	*Cost per Square Foot*
Apartment	$241.86
Office	$191.91
Retail	$146.96
Parking	$67.42

Notes: Estimate for retail space is a combination of estimates for retail (0.75) and restaurant (0.25). Includes 10% addition to RS Means estimates for Leadership in Energy and Environmental Design certification.
Source: RS Means 2020.

Cost estimates were input into appropriate IMPLAN sectors in order to calculate economic impacts (jobs, labor income, and GCP). IMPLAN results were totals, over the life of construction, and these results were averaged over the life of each type of development to establish the average annual impacts that are presented in Section 4.

Since it is not anticipated that construction activities would lead to an increase in permanent population, population change and impacts to public services analysis of these topics is limited with respect to the construction phase.

2.2.2 Operations

Data used to develop estimates of operations impacts was derived from information in the Description of Proposed Action alternatives (Chapter 2 of the EIS), information provided by NAVWAR and SANDAG, information developed in a Development Opportunity and Market Analyses for the NAVWAR Site (London Moeder, 2020), square footage to jobs ratios included in a Jobs-Housing Nexus Study that was prepared for the City of San Diego (City of San Diego, 2013), and the IMPLAN economic model for San Diego County (IMPLAN, 2020). Economic impacts that are developed are presented on an annual basis, at full build-out, and additional information representative of growth over the build-out timeframe is presented as available.

2.2.2.1 Population Change

Information on the number of proposed housing units from Chapter 2 of the EIS, projected persons per housing unit, and occupancy rates from market analyses (London Moeder, 2020) were used to develop estimates of the total population that would reside in newly developed residential units. Population estimates are presented for each alternative, at full build-out (projected to be the year 2050). Also, a development scenario (generalized based on Chapter 2 of the EIS) that shows population growth over time is presented with population growth lagging the start of residential construction by 3 years (while new units are under construction and none are ready for occupancy).

While it is not possible to determine the portion of population in project-related housing units that would in-migrate from other areas into San Diego versus consist of current residents, the change in total population for San Diego County, in response to newly developed housing, is estimated in this study as equivalent to the population that would reside in newly developed units. This assumption is based on research by the National Bureau of Economic Analysis (BEA) (2005) that indicates that the logarithmic change in housing units in high-performance metro areas is roughly equal to the logarithmic change in population. Importantly, the 1 for 1 housing to population ratio used in this study is not entirely realistic

as it assumes that demand for housing in San Diego is perfectly elastic, and while due to the quality of life in San Diego demand for housing is highly elastic, it is not perfectly elastic (due to transactions costs for instance). However, this assumption is used for population estimates in part for heuristics and in part because it allows for a maximum impact scenario for analysis of public services (i.e., population growth estimates feed into the analysis of public services and a 1 for 1 population increase allows conservative inputs into calculations for determining additional demand on public services).

The framework for how this assumption would play out in practice is that one-half of the new population in the new housing units would come from within San Diego County and one-half would come from outside of San Diego County; this implies that county population would initially increase by one-half the total residents of new housing (as the other one-half would already be County residents). Following that, the vacant housing units in the county created by those residents moving into the new development would then become occupied by in-migrants from other counties. On a net basis, population in the county would increase by the same number as population in new project-related housing units.

A more detailed example: 10 new units are built in the City of San Diego and can house a population of 20; 5 units (a population of 10) are filled by county residents living outside the city limits (changing the county population by 0); 5 units (a population of 10) are filled by in-migrants from other counties (increasing the county population by 10); the 5 units in the county (outside the city limits) that were left vacant are then filled by 10 in-migrants from other counties – population in the city increases by 20 and population in the county increases by 20. According to National Bureau of Economic Research (2005) this would tend to hold true for a location such as San Diego, with a vibrant economy and amenities such as great weather and scenery but would not necessarily hold true in other places where the scenery and economy were not so vibrant.

2.2.2.2 Economic Impacts

For economic measures, operations impacts are delineated into two categories: (1) Residential development, and (2) Commercial development (office, hotel, and retail). While both Navy and transit center operations are anticipated to expand over time, they are not anticipated to expand due to the Proposed Action alternatives (they would grow with or without it) and therefore, no operational impacts related to Navy or transit center operations are attributed to the Proposed Action alternatives. Analysis for residential development is related to two sources: (1) employment at residential buildings (e.g., building management and maintenance), and (2) the household income of new population who move to San Diego from outside the county in response to additional housing supply.

To establish employment at the residential buildings, the anticipated number of housing units (from Chapter 2 of the EIS) was multiplied by anticipated occupancy rates (London Moeder, 2020), then by a weighted average of anticipated rents for those units (as estimated from London Moeder, 2020) to establish total rents paid; total rents paid were input into IMPLAN Sector 448 – Tenant-occupied housing, to estimate direct jobs and associated indirect and induced effects. As noted above in Section 2.2.2.1, population in San Diego County is estimated to grow in an equivalent manner to population in the project-related housing units. Analysis further assumes household size for the new population is similar to the county currently and calculates household income of new residents by multiplying county average household income ($179,242 per year, IMPLAN, 2020) by the number of anticipated occupied project-related housing units. The product of average household income and project-related occupied housing units is input into the IMPLAN model as a household income change to estimate associated economic effects.

Estimated impacts related to new commercial development were derived using square footage information from Chapter 2 of the EIS specific to new office, retail, and hotel space in conjunction with square footage to job ratios for San Diego as presented in a Jobs-Housing Nexus Study (City of San Diego, 2013). Ratios that were applied were: 1 job per 298 square feet of office space, 1 job per 595 square feet of hotel space, and 1 job per 417 feet of retail space. Total job estimates for each type of space were input into the IMPLAN model to estimate associated economic impacts. Hotel jobs estimates were input into IMPLAN Sector 507 – Hotels and motels. Jobs in retail and office space were input into the IMPLAN sectors, proportionally, as shown in Table 2.2-2 and Table 2.2-3.

Table 2.2-2 Retail Space Sector Distribution for IMPLAN Modeling

IMPLAN Sector Number	*IMPLAN Sector Description*	*Percent Allocation of Total Jobs*
402	Retail - Motor vehicle and parts dealers	10.9
403	Retail - Furniture and home furnishings stores	3.3
404	Retail - Electronics and appliance stores	2.5
405	Retail - Building material and garden equipment and supplies stores	8.5
406	Retail - Food and beverage stores	16.7
407	Retail - Health and personal care stores	7.4
408	Retail - Gasoline stores	2.9
409	Retail - Clothing and clothing accessories stores	6.9
410	Retail - Sporting goods, hobby, musical instrument and bookstores	3.4
411	Retail - General merchandise stores	13.5
412	Retail - Miscellaneous store retailers	9.0
509	Full-service restaurants	11.2
510	Limited-service restaurants	3.7

Note: Allocation based on national levels of employment by industry.
Sources: IMPLAN, 2020; BLS, 2019.

Table 2.2-3 Office Space Sector Distribution for IMPLAN Modeling

IMPLAN Sector Number	*IMPLAN Sector Description*	*Percent Allocation of Total Jobs*
441	Monetary authorities and depository credit intermediation	9.7
445	Insurance agencies, brokerages, and related activities	13.5
447	Other real estate	13.9
455	Legal services	8.3
456	Accounting, tax preparation, bookkeeping, and payroll services	5.8
457	Architectural, engineering, and related services	8.7
460	Computer systems design services	17.6
462	Management consulting services	4.0
463	Environmental and other technical consulting services	4.0
476	Services to buildings	7.6
477	Landscape and horticultural services	6.7

Note: Allocation based on national levels of employment by industry.
Sources: IMPLAN, 2020; BLS, 2019.

Analysis of housing presents a timeline for new housing occupancy and rents paid overtime. Additionally, an assessment of the effect that new housing units will have on the affordability of housing is presented based on review of recent literature. The conclusion is that the Proposed Action alternatives would increase local income, would not reduce affordability of local housing, would not spur a process of gentrification, and would not lead to displacement of low-income or minority residents.

Analysis of state and local government revenue presents the results of IMPLAN modeling at the construction and operations level. County, sub-county (municipal governments within San Diego County), and State of California revenue are presented, on an annual basis, for the full build-out timeframe (i.e., revenue that would be anticipated to occur on an annual basis for the foreseeable future).

2.2.2.3 Public Services Impacts

Analysis of public services considers the additional demands on public services due to new population (See Section 4.1) and the additional personnel that public services agencies would require in order to maintain recent levels of service given the additional population. For schools, the number of new students is estimated using data on the number of new housing units for each alternative and student generation rates provided in Section 3.3.1. The number of additional students is divided by recent student-teacher ratios in order to estimate the number of new teachers that would be required for the ratio to remain stable. For police and fire-rescue, total population is considered as a ratio to total population and a similar assessment (i.e., how many additional uniformed personnel [police officers and fire/EMT personnel] would be required to maintain recent personnel-population ratios). Anticipated requirements for additional personnel are presented over time, generally mimicking population growth over time.

For libraries and parks, the additional population is considered relative to the existing capacity of those services and locations, and generally indicates whether new capacity would be required or if it is anticipated that the services or facilities would be likely to experience crowding due to new population.

3 Existing Conditions

This section discusses data related to population and demographics, employment and income, housing, economic activity, state and local government revenue, and public services (schools, police, fire-rescue, libraries, and parks). Data have been collected from published documents issued by federal, state, and local agencies and from state and national databases in order to establish baseline socioeconomic conditions in the context of the State of California, San Diego County, the City of San Diego, and the local Region of Influence (ROI). The ROI is shown in Figure 3.1-1 and consists of the Census Tracts in which the Proposed Action alternatives would be located, and adjoining Census Tracts to include Census Tract 65 (the location of the Proposed Action alternatives), Census Tract 1, Census Tract 2.02, Census Tract 61, Census Tract 62, Census Tract 63, Census Tract 66, Census Tract 68.01, and Census Tract 68.02.

3.1 Population

Table 3.1-1 shows U.S. Census Bureau data on population in the State of California, San Diego County, the City of San Diego, and the ROI for years 2010 to 2018, along with total and annual growth rates from 2010 to 2015, 2015 to 2018, and 2010 to 2018. In 2018, California had a population of 39,148,760 (12.1percent of the total U.S. population), San Diego County had a population of 3,302,833 (8.4 percent of California's population), the City of San Diego had a population of 1,401,932 (42.4 percent of the county population), and the ROI had a population of 27,202 (1.9 percent of the city population). Over the 2010 to 2018 period, San Diego County and the City of San Diego had population growth rates greater than that of California overall, while the ROI grew at a slower pace than the state. However, the state, county, and city saw population growth rates fall off (i.e., annual growth rates from 2015 to 2018 were slower than from 2010 to2015) while the ROI saw faster growth from 2015 to 2018 than from 2010 to 2015.

Table 3.1-1 Population Totals and Growth Rates, 2010-2018

	California	*San Diego County*	*City of San Diego*	*ROI*
2010	36,637,290	3,022,468	1,282,800	26,172
2011	36,969,200	3,060,849	1,296,437	25,694
2012	37,325,068	3,100,500	1,308,619	25,344
2013	37,659,181	3,138,265	1,322,838	25,907
2014	38,066,920	3,183,143	1,341,510	25,480
2015	38,421,464	3,223,096	1,359,791	26,119
2016	38,654,206	3,253,356	1,374,812	26,047
2017	38,982,847	3,283,665	1,390,966	26,652
2018	39,148,760	3,302,833	1,401,932	27,202
Annual Growth Rate 2010 to 2015	1.0%	1.3%	1.2%	0.0%
Annual Growth Rate 2015 to 2018	0.6%	0.8%	1.0%	1.4%
Annual Growth Rate 2010 to 2018	0.9%	1.2%	1.2%	0.5%

Legend: % = percent

Source: U.S. Census Bureau, 2010, 2013, 2014, 2015, 2016, 2017, 2018.

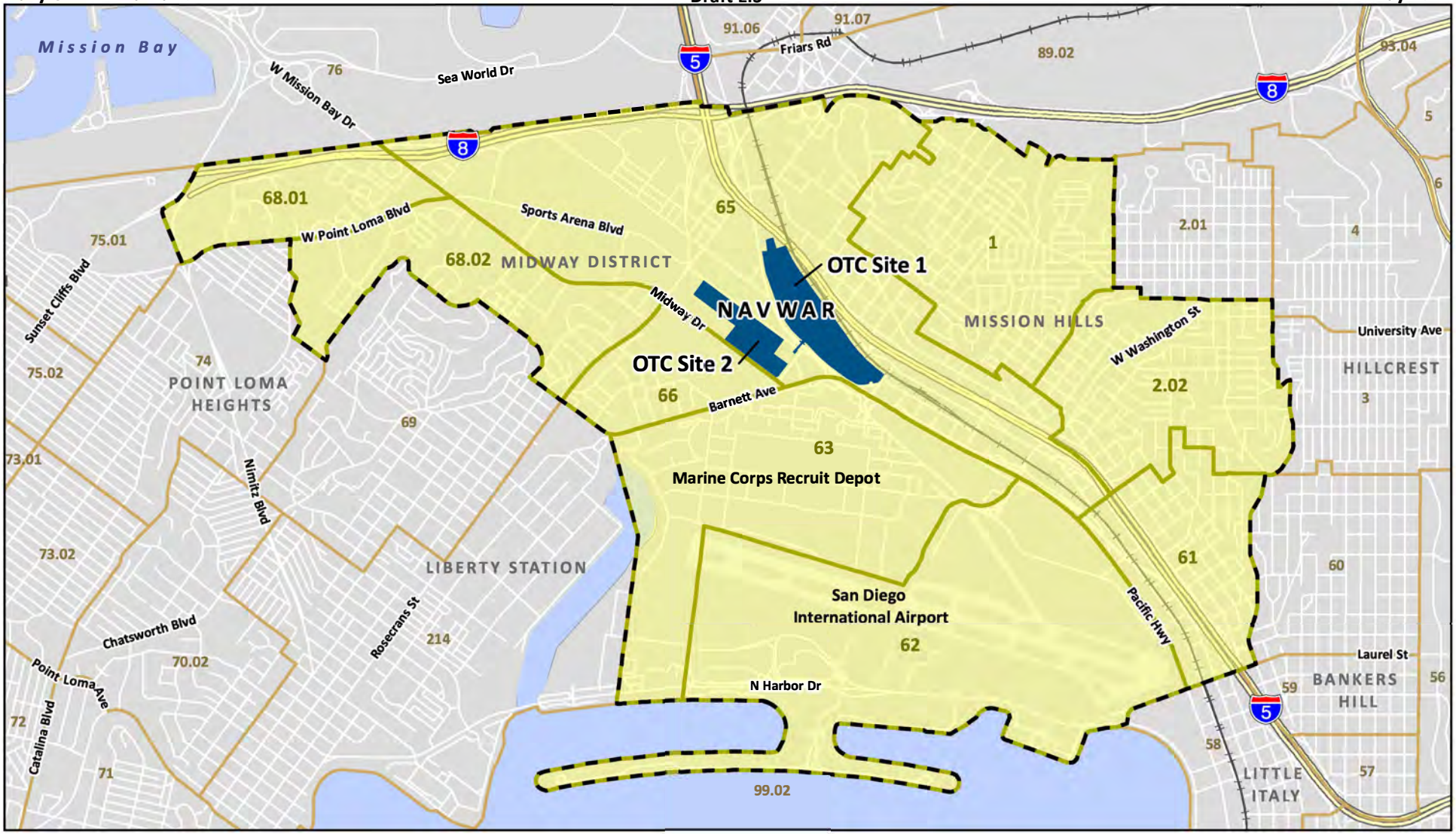

Figure 3.1-1. Socioeconomic Region of Influence

Table 3.1-2 shows projected population data from SANDAG (2013) for the San Diego Region (approximating San Diego County) from 2020 to 2050, the projected percentage change in population from 2020 to 2050, and the projected annual growth rate from 2020 to 2050. By 2050, it is projected that the San Diego Region will have a population of nearly 4.1 million, growing 18.4 percent from 2020. The projected annual growth rate from 2020 to 2050 (0.6 percent per year) is slower than the region grew from 2010 to 2017 (1.2 percent per year).

Table 3.1-2 Projected Population, 2020-2050

	2020	*2035*	*2050*	*Projected Percent Change 2020 to 2050*	*Projected Annual Growth Rate 2020 to 2050*
San Diego Region	3,435,713	3,853,698	4,068,759	18.4	0.6%

Legend: % = percent
Source: SANDAG, 2013.

Table 3.1-3 shows U.S. Census Bureau (2018) data on race and ethnicity in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, Hispanic or Latino (of any race) was the most prevalent population in the State of California (38.9 percent) while White was the most prevalent population in San Diego County (45.9 percent), the City of San Diego (42.9 percent), and the ROI (63.6 percent). The ROI's Hispanic or Latino (18.6 percent) and Asian (6.5 percent) portion of the population was substantially lower than the state, county, or city, while its Black or African American population (7.2 percent) was slightly more prevalent.

Table 3.1-3 Race and Ethnicity, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Hispanic or Latino (of any race)	38.9%	33.5%	30.1%	18.6%
White	37.5%	45.9%	42.9%	63.6%
Asian	14.1%	11.6%	16.4%	6.5%
Black or African American	5.5%	4.7%	6.2%	7.2%
Two or more races	3.0%	3.4%	3.6%	3.3%
Native Hawaiian and Other Pacific Islander	0.4%	0.4%	0.4%	0.3%
American Indian or Alaska Native	0.4%	0.4%	0.2%	0.5%
Some other Race	0.2%	0.2%	0.2%	0.0%

Legend: % = percent
Source: U.S. Census Bureau 2018.

Table 3.1-4 shows U.S. Census Bureau (2018) data on gender and age in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, the ROI was substantially more male than the state, county, or city; this was likely due to the presence of the Marine Corps Recruit Depot. In terms of age, the ROI had a higher median age (36.7) than the state, county or city.

Table 3.1-4 Gender and Age, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Male	49.7%	50.3%	50.3%	56.2%
Female	50.3%	49.7%	49.7%	43.8%
Median Age	36.3	35.6	34.7	36.7

Source: U.S. Census Bureau, 2018.

Table 3.1-5 shows U.S. Census Bureau (2018) data on number of households, average household size, and in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, the average household and average family size in California (2.96 and 3.54) was higher than in San Diego County (2.87 and 3.43), the City of San Diego (2.71 and 3.38), and the ROI (2.10 and 2.88). The average household size of the ROI was approximately 0.7 times the size of that of California while the average family size was about 0.8 times that of the state, indicating substantially fewer people per housing unit. Additionally, the percentage of households with children within the ROI (20.1 percent) was substantially lower than the state (30.6 percent), County (30.0 percent), and City (26.6 percent).

Table 3.1-5 Household Characteristics, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Total Households	12,965,435	1,118,980	503,463	10,764
Average Household Size	2.96	2.87	2.71	2.10
Average Family Size	3.54	3.43	3.38	2.88
% Households with Children under 18 years	30.6%	30.0%	26.6%	20.1%

Note: Measures of average household size and average family size exclude data on group quarters (i.e., population residing in barracks at the Marine Corps Recruit Depot).
Source: U.S. Census Bureau, 2018.

Table 3.1-6 shows U.S. Census Bureau (2018) data on educational attainment in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In general, San Diego County, the City of San Diego, and the ROI had a higher level of educational attainment than California. The ROI had a particularly high level of educational attainment with only 4.3 percent of the population having less than a high school diploma (compared to 17.1 percent in the state) and 50.7 percent of the ROI having at least a bachelor's degree (compared to 33.3 percent in the state).

Table 3.1-6 Educational Attainment, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Less than 9th grade	9.43%	6.72%	6.49%	2.39%
9th to 12th grade, no diploma	7.64%	6.15%	5.63%	1.95%
High school graduate (includes equivalency)	20.56%	18.41%	15.26%	14.32%
Some college, no degree	21.29%	22.42%	19.88%	22.30%
Associate's degree	7.82%	8.16%	7.43%	8.39%
Bachelor's degree	20.77%	23.46%	26.82%	29.17%
Graduate or professional degree	12.48%	14.68%	18.49%	21.49%

Legend: % = percent
Source: U.S. Census Bureau, 2018.

3.2 Economic Conditions

3.2.1 Employment and Income

Table 3.2-1 shows U.S. Census Bureau (2018) labor force data in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. San Diego County, the City of San Diego, and the ROI had higher labor force participation rates and lower unemployment rates than the state, and those measures were better for the ROI than for both the county and city. The armed forces population, as a percentage of the population 16 years and over, was much higher in the ROI (15.7 percent) than the state (0.4 percent), county (2.8 percent), and city (2.5 percent).

More recent data from the U.S. Bureau of Labor Statistics (2020) indicate that unemployment has substantially increased since 2018. As of May 2020, the California unemployment rate had increased to 16.3 percent and, as of April 2020, the unemployment rate for the San Diego metropolitan area had increased to 15.3 percent. Projections developed by SANDAG (2013) indicate that civilian employment in the San Diego Region will increase by 18.9 percent from 2020 to 2050; however, these projections do not account for the substantial job losses in 2020 due to the COVID-19 pandemic.

Table 3.2-1 Labor Force Characteristics, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Population 16 Years and Over	31,109,195	2,656,740	1,150,707	23,855
In Labor Force	19,758,291	1,745,186	776,991	17,296
Civilian Labor Force	19,630,514	1,671,892	747,654	13,551
Employed	18,309,012	1,564,930	700,233	12,744
Unemployed	1,321,502	106,962	47,421	807
Armed Forces	127,777	73,294	29,337	3,745
Not in Labor Force	11,350,904	911,554	373,716	6,559
Labor Force Participation Rate	63.5%	65.7%	67.5%	72.5%
Unemployment Rate	6.7%	6.1%	6.1%	4.7%

Legend: % = percent
Source: U.S. Census Bureau, 2018.

Table 3.2-2 shows U.S. Census Bureau (2018) civilian employment by industry in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, the educational services, and health care and social assistance industry was the largest employer in the state, county, city, and ROI. A smaller portion of ROI residents worked in the construction industry and retail trade industry than the state, county, and city. A larger portion of ROI residents worked in the finance and insurance, and real estate and rental and leasing industry, the arts, entertainment, and recreation, and accommodation and food services industry, and the professional, scientific, and management, and administrative and waste management services industry than the state, county, and city.

Table 3.2-2 Employment by Industry, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Agriculture, forestry, fishing and hunting, and mining	2.3%	0.9%	0.4%	1.6%
Construction	6.2%	5.9%	4.3%	3.9%
Manufacturing	9.3%	9.2%	9.0%	5.8%
Wholesale trade	2.9%	2.4%	2.1%	2.7%
Retail trade	10.6%	10.5%	9.3%	6.7%
Transportation and warehousing, and utilities	5.1%	4.1%	3.9%	4.6%
Information	2.9%	2.2%	2.6%	2.5%
Finance and insurance, and real estate and rental and leasing	6.1%	6.2%	6.5%	8.5%
Professional, scientific, and management, and administrative and waste management services	13.4%	15.1%	17.0%	18.5%
Educational services, and health care and social assistance	21.0%	21.3%	22.3%	22.2%
Arts, entertainment, and recreation, and accommodation and food services	10.5%	11.9%	12.5%	13.0%
Other services, except public administration	5.3%	5.4%	5.2%	5.2%
Public administration	4.4%	5.0%	4.8%	4.8%

Legend: % = percent
Source: U.S. Census Bureau, 2018.

Table 3.2-3 shows U.S. Census Bureau (2018) per capita income, median household income, and the percentage of households with incomes below the poverty line in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, the ROI had higher per capita income and median household income than the state, county, and city, and had a lower portion of the population with incomes below the poverty line. Per capita income in the ROI ($47,431) was 35 percent higher than California ($35,021) and the portion of the population with incomes below the poverty line was lower than the state (11.7 percent compared to 14.3 percent). According to the BEA, in 2018, San Diego County had per capita income of $61,386, the 18th highest per capita income of all counties in California (but below the state average of $63,557), and per capita income grew 5.7 percent from 2017 to 2018. Additionally, the BEA reported that total personal income in the County was approximately $205 billion (BEA, 2018a). Data from the IMPLAN model indicates an average household income for 2018 of $179,242.

Table 3.2-3 Income Statistics, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Per Capita Income[1]	$35,021	$36,156	$39,066	$47,431
Median Household Income	$71,228	$74,855	$75,456	$78,326
% with income below the poverty line	14.3%	12.5%	13.8%	11.7%

Notes: [1] Census data applies an inflation adjustment to income statistics in order to adjust for changes in the cost of living over time. As such, Census values tend to be lower than those reported by the BEA, which does not apply an inflation adjustment.
Legend: % = percent
Source: U.S. Census Bureau, 2018.

3.2.2 Economic Activity

The BEA (2018b) estimated that GDP for the State of California was $12 trillion, equaling about 14.5 percent of total U.S. GDP; the 2018 California GDP was up 4.3 percent from 2017 levels. Partial year data for 2019 indicate that California GDP continued to grow, but at a slower pace than growth from 2017 to 2018 and that California GDP was growing at the 26th fastest rate of all U.S. States. The largest industry contributors to state GDP were the professional, scientific, and technical services industry, the information industry, and the retail trade industry. The BEA (2018c) also estimates local area GDP. In 2018, GDP for San Diego County was $219.3 billion, up 4.1 percent from 2017. In 2018, GDP for San Diego County was $219.3 billion (ranked the fourth largest economy in the state), up 4.1 percent from 2017. The 4.1 percent growth was the 18th fastest in California.

3.2.3 Housing

Table 3.2-4 shows U.S. Census Bureau (2018) data on housing characteristics in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2018. In 2018, there were 11,442 housing units in the ROI. Of those units, 10,764 were occupied and 678 were vacant (a vacancy rate of 5.9 percent). Median gross rent ($1,629 per month) and median housing value ($671,500) in the ROI were higher than the state, county, and city. The percentage of renters in the ROI whose gross rent was 35 percent or more of their income was 44.4 percent, lower than each the state, county, and city.

Table 3.2-4 Housing Characteristics, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Total housing units	14,084,824	1,204,884	540,644	11,442
Occupied housing units	12,965,435	1,118,980	503,463	10,764
Vacant housing units	1,119,389	85,904	37,181	678
Vacancy rate	7.9%	7.1%	6.9%	5.9%
Median gross rent	$1,429	$1,569	$1,611	$1,629
Median value	$475,900	$526,300	$569,100	$671,500
% paying Gross rent 35% or more of income	45.9%	46.8%	44.5%	44.4%

Legend: % = percent
Source: U.S. Census Bureau, 2018.

Table 3.2-5 shows U.S. Census Bureau (2017) data on housing unit type in the State of California, San Diego County, the City of San Diego, and the ROI for the year 2017. In 2017, 58.5 percent of ROI housing units were multi-unit (e.g., apartment or condominium), more than double the rate for the state. Projections developed by SANDAG (2013) indicate that the number of housing units in the San Diego Region will increase by 19.4 percent from 2020 to 2050, with most of that growth coming in the form of multi-unit dwellings.

Table 3.2-5 Housing Unit Type, 2018

	California	*San Diego County*	*City of San Diego*	*ROI*
Single unit	65.0%	60.8%	54.9%	41.5%
Multi-unit	31.3%	35.7%	44.1%	58.5%
Mobile home	3.7%	3.5%	1.1%	0.0%

Source: U.S. Census Bureau, 2017.

The report associated with 15th Annual Demographia International Housing Affordability Survey (Demographia, 2019) presented an analysis of the housing crisis in California. The analysis indicated that California has the most serious affordability problem in the U.S. and has the worst homelessness problem in the nation, and that both problems are getting worse. The analysis further indicates that these problems have contributed to an accelerating decline in state population growth. The analysis suggests that solving these problems would be aided by an increase in housing supply. The report associated with the 16th Annual Demographia International Housing Affordability Survey (Demographia, 2020) indicated that San Diego had the 4th least affordable housing market in California, 5th least affordable in U.S., and 12th least affordable in the world. A study conducted at Florida International University (2019) to study affordability in Miami, Florida provides additional context. The study indicated that San Diego had the 3rd highest rate of renters in the nation, the 5th highest rental prices, 5th highest share of homeowners who have monthly housing costs in excess of 35 percent of their income, and the 2nd lowest income remaining after housing expenses.

3.2.4 State and Local Government Revenue

As shown in Table 3.2-6, according to San Diego County (2019), county revenues were approximately $4.5 billion in Fiscal Year 2019. About half of that ($2.3 billion) came from intergovernmental revenue (primarily funding from the federal and state governments). Other major sources of revenue were property taxes ($741 million), taxes other than current secured (primarily sales taxes, $525 million), and charges for current services (including utilities and some emergency services, $406 million).

Table 3.2-6 San Diego County Tax Reneues, Fiscal Year 2019

Revenue Categories	*Total (Estimated)*
Taxes Current Property	$741,010,000
Taxes Other Than Current Secured	$524,791,000
Licenses, Permits, & Franchises	$45,718,000
Fines, Forfeitures, & Penalties	$39,398,000
Revenue Use - Money and Property	$36,269,000
Intergovernmental Revenue	$2,309,243,000
Charges for Current Services	$406,134,000
Miscellaneous Revenue	$44,915,000
Other Financing Sources	$350,398,000
Total Revenues	**$4,497,876,000**

Source: San Diego County, 2019.

As shown in Table 3.2-7, the City of San Diego (2020) reported that revenues for its 2019-2020 adopted operating budget totaled approximately $4.2 billion, up 20.7 percent from the previous year. Charges for current services ($1.6 billion) and property tax revenue ($634.7 million) were the largest contributors

to revenues. Revenue from each of these sources increased over 2018-2019 levels, by 9.6 percent and 7.5 percent, respectively.

Table 3.2-7 City of San Diego Revenues, Adpted Operating Budgets for 2018-2019 and 2019-2020 (millions of dollars)

Revenue Categories	*2018-2019*	*2019-2020*	*% of Total General Fund Revenue (2019-2020)*	*% Change*
Charges for Current Services	$1,467.8	$1,609.0	38.4%	9.6%
Property Tax Revenue	$590.4	$634.7	15.1%	7.5%
Sales Taxes	$325.2	$343.2	8.2%	5.5%
Transfers In	$271.3	$464.9	11.1%	71.3%
Transient Occupancy Taxes	$245.1	$260.3	6.2%	6.2%
Other Local Taxes	$227.7	$237.2	5.7%	4.2%
Other Revenue	$115.1	$382.3	9.1%	232.1%
Revenue from the Use of Money and Property	$92.0	$96.0	2.3%	4.3%
Licenses and Permits	$93.5	$118.6	2.8%	26.8%
Revenue from Other Agencies	$10.3	$11.4	0.3%	10.6%
Fines Forfeitures and Penalties	$32.4	$33.3	0.8%	2.9%
Revenue from Federal Agencies	$1.3	$1.2	0.0%	-7.0%
Special Assessments	$0.0	$0.0	0.0%	0.0%
Total	**$3,472.1**	**$4,192.2**	**100%**	**20.7%**

Legend: % = percent
Source: City of San Diego, 2020.

State of California Revenue for Fiscal Year 2019-2020 was $151.6 billion (California Department of Finance, 2020).

3.3 Public Services

Figure 3.3-1 shows the location of public services that may be affected by induced population growth associated with the Proposed Action alternatives and the corresponding Table 3.3-1 provides additional information on names and types of locations that are identified in the figure.

Table 3.3-1 Potentially Affected Public Services

Name	*Type*	*Number*
SD FS 8	Fire Station	1
SD FS 15	Fire Station	2
SD FS 20	Fire Station	3
Mission Hills	Library	4
Point Loma	Library	5
Clear. Site 397	Park	6
Famosa Slough	Park	7
Harbor Island Park	Park	8
Heritage Park	Park	9
Mission Hills Open Space Park	Park	10
Old Town San Diego SHP	Park	11
Presidio Park	Park	12
Spanish Landing Park	Park	13
Uptown Open Space	Park	14
Whaley House Complex	Park	15
SDPD Western Division	Police Station	16
Correia Middle School	School	17
Dana (5th and 6th) School	School	18
Dewey Elementary School	School	19
Grant K-8 School	School	20
iHigh Virtual Academy	School	21
Old Town Academy K-8 Charter School	School	22
Point Loma High School	School	23
Roosevelt International Middle School	School	24
San Diego Business/Leadership	School	25
San Diego International Studies	School	26
San Diego Science and Technology	School	27

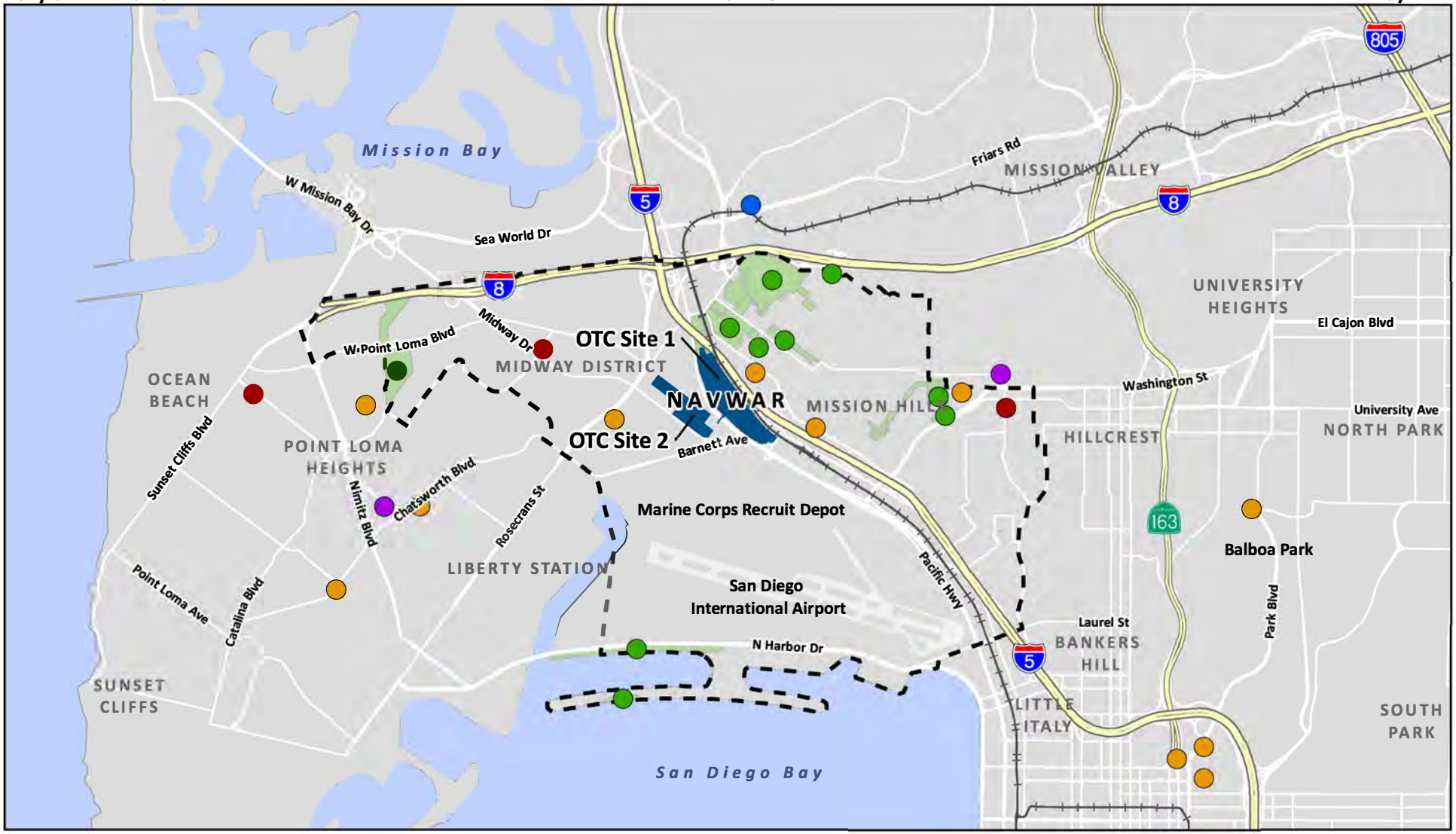

Figure 3.3-1. Potentially Affected Public Services

3.3.1 Schools

As indicated above in Table 3.1-5, in 2018, the ROI had a relatively low number of households with children and as shown below in Table 3.3-2, children who reside in the ROI are more likely to attend private school than rates for the state, county, and city. These factors tend to indicate that, historically, ROI households generate fewer public-school students per household than state, county, and city averages.

Table 3.3-2 Enrollment by School Type (Public or Private), 2017

Grade	*School Type*	*California*	*San Diego County*	*City of San Diego*	*ROI*
Kindergarten	Public	89.8%	90.8%	91.6%	73.9%
	Private	10.2%	9.2%	8.4%	26.1%
Grade 1 to 4	Public	91.5%	92.3%	90.5%	85.5%
	Private	8.5%	7.7%	9.5%	14.5%
Grade 5 to 8	Public	91.5%	92.3%	90.9%	79.2%
	Private	8.5%	7.7%	9.1%	20.8%
Grade 9 to 12	Public	92.1%	92.3%	90.4%	88.8%
	Private	7.9%	7.7%	9.6%	11.2%

Legend: % = percent
Source: U.S. Census Bureau, 2018.

Public-school student generation rates for single-family and multi-family housing units in Old Town San Diego are shown in Table 3.3-3. Single-family units generated more than twice the number of students than multi-family units (0.193 students per unit compared to 0.072 students per unit). Multi-family units generated a higher rate of K-5 (elementary school) students (0.031 per housing unit) than 6-8 (middle school) students (0.019) and 9-12 (high school) students (0.022). As an example, if 100 new apartment (multi-family) units were developed, those units would generate 3.1 elementary school students, 1.9 middle school students, and 2.2 high school students; a total of 7.2 students.

Table 3.3-3 Potential Student Generation Per New Housing Unit

Community Plan Area	*Housing Type*	*Number of Existing Units*	*2016-2017 students*	*Student Generation Rate*
Old Town San Diego	Single-family	151	K-5: 11	K-5: 0.073
			6-8: 9	6-8: 0.060
			9-12: 9	9-12: 0.060
			K-12: 29	K-12: 0.193
Old Town San Diego	Multi-family	323	K-5: 10	K-5: 0.031
			6-8: 6	6-8: 0.019
			9-12: 7	9-12: 0.022
			K-12: 23	K-12: 0.072

Source: City of San Diego, 2018.

Table 3.3-4 shows enrollment data at potentially affected schools from the 2015-2016 school year to the 2018-2019 school year. Over that period, elementary school enrollment increased by 22, from 1,827 to 1,849 (1.2 percent increase); middle school enrollment declined by 81, from 1,845 to 1,764 (4.4 percent decline); while high school enrollment increased by 124, from 4,326 to 4,450 (2.9 percent increase).

Table 3.3-4 Student Enrollment at Potentially Affected Schools

	2015-2016	*2016-2017*	*2017-2018*	*2018-2019*
Dewey Elementary	308	345	386	377
Grant K-8	699	732	747	721
Dana 5th and 6th	820	801	768	751
Elementary School Total	**1,827**	**1,878**	**1,901**	**1,849**
Correia Middle	832	775	761	775
Roosevelt International Middle	1,013	1,018	983	989
Middle School Total	**1,845**	**1,793**	**1,744**	**1,764**
Point Loma High	1,915	1,952	1,930	1,907
San Diego High Complex	2,411	2,391	2,450	2,543
San Diego Business/Leadership	686	614	560	531
San Diego International Studies	995	1,024	1,132	1,239
San Diego Science and Technology	730	753	758	773
High School Total	**4,326**	**4,343**	**4,380**	**4,450**

Note: iHigh Virtual Academy and Old Town Charter are not included in the table above. These schools have facilities within the ROI but would not necessarily be affected by new population in the ROI; students at these schools may be from anywhere within the San Diego Unified School District.

Source: Ed-Data, 2020.

Table 3.3-5 shows data on the number of teachers at potentially affected schools from the 2015-2016 school year to the 2017-2018 school year (2018-2019 data are not available). Over that period, the number of elementary school teachers increased by 2, from 89 to 91 (a 2.2 percent increase); the number of middle school teachers declined by 4, from 87 to 83 (a 4.6 percent decline); while the number of high school teachers increased by 36, from 217 to 253 (a 16.6 percent increase).

Table 3.3-5 Teachers at Potentially Affected Schools

	2015-2016	*2016-2017*	*2017-2018*	*2018-2019*
Dewey Elementary	18	18	21	NA
Grant K-8	36	35	36	NA
Dana 5th and 6th	35	34	34	NA
Elementary School Total	**89**	**87**	**91**	NA
Correia Middle	36	35	34	NA
Roosevelt International Middle	51	51	49	NA
Middle School Total	**87**	**86**	**83**	NA
Point Loma High	89	89	88	NA
San Diego High Complex	128	121	165	NA
San Diego Business/Leadership	42	38	50	NA
San Diego International Studies	50	45	67	NA
San Diego Science and Technology	36	38	48	NA
High School Total	**217**	**210**	**253**	NA

Legend: NA = not available.

Source: Ed-Data, 2020.

Table 3.3-6 shows student-teacher ratios (i.e., number of enrolled students per teacher) at potentially affected schools. Over that period, the student-teacher ratio at elementary schools increased from 20.5 to 20.9 (by 1.8 percent), declined from 21.2 to 21.0 (by 0.9 percent) at middle schools; and declined from 19.9 to 17.3 (by 13.2 percent) at high schools. For school year 2017-2018, the national average student-teacher ratio was 15.8 (National Education Association, 2019), which tends to be better than for most potentially affected schools.

Table 3.3-6 Student-Teacher Ratios at Potentially Affected Schools

	2015-2016	*2016-2017*	*2017-2018*
Dewey Elementary	17.1	19.2	18.4
Grant K-8	19.4	20.9	20.8
Dana 5th and 6th	23.4	23.6	22.6
Elementary School Total	**20.5**	**21.6**	**20.9**
Correia Middle	23.1	22.1	22.4
Roosevelt International Middle	19.9	20.0	20.1
Middle School Total	**21.2**	**20.8**	**21.0**
Point Loma High	21.5	21.9	21.9
San Diego High Complex	18.8	19.8	14.8
San Diego Business/Leadership	16.3	16.2	11.2
San Diego International Studies	19.9	22.8	16.9
San Diego Science and Technology	20.3	19.8	15.8
High School Total	**19.9**	**20.7**	**17.3**

Source: Ed-Data, 2020.

Despite generally worse student-teacher ratios relative to the national average, as shown in Table 3.3-7, potentially affected schools are generally operating below capacity (i.e., they can have more students without stressing their academic mission). Potentially affected elementary schools, as of the 2017-2018 school year, had remaining capacity for an additional 539 students, middle schools had remaining capacity for 728 additional students, and high schools had remaining capacity for an additional 498 students.

Table 3.3-7 Remaining Capacity at Potentially Affected Schools, 2017-2018 School Year

	Capacity	*Enrollment 2017-2018*	*Remaining Capacity*
Dewey Elementary	441	386	55
Grant K-8	772	747	25
Dana 5th and 6th	1,227	768	459
Elementary School Total	**2,440**	**1,901**	**539**
Correia Middle	1,037	761	276
Roosevelt International Middle	1,435	983	452
Middle School Total	**2,472**	**1,744**	**728**
Point Loma High	2,100	1,930	170
San Diego High Complex	2,778	2,450	328
San Diego Business/Leadership	885	560	325
San Diego International Studies	1055	1132	-77
San Diego Science and Technology	838	758	80
High School Total	**4,878**	**4,380**	**498**

Source: Voice of San Diego, 2019.

3.3.2 Police

The City of San Diego Police Department provides public safety services to the City of San Diego; in 2017 the department had 1,752 police officers (Federal Bureau of Investigation, 2017). The ROI is served by the City of San Diego Police Department's Western Division, one of nine divisions, with its station located approximately 1.0 mile from project site (see Figure 3.3-1). As of February 28, 2020, the Western Division had 101 sworn officers (City of San Diego, 2020), for a service population of approximately 129,709 (San Diego Police Department 2020)—a rate of 1,284 in population per sworn officer (or 0.78 sworn officers per 1,000 in population).

Table 3.3-8 shows crime rates (number of crimes per 1,000 in population) for the U.S., California, and the City of San Diego for years 2015 to 2018. Crimes rates in California tended to exceed the national rates while crime rates for San Diego tended to be lower than national rates. Neighborhoods within the ROI tended to have higher crime rates than national, state, and city rates. The Old Town Neighborhood, in particular, has experienced high crime rates with a 2018 crime rate more than seven times that of San Diego.

Table 3.3-8 Crime Rates[1], 2015-2018

	2015	*2016*	*2017*	*2018*
U.S.	28.74	28.49	27.58	25.80
California	30.56	29.95	29.59	28.28
San Diego	25.39	24.40	22.38	23.08
Old Town Neighborhood	161.85	158.05	149.43	165.42
Midway Neighborhood	68.33	72.94	68.86	61.39
Mission Hills Neighborhood	32.14	27.5	28.78	25.41

Note: [1] The crime rate is equal to number of crimes per 1,000 in population.
Source: City of San Diego, 2015; City of San Diego, 2016; City of San Diego, 2017b; City of San Diego, 2018; City of San Diego, 2019a; Federal Bureau of Investigation, 2019 (for U.S. and California).

Detailed crime statistics for the Western Division are presented in Table 3.3-9.

Table 3.3-9 Crime Statistics for San Diego Police Department's Western Division, 2015-2019

	2015	*2016*	*2017*	*2018*	*2019*
Murder	1	6	1	9	5
Rape	66	84	96	91	75
Armed Robbery	60	61	55	68	86
Strong Arm Robbery	132	115	135	119	105
Aggravated Assault	455	414	423	397	460
Total Violent Crime	**714**	**680**	**710**	**684**	**731**
Residential Burglary	444	374	283	305	310
Commercial Burglary	225	240	212	206	246
Total Burglary	669	614	495	511	556
Theft >= $400	1,403	1,380	1,328	1,457	1,432
Theft < $400	1,769	1,550	1,491	1,441	1,473
Total Thefts	3,172	2,930	2,819	2,898	2,905
Motor Vehicle Theft	609	691	611	606	626
Total Property Crime	**4,450**	**4,235**	**3,925**	**4,015**	**4,087**

Source: Automated Regional Justice Information System, 2020.

Table 3.3-10 provides arrest data for the ROI, by Census Tract for 2017. Three of the 10 Census Tracts in the ROI, including the location of the Proposed Action alternatives (Census Tract 65), are considered high crime areas. The remaining seven Census Tracts are well below the average number of arrests for Census Tracts in San Diego.

Table 3.3-10 Part 1 and Part 2[1] Arrests by Census Tract in the ROI, 2017

	Arrests	*% of City Tract Average[2]*
Census Tract 1	84	46.1%
Census Tract 2.02	147	80.7%
Census Tract 61	115	63.1%
Census Tract 62	51	28.0%
Census Tract 63	22	12.1%
Census Tract 65*	1,809	992.7%
Census Tract 66	120	65.9%
Census Tract 68.01	125	68.6%
Census Tract 68.02*	447	245.3%
ROI Total	**3,879**	
City Tract Average	**182.2**	

Note: [1] Part 1 crimes are major offenses including murder, rape, robbery, aggravated assault, burglary/theft, and arson. Pat 2 crimes are less serious offenses including simple assault, fraud, embezzlement, vandalism, prostitution, drug abuse, and driving under the influence.
[2].Estimate of arrests in a particular census tract as a percentage of the average of all tracts in the city; 120% or above is considered a high crime area as indicated by *.
Legend: % = percent
Source: Automated Regional Justice Information System, 2017.

3.3.3 Fire-Rescue

The San Diego Fire-Rescue Department, as of 2018, covered an area of 343 square miles and a population estimated at 1.4 million. The department has 52 stations, 9 permanent lifeguard stations, 892 uniformed personnel (including firefighters and Emergency Medical Technicians), 98 permanent lifeguard personnel, and 246 civilian personnel. The number of uniformed personnel in comparison to population implies a ratio of 1 person in uniform per 1,570 in population.

Out of approximately 160,000 incidents that the department responded to, 69.1 percent were emergency medical response, 9.4 percent were urgent medical response, 9.2 percent were non-emergency medical response, 7.2 percent were hazard response, and 3.9 percent were fire response (San Diego Fire-Rescue Department, 2020).

The station nearest to the site of the Proposed Action alternatives is San Diego Fire-Rescue Station 20, which is located approximately 1.0 mile away; other nearby stations include Number 8 and 15 (see Figure 3.3-1). Data on the type of incident's responded to by these nearby stations is shown in Table 3.3-11. The proportion of station responses to the site of the Proposed Action alternatives are presented in Table 3.3-12; in general, the stations located near the site of the Proposed Action alternatives

responded to calls in Old Town and Midway a relatively small portion of the time (on average 6.2 percent of combined Station responses went to Old Town or Midway).

Table 3.3-11 San Diego Fire-Rescue Department Responses of Stations 8, 15, and 20 to Old Town and Midway, 2016

	Fire	*Rescue*	*Emergency Medical Response*	*Urgent Medical Response*	*Non-emergency Medical Response*	*Hazard*	*Service*	*Total*
Station 8	296	45	3,154	292	361	352	6	**4,506**
Station 15	189	21	1,869	182	151	163	10	**2,585**
Station 20	433	119	4,427	399	374	357	14	**6,123**

Source: City of San Diego, 2017a.

Table 3.3-12 San Diego Fire-Rescue Department Responses of Stations 8, 15, and 20 to Old Town and Midway, 2016

	Responses	*% of Station Responses*
Station 8	123	4.30%
Station 15	5	0.20%
Station 20	442	10.30%
Total	**570**	**6.20%**

Legend: % = percent
Source: City of San Diego, 2017a.

3.3.4 Libraries

Library services are provided by the San Diego Public Library and its branch locations. The Old Town community is served by two branch locations, the Mission Hills/Hillcrest Branch Library located in the Uptown community and the Point Loma/Hervey Library located in the Peninsula community. The Central Library in Downtown is accessible from Old Town via the trolley (City of San Diego 2018). As of Fiscal Year 2019, there were 445 library employees in the City of San Diego (City of San Diego, 2019b), serving a population of approximately 1.4 million people (a ratio of 3.2 employees per 10,000 in population). Library locations are shown in Figure 3.3-1.

3.3.5 Parks

The City of San Diego Parks and Recreation Department is responsible for the management of 42,263 acres of park land, joint use, and open space. Regional parks include Balboa Park (1,172 acres), Mission Bay (4,235 acres), Mission Trails Regional Park (9,800 acres), and Otay Valley Regional park (2,029 acres). The department also manages 13 miles of shoreline parks (including 65 view areas), the San Diego-La Jolla Underwater Park (5,977 acres of ocean bottom and tidelands), 58 recreation centers, 3 municipal golf courses, and 13 city pools (San Diego Parks and Recreation 2020). Figure 3.3-1 shows parks nearby the Proposed Action alternatives.

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4 Impacts of the Proposed Action Alternatives

4.1 Population Change

4.1.1 Construction

The construction industry of San Diego County, and surrounding areas, is sufficient to supply the necessary workforce to complete construction projects without additional population relocating to the county; therefore, no permanent population increase is anticipated in association with construction for the Proposed Action alternatives.

4.1.2 Operations

Table 4.1-1 shows the cumulative change in population that would be associated with the development of new project-related residential units. Based on the project timeline, as housing units are built and residents take occupancy, population would grow continuously (Figure 4.1-1), while somewhat sporadically (Figure 4.1-2), until new developments reach maximum occupancy in 2050. Alternative 4 includes the most potential housing units and highest population at maximum occupancy (14,364 in new population by 2050), with this level of population anticipated to remain stable for the foreseeable future.

Table 4.1-1 Population Change[1,2] by Alternative, 2025-2050

	2025	*2035*	*2045*	*2050[3]*
Alternative 2	0	3,156	7,943	9,480
Alternative 3	0	2,104	5,295	6,320
Alternative 4	0	4,782	12,034	14,364
Alternative 5	0	3,826	9,627	11,491

Notes: [1] Each value represents a point in time. Therefore, values cannot be added.
[2] Values apply to population in project-related housing units, the ROI, the City of San Diego, and San Diego County.
[3] Values for the year 2050 represents the maximum anticipated occupancy of newly developed residential units, and these values would be expected to continue in a steady state for the foreseeable future.

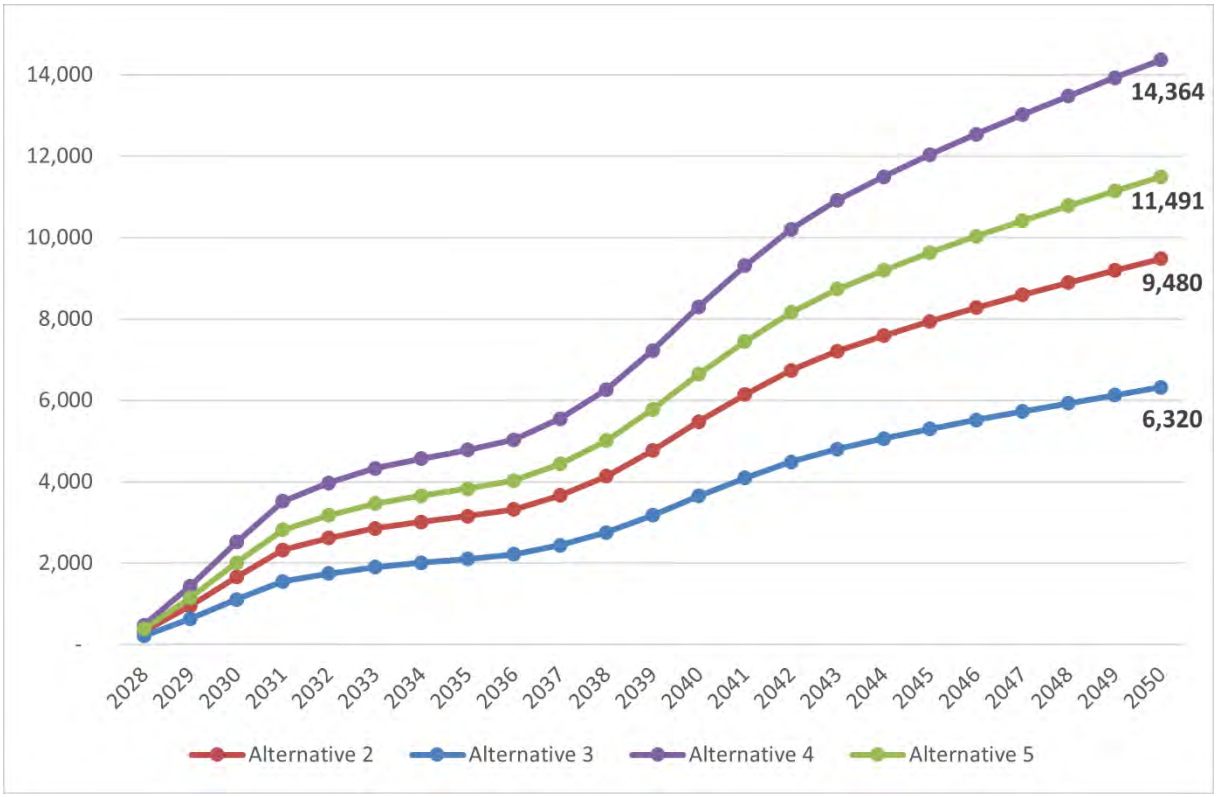

Figure 4.1-1 Population Change by Alternative, 2028-2050

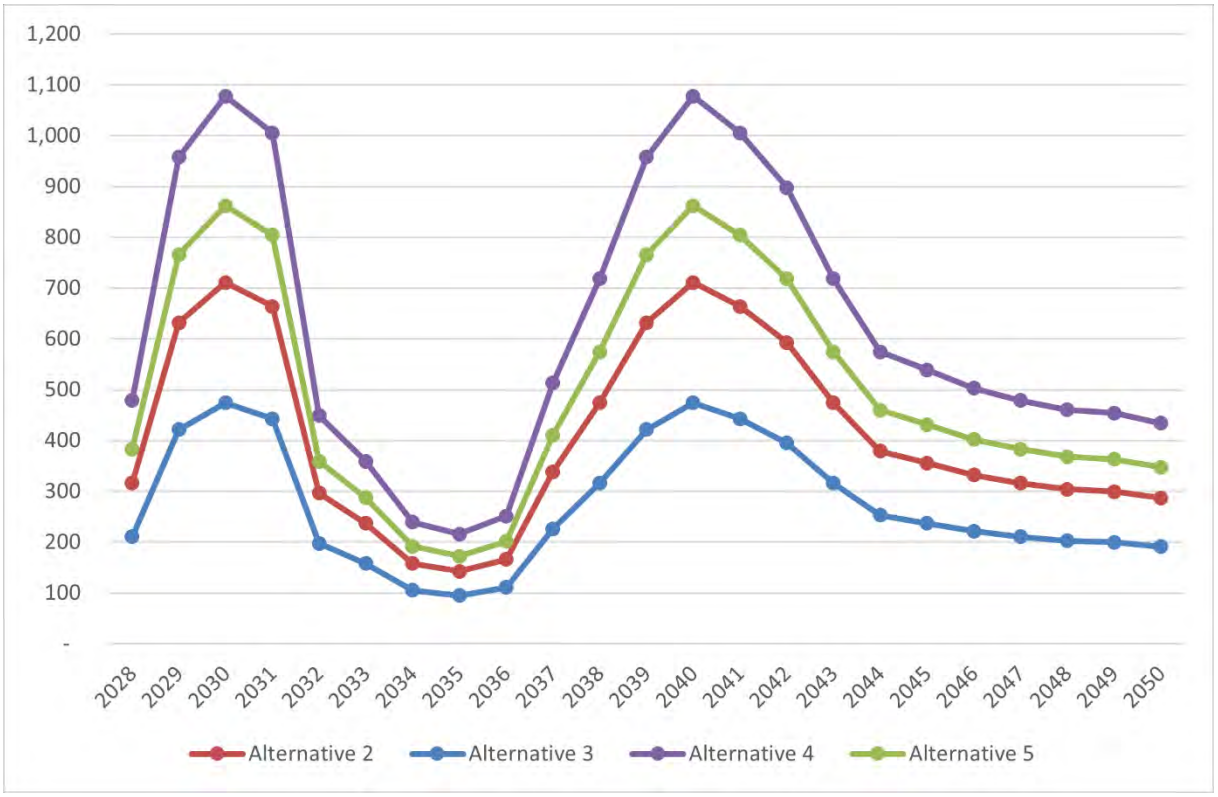

Figure 4.1-2 Year-over-year Change in Population by Alternative, 2028-2050

4.2 Economic Impacts

4.2.1 Employment and Income

4.2.1.1 Construction

Navy OTC

Construction of the Navy facilities would occur from 2021 to 2025 and would generate jobs in the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-1, under Alternative 1, Navy OTC recapitalization would generate a total of 938 jobs annually, including 528 direct jobs. Under all other alternatives, construction of a new Navy OTC facility would generate 2,651 jobs annually, including 1,782 direct jobs.

Table 4.2-1 Jobs from Navy OTC Construction, Annual Averages, 2021-2025

	Alternative 1	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	528	1,782	1,782	1,782	1,782
Indirect	199	268	268	268	268
Induced	212	600	600	600	600
Total	**938**	**2,651**	**2,651**	**2,651**	**2,651**

Table 4.2-2 shows the labor income that would be earned in those jobs. Under Alternative 1, Navy OTC recapitalization would generate a total of $58.3 million annually from 2021 to 2025, including $34.9 million in direct labor income. Under all other alternatives, construction of a new Navy OTC facility would generate $165.5 million in labor income annually, including $114.9 million in direct labor income.

Table 4.2-2 Labor Income from Navy OTC Construction, Annual Averages, 2021-2025

	Alternative 1	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$34,863,258	$114,891,113	$114,891,113	$114,891,113	$114,891,113
Indirect	$12,352,478	$19,261,255	$19,261,255	$19,261,255	$19,261,255
Induced	$11,063,500	$31,379,145	$31,379,145	$31,379,145	$31,379,145
Total	**$58,279,235**	**$165,531,513**	**$165,531,513**	**$165,531,513**	**$165,531,513**

Residential

Construction of residential units would occur from 2026 to 2049 and would generate jobs in the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-3, Alternative 4 would have the largest effects generating a total of 1,299 jobs annually, including 906 direct jobs.

Table 4.2-3 Jobs from Residential Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	598	399	906	725
Indirect	66	44	99	80
Induced	194	129	293	235
Total	**857**	**572**	**1,299**	**1,039**

Table 4.2-4 shows the labor income that would be earned in those jobs. Alternative 4 would have the largest effects generating a total of $80.9 million in labor income annually, including $59.5 million in direct labor income.

Table 4.2-4 Labor Income from Residential Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$39,243,708	$26,162,472	$59,460,164	$47,568,132
Indirect	$4,040,873	$2,693,916	$6,122,535	$4,898,028
Induced	$10,121,309	$6,747,540	$15,335,317	$12,268,254
Total	**$53,405,891**	**$35,603,927**	**$80,918,017**	**$64,734,414**

Commercial

Construction of commercial space would occur from 2026 to 2049 and would generate jobs in the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-5, Alternative 4 would have the largest effects generating a total of 202 jobs annually, including 136 direct jobs.

Table 4.2-5 Jobs from Commercial Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	104	68	136	97
Indirect	16	10	20	15
Induced	35	23	46	33
Total	**155**	**101**	**202**	**144**

Table 4.2-6 shows the labor income that would be earned in those jobs. Alternative 4 would have the largest effects generating a total of $12.6 million in labor income annually, including $8.8 million in direct labor income.

Table 4.2-6 Labor Income from Commercial Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$6,704,799	$4,362,235	$8,750,978	$6,258,112
Indirect	$1,124,046	$731,320	$1,467,083	$1,049,159
Induced	$1,831,220	$1,191,417	$2,390,074	$1,709,220
Total	**$9,660,064**	**$6,284,971**	**$12,608,135**	**$9,016,492**

Transit Center

Construction of the transit center would occur from 2026 to 2035 and would generate jobs in the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-7, transit center construction would be the same under Alternative 4 and Alternative 5 (not occurring under the other alternatives) and would generate 2,455 jobs annually, including 1,558 direct jobs.

Table 4.2-7 Jobs from Transit Center Construction, Annual Averages, 2026-2035

	Alternative 4	*Alternative 5*
Direct	1,558	1,558
Indirect	305	305
Induced	592	592
Total	**2,455**	**2,455**

Table 4.2-8 shows the labor income that would be earned in those jobs. Under Alternative 4 and Alternative 5 construction would generate a total of $163.3 million in labor income annually, including $111.6 million in direct labor income.

Table 4.2-8 Labor Income from Transit Center Construction, Annual Averages, 2026-2035

	Alternative 4	*Alternative 5*
Direct	$111,552,313	$111,552,313
Indirect	$20,780,002	$20,780,002
Induced	$30,918,601	$30,918,601
Total	**$163,250,916**	**$163,250,916**

4.2.1.2 Operations

Navy OTC

It is anticipated that Navy capabilities at OTC will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would not in and of itself spur additional Navy OTC operations growth. Therefore, no operations impacts, in terms of employment or income, are attributed to Navy OTC operations.

Residential

Table 4.2-9 shows the number of estimated jobs that would be generated annually by rents paid at new residential developments. These jobs would include employment at the residential buildings (direct jobs), indirect jobs generated through the operations expenditures of the new developments (on things such as garbage collection and other maintenance), and jobs generated by the expenditures made by the holders of the direct and indirect jobs. Estimates are for full build-out, assuming a 79.8 percent occupancy rate, which is expected to occur initially in the year 2050 and continue for the foreseeable future. Rent paid under Alternative 4 would have the largest effects, 618 total jobs annually including 442 direct jobs.

Table 4.2-9 Jobs from Rents Paid, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	292	195	442	354
Indirect	47	32	72	57
Induced	68	46	104	83
Total	**408**	**272**	**618**	**494**

Table 4.2-10 shows the estimated income from jobs that would be generated annually by rents paid at new residential developments. This income would be generated by the new employment identified in the previous table. Rent paid under Alternative 4 would have the largest effects, $27.8 million in total labor income annually including $17.6 million in direct labor income.

Table 4.2-10 Labor Income from Rents Paid, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$11,600,037	$7,733,358	$17,575,814	$14,060,651
Indirect	$3,207,732	$2,138,488	$4,860,200	$3,888,160
Induced	$3,571,000	$2,380,667	$5,410,606	$4,328,485
Total	**$18,378,770**	**$12,252,513**	**$27,846,621**	**$22,277,297**

As indicated in Section 4.1.2, the population of San Diego County would increase under each alternative. As that population moves into the county, the expenditures of that new population would generate induced employment; the estimated jobs that would be generated under each alternative are shown in Table 4.2-11. Expenditures of new population under Alternative 4 would have the largest effects, 6,713 induced jobs annually.

Table 4.2-11 Jobs from Expenditures of New Population, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	0	0	0	0
Indirect	0	0	0	0
Induced	4,431	2,954	6,713	5,371
Total	**4,431**	**2,954**	**6,713**	**5,371**

Table 4.2-12 shows the estimated income from jobs that would be generated annually by expenditures of population new to San Diego County. This income would be generated by the new employment identified in the previous table. Expenditures of new population under Alternative 4 would have the largest effects, $351.5 million in induced labor income annually.

Table 4.2-12 Labor Income from Expenditures of New Population, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$0	$0	$0	$0
Indirect	$0	$0	$0	$0
Induced	$232,003,697	$154,669,132	$351,520,753	$281,216,602
Total	**$232,003,697**	**$154,669,132**	**$351,520,753**	**$281,216,602**

Table 4.2-13 shows total jobs from residential development (from rents paid and expenditures of new population combined) at full build-out. Impacts are greatest under Alternative 4 because that alternative would have the highest level of population growth and the expenditures of that new population would be the primary generator of the 7,331 total annual jobs.

Table 4.2-13 Total Jobs from Resdiential Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	292	195	442	354
Indirect	47	32	72	57
Induced	4,499	3,000	6,817	5,454
Total	**4,838**	**3,227**	**7,331**	**5,865**

Table 4.2-14 shows total income from jobs generated through residential development (from rents paid and expenditures of new population combined) at full build-out. Impacts are greatest under Alternative 4 because that alternative would have the highest level of population growth and the expenditures of that new population would be the primary generator of the $379.4 million in total annual labor income.

Table 4.2-14 Total Income from Resdiential Operations, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$11,600,037	$7,733,358	$17,575,814	$14,060,651
Indirect	$3,207,732	$2,138,488	$4,860,200	$3,888,160
Induced	$235,574,697	$157,049,799	$356,931,359	$285,545,087
Total	**$250,382,466**	**$166,921,645**	**$379,367,373**	**$303,493,898**

Commercial

Table 4.2-15 shows the number of jobs at the new office space under each alternative at full build-out, 2050 forward. Direct jobs would be located in the new office space, indirect jobs would be generated through the expenditures of businesses that occupy the new office space, and induced jobs would be generated through the personal expenditures of the holders of the new jobs. Because Alternative 4 would include the most office space, that alternative would have the largest effects, 9,331 total jobs including 4,536 direct (located within the new office space).

Table 4.2-15 Jobs from New Office Space, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	3,361	2,184	4,536	2,857
Indirect	1,832	1,190	2,472	1,557
Induced	1,721	1,118	2,323	1,463
Total	**6,914**	**4,493**	**9,331**	**5,877**

Table 4.2-16 shows income that would be generated by the jobs at the new office space under each alternative at full build-out. This level of income would be expected around the year 2050 and continue on an annual basis for the foreseeable future.

Table 4.2-16 Income from New Office Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$260,652,493	$169,333,915	$351,793,266	$221,496,349
Indirect	$117,843,999	$76,570,188	$159,017,746	$100,158,540
Induced	$89,975,212	$58,455,883	$121,429,180	$76,463,502
Total	**$468,471,704**	**$304,359,986**	**$632,240,192**	**$398,118,392**

Table 4.2-17 shows the number of jobs at new retail space under each alternative at full build-out, 2050 forward. Direct jobs would be located in the new retail space, indirect jobs would be generated through the expenditures of businesses that occupy the new retail space, and induced jobs would be generated through the personal expenditures of the holders of the new jobs. Because Alternative 4 would include the most retail space, that alternative would have the largest effects, 839 total jobs including 599 direct (located within the new retail space).

Table 4.2-17 Jobs from New Retail Space, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	433	313	599	480
Indirect	71	51	98	79
Induced	102	74	141	113
Total	**606**	**438**	**839**	**672**

Table 4.2-18 shows income that would be generated by the jobs at new retail space under each alternative at full build-out (around the year 2050). This level of income would be expected around the year 2050 and continue on an annual basis for the foreseeable future.

Table 4.2-18 Income from New Retail Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$17,901,686	$12,921,789	$24,766,597	$19,840,041
Indirect	$4,699,540	$3,399,098	$6,506,794	$5,208,323
Induced	$5,339,221	$3,855,417	$7,388,067	$5,917,206
Total	**$27,940,446**	**$20,176,303**	**$38,661,459**	**$30,965,570**

Table 4.2-19 shows the number of jobs at new hotel space under each alternative at full build-out. Direct jobs would be located in the new hotel space, indirect jobs would be generated through hotel operations expenditures, and induced jobs would be generated through the personal expenditures of the holders of the new jobs. Because Alternative 4 would include the most hotel space, that alternative would have the largest effects, 740 total jobs including 487 direct (located within the new retail space).

Table 4.2-19 Jobs from New Hotel Space, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	437	269	487	487
Indirect	105	64	117	117
Induced	122	75	136	136
Total	**664**	**409**	**740**	**740**

Table 4.2-20 shows income that would be generated by the jobs at new hotel space under each alternative when the planned hotel becomes operational. This level of income would be expected on an annual basis from the time the hotel becomes operational, for the foreseeable future.

Table 4.2-20 Income from New Hotel Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$20,546,175	$12,647,416	$22,896,996	$22,896,996
Indirect	$6,615,369	$4,072,161	$7,372,276	$7,372,276
Induced	$6,398,490	$3,938,659	$7,130,583	$7,130,583
Total	**$33,560,034**	**$20,658,236**	**$37,399,855**	**$37,399,855**

Table 4.2-21 shows total jobs from commercial operations (office, hotel, and retail space) at full build-out. Because Alternative 4 would include the most commercial space, that alternative would have the largest effects, 10,910 total jobs including 5,622 direct (located within the new commercial space).

Table 4.2-21 Total Jobs from Commercial Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	4,231	2,766	5,622	3,824
Indirect	2,007	1,306	2,687	1,752
Induced	1,946	1,268	2,601	1,713
Total	**8,184**	**5,339**	**10,910**	**7,289**

Table 4.2-22 shows total income from jobs generated through commercial operations (from rents paid and expenditures of new population combined) at full build-out. Because Alternative 4 would include the most commercial space, that alternative would have the largest effects, $708.3 million in total labor income including $399.5 million direct (earned through jobs located in new commercial space).

Table 4.2-22 Total Labor Income from Commercial Operations, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$299,100,353	$194,903,120	$399,456,859	$264,233,386
Indirect	$129,158,908	$84,041,447	$172,896,816	$112,739,139
Induced	$101,712,923	$66,249,958	$135,947,831	$89,511,291
Total	**$529,972,185**	**$345,194,525**	**$708,301,506**	**$466,483,817**

Transit Center

Similar to Navy OTC, it is anticipated that transit capabilities will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would not in and of itself spur additional transit operations growth. Therefore, no operations impacts, in terms of employment or income, are attributed to transit center operations.

4.2.2 Economic Activity

4.2.2.1 Construction

Navy OTC

Construction of Navy facilities would occur from 2021 to 2025 and would generate GCP stemming from the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-23, under Alternative 1, Navy OTC recapitalization would generate a total of $94.7 million in GCP annually, including $51.4 million in direct GCP. Under all other alternatives, construction of a new Navy OTC facility would generate $232.3 million in GCP annually, including $140.6 million in direct GCP.

Table 4.2-23 Gross County Product from Navy OTC Construction, Annual Averages, 2021-2025

	Alternative 1	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$51,352,355	$140,583,710	$140,583,710	$140,583,710	$140,583,710
Indirect	$22,000,997	$31,144,959	$31,144,959	$31,144,959	$31,144,959
Induced	$21,352,837	$60,562,059	$60,562,059	$60,562,059	$60,562,059
Total	**$94,706,189**	**$232,290,728**	**$232,290,728**	**$232,290,728**	**$232,290,728**

Residential

Construction of new residential units would occur from 2026 to 2049 and would generate GCP stemming from the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-24, Alternative 4 would result in larger effects than other alternatives with a total of $127.0 million in GCP annually.

Table 4.2-24 Gross County Product from Residential Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$57,516,443	$38,344,295	$87,146,125	$69,716,900
Indirect	$6,758,712	$4,505,808	$10,240,473	$8,192,378
Induced	$19,533,566	$13,022,378	$29,596,313	$23,677,050
Total	**$83,808,721**	**$55,872,481**	**$126,982,910**	**$101,586,328**

Commercial

Construction of new commercial space would occur from 2026 to 2049 and would generate GCP stemming from the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-25, Alternative 4 would result in larger effects than other alternatives with a total of $17.7 million in GCP annually.

Table 4.2-25 Gross County Product from Commercial Construction, Annual Averages, 2026-2049

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$8,204,164	$5,337,743	$10,707,922	$7,657,587
Indirect	$1,817,553	$1,182,525	$2,372,236	$1,696,464
Induced	$3,534,272	$2,299,446	$4,612,866	$3,298,812
Total	**$13,555,989**	**$8,819,714**	**$17,693,024**	**$12,652,863**

Transit Center

Construction of the transit center would occur from 2026 to 2035 and would generate GCP stemming from the construction sector (direct), industries that supply the construction sector (indirect) and in many other industries where jobholders make expenditures (induced). As shown in Table 4.2-26, both alternatives would result in a total of $171.9 million in GCP annually.

Table 4.2-26 Gross County Product from Transit Center Construction, Annual Averages, 2026-2035

	Alternative 4	*Alternative 5*
Direct	$79,641,059	$79,641,059
Indirect	$32,603,243	$32,603,243
Induced	$59,681,944	$59,681,944
Total	**$171,926,247**	**$171,926,247**

4.2.2.2 Operations

Navy OTC

It is anticipated that Navy capabilities at OTC will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would

not in and of itself spur additional Navy OTC growth. Therefore, no operations impacts, in terms of GCP, are attributed to Navy OTC operations.

Residential

Table 4.2-27 shows estimated GCP that would be generated annually by rents paid at new residential developments, from 2050 forward. This economic activity would be generated through the operations expenditures (including labor costs) at the new developments. Because Alternative 4 would include the most residential units, that alternative would have the largest effects, $291.9 million in total GCP including $273.6 million direct, annually.

Table 4.2-27 Gross County Product from Rents Paid, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$180,565,115	$120,376,743	$273,583,508	$218,866,806
Indirect	$5,205,104	$3,470,069	$7,886,521	$6,309,217
Induced	$6,873,433	$4,582,289	$10,414,293	$8,331,434
Total	**$192,643,652**	**$128,429,102**	**$291,884,322**	**$233,507,458**

Table 4.2-28 shows the estimated GCP from jobs that would be generated annually by expenditures of new population to San Diego County. The expenditures would induce economic activity by increasing the level of personal expenditures on local goods and services. Because Alternative 4 would include the most additional population, that alternative would have the largest effects, $453.9 million in induced GCP, annually.

Table 4.2-28 Gross County Product from Expenditures of New Population, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$0	$0	$0	$0
Indirect	$0	$0	$0	$0
Induced	$299,571,064	$199,714,042	$453,895,550	$363,116,440
Total	**$299,571,064**	**$199,714,042**	**$453,895,550**	**$363,116,440**

Table 4.2-29 shows total GCP from residential development (from rents paid and expenditures of new population combined) at full build-out. Because Alternative 4 would result in the largest residential developments and most new population to San Diego County, impacts are larger than other alternatives, over $745 million in total GCP with most of that induced through the spending of new population.

Table 4.2-29 Total Gross County Product from Residential Operations, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$180,565,115	$120,376,743	$273,583,508	$218,866,806
Indirect	$5,205,104	$3,470,069	$7,886,521	$6,309,217
Induced	$306,444,497	$204,296,331	$464,309,843	$371,447,874
Total	**$492,214,716**	**$328,143,143**	**$745,779,872**	**$596,623,897**

Commercial

Table 4.2-30 shows the GCP from new office space under each alternative at full build-out, 2050 forward. This economic activity would be generated through the operations expenditures of business located in the new office space (including labor costs). Because Alternative 4 would include the most office space, that alternative would have the largest effects, $1.0 billion in total GCP including $552.1 million direct, annually.

Table 4.2-30 Total Gross County Product from New Office Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$408,932,110	$265,722,670	$552,099,184	$347,538,628
Indirect	$172,028,564	$111,779,027	$232,149,199	$146,213,538
Induced	$173,672,006	$112,832,741	$234,385,135	$147,591,396
Total	**$754,632,680**	**$490,334,438**	**$1,018,633,518**	**$641,343,563**

Table 4.2-31 shows the GCP from new office space under each alternative at full build-out. This economic activity would be generated through the operations expenditures of business located in the new retail space (including labor costs). Because Alternative 4 would include the most retail space, that alternative would have the largest effects, $63.7 million in total GCP including $38.9 million direct, annually.

Table 4.2-31 Total Gross County Product from New Retail Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$28,084,078	$20,285,276	$38,861,450	$31,122,574
Indirect	$7,649,398	$5,532,898	$10,590,277	$8,477,085
Induced	$10,308,373	$7,443,666	$14,264,059	$11,424,349
Total	**$46,041,848**	**$33,261,840**	**$63,715,786**	**$51,024,008**

Table 4.2-32 shows the GCP from new office space under each alternative at full build-out. This economic activity would be generated through the operations expenditures of the new hotel(s) (including labor costs). Because Alternatives 4 and 5 would include the most hotel space, those alternatives would have the largest effects, $61.9 million in total GCP including $37.3 million direct, annually.

Table 4.2-32 Total Gross County Product from New Hotel Space, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$33,472,695	$20,604,473	$37,302,523	$37,302,523
Indirect	$9,703,540	$5,973,117	$10,813,785	$10,813,785
Induced	$12,357,289	$7,606,661	$13,771,167	$13,771,167
Total	**$55,533,524**	**$34,184,252**	**$61,887,474**	**$61,887,474**

Table 4.2-33 shows total GCP from commercial operations (new office, retail, and hotel development) at full build-out. Because Alternative 4 would include the most commercial space, that alternative would have the largest effects, $1.14 billion in total GCP including $628.3 million direct, annually.

Table 4.2-33 Total Gross County Product from Commercial Operations, Annual Steady State, 2050 Forward (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Direct	$470,488,882	$306,612,419	$628,263,156	$415,963,725
Indirect	$189,381,502	$123,285,042	$253,553,262	$165,504,408
Induced	$196,337,668	$127,883,068	$262,420,361	$172,786,912
Total	**$856,208,052**	**$557,780,529**	**$1,144,236,779**	**$754,255,045**

Transit Center

Like Navy OTC, it is anticipated that transit capabilities will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would not in and of itself spur additional transit operations growth. Therefore, no operations impacts, in terms of GCP, are attributed to the transit center operations.

4.2.3 Housing

4.2.3.1 Construction

Since no new permanent population is anticipated with construction, no changes to housing demand, supply, or price would be anticipated.

4.2.3.2 Operations

Figure 4.2-1 shows the notional timeline for the development of housing units for each alternative. According to market analyses (London Moeder 2020), three separate housing developments would be constructed, and housing units would initially become available for occupancy toward the end of 2028 and new housing units would complete development toward the end of 2049 (with those becoming occupied in 2050).

Figure 4.2-3 shows the notional timeline for total rents paid at the new housing developments. The assessment of total rents paid assumes an average monthly rent of $3,013 and an occupancy rate of 79.8 percent (London Moeder 2020).

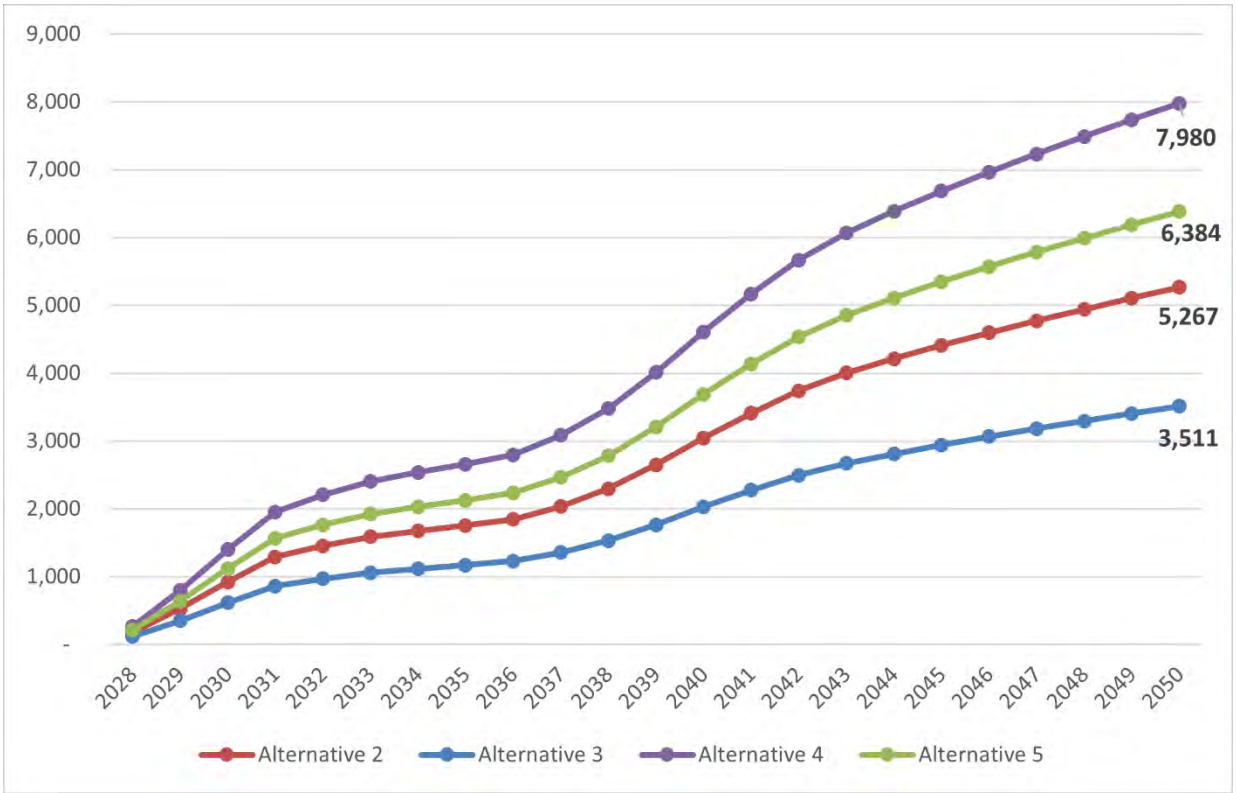

Figure 4.2-1 Occupied Housing Units

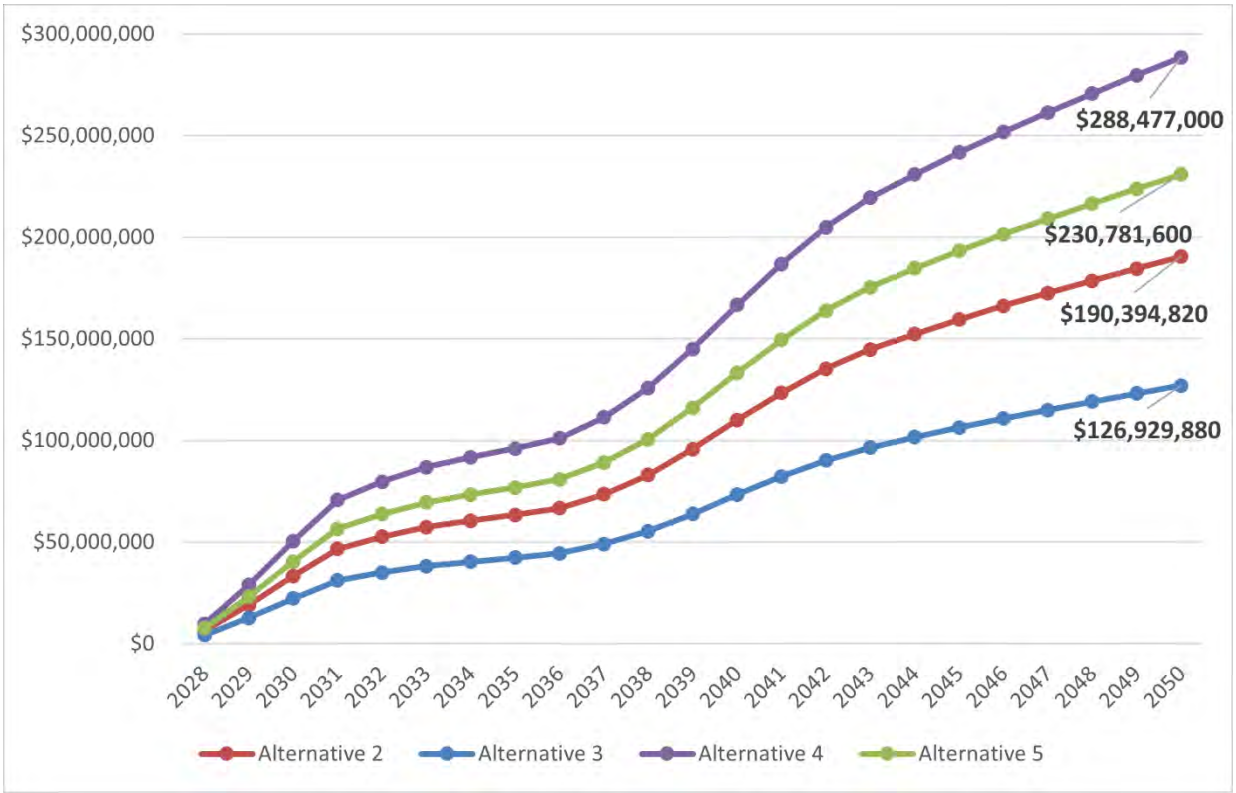

Figure 4.2-2 Total Rents Paid Annually (2020 dollars)

4.2.3.3 Affordability, gentrification, and displacement

Economic theory suggests that an increase in the quantity of a good at market price will, all else equal, lead to a reduction in the market price of that good. Housing is certainly an economic good, so it should hold that an increase in the quantity of housing units at market price should reduce the price of housing units. However, this situation is complicated by the fact that all else is never equal – markets, especially housing markets, which are non-homogeneous, dynamic, and respond to many factors including things such as elasticity of housing demand (discussed in Section 2.2.2.1), interest rates, inflation, expectations for future prices, and the tastes, preferences, and budgetary constraints of regional populations. As such, there is much disagreement on the question of whether an increase is supply of market rate housing units will lower or raise housing prices, and in turn improve or reduce the affordability of housing.

Those who oppose the simple assertion that increased supply will reduce prices do so with strong anecdotal evidence noting that, despite a severe pullback is sales price from 2007-2012, rents never declined, and it has been observable that city revitalizations in the U.S. in the 21st century have been accompanied by ever increasing rents, and that incomes have not kept up with rents, and that reduced affordability has been the rule. And furthermore, that this condition has been accompanied by gentrification and eventual displacement of low-income and minority residents.

Been, Ellen, and O'Regan (2018) generalize the arguments of those who refute the supply and demand theory and offer refutations. The discussion is further generalized below:

The first set of arguments sets forth that land is limited, and development is constrained by natural features (Angotti & Morese, 2016) and that it should be that a higher percentage (about half) of all housing units developed on private sites be developed as affordable units (Durkin, 2016), otherwise the reduction in supply of land (taken up by the market rate development) will displace potential future affordable housing units, thus reducing affordability in the long-term. Furthermore, these arguments assert that when high price housing is developed it often goes unoccupied because they are the second, third, or even fourth homes for the wealthy (Booth & Adam, 2017). Been, Ellen, and O'Regan (2018) counter these arguments by indicating that, while land is limited, it should not be assumed that land "where market rate housing (or a mixture of market rate and affordable housing) is proposed would otherwise be used entirely for affordable housing". They concede that some percentage of affordable units should accompany development of market rate housing but caution that if there is not enough market rate housing proposed then proposals will not pass a cost-benefit test and no new housing at all will be developed by the private sector.

The second set of arguments proposes that high price and low-price housing fall into entirely different markets (i.e., housing is heterogeneous) and the only possible way to improve affordability is through the development affordable units (Aquirre, Benke, Neugebaurer & Santiago, 2016). These arguments suggest a 'filtering fallacy' (Cohen 2016) that price effects of additional supply of market rate housing do not filter into affordable unit pricing, except maybe decades later when what were built as market rate units age and deteriorate into affordable units. Been, Ellen, and O'Regan (2018) concede that housing is heterogeneous but argue that price filtering is a "fairly quick" process because competition for lower priced housing is alleviated by the new market rate housing. They suggest imagining a condition where no new market rate housing is constructed and suggest that under such a condition prices in the high price market will be driven up to the point where those who would normally seek high priced housing instead seek affordable housing, thus pushing up the price of affordable housing and crowding lower

income people out of the market altogether (into a different housing market in a different area, i.e., displacement through gentrification).

The third set of arguments indicates that additional supply may lead to lower prices, but only for a brief period. Over time, higher income populations will in-migrate and drive prices as high, or higher, than they were before the market price housing was developed (Redmond, 2015). Additionally, lower rents caused by additional supply will induce latent demand as rates of household formation increase (i.e., those living with roommates or parents will form their own household), pushing prices back up (Gorham, 2009; Ellen & O'Flaherty, 2007). Been, Ellen, and O'Regan (2018) contend that this argument assumes that there is no constraint or cost associated with in-migration and household formation, while in practicality there clearly are constraints in terms of ability and willingness to move to a different area, willingness to increase the proportion of income spent or rents, and costs of moving. They further point out that mobility rates have declined sharply in the past several decades, indicating that the third set of arguments has been losing validity over time.

The fourth set of arguments suggests that new supply of market rate housing may reduce prices regionally, but; locally, prices will rise causing displacement in the immediately surrounding neighborhood (Atta-Mensah, 2017; Savitch-Lew, 2017; and Hankinson, 2017). These arguments are buoyed by discreet empirical evidence related to price increases in rental properties in blighted areas for which capital is spent to improve appearance and amenities (Diamond & McQuade, 2016; Schwartz, Ellen, Voicu & Schill, 2006). Been, Ellen, and O'Regan (2018) certainly agree that new market rate housing will lower prices on a regional basis but point out that there is no causal evidence that surrounding neighborhood rents increase when new market rate housing is built nearby. And they later point out that when new housing supply is limited, prices push upwards which has a more direct effect on displacement of low-income and minority residents (i.e., underdevelopment is more likely a cause of displacement than development is).

Understandably, as the theories would be very difficult to test, none the arguments against the simple assertion that increased supply will reduce prices provide empirical evidence. Furthermore, none of the arguments offered on either side touch on broader economic conditions (i.e., interest rates, inflation, rates of employment, wage rates, and rates of inflow for foreign investment), which can have outsized effects on housing markets. Even as both sides concede that housing is heterogeneous and that some affordable housing should be included in larger market rate developments, no mention is made that all classifications of real estate are strongly affected by macro factors. Nor any mention that clearly low interest rates and low inflation have contributed to the trend of prices not falling in concert with new supply. But, these macro factors, over the past several years, have contributed to the outcomes that have produced the anecdotal observations that increased supply does not reduce prices.

There is a "considerable body of empirical research showing less restrictive land use regulation is associated with lower prices" (Been, Ellen, and O'Regan, 2018); they cite Glaeser and Gyourko (2003), Gyourko and Molloy (2015), Kok, Monkkonen, and Quigley (2014), Jackson (2016), Zabel and Dalton (2011), and Glaser and Ward (2009) as examples of empirical studies that show limits on new market rate housing tend to push prices higher.

Upon investigation of the arguments (noting that empirical evidence and the law of supply and demand both suggest that increased supply will not push prices higher), this study generally accepts that the Proposed Action alternatives would not substantially reduce housing affordability in San Diego County. Furthermore, while expectations for future prices near the Proposed Action alternatives (in the

socioeconomic ROI) would have a tendency to push higher in anticipation of mixed use and transient oriented development, it may be difficult for that long-term expectation to filter into near-term rents while the area is in the midst of major construction (with associated noise and traffic). If rents in the ROI grow at a relatively slow rate during construction then, unless there are improvements to property that demand higher rent, rents there may grow at a rate below the city trend for an extended period, making the ROI less expensive relative to the city over that period, which would be counter to a situation where current ROI residents are displaced.

This study considers that macro factors can change, sometimes quickly, and furthermore considers the contrary (i.e., what if no market rate units were built when there were low interest and inflation rates) and expects that with less market rate development in San Diego, over time, there would be more displacement and more homelessness. The State of California incentivizes developers who provide a certain number of affordable units be built as a percentage of total units and it is anticipated that developers of OTC Site 1 and OTC Site 2 would take advantage of those incentives; however, if no market rate units are built on the sites then there would be no associated affordable units. There are no other proposals to develop OTC Site 1 or OTC Site 2, and hence no other proposals to build affordable housing units on the sites. So, the Proposed Action alternatives would increase the number of affordable units relative to a condition without it, would not be likely to result in gentrification or displacement, and would tend to improve local housing affordability in the short, medium, and long-term.

4.2.4 State and Local Government Revenue

4.2.4.1 Construction

Navy OTC

Table 4.2-34, Table 4.2-35, and Table 4.2-36 show state, county, and sub-county (primarily the City of San Diego) average annual revenue from construction of Navy facilities at OTC over the 2021 to 2025 period, for each alternative. Most revenue would accrue to the state government (about $5 million per year under Alternative 1 and $11.1 million per year under the other alternatives), county revenue would be approximately $645,000 per year under Alternative 1 and $1.1 million under the other alternatives, and sub-county revenue would be approximately $1.3 million per year under Alternative 1 and $2.2 million per year under the other alternatives. Figures for Alternative 1 are approximately half of what would be expected under the other alternatives.

Table 4.2-34 State Revenue From Navy OTC Construction, Average Annual, 2021-2025 (2020 dollars)

	Alternative 1	*Alternatives 2-4*
Social Insurance Tax- Employee Contribution	$95,705	$271,188
Social Insurance Tax- Employer Contribution	$168,678	$477,963
TOPI: Sales Tax	$2,052,706	$3,487,480
TOPI: Property Tax	$122,535	$208,183
TOPI: Motor Vehicle License	$69,925	$118,800
TOPI: Severance Tax	$5,961	$10,127
TOPI: Other Taxes	$259,735	$441,281

	Alternative 1	*Alternatives 2-4*
TOPI: Special Assessments	$0	$0
Corporate Profits Tax	$331,833	$618,729
Personal Tax: Income Tax	$1,869,507	$5,303,239
Personal Tax: Motor Vehicle License	$52,261	$148,215
Personal Tax: Property Taxes	$958	$2,716
Personal Tax: Other Tax (Fish/Hunt)	$6,827	$19,366
Total	**$5,036,630**	**$11,107,288**

Legend: TOPI = Taxes on production and imports.

Table 4.2-35 County Revenue From Navy OTC Construction, Average Annual, 2021-2025 (2020 dollars)

	Alternative 1	*Alternatives 2-4*
Social Insurance Tax- Employee Contribution	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0
TOPI: Sales Tax	$16,735	$28,433
TOPI: Property Tax	$583,494	$991,337
TOPI: Motor Vehicle License	$0	$0
TOPI: Severance Tax	$0	$0
TOPI: Other Taxes	$40,557	$68,905
TOPI: Special Assessments	$285	$485
Corporate Profits Tax	$0	$0
Personal Tax: Income Tax	$0	$0
Personal Tax: Motor Vehicle License	$0	$0
Personal Tax: Property Taxes	$4,560	$12,935
Personal Tax: Other Tax (Fish/Hunt)	$0	$0
Total	**$645,632**	**$1,102,094**

Legend: TOPI = Taxes on production and imports.

Table 4.2-36 Sub-county Revenue From Navy OTC Construction, Average Annual, 2021-2025 (2020 dollars)

	Alternative 1	*Alternatives 2-4*
Social Insurance Tax- Employee Contribution	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0
TOPI: Sales Tax	$513,073	$871,694
TOPI: Property Tax	$672,767	$1,143,009
TOPI: Motor Vehicle License	$0	$0
TOPI: Severance Tax	$0	$0

	Alternative 1	*Alternatives 2-4*
TOPI: Other Taxes	$71,633	$121,701
TOPI: Special Assessments	$39,692	$67,436
Corporate Profits Tax	$0	$0
Personal Tax: Income Tax	$0	$0
Personal Tax: Motor Vehicle License	$0	$0
Personal Tax: Property Taxes	$5,258	$14,913
Personal Tax: Other Tax (Fish/Hunt)	$0	$0
Total	**$1,302,423**	**$2,218,754**

Legend: TOPI = Taxes on production and imports.

Residential

Table 4.2-37, Table 4.2-38, and Table 4.2-39 show state, county, and sub-county (primarily the City of San Diego) average annual revenue from residential construction over the 2026 to 2049 period, for each alternative. Most revenue would accrue to the state government (between $2.4 and $5.5 million per year), county revenue would be between approximately $220,000 and $500,000 per year, and sub-county revenue would be between approximately $450,000 and $1.0 million per year.

Table 4.2-37 State Revenue From Residential Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$87,125	$58,083	$132,007	$105,606
Social Insurance Tax- Employer Contribution	$153,555	$102,370	$232,659	$186,127
TOPI: Sales Tax	$1,059,681	$706,454	$1,605,578	$1,284,462
TOPI: Property Tax	$63,257	$42,171	$95,844	$76,675
TOPI: Motor Vehicle License	$36,098	$24,065	$54,694	$43,755
TOPI: Severance Tax	$3,077	$2,051	$4,662	$3,730
TOPI: Other Taxes	$134,084	$89,390	$203,158	$162,527
TOPI: Special Assessments	$0	$0	$0	$0
Corporate Profits Tax	$300,008	$200,005	$454,557	$363,646
Personal Tax: Income Tax	$1,711,607	$1,141,071	$2,593,343	$2,074,675
Personal Tax: Motor Vehicle License	$47,790	$31,860	$72,409	$57,927
Personal Tax: Property Taxes	$876	$584	$1,327	$1,062
Personal Tax: Other Tax (Fish/Hunt)	$6,252	$4,168	$9,472	$7,578
Total	**$3,603,408**	**$2,402,272**	**$5,459,710**	**$4,367,768**

Legend: TOPI = Taxes on production and imports.

Table 4.2-38 County Revenue From Residential Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$8,639	$5,760	$13,090	$10,472
TOPI: Property Tax	$301,221	$200,814	$456,395	$365,116
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$20,937	$13,958	$31,723	$25,378
TOPI: Special Assessments	$147	$98	$223	$179
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$4,172	$2,781	$6,321	$5,057
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$335,116**	**$223,411**	**$507,752**	**$406,202**

Legend: TOPI = Taxes on production and imports.

Table 4.2-39 Sub-county Revenue From Residential Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$264,867	$176,578	$401,313	$321,051
TOPI: Property Tax	$347,307	$231,538	$526,222	$420,978
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$36,979	$24,653	$56,029	$44,823
TOPI: Special Assessments	$20,491	$13,660	$31,046	$24,837
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$4,810	$3,207	$7,289	$5,831
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$674,454**	**$449,636**	**$1,021,900**	**$817,520**

Legend: TOPI = Taxes on production and imports.

Commercial

Table 4.2-40, Table 4.2-41, and Table 4.2-42 show state, county, and sub-county (primarily the City of San Diego) average annual revenue from commercial construction over the 2026 to 2049 period, for each relevant alternative. Most revenue would accrue to the state government (between $422,000 and $846,000 per year), county revenue would be between approximately $42,000 and $84,000 per year, and sub-county revenue would be between approximately $84,000 and $169,000 per year.

Table 4.2-40 State Revenue From Commercial Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$15,826	$10,297	$20,656	$14,772
Social Insurance Tax- Employer Contribution	$27,893	$18,147	$36,405	$26,035
TOPI: Sales Tax	$203,522	$132,414	$265,633	$189,963
TOPI: Property Tax	$12,149	$7,904	$15,857	$11,340
TOPI: Motor Vehicle License	$6,933	$4,511	$9,049	$6,471
TOPI: Severance Tax	$591	$384	$771	$552
TOPI: Other Taxes	$25,752	$16,755	$33,611	$24,037
TOPI: Special Assessments	$0	$0	$0	$0
Corporate Profits Tax	$36,108	$23,492	$47,127	$33,702
Personal Tax: Income Tax	$309,486	$201,356	$403,935	$288,867
Personal Tax: Motor Vehicle License	$8,650	$5,628	$11,289	$8,073
Personal Tax: Property Taxes	$159	$103	$207	$148
Personal Tax: Other Tax (Fish/Hunt)	$1,130	$735	$1,475	$1,055
Total	**$648,198**	**$421,726**	**$846,015**	**$605,013**

Legend: TOPI = Taxes on production and imports.

Table 4.2-41 County Revenue From Commercial Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$1,659	$1,080	$2,166	$1,549
TOPI: Property Tax	$57,852	$37,639	$75,508	$53,998
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$4,021	$2,616	$5,248	$3,753
TOPI: Special Assessments	$28	$18	$37	$26
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$755	$491	$985	$705
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$64,316**	**$41,845**	**$83,944**	**$60,031**

Legend: TOPI = Taxes on production and imports.

Table 4.2-42 Sub-county Revenue From Commercial Construction, Average Annual, 2026-2049 (2020 dollars)

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$50,870	$33,097	$66,395	$47,481
TOPI: Property Tax	$66,704	$43,398	$87,060	$62,260
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$7,102	$4,621	$9,270	$6,629
TOPI: Special Assessments	$3,935	$2,560	$5,136	$3,673
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$870	$566	$1,136	$812
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$129,482**	**$84,243**	**$168,997**	**$120,855**

Legend: TOPI = Taxes on production and imports.

Transit Center

Table 4.2-43, 4.2-44, and Table 4.2-45 show state, county, and sub-county (primarily the City of San Diego) average annual revenue from transit center construction over the 2026 to 2034 period. The transit center would be the same under both relevant alternatives and would generate about $9.8 million per year for the state government, about $1.0 million per year for the county government, and about $1.9 million per year for sub-county governments (primarily the City of San Diego).

Table 4.2-43 State Revenue From Transit Center Construction, Average Annual, 2026-2034 (2020 dollars)

	Alternative 4	*Alternative 5*
Social Insurance Tax- Employee Contribution	$271,802	$271,802
Social Insurance Tax- Employer Contribution	$479,044	$479,044
TOPI: Sales Tax	$3,020,379	$3,020,379
TOPI: Property Tax	$180,300	$180,300
TOPI: Motor Vehicle License	$102,888	$102,888
TOPI: Severance Tax	$8,770	$8,770
TOPI: Other Taxes	$382,177	$382,177
TOPI: Special Assessments	$0	$0
Corporate Profits Tax	$0	$0
Personal Tax: Income Tax	$5,211,474	$5,211,474
Personal Tax: Motor Vehicle License	$146,265	$146,265
Personal Tax: Property Taxes	$2,676	$2,676
Personal Tax: Other Tax (Fish/Hunt)	$19,017	$19,017
Total	**$9,816,881**	**$9,816,881**

Legend: TOPI = Taxes on production and imports.

Table 4.2-44 County Revenue From Transit Center Construction, Average Annual, 2026-2034 (2020 dollars)

	Alternative 4	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0
TOPI: Sales Tax	$24,624	$24,624
TOPI: Property Tax	$858,560	$858,560
TOPI: Motor Vehicle License	$0	$0
TOPI: Severance Tax	$0	$0
TOPI: Other Taxes	$59,676	$59,676
TOPI: Special Assessments	$420	$420
Corporate Profits Tax	$0	$0
Personal Tax: Income Tax	$0	$0
Personal Tax: Motor Vehicle License	$0	$0
Personal Tax: Property Taxes	$12,744	$12,744
Personal Tax: Other Tax (Fish/Hunt)	$0	$0
Total	**$956,024**	**$956,024**

Legend: TOPI = Taxes on production and imports.

Table 4.2-45 Sub-county Revenue From Transit Center Construction, Average Annual, 2026-2034 (2020 dollars)

	Alternative 4	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0
TOPI: Sales Tax	$754,942	$754,942
TOPI: Property Tax	$989,918	$989,918
TOPI: Motor Vehicle License	$0	$0
TOPI: Severance Tax	$0	$0
TOPI: Other Taxes	$105,401	$105,401
TOPI: Special Assessments	$58,404	$58,404
Corporate Profits Tax	$0	$0
Personal Tax: Income Tax	$0	$0
Personal Tax: Motor Vehicle License	$0	$0
Personal Tax: Property Taxes	$14,693	$14,693
Personal Tax: Other Tax (Fish/Hunt)	$0	$0
Total	**$1,923,359**	**$1,923,359**

Legend: TOPI = Taxes on production and imports.

4.2.4.2 Operations

Navy OTC

It is anticipated that Navy capabilities at OTC will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would not in and of itself spur additional Navy OTC operations growth. Therefore, no operations impacts, in terms of state and local government revenue, are attributed to Navy OTC operations.

Residential

Table 4.2-46, Table 4.2-47, and Table 4.2-48 show state, county, and sub-county (primarily the City of San Diego) annual revenue from residential operations from 2050 forward, for each alternative. Most revenue would accrue to the state government (between $25.4 and $57.7 million per year), county revenue would be between approximately $3.3 and $7.4 million per year, and sub-county revenue would be between approximately $7.4 and $16.7 million per year.

Table 4.2-46 State Revenue from Resdiential Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$442,349	$294,899	$670,225	$536,180
Social Insurance Tax- Employer Contribution	$779,628	$519,752	$1,181,255	$945,004
TOPI: Sales Tax	$19,791,220	$13,194,147	$29,986,697	$23,989,358
TOPI: Property Tax	$908,772	$605,848	$1,376,926	$1,101,541
TOPI: Motor Vehicle License	$674,183	$449,455	$1,021,489	$817,191
TOPI: Severance Tax	$57,469	$38,312	$87,074	$69,659
TOPI: Other Taxes	$2,504,239	$1,669,493	$3,794,302	$3,035,441
TOPI: Special Assessments	$0	$0	$0	$0
Corporate Profits Tax	$3,954,376	$2,636,250	$5,991,478	$4,793,183
Personal Tax: Income Tax	$8,693,525	$5,795,683	$13,172,008	$10,537,606
Personal Tax: Motor Vehicle License	$242,712	$161,808	$367,745	$294,196
Personal Tax: Property Taxes	$4,450	$2,967	$6,742	$5,394
Personal Tax: Other Tax (Fish/Hunt)	$31,753	$21,169	$48,111	$38,488
Total	**$38,084,676**	**$25,389,783**	**$57,704,052**	**$46,163,241**

Legend: TOPI = Taxes on production and imports.

Table 4.2-47 County Revenue from Resdiential Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$161,353	$107,569	$244,475	$195,580
TOPI: Property Tax	$4,327,439	$2,884,959	$6,556,726	$5,245,381
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$391,030	$260,687	$592,470	$473,976
TOPI: Special Assessments	$2,752	$1,835	$4,170	$3,336
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$21,190	$14,126	$32,106	$25,684
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$4,903,764**	**$3,269,176**	**$7,429,947**	**$5,943,957**

Legend: TOPI = Taxes on production and imports.

Table 4.2-48 Sub-county Revenue from Resdiential Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$4,946,806	$3,297,871	$7,495,161	$5,996,129
TOPI: Property Tax	$4,989,527	$3,326,351	$7,559,888	$6,047,910
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$690,648	$460,432	$1,046,436	$837,149
TOPI: Special Assessments	$382,695	$255,130	$579,841	$463,873
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$24,432	$16,288	$37,018	$29,614
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$11,034,108**	**$7,356,072**	**$16,718,344**	**$13,374,675**

Legend: TOPI = Taxes on production and imports.

Commercial

Table 4.2-49, Table 4.2-50, and Table 4.2-51 show state, county, and sub-county (primarily the City of San Diego) annual revenue from commercial operations from 2050 forward, for each alternative. Most revenue would accrue to the state government (between $26.6 and $54.3 million per year), county revenue would be between approximately $2.9 and $5.9 million per year, and sub-county revenue would be between approximately $5.9 and $12.0 million per year.

Table 4.2-49 State Revenue from Commercial Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$895,188	$583,065	$1,195,781	$788,956
Social Insurance Tax- Employer Contribution	$1,577,745	$1,027,637	$2,107,532	$1,390,515
TOPI: Sales Tax	$14,136,828	$9,328,481	$18,871,295	$13,009,989
TOPI: Property Tax	$843,889	$556,858	$1,126,510	$776,623
TOPI: Motor Vehicle License	$481,567	$317,772	$642,846	$443,182
TOPI: Severance Tax	$41,050	$27,088	$54,797	$37,778
TOPI: Other Taxes	$1,788,773	$1,180,359	$2,387,838	$1,646,191
TOPI: Special Assessments	$0	$0	$0	$0
Corporate Profits Tax	$3,171,754	$2,062,531	$4,239,390	$2,777,252
Personal Tax: Income Tax	$17,141,064	$11,164,731	$22,912,626	$15,081,290
Personal Tax: Motor Vehicle License	$481,221	$313,440	$643,158	$423,550
Personal Tax: Property Taxes	$8,804	$5,734	$11,767	$7,748
Personal Tax: Other Tax (Fish/Hunt)	$62,545	$40,738	$83,607	$55,026
Total	**$40,630,428**	**$26,608,435**	**$54,277,147**	**$36,438,098**

Legend: TOPI = Taxes on production and imports.

Table 4.2-50 County Revenue from Commercial Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$115,254	$76,053	$153,853	$106,067
TOPI: Property Tax	$4,018,476	$2,651,675	$5,364,276	$3,698,165
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$279,312	$184,310	$372,854	$257,048
TOPI: Special Assessments	$1,966	$1,297	$2,624	$1,809
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$41,923	$27,306	$56,034	$36,894
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$4,456,931**	**$2,940,641**	**$5,949,642**	**$4,099,984**

Legend: TOPI = Taxes on production and imports.

Table 4.2-51 Sub-county Revenue from Commercial Operations, Annual Steady State, 2050 Forward

	Alternative 2	*Alternative 3*	*Alternative 4*	*Alternative 5*
Social Insurance Tax- Employee Contribution	$0	$0	$0	$0
Social Insurance Tax- Employer Contribution	$0	$0	$0	$0
TOPI: Sales Tax	$3,533,494	$2,331,650	$4,716,872	$3,251,841
TOPI: Property Tax	$4,633,293	$3,057,375	$6,184,997	$4,263,975
TOPI: Motor Vehicle License	$0	$0	$0	$0
TOPI: Severance Tax	$0	$0	$0	$0
TOPI: Other Taxes	$493,328	$325,533	$658,546	$454,005
TOPI: Special Assessments	$273,358	$180,381	$364,907	$251,569
Corporate Profits Tax	$0	$0	$0	$0
Personal Tax: Income Tax	$0	$0	$0	$0
Personal Tax: Motor Vehicle License	$0	$0	$0	$0
Personal Tax: Property Taxes	$48,337	$31,484	$64,607	$42,538
Personal Tax: Other Tax (Fish/Hunt)	$0	$0	$0	$0
Total	**$8,981,810**	**$5,926,423**	**$11,989,927**	**$8,263,929**

Legend: TOPI = Taxes on production and imports.

Transit Center

Like Navy OTC, it is anticipated that transit capabilities will continue to grow over time and the Proposed Action alternatives will provide capacity for that to happen. However, the Proposed Action alternatives would not in and of itself spur additional transit operations growth. Therefore, no operations impacts, in terms of state and local tax revenue, are attributed to transit center operations.

4.3 Impacts to Public Services

4.3.1 Schools

4.3.1.1 Construction

No permanent population is anticipated in association with construction for any of the action alternatives; therefore, no impacts to San Diego schools are anticipated.

4.3.1.2 Operations

New residential development would lead to an increase in population (Section 4.1), including children, and an associated increase in the number of public-school students. Using estimates based on anticipated growth in new housing units and student generation rates presented above in Table 3.3-2, Figure 4.3-1 shows the growth in the number of public-school students over time that would be associated with the residential development. By 2050, when population growth is anticipated to be complete, Alternative 2 would lead to an increase of 475 total students, Alternative 3 would lead to an additional 317 students, Alternative 4 would lead to an additional 720 students, and Alternative 5 would lead to an additional 576 students.

Figure 4.3-2 shows the grade level distribution for each alternative, at full build-out (around 2050). Approximately 43 percent of additional students would be anticipated to be enrolled in elementary schools (grade K-5), 26 percent in middle school (grade 6-8), and 31 percent in high school (grade 9-12).

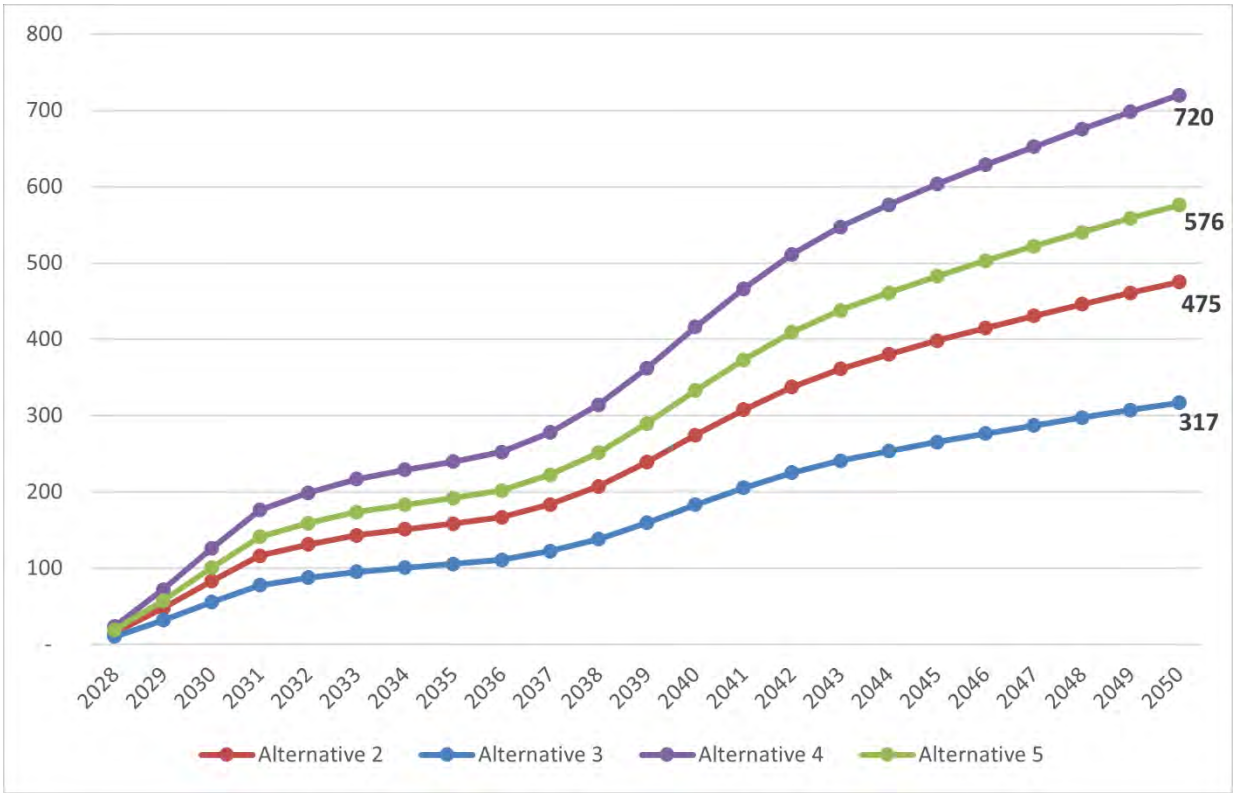

Figure 4.3-1 Total Student Growth by Alternative, 2024-2050

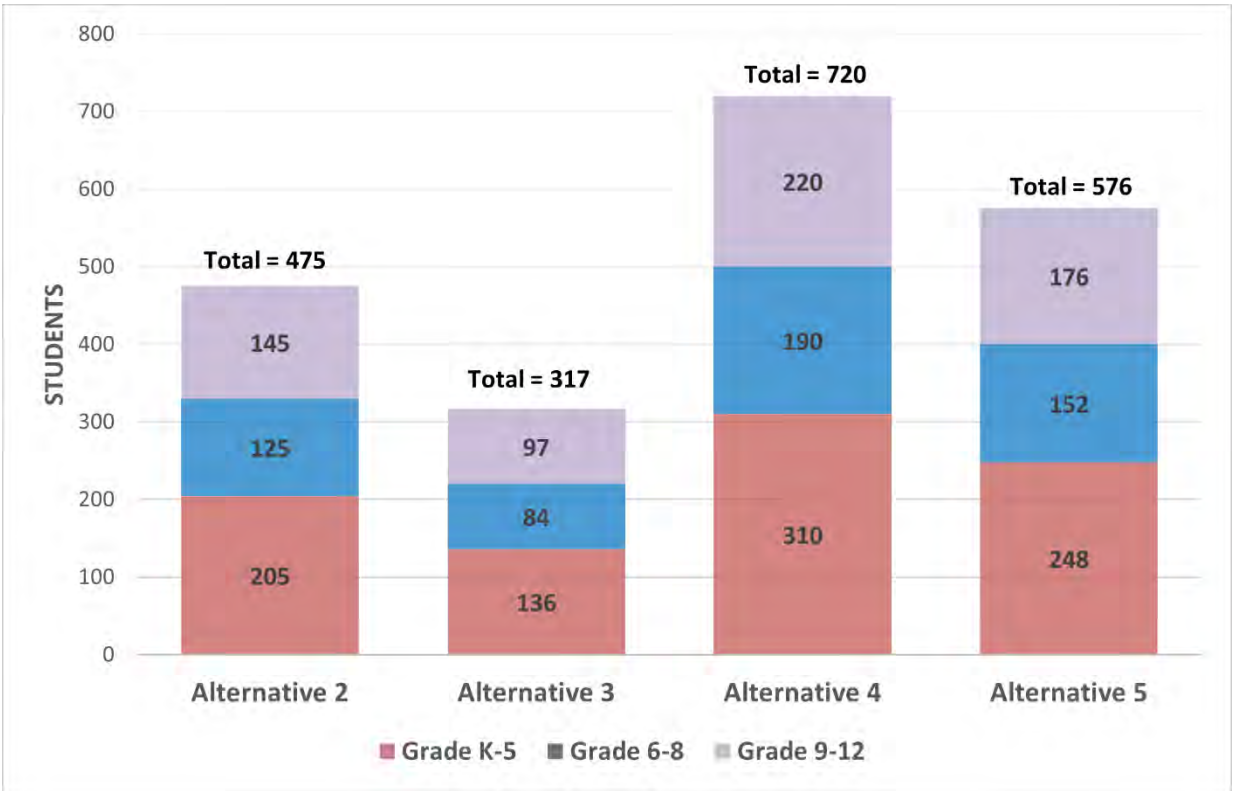

Figure 4.3-2 Additional Students by Grade level and Alternative, Annual, at Full Build-out

Table 3.3-6 above provides current capacity at potentially affected schools and indicates that there is capacity for an additional 539 elementary school students, 728 middle school students, and 498 high school students. Estimates for each of the alternatives indicate that the number of additional students associated would not lead to a condition of over-capacity at any grade level. Table 4.3-1 shows current remaining capacity at potentially affected schools, the additional students associated with Alternative 4 (the alternative that would generate the most additional students), and remaining capacity with the implementation of Alternative 4. Even though full build-out would not be anticipated until 2050, the present level of remaining capacity would not be filled by the Proposed Action alternatives.

Table 4.3-1 Remaining Capacity with Alternative 4, at Full Build-out

	Grade K-5	***Grade 6-8***	***Grade 9-12***
Current Remaining Capacity (2017-2018)	539	728	498
Additional Students under Alternative 4	310	190	220
Remaining Capacity under Alternative 4	**229**	**538**	**278**

Table 3.3-5 above provides student-teacher ratios and indicates, for the 2017-2018 school year, that potentially affected elementary schools had a student-teacher ratio of 20.9 middle schools a ratio of 21.0, and high schools a ratio of 17.3. Given the number of new students indicated in Figure 4.3-2, Table 4.3-2 shows the number of additional teachers that would be required, by the year 2050, in order to maintain current student-teacher ratios under each alternative. Figure 4.3-3 shows the additional teachers required over time.

Table 4.3-2 Estimated Additional Teachers Required to Maintain Current Student-Teacher Ratios, at Full Build-out

	Alternative 2	***Alternative 3***	***Alternative 4***	***Alternative 5***
Grade K-5	10	7	15	12
Grade 6-8	6	4	9	7
Grade 9-12	8	6	13	10
Total (K-12)	**24**	**16**	**37**	**29**

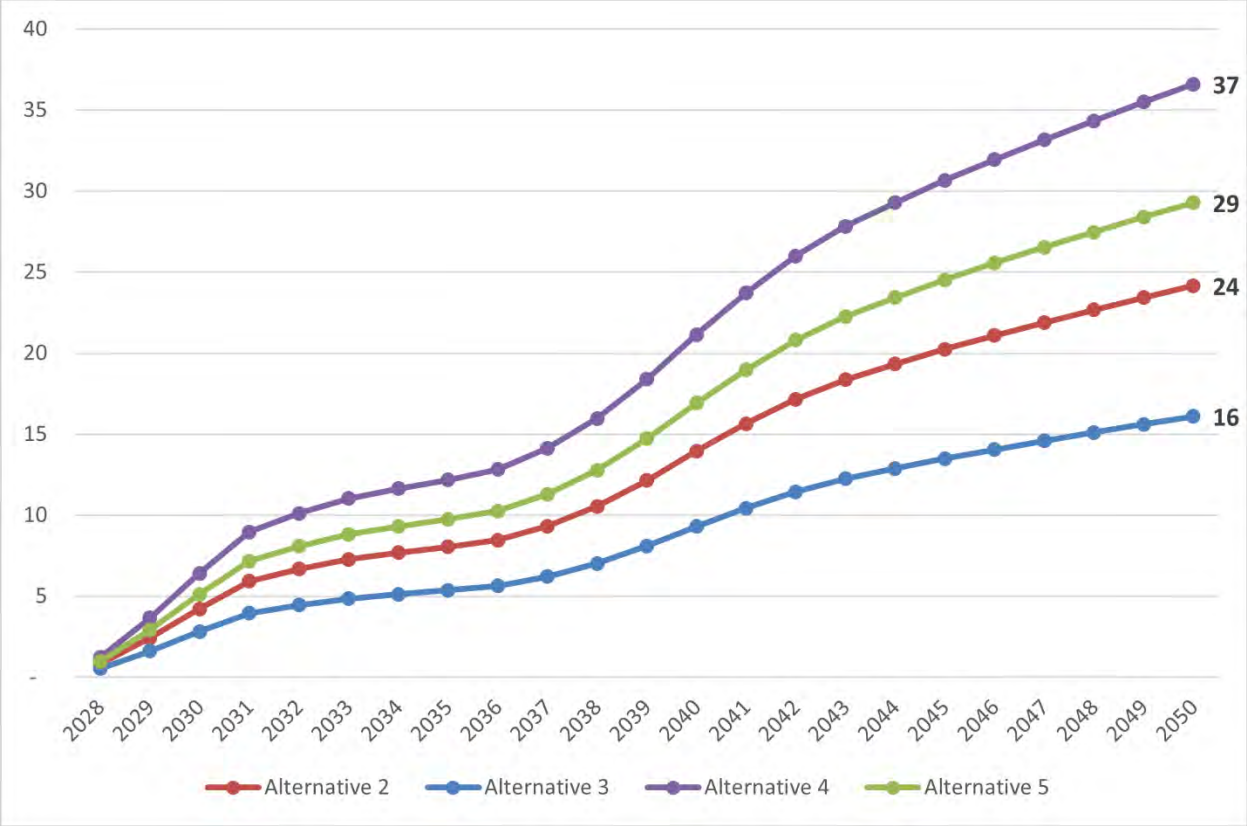

Figure 4.3-3 Additional Teachers Required to Maintain Level of Service, 2028-2050

4.3.2 Police

4.3.2.1 Construction

No permanent population is anticipated in association with construction for any of the Proposed Action alternatives; therefore, limited impacts to police protection services are anticipated. Activity at construction sites and additional traffic would likely lead to an increase in the number of necessary responses.

4.3.2.2 Operations

The recent ratio of population to police officers for San Diego County (1 officer per 1,284 in population) is calculated above in Section 3.3.2. Based on population growth estimates presented in Section 4.1.2, Figure 4.3-4 presents estimates of additional police officers that would be required over time in order to maintain the recent ratio. As the population in new residential units reaches its maximum around 2050, the number of additional police officers required to maintain the recent ratio ranges from 5 (for Alternative 3) to 11 (for Alternative 4). Given the dynamics of anticipated population growth, most additional officers would be associated with the San Diego Police Department's Western Division.

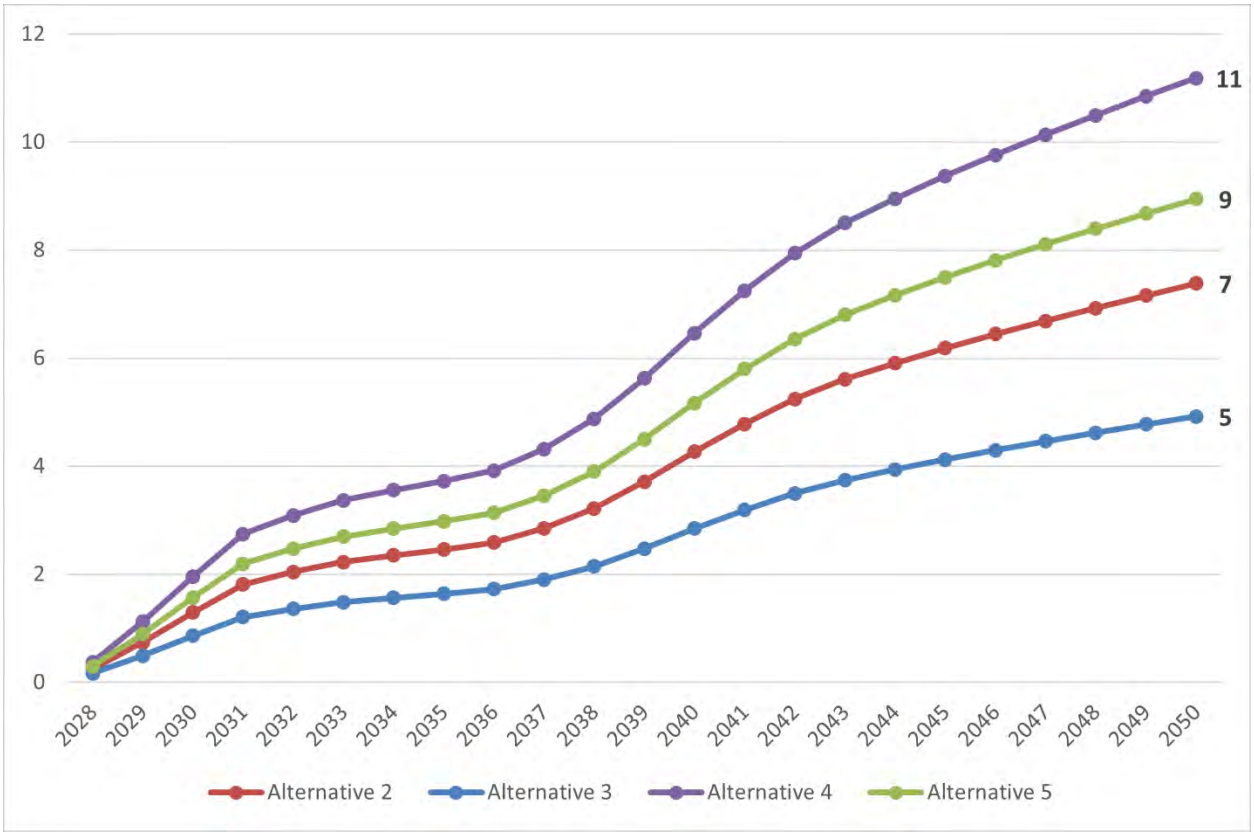

Figure 4.3-4 Additional Uniformed Officers Required to Maintain Level of Service, 2028-2050

4.3.3 Fire-Rescue

4.3.3.1 Construction

No permanent population is anticipated in association with construction for any of the Proposed Action alternatives; therefore, limited impacts to fire-rescue services are anticipated. Activity at construction sites and additional traffic would likely lead to an increase in the number of necessary responses.

4.3.3.2 Operations

The recent ratio of population to uniformed fire/EMT personnel for San Diego County (1 uniformed personnel per 1,570 in population) is calculated above in Section 3.3.3. Based on population growth estimates presented in Section 4.1.2, Figure 4.3-5 presents estimates of additional uniformed fire/EMT personnel that would be required over time in order to maintain the recent ratio. As the population in new residential units reaches its maximum around 2050, the number of additional uniformed fire/EMT personnel required to maintain the recent ratio ranges from 4 (for Alternative 3) to 9 (for Alternative 4). Given the dynamics of anticipated population growth, most new personnel would be associated with Stations 8, 15, and 20.

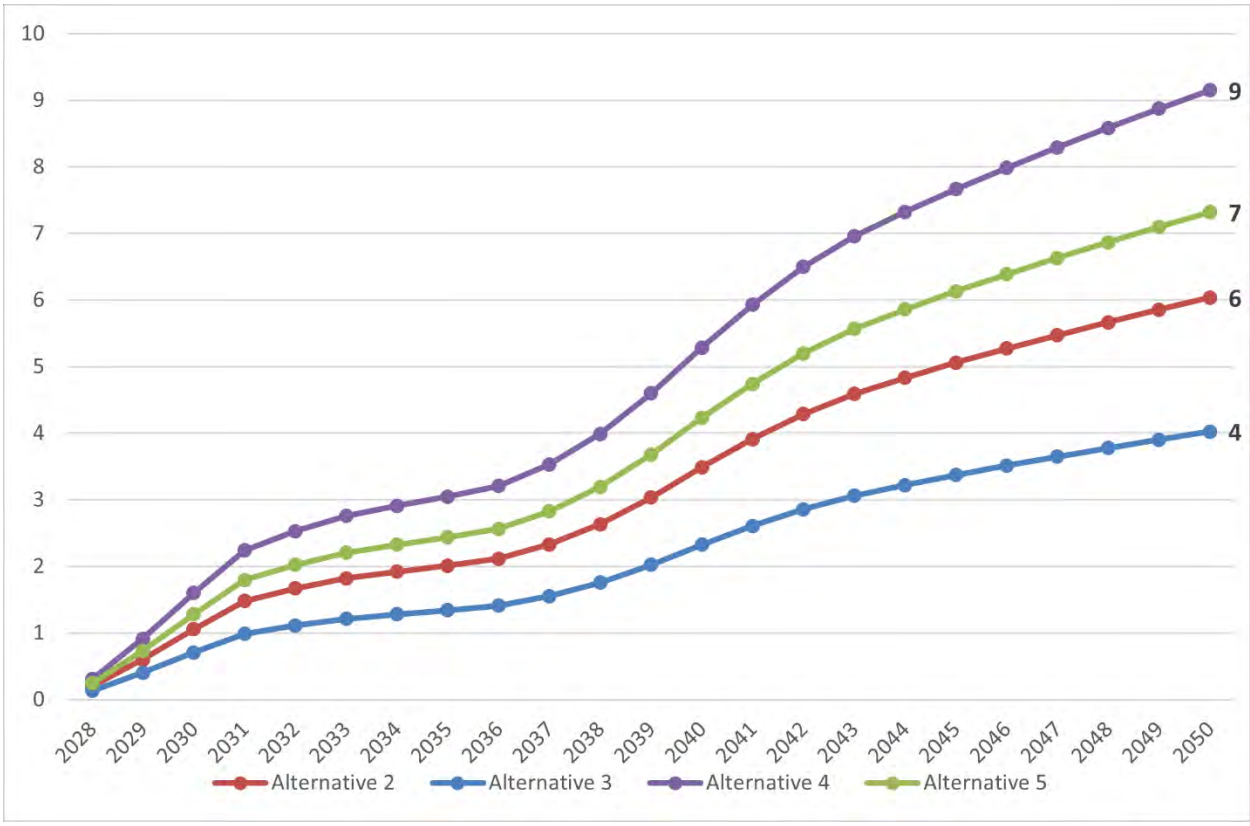

Figure 4.3-5 Additional Fire/EMT Personnel Required to Maintain Level of Service, 2028-2050

4.3.4 Libraries

4.3.4.1 Construction

No permanent population is anticipated in association with construction for any of the Proposed Action alternatives; therefore, no impacts to San Diego libraries are anticipated.

4.3.4.2 Operations

Population associated with the Proposed Action alternatives would likely not necessitate the development of any additional libraries and pertinent local fees and assessment would cover costs for necessary maintenance of minimum standards. Additionally, various library improvements, including the Mission Hills – Hillcrest Library (completed in 2019), have been completed or are planned. These improvements are part of the 21st Century Library System/Library Department Facility Improvements Program being made in anticipation of a growing population. The recent completion of new library improvements throughout San Diego, including the recent completion of the Mission Hills – Hillcrest Library implies that substantial crowding at libraries would not be induced by this alternative.

Based on the current ratio of 3.2 employees per 10,000 in population, Alternative 1 would require no additional library employees, Alternative 2 would require an additional 3 employees, Alternative 3 would require an additional 1 employee, Alternative 4 would require an additional 5 employees, and Alternative 5 would require an additional 4 employees.

4.3.5 Parks

4.3.5.1 Construction

No permanent population is anticipated in association with construction for any of the Proposed Action alternatives; therefore, no impacts to San Diego parks are anticipated.

4.3.5.2 Operations

The City of San Diego sets a standard of 2.8 acres of parkland for every 1,000 residents and, by 2050, the Proposed Action alternatives would lead to a population increase of between 6,320 and 14,364 – this implies that an additional 17.7 to 40.2 acres of parkland would be needed to maintain the standard. Some parkland would be developed in association residential development, but the amount is currently unknown. It is likely however, that some parkland, in addition to that developed for the Proposed Action alternatives, would need to be developed in order to satisfy the city standard. Local fees and assessments would cover costs for necessary maintenance of minimum standards.

4.4 Summary of Impacts

4.4.1 Population Change

The construction industry of San Diego County, and surrounding areas, is sufficient to supply the necessary workforce to complete construction projects without additional population relocating to the county on a permanent basis; therefore, no permanent population increase is anticipated in association with construction for the Proposed Action alternatives.

A permanent population increase is anticipated, over time, with the development of new residential units, as shown in Table 4.4-1 and Figure 4.4-1.

Table 4.1-1 Population Change[1,2] by Alternative, 2025-2050

	2025	*2035*	*2045*	*2050*
Alternative 2	0	3,156	7,943	9,480
Alternative 3	0	2,104	5,295	6,320
Alternative 4	0	4,782	12,034	14,364
Alternative 5	0	3,826	9,627	11,491

Notes: [1] Each value represents a point in time. Therefore, values cannot be added. Values for the year 2050 represents the maximum anticipated occupancy of newly developed residential units, and these values would be expected to continue in a steady state for the foreseeable future.
[2] Values apply to population in project-related housing units, the ROI, the City of San Diego, and San Diego County.

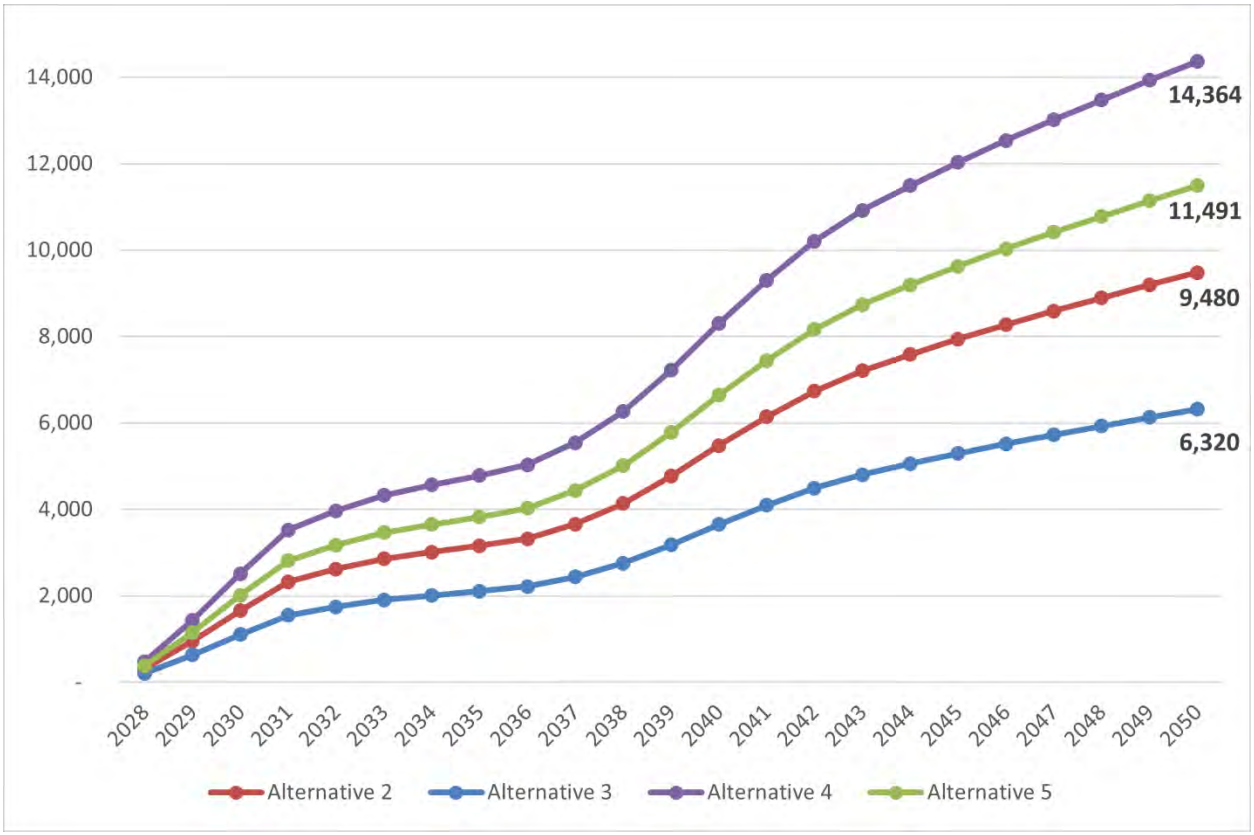

Figure 4.4-1 Population Change by Alternative, 2028-2050

Figure 4.4-2 shows year-over-year population change by alternative and illustrates the notional growth pattern for development of the Proposed Action alternatives. It is anticipated that housing units would initially become available for occupancy in 2028 with large growth in occupancy (and associated population) culminating in a peak in 2030. Growth in new units (and associated population) would begin to taper off with the lowest levels of growth occurring in the 2032 to 2036 timeframe, as the market digests the additional units and while, under Alternatives 4 and 5, transit center construction consumes some construction capacity. After transit center construction, notionally, transportation-oriented development related housing growth would kick-in and growth in new units (and associated population) would pick back up and remain at a relatively high level through around 2044, and then taper off again until culmination in new unit construction (in 2049) and population growth (in 2050).

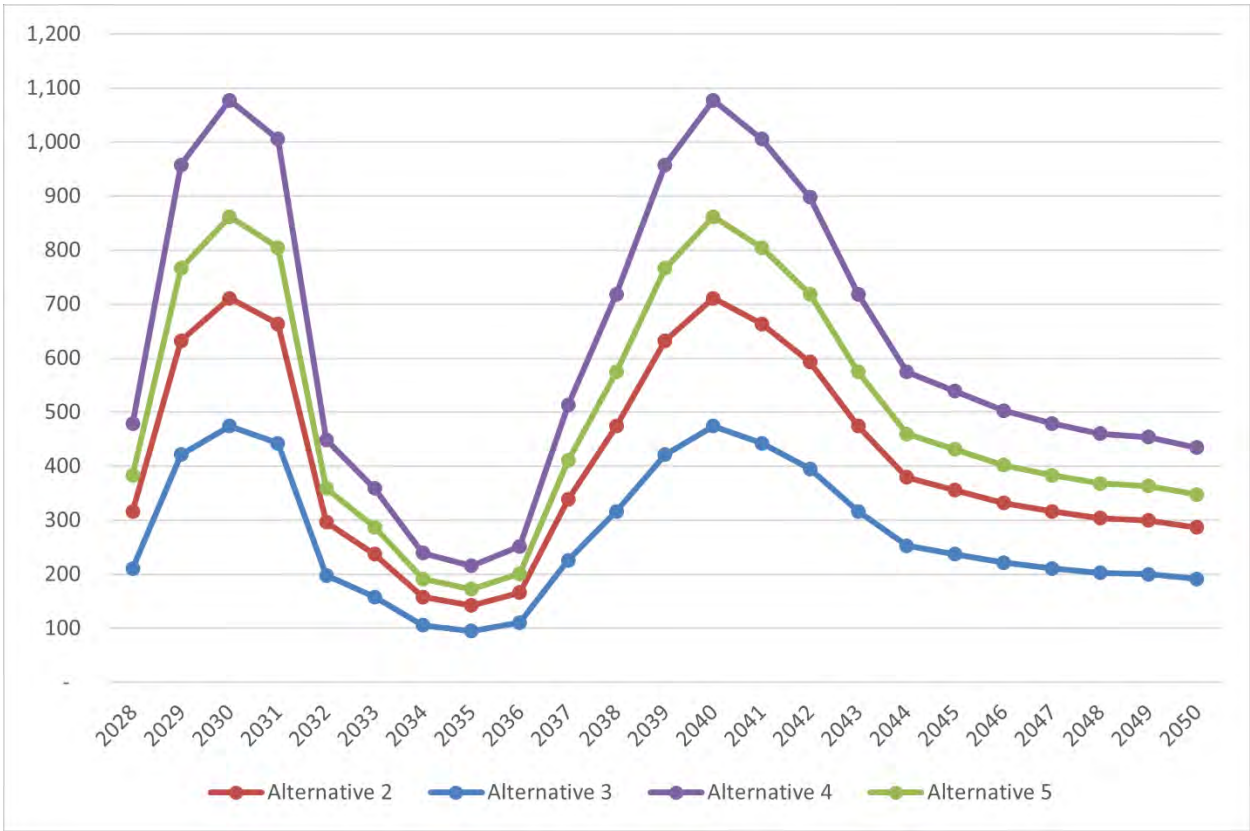

Figure 4.4-2 Annual Population Change by Alternative, 2028-2050

4.4.2 Economic Impacts

Like population, Alternative 4 would have the largest effects on the number of jobs, income earned from those jobs, GCP, and state and local government revenue. This would be the case for both the construction and operations phases. For construction, the largest effects would be expected to occur in the 2026 to 2034 timeframe, after Navy OTC construction is complete but while the transit center, residential, and commercial construction would be underway. Table 4.4-2 shows annual average economic effects of construction over relevant timeframes for Alternative 4.

Table 4.4-2 Economic Impacts for Alternative 4 Cosntruction, Average Annual, 2021-2049

	2021-2025[1]	***2026-2034[2]***	***2035-2049[3]***
Jobs[3]	2,651	3,955	1,501
Labor Income[3,4]	$165,531,513	$256,777,069	$93,526,152
GCP[3,4]	$232,290,728	$316,602,181	$144,675,934
Government Revenue[3,4]	$13,511,804	$20,784,582	$8,088,318

Notes: [1] 2021-2025 timeframe includes Navy OTC construction only.
[2] 2026-2034 timeframe includes Transit Center, residential, and commercial construction.
[3] 2035-2049 timeframe residential and commercial construction.
[4]All values are total impacts that include direct, indirect, and induced effects.
[5]Dollar based values are shown in year 2020 dollars.

Similar to population, there are no anticipated economic impacts related to Navy OTC or transit center operations; all operational impacts would be expected to stem from residential and commercial development. Table 4.4-3 shows these impacts for Alternative 4 on an annualized basis for the year 2050 when residential and commercial developments would be fully operational–these impacts would be expected to continue in a steady state for the foreseeable future.

Table 4.4-3 Economic Impacts[1,2] for Alternative 4 Operations, Annual, 2050 Forward

	Residential	*Commercial*	*Total*
Jobs	7,331	10,910	**18,241**
Labor Income	$379,367,373	$708,301,506	**$1,087,668,879**
GCP	$745,779,872	$1,144,236,779	**$1,890,016,651**
Government Revenue	$81,852,343	$72,216,715	**$154,069,058**

Notes: [1]All values are total impacts that include direct, indirect, and induced effects.
[2]Dollar based values are shown in year 2020 dollars.

Upon review of recent literature, which indicates that empirical evidence shows that an increase in supply of market rate housing does not push prices higher, this study generally accepts that the Proposed Action alternatives would not substantially reduce housing affordability in San Diego County. Furthermore, while expectations for future prices near the Proposed Action alternatives (in the socioeconomic ROI) would have a tendency to push higher in anticipation of mixed use and transient oriented development, it may be difficult for that long-term expectation to filter into near-term rents while the area is in the midst of major construction (with associated noise and traffic). If rents in the ROI grow at a relatively slow rate during construction then, unless there are improvements to property that demand higher rent, rents there may grow at a rate below the city trend for an extended period, making the ROI less expensive relative to the region over that period, which would be counter to a situation where current ROI residents are displaced. This study also considers what if no market rate units are built and expects that with less market rate development in San Diego, over time, there would be more displacement and more homelessness. There is a California State Law that requires a certain number of affordable units to be built as a percentage of market rate units; if no market rate units are built then the number of associated affordable units is always zero. There are no other proposals for residential development of OTC Site 1 or OTC Site 2, and hence no other proposals to build affordable housing units on the sites. So, the Proposed Action alternatives would increase the number of affordable units relative to a condition without it, would not be likely to result in gentrification or displacement, and would tend to improve local housing affordability in the short, medium, and long-term.

4.4.3 Impacts to Public Services

Due to the increase in population that is anticipated, public services agencies would require additional personnel in order to maintain their current levels of service. Figures 4.4-2, 4.4-3, and 4.4-4 show the additional personnel that would be needed to maintain current levels of service over time.

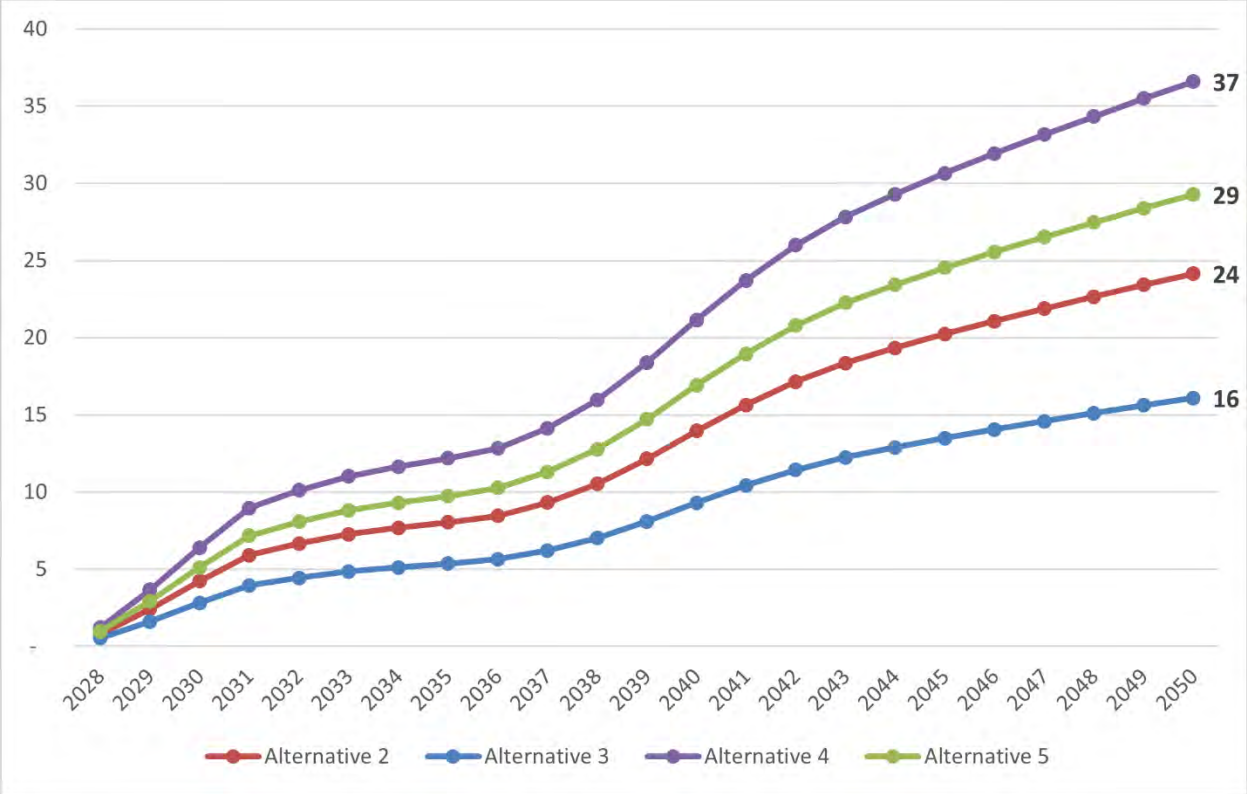

Figure 4.4-2 Additional Teachers Required to Maintain Level of Service, 2028-2050

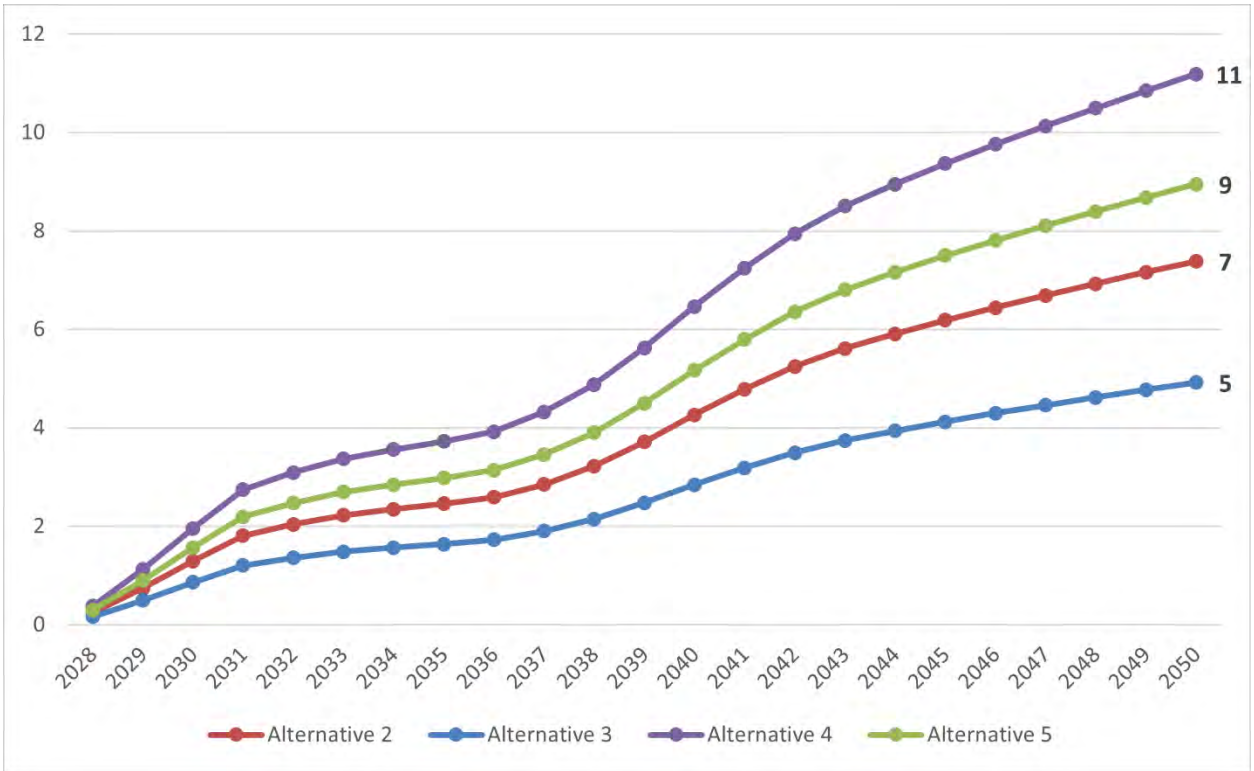

Figure 4.4-3 Additional Uniformed Officers Required to Maintain Level of Service, 2028-2050

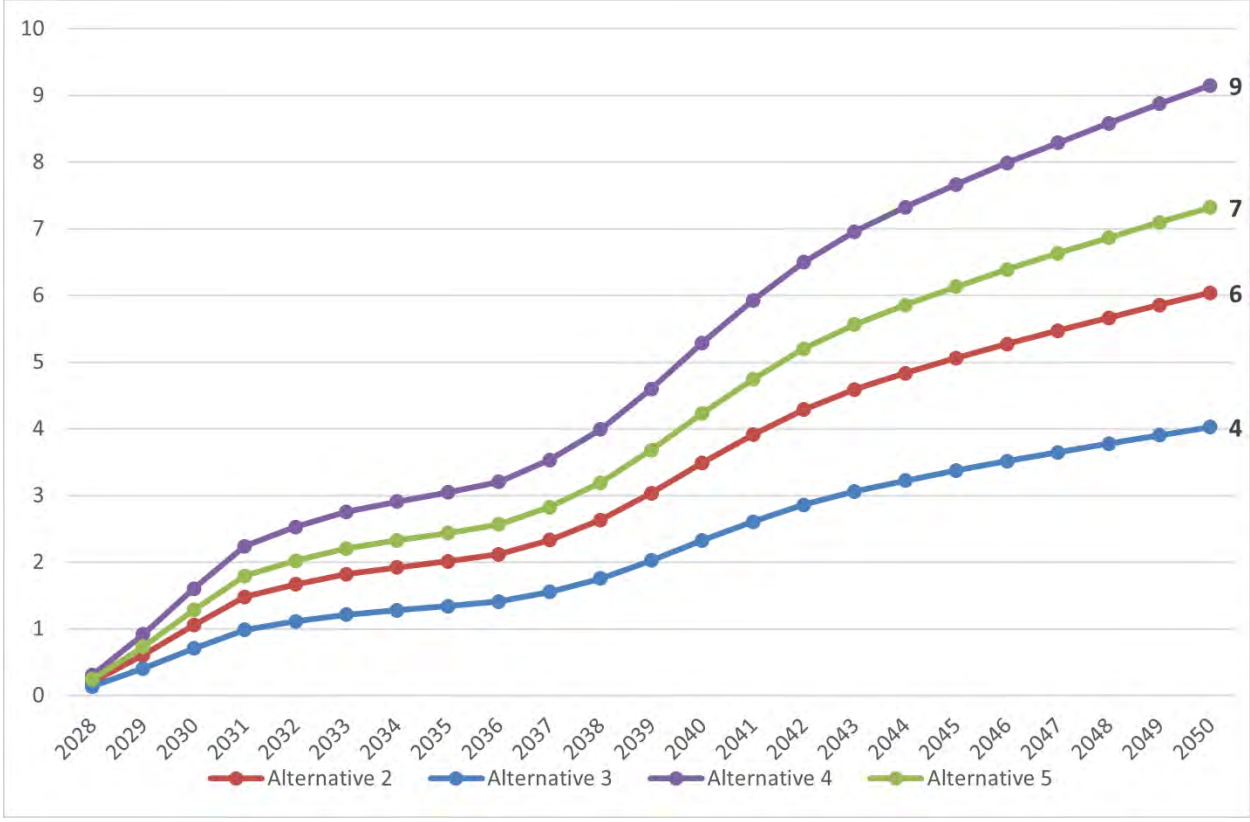

Figure 4.4-4 Additional Fire/EMT Personnel Required to Maintain Level of Service, 2028-2050

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Appendix H

Cultural Resources Technical Report

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Draft Cultural Resources Technical Report for Navy Old Town Campus San Diego, San Diego County, California

Prepared for:

Cardno GS, Inc.
2496 Old Ivy Road, Suite 300
Charlottesville, Virginia 22903

For delivery to:

Naval Facilities Engineering Command Southwest
1220 Pacific Highway
San Diego, California 92132

Prepared by:

Marilyn Novell, M.S.
Senior Architectural Historian

Laura Taylor Kung, M.A.
Senior Architectural Historian

Shannon Davis, M.A.
Director, Architectural History

ASM Affiliates, Inc.
2034 Corte del Nogal
Carlsbad, California 92011

PN 33490
February 2021

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Table of Contents

Attachments

List of Figures

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National Archaeological Database Information

Authors:	Marilyn Novell, Laura Taylor Kung, Shannon Davis
Firm:	ASM Affiliates, Inc.
Client/Project Proponent:	NAVFAC Southwest
Report Date:	February 2021
Report Title:	Cultural Resources Technical Report for Navy Old Town Campus
Type of Study:	Cultural Resource Summary
New Sites:	none
Updated Sites:	none
USGS Quad:	Point Loma and La Jolla 7.5-minute
Acreage:	10,487.44
Keywords:	Point Loma and La Jolla 7.5-minute USGS quads, Consolidated Aircraft Plant 2 Historic District, Convair, Plant 19, World War II, Cold War, Navy, Air Force, Eligible for National Register of Historic Places, Eligible for California Register of Historical Resources, Eligible for Local Register, National Historic Landmark, Consolidated Aircraft Plant 2 Historic District, Old Town San Diego State Historic Park, San Diego Union Office, Pedporena Adobe, Casa de Machado-Stewart, San Diego Courthouse, Colorado House, Casa de Rodriguez, Casa de Machado, Mason Street School, Casa de Estudillo, Rose-Robinson Adobe Reconstruction, Casa de Juan Bandini, Plaza; San Diego Viejo; Washington Square, Casa Larga, 2495 Jefferson St., San Diego Presidio; Marine Corps Recruit Depot; Northwest Mission Hills Historic District; William Mason Fortesque Residence.

List of Acronyms

amsl	above mean sea level
APE	Area of Potential Effects
ASM	ASM Affiliates, Inc.
BERD	Built Environment Resources Directory
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
CRTR	Cultural Resources Technical Report
DON	Department of the Navy
DPR	Department of Parks and Recreation
EIS	Environmental Impact Statement
GIS	Geographic Information System
HAER	Historic American Engineering Report
KOP	Key Observation Point
Local Register	San Diego Register of Historical Resources
MCRD	Marine Corps Recruit Depot
NAVWAR	Naval Information Warfare Systems Command
NBPL	Naval Base Point Loma
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
OTC	Old Town Campus
PRC	Public Resources Code
RFI	Request for Information
SANDAG	San Diego Association of Governments
Standards	Secretary of the Interior's Standards for the Treatment of Historic Properties
Survey	Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report
SCIC	South Coastal Information Center
SHPO	State Historic Preservation Office
SOI	Secretary of the Interior
U.S.	United States
U.S.C.	United States Code
WWII	World War II

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Executive Summary

This Cultural Resources Technical Report (CRTR) describes the goals, methods, and findings of the effects analysis conducted by ASM Affiliates, Inc. (ASM), for the Naval Base Point Loma Old Town Campus (OTC) in San Diego County, California. The United States (U.S.) Navy proposes to redevelop OTC's obsolete and dilapidated facilities and provide Naval Information Warfare Systems Command (NAVWAR) modern facilities that meet design standards for safety and security and will enhance NAVWAR's operational effectiveness. Navy has developed several alternatives for this redevelopment (Proposed Undertaking). The purpose of the Proposed Undertaking is to enable NAVWAR to meet its assigned operational and mission sustainment requirements.

The Proposed Undertaking is subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and implementing regulations 36 Code of Federal Regulations (CFR) 800. The CRTR will also form the basis of the analysis under the National Environmental Protection Act (NEPA) (16 U.S. Code [U.S.C.] 4321 and 4331-4335) (Section 3.6 of the Navy OTC Revitalization Environmental Impact Statement [EIS]) and in compliance with the California Environmental Quality Act (CEQA) (Appendix A of the EIS). Navy is the lead agency for NHPA/NEPA, and the San Diego Association of Governments (SANDAG) is the lead agency for CEQA.

Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties. NHPA defines historic properties as "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property or resource." . ASM has prepared this technical report to determine whether the Proposed Undertaking would affect any identified historic properties within the Area of Potential Effects (APE). The APE includes all areas that could potentially be affected by the Proposed Undertaking under all alternatives, including areas proposed for ground disturbance and areas that could be affected visually, audibly, atmospherically, or by temporary or permanent vibration. Therefore, the APE is defined as the Proposed Action Area (OTC Site 1 and OTC Site 2) as well as a roughly 2-mile buffer surrounding the Proposed Action Area.

ASM concurrently prepared an evaluation of OTC for potential eligibility for listing in the NRHP, California Register of Historical Resources (CRHR), and San Diego Register of Historical Resources (Local Register) (Draft Evaluation Report for Navy OTC, San Diego, San Diego County, California, July 2020). As a result of the evaluation, ASM identified an NRHP-eligible historic district within OTC Site 1 of the Proposed Action Area: the Consolidated Aircraft Plant 2 Historic District. The Consolidated Aircraft Plant 2 Historic District is the only historic property identified in the Proposed Action Area. Implementation of Alternatives 1-5 would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District and would result in an adverse effect to historic properties under the NHPA.

The Proposed Undertaking includes surface grading and ground disturbance related to building construction activities within the Proposed Action Area. However, no archaeological resources have been identified in the Proposed Action Area. As management measures, an archaeological monitoring plan will be developed and monitors will be provided during ground disturbing activities. Therefore, the Proposed Undertaking would result in no adverse effects to known archaeological resources within the Proposed Action Area.

ASM also identified 703 NRHP-eligible historic properties within the 2-mile APE surrounding the Proposed Action Area. Alternatives 2-5 would change the character of the physical features within the setting of 19 historic architectural properties within the APE and introduce visual elements that would diminish the integrity of significant features. As such, implementation of Alternatives 2-5 would alter

one of the characteristics of those historic properties that qualify the property for inclusion in the NRHP. Therefore, implementation of Alternatives 2-5 would result in an adverse effect to 19 historic properties, in addition to the Consolidated Aircraft Plant 2 Historic District noted above.

1.0 Introduction

This Cultural Resources Technical Report (CRTR) describes the goals, methods, and findings of the effects analysis conducted by ASM Affiliates, Inc. (ASM), for the Naval Base Point Loma (NBPL) Old Town Campus (OTC) in San Diego County, California. The United States (U.S.) Navy proposes to redevelop OTC's obsolete and dilapidated facilities and provide Naval Information Warfare Systems Command (NAVWAR) modern facilities that meet design standards for safety and security and will enhance NAVWAR's operational effectiveness. Navy has developed several alternatives for this redevelopment (Proposed Undertaking). The purpose of the Proposed Undertaking is to enable NAVWAR to meet its assigned operational and mission sustainment.

The Proposed Undertaking is subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S. Code [U.S.C.]. § 300101 et seq.) and implementing regulations 36 Code of Federal Regulations (CFR) 800. The CRTR will also form the basis of the analysis under the National Environmental Protection Act (NEPA) (16 U.S.C. 4321 and 4331-4335) (Section 3.6 of the Navy OTC Revitalization Environmental Impact Statement [EIS]) and California Environmental Quality Act (CEQA) (Appendix A of the EIS). Navy is the lead agency for NHPA/NEPA, and San Diego Association of Governments (SANDAG) is the lead agency for CEQA.

1.1 Project Description

ASM has prepared this report to determine whether the Proposed Undertaking would affect any identified historic properties within the Area of Potential Effects (APE). The following introductory sections present a description of this CRTR and regulatory framework. Section 2 defines the APE and Section 3 identifies historic properties in the APE. Section 4 defines the methodology for assessing effects and Section 5 identifies the historic properties effected by the alternatives. Section 6 identifies key personnel, with key resumes provided in Attachment E. References for this report are provided in Section 7. Attachments A through C provide the South Coastal Information Center (SCIC) Records Search results and summary. Attachment D provides the California Native American Heritage Commission correspondence to date, and Attachments F and G (DVDs) are digital copies of GIS shapefiles and photographs from the survey for effects in the APE.

Because a NEPA Preferred Alternative has not been selected, this CRTR briefly discusses all alternatives. Alternative 1 consists of revitalization of the OTC Site 1 to meet NAVWAR's facility requirements with Navy-funded redevelopment only. This would potentially include consolidating NAVWAR operations into two of the existing buildings on OTC Site 1. Buildings 2 and 3 would be significantly altered to convert them to administrative, operations, and secure annex spaces (see Section 5.1 for more details), and other buildings and structures on OTC Site 1 would be demolished. The existing buildings at OTC Site 2 would not be modified under this alternative.

Alternatives 2 and 4 both consist of construction of new Navy facilities and high-density mixed-use development. Once the NAVWAR facility is built, the remaining land on OTC Site 1 and OTC Site 2 would be developed as mixed-use, with residential, hotel, office, and/or retail. Alternatives 3 and 5 contain lower density development. Alternatives 4 and 5 also would include a transit center. For the purposes of assessing the impacts to the historic properties in the APE, all four alternatives include multiple (48 to 69) mid-rise buildings (9 to 21 stories tall), and Alternatives 4 and 5 include 35 and 21 high rise buildings (22 stories or more), respectively.

All alternatives include construction-related ground disturbance within the Proposed Action Area. For Alternative 1, ground disturbance would only occur within OTC Site 1 and would mainly be associated

with demolition activities. Alternatives 2-5 would include surface grading and other ground disturbance related to building construction and demolition activities within both OTC Site 1 and OTC Site 2. Drilling would be needed for building foundations for new construction, the depth of which will be determined after a geological study is conducted during future building design. For utilities, ground disturbance is expected to be no more than 6 feet deep. It is possible that utilities may extend outside the Proposed Action Area within adjacent easements, but the location and extent of associated ground disturbance is not known at this time. Once future utility plans are identified for areas outside the Proposed Action Area, further analysis would be needed to determine if utility plans could result in an adverse effect under the NHPA.

For all of the alternatives, the following analysis is based on the assumption that the Navy will retain ownership of OTC Site 1 and OTC Site 2. If there is a future decision to transfer the property out of federal ownership, further analysis would be needed to determine if such an undertaking would result in an adverse effect under the NHPA.

1.2 Project Location and Setting

The Proposed Action Area (4297 Pacific Highway, San Diego, California) comprises OTC Site 1 (48.7 acres) and OTC Site 2 (21.8 acres), for a total of 70.5 acres (Figures 1.2-1 and 1.2-2). OTC Site 1 is bordered by Pacific Highway to the west, Interstate 5 to the north and east, a railroad right-of-way to the east, and Barnett Avenue and Witherby Street to the south. OTC Site 1 includes three former World War II (WWII)-era aircraft assembly plants (Buildings 1, 2, and 3) (approximately 310,000 square feet each) that are now used as administrative offices, laboratory, and warehouse spaces. Smaller buildings (including Buildings 4, 7, 8, 27, 28, and 34) are also located at OTC Site 1. Paved access roads interweave between the buildings. Paved vehicle parking and materials storage areas are located throughout the remainder of the campus.

OTC Site 2 is located west of OTC Site 1 and is bordered by Midway Drive to the west, Rosecrans Street to the north, Pacific Highway and Sports Arena Boulevard to the east, and Enterprise Street to the south. OTC Site 2 is dominated by one operational supply building (approximately 100,000 square feet). The remainder of the site is made up of surface parking and a few small buildings, including Navy Salvage Yard Building 34.

Interstate 5 is located directly north of OTC Site 1 and the Interstate 5/Interstate 8 interchange is located northwest of both OTC Site 1 and the Taylor Street Complex. The Taylor Street Complex consists of four buildings north of OTC Site 1 built during the WWII-era historically related to OTC Site 1 but outside the boundaries of the Proposed Action Area. Pacific Highway borders the entire west and southwestern edge of OTC Site 1 and a variety of commercial and industrial properties are located west of (across) Pacific Highway. The Burlington Northern and Santa Fe railroad right-of-way parallels the entire eastern border of OTC Site 1 and is currently used for passenger and commercial rail service as well as local commuter trolley operations. East of Interstate 5 is the Old Town area of San Diego, which consists of light commercial and residential land uses. The Old Town Trolley Station is located north of the facility. Marine Corps Recruit Depot (MCRD) and San Diego International Airport are located to the south-southeast. Downtown San Diego is approximately 2 miles south and Liberty Station and Pechanga Arena (formerly known as the San Diego Sports Arena) are located near the Proposed Action Area.

OTC Site 1 and OTC Site 2 are located within the City of San Diego “Midway-Pacific Highway” Community Planning Area. The planning area is an urbanized neighborhood situated north of Downtown San Diego, between the Old Town and Point Loma communities. Midway-Pacific Highway encompasses approximately 800 acres of mostly flat land and comprises the central Midway area, the Pacific Highway corridor, and MCRD. The Midway area has a commercial core containing numerous shopping centers,

institutional facilities, multifamily residential developments, visitor-oriented uses, and older industrial areas. The area is characterized by wide streets, flat topography, and a varied mixture of auto-oriented large and small commercial developments. The Pacific Highway corridor, located between Interstate 5 on the east and MCRD and San Diego International Airport on the west, contains commercial and industrial uses, multifamily residential developments, and airport-related commercial uses. The Taylor Street Complex is located on the western edge of the Old Town Community Plan Area. The planning area is home to the Old Town San Diego State Park, the Birthplace of California. The community is 230 acres in size and is located south of Interstate 8 and Mission Valley, east of Interstate 5 and the Midway-Pacific Highway community, and west of the Mission Hills neighborhood of the Uptown community (City of San Diego, 2020).

1.3 Regulatory Framework

1.3.1 National Historic Preservation Act

NHPA establishes responsibility for federal agencies to provide leadership in the identification, planning, and preservation of historic properties. Under the law, federal agencies must approach historic properties in the spirit of stewardship and must appropriately involve the public. The two portions of the law most often applied to projects on Department of Defense properties are: Section 110, which mandates proactive identification and management of cultural resources actions; and Section 106, which requires agencies to consider the effects of their actions on historic properties. The NHPA's implementing regulations (36 CFR 800) define a historic property as: any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior (SOI). This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria.

1.3.2 Naval Base Point Loma Programmatic Agreement

The 2014 Programmatic Agreement Among the Commander NBPL, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Regarding NBPL Undertakings, San Diego County, California (NBPL PA) is the primary NHPA compliance mechanism for NBPL. The NBPL PA provides deferred authority to professionally qualified Navy subject matter experts on the majority of project reviews that significantly reduce cost and time associated with standard consultation. The NBPL PA directs that all new construction, alterations, structure modifications, or repairs and maintenance on Class 1 (land) and Class 2 (buildings and structures) properties will be reviewed in accordance with "Policy and Procedures for Conducting Environmental Review Process at NBPL." The NBPL PA stipulates that ground disturbing activities include appropriate measures to protect archaeological resources and provide direction for managing inadvertent discoveries, unanticipated effects, and emergencies to avoid or minimize harm to historic properties. The NBPL PA also establishes the procedures for identifying and addressing adverse effects through consultation between the Navy and the Advisory Council on Historic Preservation, State Historic Preservation Office (SHPO), Native American tribes and interested parties.

1.3.3 National Environmental Policy Act

NEPA establishes guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice" [42 U.S.C. Section 4331 (b)(4)]. Impacts considered under NEPA include those on cultural and historic resources [40 CFR 1508.8]. This CRTR will form the basis of the analysis of impacts under NEPA.

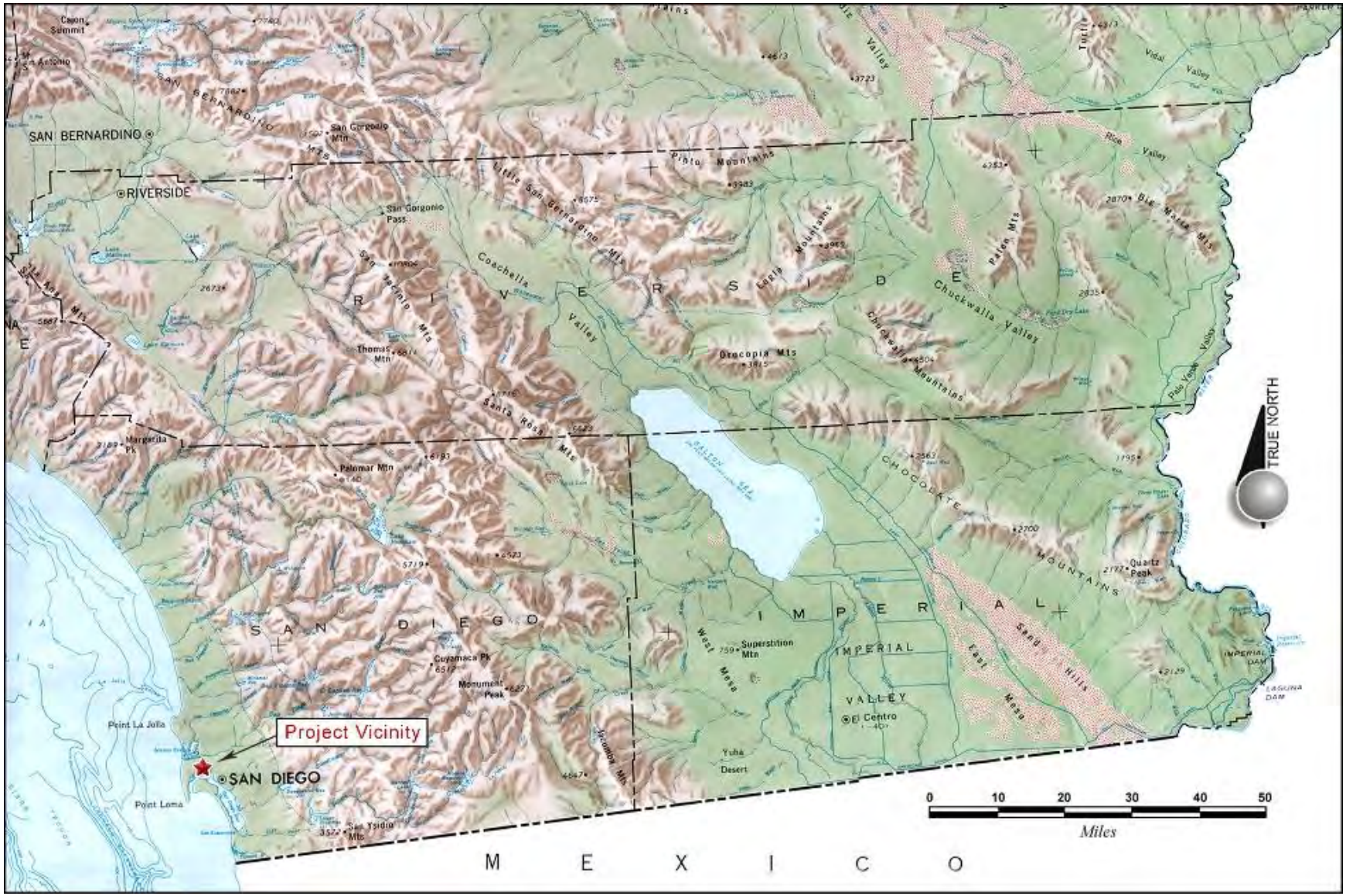

Figure 1.2-1 Regional Vicinity Map

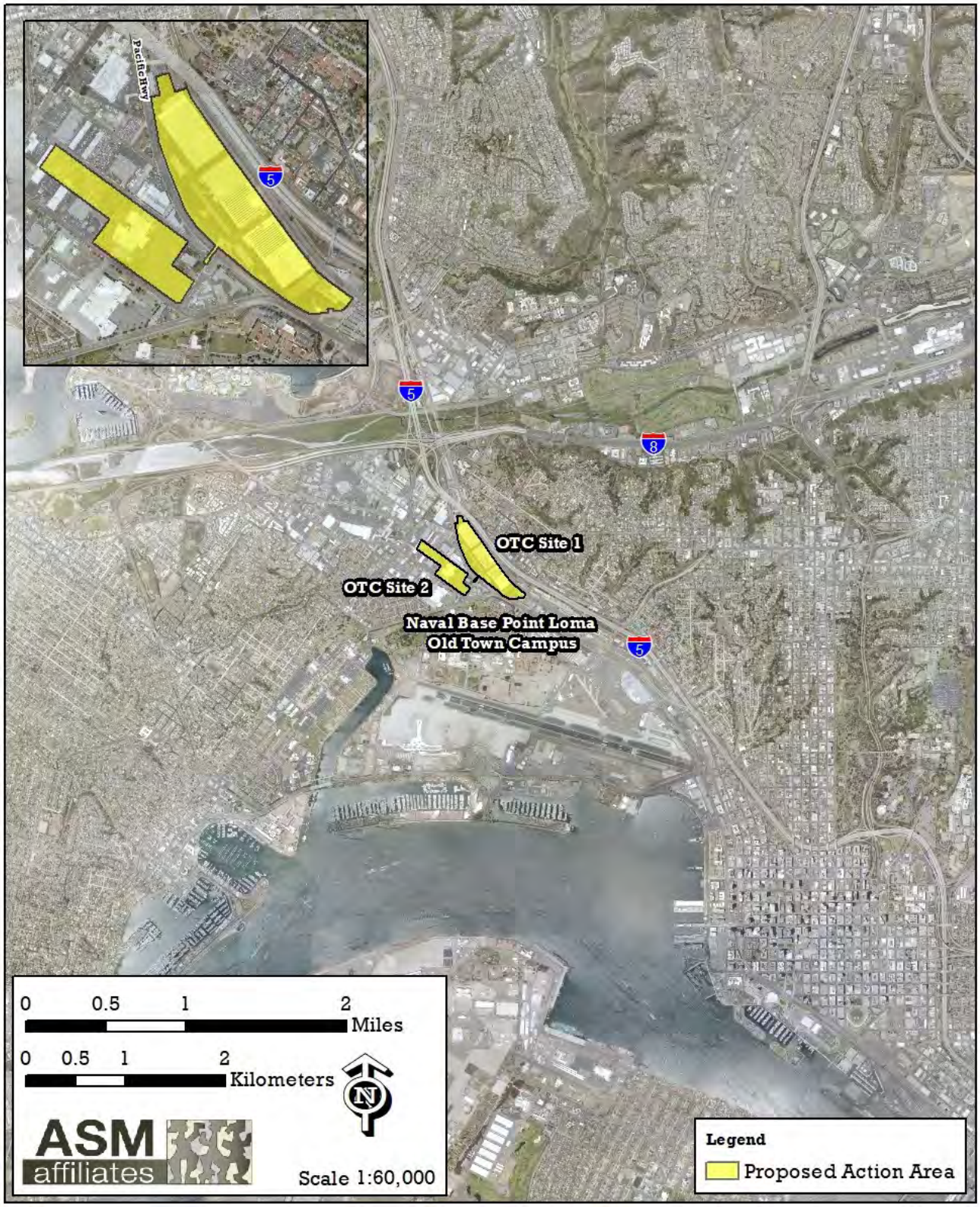

Figure 1.2-2 Proposed Action Area

1.3.4 National Register of Historic Places

Authorized by the NHPA of 1966, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archaeological resources. The NRHP is the official list of the Nation's historic places worthy of preservation. The NRHP criteria for evaluation are designed to guide federal agencies and others in evaluating whether a property is eligible for inclusion in the NRHP. *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 15 provides additional guidance on the evaluation of historic properties (National Park Service [NPS], 1991). The criteria for evaluation are as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity (see following section for the NRHP definition of integrity) and:

a) are associated with events that have made a significant contribution to the broad patterns of our history; or

b) are associated with the lives of persons significant in our past; or

c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) have yielded or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b) a building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

c) a birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or

d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

g) a property achieving significance within the past 50 years if it is of exceptional importance.

1.3.4.1 Integrity

In order to be eligible for listing in the NRHP, a property must also retain sufficient integrity to convey its significance. The NRHP publication *How to Apply the National Register Criteria for Evaluation*, NRHP Bulletin 15, establishes how to evaluate the integrity of a property: "Integrity is the ability of a property to convey its significance" (NPS, 1991). The evaluation of integrity must be grounded in an understanding of a property's physical features, and how they relate to the concept of integrity. Determining which of these aspects are most important to a property requires knowing why, where, and when a property is significant. To retain historic integrity, a property must possess several, and usually most, aspects of integrity:

1) Location is the place where the historic property was constructed or the place where the historic event occurred.
2) Design is the combination of elements that create the form, plan, space, structure, and style of a property.
3) Setting is the physical environment of a historic property and refers to the character of the site and the relationship to surrounding features and open space. Setting often refers to the basic physical conditions under which a property was built and the functions it was intended to serve. These features can be either natural or manmade, including vegetation, paths, fences, and relationships between other features or open space.
4) Materials are the physical elements that were combined or deposited during a particular period of time, and in a particular pattern or configuration to form a historic property.
5) Workmanship is the physical evidence of crafts of a particular culture or people during any given period of history or prehistory and can be applied to the property as a whole, or to individual components.
6) Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, when taken together, convey the property's historic character.
7) Association is the direct link between the important historic event or person and a historic property.

1.3.5 California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are defined as "any object, building, structure, site, area, or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California," as cited in Division I, Public Resources Code (PRC), Section 5021. This CRTR will form the basis of the analysis of impacts under CEQA.

The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be a "historical resource" if it:

1) Is listed in or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC, Section 5024.1, Title 14 CCR, Section 4850 et seq.).
2) Is included in a local register of historical resources or is identified as significant in an historical resource survey meeting the requirements of PRC, Section 5024.1(g).
3) Is a building or structure determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

1.3.6 California Register of Historical Resources

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. The criteria established for eligibility for the CRHR are directly comparable to the national criteria established for the NRHP.

In order to be eligible for listing in the CRHR, a resource must satisfy at least one of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
2) It is associated with the lives of persons important to local, California, or national history.
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Historical resources achieving significance within the past 50 years are considered for eligibility for the CRHR only if they meet special consideration. In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance. The NRHP has a comparable special consideration for resources less than 50 years old and requires those resources to be of "exceptional importance." In 2012, the California Office of Historic Preservation clarified that the guidance regarding resources less than 50 years old is the same for both the CRHR and NRHP, and that the intent of the CRHR regulations is to be the same as the NRHP (California Department of Transportation, 2012).

Not only must historical resources eligible for listing in the CRHR meet one of the criteria of significance described above, but eligible resources must also retain integrity, or enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. For the purposes of eligibility for the CRHR, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (Office of Historic Preservation, 2001). This general definition is strengthened by the more specific definition offered by the NRHP—the criteria and guidelines on which the CRHR criteria and guidelines are based upon.

1.3.7 San Diego Register of Historical Resources

The Historical Resources Guidelines of the City of San Diego's Land Development Manual identifies the criteria under which a resource may be historically designated. It states that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated a historical resource by the City of San Diego Historical Resources Board if it meets one or more of the following designation criteria:

a) Exemplifies or reflects special elements of the city's, a community's, or a neighborhood's, historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development.

b) Identified with persons or events significant in local, state, or national history.

c) Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.

d) Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman.

e) Is listed or has been determined eligible by the NPS for listing in the NRHP or is listed or has been determined eligible by the State Historical Preservation Office for listing in the State Register of Historical Resources.

f) Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the city.

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2.0 Area of Potential Effect

The APE for the Proposed Undertaking includes proposed ground disturbance areas and all areas that could potentially be affected by the alternatives, including visually, audibly, atmospherically, or by temporary or permanent vibration. This includes the Proposed Action Area (OTC Site 1 and OTC Site 2) as well as an area roughly defined by a 2-mile radius surrounding the Proposed Action Area (Figure 2.0-1). An area defined by a 1/2-mile radius surrounding the Proposed Action Area is sufficient for analyzing audible, atmospheric, and vibration effects, based on consideration of potential effects from proposed construction and/or operation activities under all alternatives and review of pertinent resource sections of the EIS (see EIS Sections 3.1, 3.13, and 3.14). However, a wider APE is appropriate for considering potential visual effects due to the height and mass of the highest density alternatives.

To determine the appropriate extent of the APE, ASM collaborated with KTU&A, the visual specialists for the EIS. The expertise of the visual specialists helped inform the potential visibility of the project from various distances (or zones) and locations in the San Diego area. This included defining four distance zones specifically for this project:

Foreground: zone of distance nearest to viewer location in which changes to the view are dominant and create the greatest contrast.

Middleground: zone of distance between foreground and background in which detail is still apparent.

Background: zone of distance far from viewer location in which the human eye typically does not perceive line or texture and only sees outlines of form and splashes of color.

Distant Background: zone of distance furthest from viewer location, detail will not be visible.

In general, the distance away from a location from which the Proposed Undertaking could be visible would be shorter in urban areas where dense mixed-use development occurs, than those in natural areas with distant views.

KTU&A determined the distance zones and the limits of their study area based on the size of the project, the viewing conditions of the project site, and the viewing area from which the site is seen. For the purposes of this study, the foreground is considered to be up to ½ mile from the edges of the Proposed Action Area; the middleground is ½ mile to 1 miles; the background is 1 miles to 3 miles; and anything beyond 3 miles is considered to be a distant background. Most of the alternatives being considered under this undertaking would be a dominant feature within the foreground view of a location up to ½ mile from the Proposed Action Area. Between ½ mile to 2 miles away, the Proposed Action Area would no longer be dominant within the foreground but could be present within middleground views. In an area beyond 2 miles, the alternatives would be lost in the background view and would not dominate the historic views. Therefore, the APE was drawn at the 2-mile radius. Unshaded areas within the 2-mile radius on Figure 2.0-1 are areas where views towards the Proposed Action Area are known to be obscured (for example, by topography).

The part of the APE relevant to archaeological resources is limited to proposed ground disturbance. This includes surface grading, utility placements, foundation drilling, and other building construction and demolition activities within the Proposed Action Area. Drilling would be needed for building foundations, the depth of which will be determined after a geological study is conducted during future building design. For utilities, ground disturbance is expected to be no more than 6 feet deep. It is

possible that utilities may extend outside the Proposed Action Area within adjacent easements, but the location and extent of associated ground disturbance is not known at this time. Once future utility plans are identified for areas outside the Proposed Action Area, further analysis would be needed to determine if the utility plans could result in a significant impact to cultural resources.

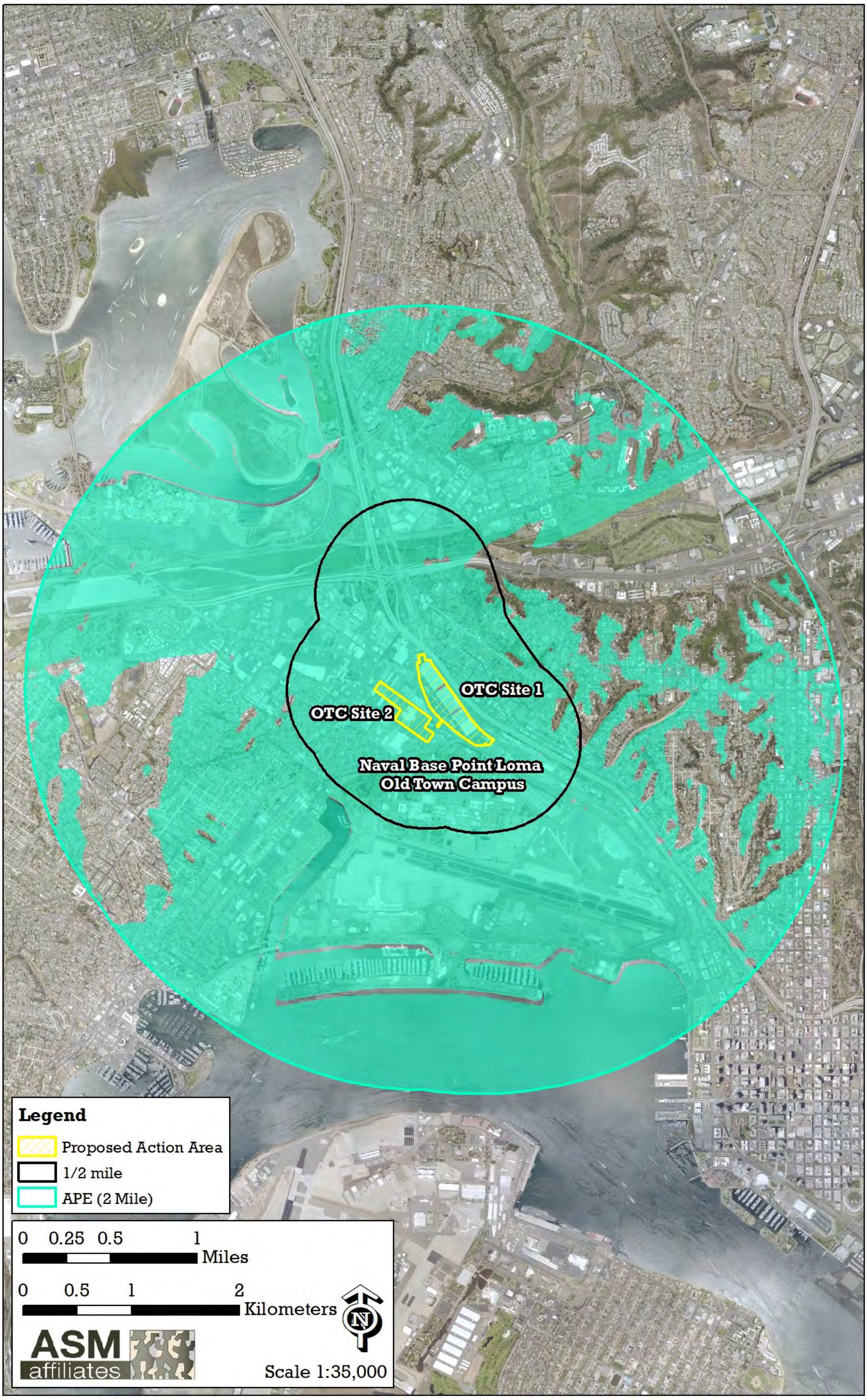

Figure 2.0-1 Area of Potential Effect Map for Proposed Undertaking

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3.0 Identification of Historic Properties

This section of the report contains a review of existing information (records search results), a summary of consultation with tribes/interested parties, and a discussion of prior and current studies of OTC. Additionally, identification of archaeological and architectural historic properties is addressed, both within and outside the Proposed Action Area.

3.1 Records Search Results

An archival records search of the California Historical Resources Information System was conducted at the SCIC in June 2020 that included a 2-mile radius around the Proposed Action Area (Attachments A through C). The results of the records search are summarized below (Table 3.1-1).

Table 3.1-1 Summary of Records Search Results

SCIC Record Type	Mapped within 2 miles of Proposed Action Area	Intersects with Proposed Action Area
Resources (Archaeological and Architectural)	1,033	3
Historical Addresses	1,142	3
Built Environment Resources Directory	56	0
Previous Reports	848	14

Note: These lists include many duplicate listings of the same resource.

SCIC records searches provide information on resources in three ways: resources, historical addresses, and Built Environment Resources Directory (BERD). Attachment B provides a summary of the combined resources (archaeological and architectural) from those three lists. This summary eliminates duplicate listings of the same resource if it appears on more than one of the lists and identifies historic districts as one resource (except where a contributing resource to a district is also individually eligible for the NRHP).

SCIC records include a list of 1,033 previously recorded resources within a 2-mile radius of the Proposed Action Area. This includes 955 architectural resources (eligible and ineligible), and 78 archaeological resources. Three of the 955 architectural resources are located within or intersect the Proposed Action Area: OTC (P-37-028238), La Playa Trail (P-37-028552), and a former Navy salvage yard building (P-37-035551). Of the 78 archaeological sites, eight are located within a ½-mile radius from the Proposed Action Area, and none are located within the Proposed Action Area.

The list of "historic addresses" (many of these were duplicates from the "resources" list) identified 1,142 architectural properties within the APE, and 176 were located within a ½-mile radius of the Proposed Undertaking. Architectural properties on this list include properties eligible for the NRHP, CRHR, and/or Local Register.

SCIC records search results also included a separate list of properties in the California Office of Historic Preservation's BERD. The BERD contains information only for architectural resources that have been processed through the California Office of Historic Preservation including resources reviewed for NRHP eligibility and the CRHR or California Historical Landmarks programs through federal and state environmental compliance laws, and resources nominated under federal and state registration programs. The BERD identified 56 additional architectural properties within the APE, 19 of which were located within a ½-mile radius of the Proposed Action Area.

SCIC records identified 848 previous reports within a 2-mile radius of the Proposed Action Area (Attachments A and C). These reports include all prior surveys and/or reports submitted to the SCIC that address cultural resources including, but not limited to, CRTRs, archaeological survey and monitoring reports, and architectural evaluation reports. Of those reports, only 14 intersect or overlap the Proposed Action Area, and these reports account for cultural resources surveys of approximately 100 percent of the Proposed Action Area (Table 3.1-2).

The most complete archaeological examination of the Proposed Action Area was completed in 1994 by Roger Mason and Joel Paulson (1994). Mason and Paulson's project area included OTC Site 1 and OTC Site 2. Although no archaeological survey was conducted by Mason and Paulson (1994) due to the presence of structures and hardscaping, they used geological data from a previous study to assess archaeological potential. According to Mason and Paulson (1994), the 1992 geological study by Berger "showed that the study area is underlain by manmade fill to a depth of 8 to 13.5 feet, which overlies bay deposits." Per Mason and Paulson (1994), there is no potential for subsurface prehistoric cultural deposits in the fill and a very low potential in the bay deposits. Furthermore, they conclude that this information indicates that OTC 1 (previously known as Consolidated Aircraft Plant 2 and Air Force Plant 19) was part of San Diego Bay and was probably a marsh or tidal flat during prehistoric times.

Table 3.1-2 Summary of Previous Reports within the Proposed Action Area

IC File No.	NADB No.	Authors	Year	Title	Affiliation
SD-02894	1122894	City of San Diego	1993	Mitigated Negative Declaration Replacement of Water and Sewer Pipes: La Jolla, Uptown, Mission Valley, Midway and Navajo Communities	City of San Diego Planning Department
SD-03094	1123094	Mason, Roger and Joel Paulson	1994	Cultural Resources Survey Report for two proposed locations for the Naval Engineering Facility Air Force Plant 19, San Diego and a Portion of Naval Air Station Miramar	Chambers Group, Inc.
SD-03461	1123461	Kyle, Carolyn, and Roxana L. Phillips	1998	Cultural Resource Constraint Study for the North Bay Redevelopment Project City of San Diego, California	Gallego & Associates
SD-04000	1124000	Various	-	Dutch Flats/Ryan Field	Various
SD-05507	1125507	Wade, Sue, Stephen R. Van Wormer, and Dayle M. Cheever	1990	Historic Properties Inventory for Secondary Treatment, Clean Water Program for Greater San Diego, San Diego, California (DEP No. 89-0744)	RECON
SD-05596	1125596	City of San Diego	1992	Mitigated Negative Declaration for Group Job 600	City of San Diego
SD-06899	1126899	Widell, Cherilyn	1996	National Register Engineering Laboratory at Hanger 19	Cherilyn Widell
SD-10134	1130134	Schaefer, Jerry	2006	Final Cultural Resource Constraints Analysis for the Barnett Avenue Bikeway Project San Diego California	ASM Affiliates
SD-10515	1130515	U.S. Department of The Navy	-	Request for Historical Designation for Air Force Plant 19	U.S. Department of The Navy

IC File No.	NADB No.	Authors	Year	Title	Affiliation
SD-12200	1132200	City of San Diego	2009	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)	City of San Diego Development Services Department
SD-13491	1133491	U.S. Department of Transportation	2011	Section 106 Consultation for the Mid-Coast Corridor Transit Project, San Diego County, CA	U.S. Department of Transportation
SD-15151	1135151	Brunzell, David	2015	Cultural Resources Assessment of the Crown Castle/ Verizon Fiber PUC Project, San Diego, California (BCR Consulting Project No. Syn1404)	BCR Consulting LLC
SD-16448	1136448	Garcia-Herbst, Arleen	2015	Cultural Resources Inventory for the Pacific Beach Pipeline Project, City of San Diego, CA	Spindrift Archaeological Consulting, LLC
SD-16601	1136601	Cogstone Resource Management, Inc.	2015	San Diego River Bridge Double Track Project (CP Tecolote to CP Friar) Cultural Resources Technical Report	Cogstone Resource Management, Inc.

Legend: NADB = National Archaeological Database Information; IC = Information Center.

3.2 Native American Heritage Commission

Per the Integrated Cultural Resources Management Plan for NBPL, the Proposed Action Area does not contain any known traditional cultural properties or other traditional cultural resources based on prior consultations between the Navy and the Kumeyaay during preparation of the NBPL PA (Ultrasystems, 2017). ASM sent a request to the Native American Heritage Commission to search their Sacred Lands File to determine whether their files contain any information relating to the presence of Native American cultural resources within the Proposed Action Area. ASM received a response from the Native American Heritage Commission dated March 18, 2020, stating that a records search was positive and indicating the presence of Native American cultural resources in or within the vicinity of the Proposed Action Area (Attachment D).

3.3 Prior Studies of OTC

In 2020, at the request of the Navy, ASM prepared a *Draft Evaluation Report for Navy Old Town Campus, San Diego,* to determine the eligibility of the NBPL OTC in San Diego County, California, for listing in the NRHP, CRHR, and Local Register (ASM, 2020). ASM recommended that the Consolidated Plant 2 Historic District is eligible for listing in the NRHP, CRHR, and Local Register under Criteria A/1/A, Criteria B/2/B, and Criteria C/3/C and D, and Local Criterion F. See Section 3.7.1.1. for more information about the Consolidated Plant 2 Historic District.

A prior evaluation of OTC was discussed in a report titled *Architectural and Historical Evaluation of the Air Force Plant 19 Complex and Taylor Street Annex, San Diego*, prepared by Hatheway and Associates, Crestline, California, in 1993. The 2020 evaluation was requested because the prior evaluation was conducted more than 10 years ago and was not prepared in compliance with the SOI's *Professional Qualification Standards* (36 CFR 61). Other prior studies include a 1994 Evaluation Report by the Chambers Group and two reports prepared by KEA Environmental in 1995 and 1996.

The Proposed Action Area is within the boundaries of the *Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report* (Galvin Preservation Associates, 2017). The report identified significant themes for the Midway-Pacific community and registration requirements for properties

therein. The report recommendation (based on reconnaissance-level survey) is that OTC is potentially eligible for local designation within the contexts of Military, Aerospace, and Related Industrial Development and Post-war Commercial and Residential Development (Galvin Preservation Associates, 2017, p. 36).

3.4 Geoarchaeological Overview

3.4.1 Changing Landforms and the Archaeological Implications

The Proposed Action Area is located on a flat plain averaging about 10 feet above mean sea level (amsl). This plain is surrounded to the north by Mission Bay, to the west by the Point Loma peninsula with a maximum height of 420 feet amsl, to the south by the San Diego Bay, and to the east by bluffs with San Diego Presidio Park and Old Town San Diego State Historic Park. The Old Town State Park ranges in elevation from 20 to 65 feet amsl, while San Diego Presidio Park ranges in elevation from 100 to 160 feet amsl. The San Diego River cuts through this plain, currently running east-west from its Mission Valley exit until its outflow into the Pacific Ocean immediately south of Mission Bay. While historic maps indicate that a portion of Old Town was on the bluff, the western portion was initially located on the plain (Figure 3.4-1).

The San Diego Bay and surrounding coastline has seen significant changes since the last ice age. At 18,000 years ago, the sea level was at its lowest during the Wisconsin Glacial Stage at 120 meters below present sea level (Masters, 1988). At this time, the coast was 2 to 3 miles west of its present location, and the San Diego Bay did not exist until sea levels rose to 5 meters below present sea level and the bay began to infill with seawater around 6,000 years ago. This infilling continued until the present sea level stabilized around 4,000 to 3,000 years ago (Gallegos, 2017).

Figure 3.4-1 An 1851 Topographic Map of the San Diego Bay and Surrounding Area

Note that the river was already recorded as flowing into San Diego Bay and ran just below the bluff with San Diego (Old Town). "New" San Diego is also located on the map.

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Spanish records note that in the early nineteenth century, the San Diego River flowed into Mission Bay (also known as False Bay), and that sometime in the 1820s, flooding diverted the river so that it flowed into the San Diego Bay (Smythe, 1908; Figure 3.4-2). Between 1820 and 1877, the river may have oscillated between Mission Bay and San Diego Bay. During this period, the lower elevation portion of Old Town San Diego was susceptible to flooding, and at various times was incised with a river channel (Figure 3.4-3). When the San Diego River began to flow into the San Diego Bay, the sediment load began to decrease the depth of the bay, thereby threatening shipping (Smythe, 1908). As a result, in 1877, the river was diverted just south of Mission Bay through a dam and channel so that it would flow directly into the Pacific Ocean and reduce the sediment flow into San Diego Bay.

Within the Proposed Action Area, limited data are available regarding what underlies OTC Site 1 and OTC Site 2 and to what depth it can be found. A study by Mason and Paulson (1994) that cited a 1992 geology report by V. D. Berger states that the north end of OTC Site 1 is overlain with 8 to 13.5 feet of "manmade" fill soil, which at the time, precluded the discovery of archaeological resources via pedestrian survey (Mason and Paulson, 1994). According to the Mason and Paulson report, Berger found that the fill layer was immediately above bay deposits that extended to a depth of 49 to 53 feet below the surface (Mason and Paulson, 1994). The geological section of the EIS for the current project also confirms this finding based on an investigation conducted near the main gate of OTC Site 1. This investigation found that the uppermost geological unit at OTC is artificial fill from the late Holocene epoch to a depth of approximately 12 feet below ground surface. However, the geological section concludes that the thickness of artificial fill likely varies across OTC Site 1 and OTC Site 2 with a maximum total thickness of fill up to 20 feet (EIS Section 3.14, *Geological Resources*). The artificial fill overlies older Holocene-age bay, estuarine, and river sediments (Kennedy and Tan, 2008).

The geology data tends to support the idea that OTC Site 1 is located within the old San Diego River channel as seen on both the 1851 and 1859 maps (see Figures 3.4-1 through 3.4-3) and would correlate with Figure 3.4-2 showing a river channel cutting through the plain that was leveled off with fill deposits. Most of OTC Site 2 is also located within an old San Diego River channel (see Figure 3.4-3). Any prehistoric archaeological sites that may have been located in this area were likely removed by river channels cut by flooding events up through the late nineteenth century. However, due to the limited amount of subsurface investigations, this should be viewed as tentative. Based on the available geological data for the area, there is low potential for buried unrecorded archaeological resources in OTC Site 1 and OTC Site 2.

3.5 Archaeological Historic Properties

3.5.1 Within the Proposed Action Area

No archaeological survey of the Proposed Action Area was conducted as the property is completely covered by structures and hardscaping. No archaeological sites are recorded within the Proposed Action Area. There is a low potential for buried unrecorded archaeological resources in OTC Site 1 and OTC Site 2 (see Section 3.4). However, archaeological monitors will be provided during ground disturbing activities as a management measure.

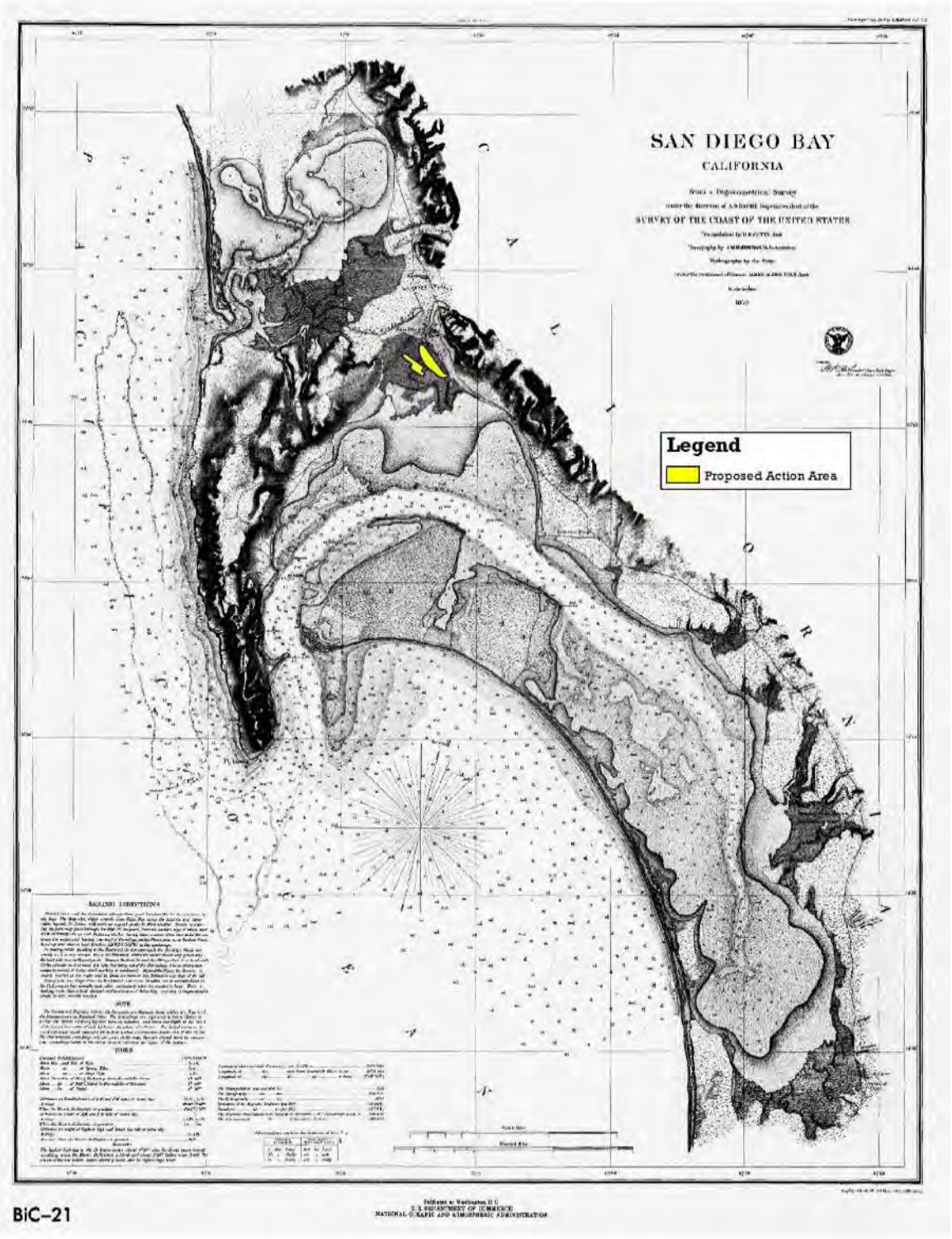

Figure 3.4-2 An 1859 Relief and Nautical Map of the San Diego Bay and Surrounding Area

Note that while the river is shown as running into San Diego Bay, the earlier river channel flowing into False Bay is also recorded on the map. This figure also approximates the prehistoric shoreline at the time of European contact.

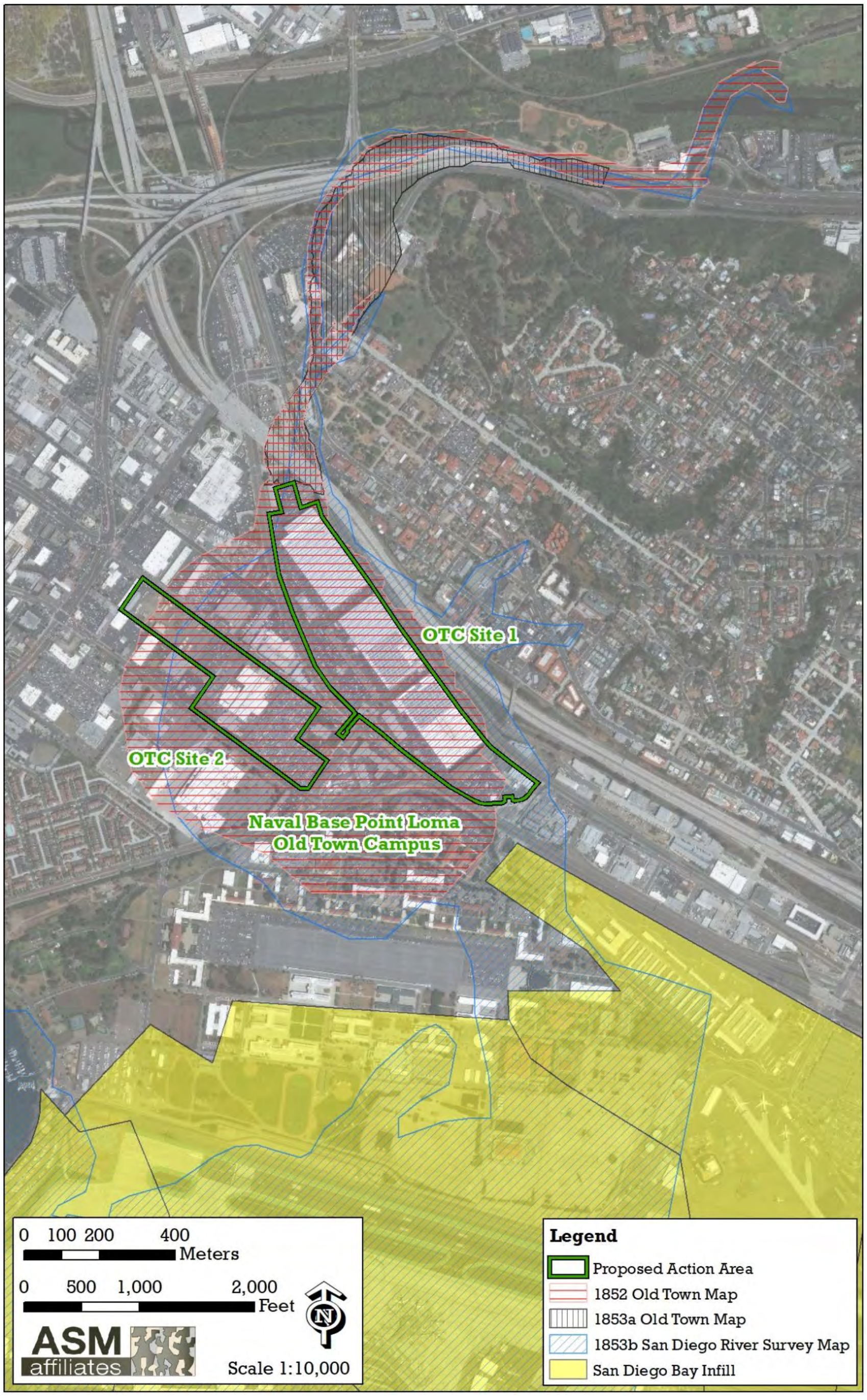

Figure 3.4-3 The Old Course of the San Diego River Flowing through a Portion of Old Town San Diego into San Diego Bay

Note that OTC Site 1 and most of OTC Site 2 are located on a plain that old river channels would cut through to flow into the bay. The Taylor Street Complex was included for evaluation of a potential historic district but it outside the Proposed Action Area.

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3.5.2 Outside the Proposed Action Area

California Historical Resources Information System records indicate the presence of 78 previously recorded archaeological sites within a 2-mile radius of the Proposed Action Area; 8 archaeological sites are located within a ½-mile radius of the Proposed Action Area. Most of the archaeological resources contain trash scatters and are associated with single-family properties (see Attachments A-C). No archaeological survey was conducted outside the Proposed Action Area because there is no potential for adverse effects from this Proposed Undertaking on such resources outside the Proposed Action Area. As the Proposed Undertaking would have no effect on archaeological resources outside the Proposed Action Area, these resources are not addressed further in this study.

3.6 Visual Simulations

In addition to the field survey described in Section 4.2, designs and/or simulations for the alternatives were reviewed. Design details and renderings were reviewed for Alternative 1 that came from the Draft OTC Recapitalization Plan prepared by Makers Architecture (Department of the Navy [DON], 2020). That level of design has not been developed for Alternatives 2-5, however models that depict general massing and size of all alternatives were reviewed (Figures 3.6-1 through 3.6-5).

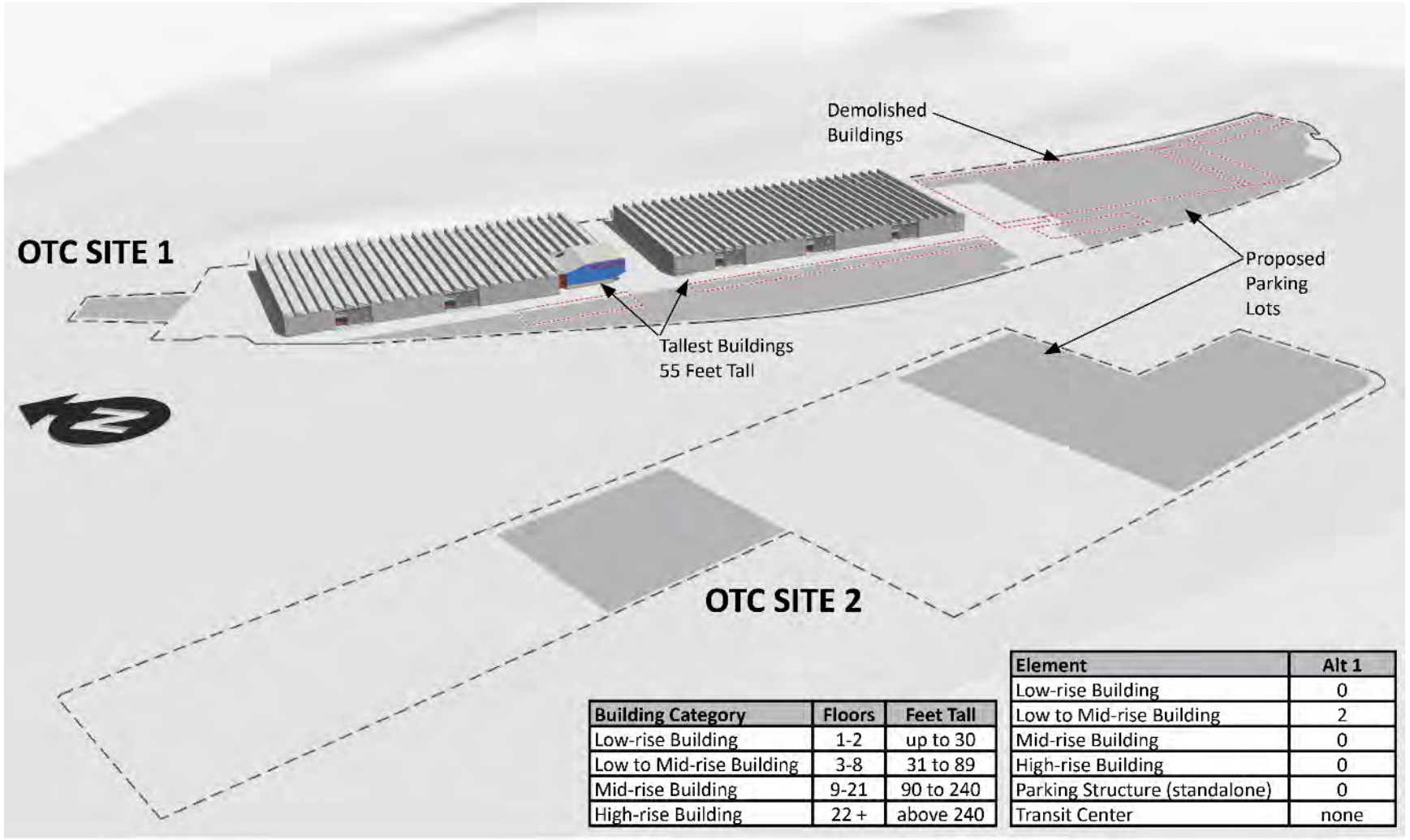
For Alternatives 2-5, visual simulations of Key Observation Points (KOPs) toward the Proposed Action Area were prepared by KTU&A as part of a visual impacts assessment (see Table 3.6-1, Figure 3.6-6, and Appendix F of the EIS). ASM reviewed several visual simulations from KOPs within the APE that are adjacent to or near historic properties (Figures 3.6-7 through 3.6-9). KOP names include the "candidate" name in a letter-number format that was assigned to prospective views considered for simulation. Although simulations were only prepared for 10 KOPs for the Visual Impacts Assessment, KTU&A prepared additional simulations for this cultural assessment to depict views from additional historic properties in the APE (Figures 3.6-10 through 3.6-13). The additional simulations were not prepared to the same level of visual detail or quality as the 10 KOPs. While these simulations look more distorted, they still provide valuable insight on local views.

The simulations beyond the ½-mile radius of the project confirmed the adequacy of the APE and that the views of the Proposed Action Area would indeed be in the middleground view with weak or no contrast. However, simulations within the ½-mile radius illustrated that the Proposed Action Area would be highly visible in the foreground and create a moderate to strong contrast (see Figures 5.2-2 and 5.2.5).

Table 3.6-1 Visual Simulations Reviewed Near Historic Properties

KOP#	Address and/or Name of Historic Property near KOP
#5 (SP-2)	1751 Hancock St. (Mission Brewing Company)
#6 (OT-1)	Old Town SHP
#7 (OT-6)	2266 San Diego Avenue
#8 (NP-1)	San Diego Presidio (NHL)
#9 (NP-3)	4212 Altamirano Way
#10 (CH-2)	4030 Sunset Road and 2206 Juan Street
-	1674 Torrance Street (John Holland Residence)
-	4044 Lark Street (Mission Hills United Methodist Church)
-	Berkeley Ferry (NHL), San Diego Harbor
-	Balboa Park (NHL)

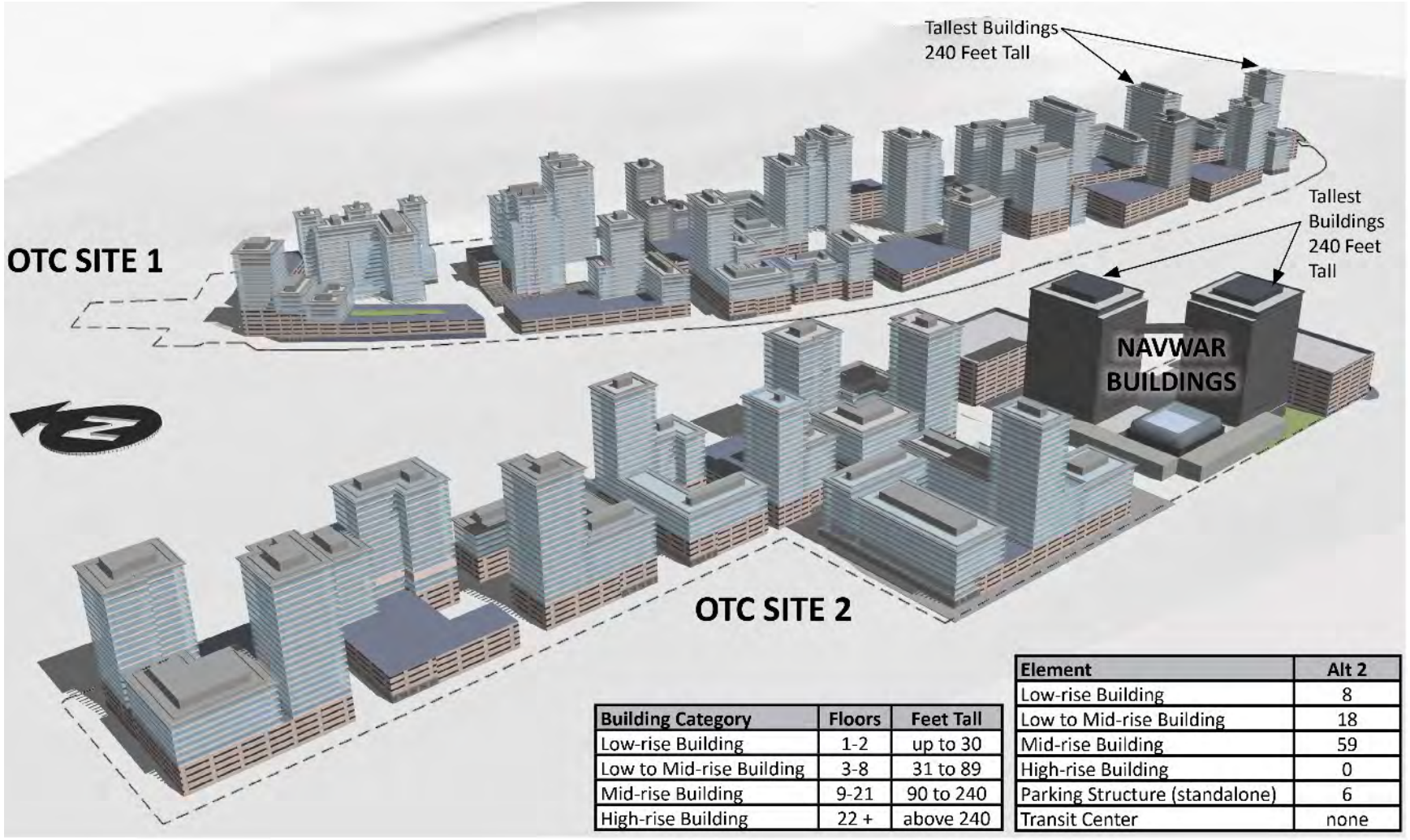
Legend: - = no data; KOP = Key Observation Point; NHL = National Historic Landmark; OT = Old Town; SHP = State Historic Park.



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 1
Low-rise Building	0
Low to Mid-rise Building	2
Mid-rise Building	0
High-rise Building	0
Parking Structure (standalone)	0
Transit Center	none

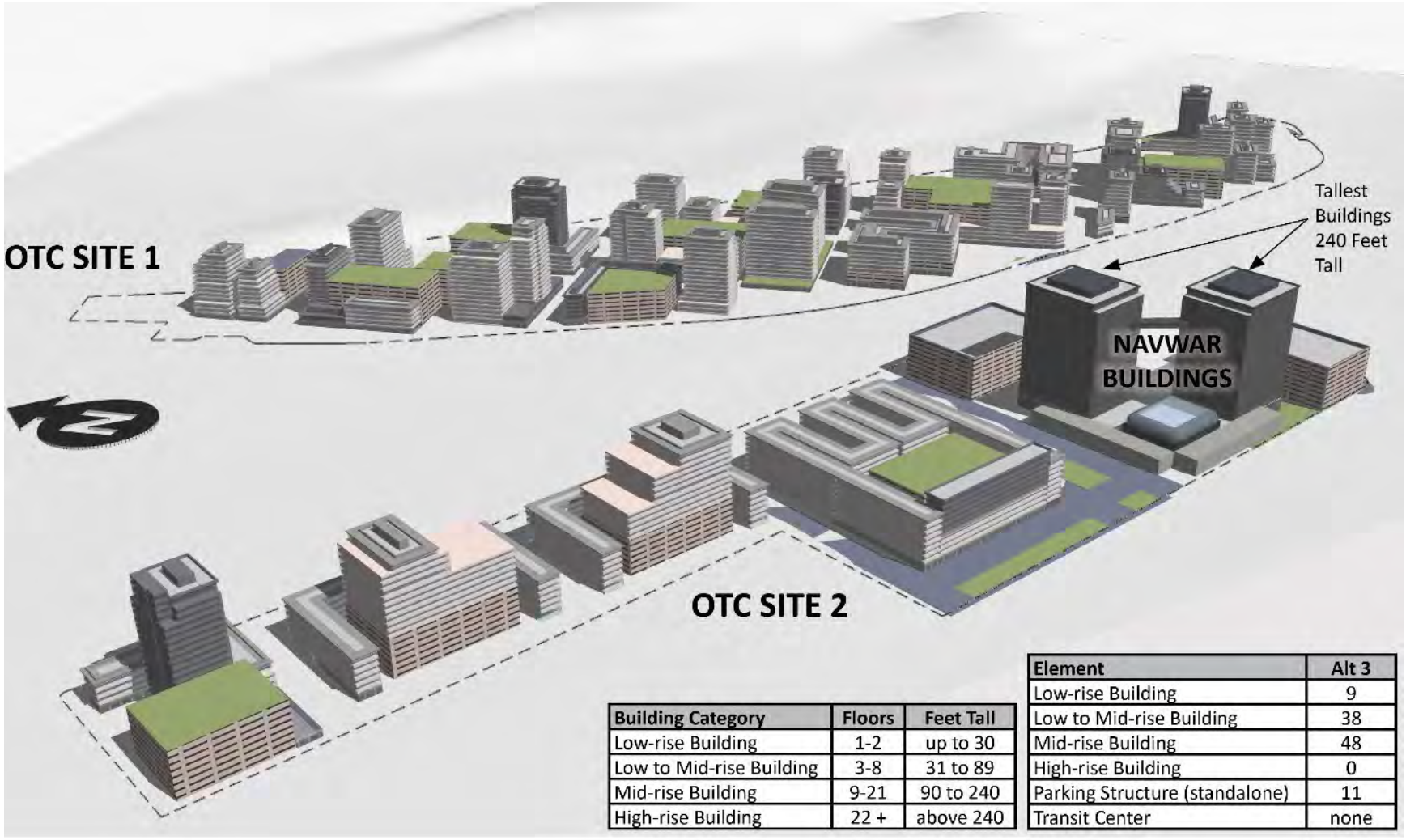
Figure 3.6-1 Estimated Build-out for Alternative 1 on OTC Site 1



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 2
Low-rise Building	8
Low to Mid-rise Building	18
Mid-rise Building	59
High-rise Building	0
Parking Structure (standalone)	6
Transit Center	none

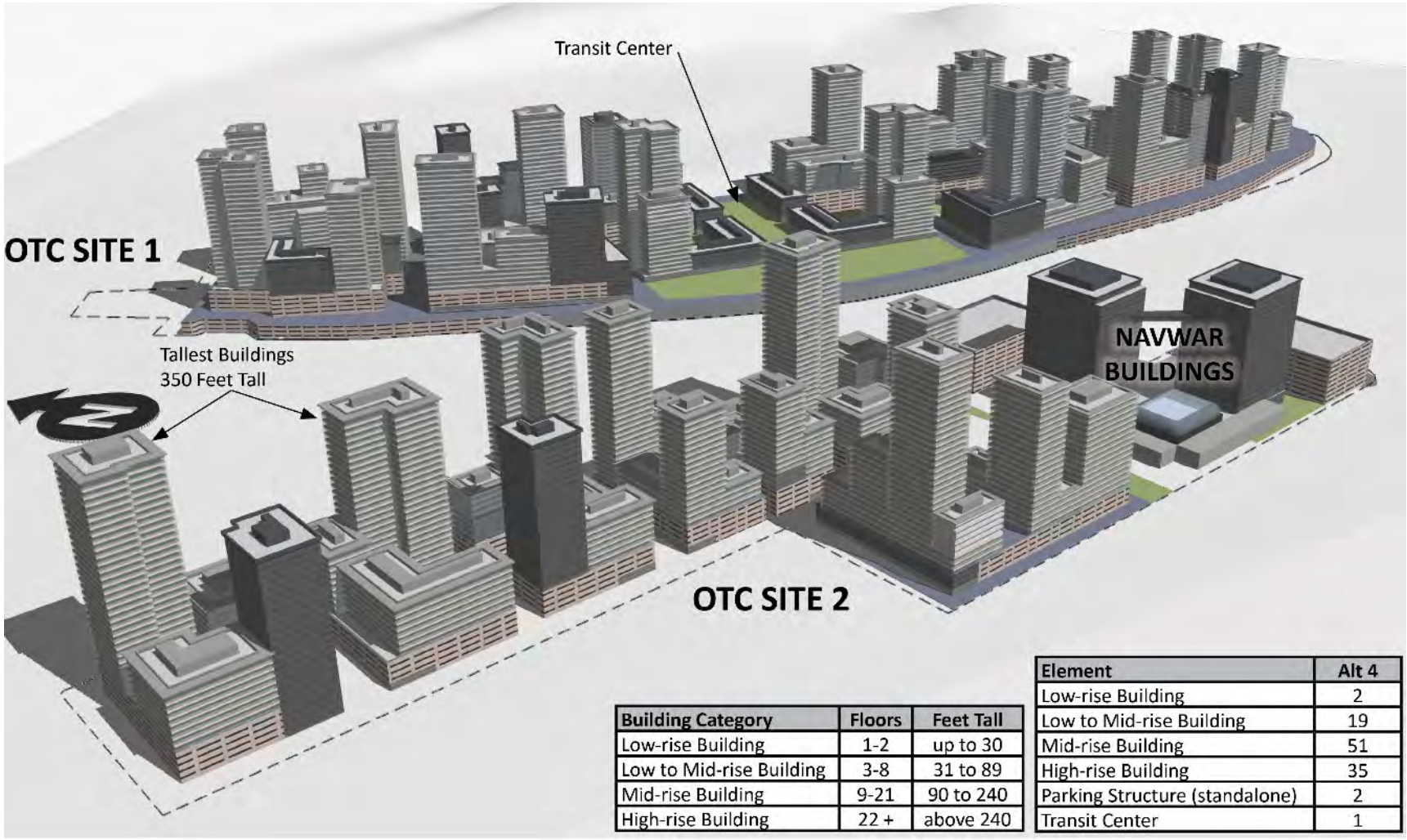
Figure 3.6-2 General Building Massing of Alternative 2



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 3
Low-rise Building	9
Low to Mid-rise Building	38
Mid-rise Building	48
High-rise Building	0
Parking Structure (standalone)	11
Transit Center	none

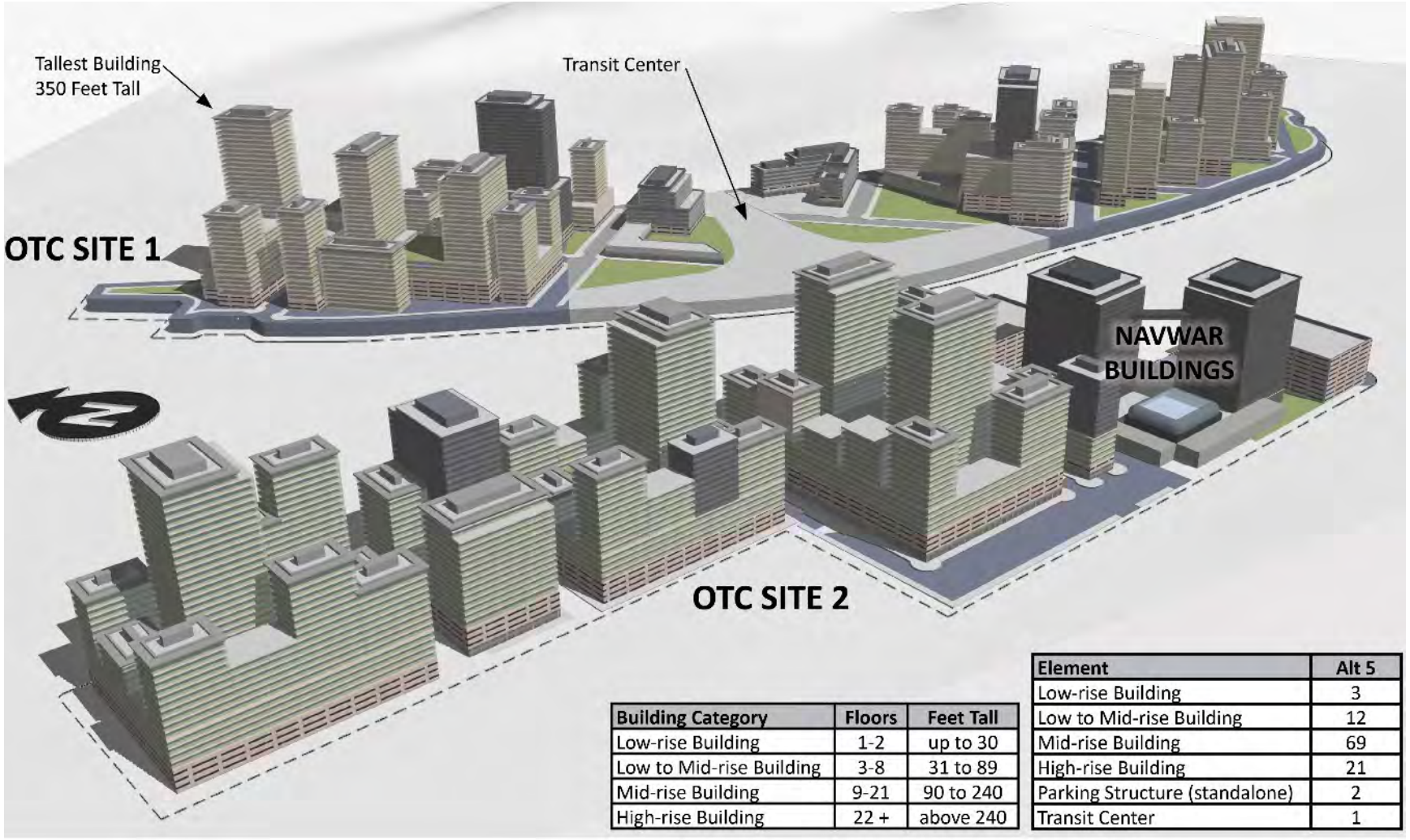
Figure 3.6-3 General Building Massing of Alternative 3



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 4
Low-rise Building	2
Low to Mid-rise Building	19
Mid-rise Building	51
High-rise Building	35
Parking Structure (standalone)	2
Transit Center	1

Figure 3.6-4 General Building Massing of Alternative 4



Building Category	Floors	Feet Tall
Low-rise Building	1-2	up to 30
Low to Mid-rise Building	3-8	31 to 89
Mid-rise Building	9-21	90 to 240
High-rise Building	22 +	above 240

Element	Alt 5
Low-rise Building	3
Low to Mid-rise Building	12
Mid-rise Building	69
High-rise Building	21
Parking Structure (standalone)	2
Transit Center	1

Figure 3.6-5 General Building Massing of Alternative 5

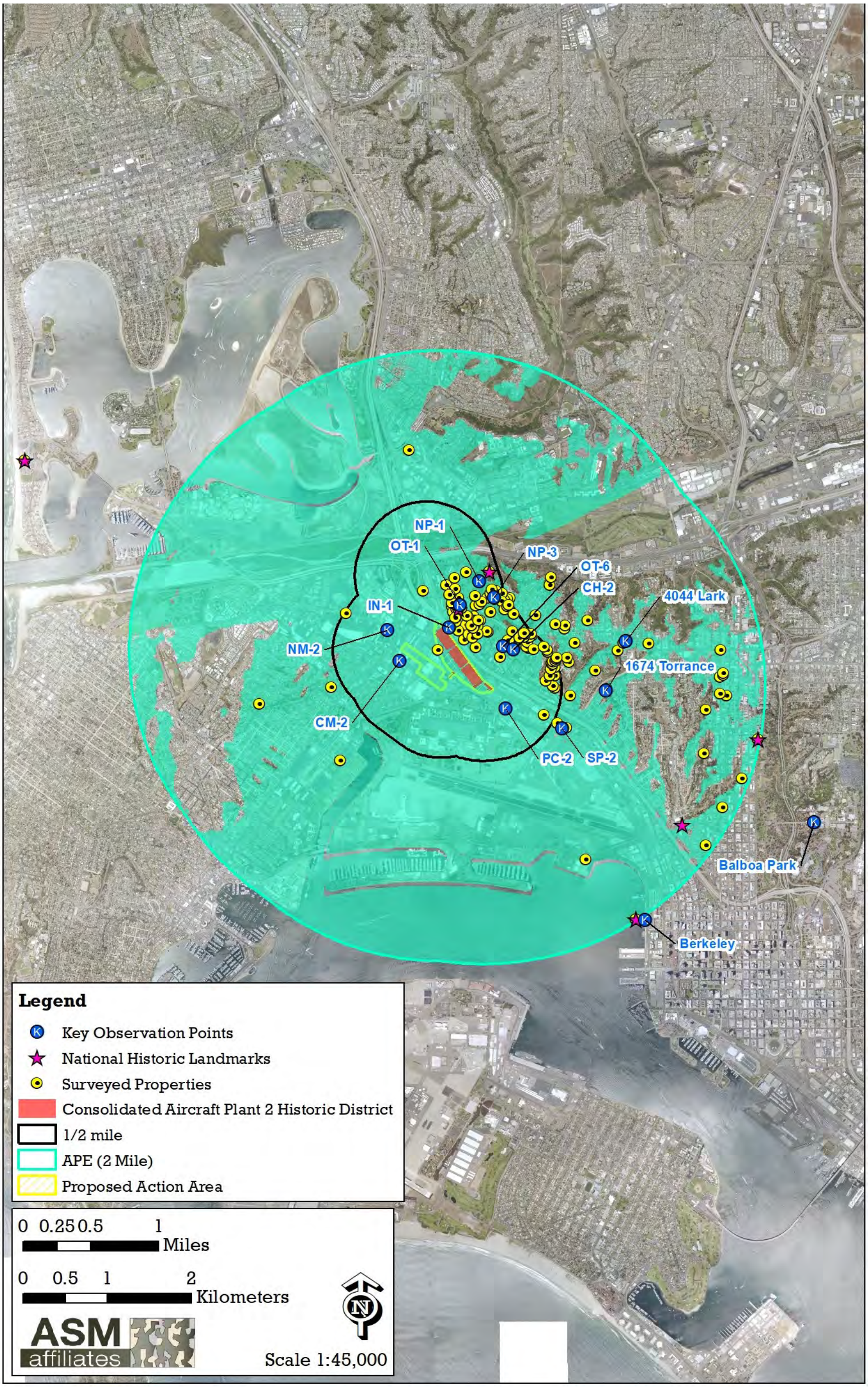


Figure 3.6-6 Map of KOPs and Additional Visual Simulations Reviewed

KOPs are identified by their candidate name only.

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Figure 3.6-7 KOP #5 (SP-2) for Alternative 4 from Mission Brewing Company/American Agar Company
Simulation by KTU&A.

Figure 3.6-8 KOP #9 (NP-3) for Alternative 4 near 4212 Altamirano Way within the Northwest Mills Hills Historic District
Simulation by KTU&A.

Figure 3.6-9 KOP #10 (CH-2) for Alternative 4 near 4030 Sunset Road and 2206 Juan Street within the Northwest Mission Hills Historic District
Simulation by KTU&A.

Figure 3.6-10 Additional Visual Simulation for Alternative 4 from John Holland Residence at 1674 Torrance Street
Simulation by KTU&A.

Figure 3.6-11 Additional Visual Simulation for Alternative 4 from the Mission Hills United Methodist Church at 4044 Lark Street
Simulation by KTU&A.

Figure 3.6-12 Additional Visual Simulation for Alternative 4 from the *Berkeley* ferry (NHL) Docked in the San Diego Harbor
Simulation by KTU&A.

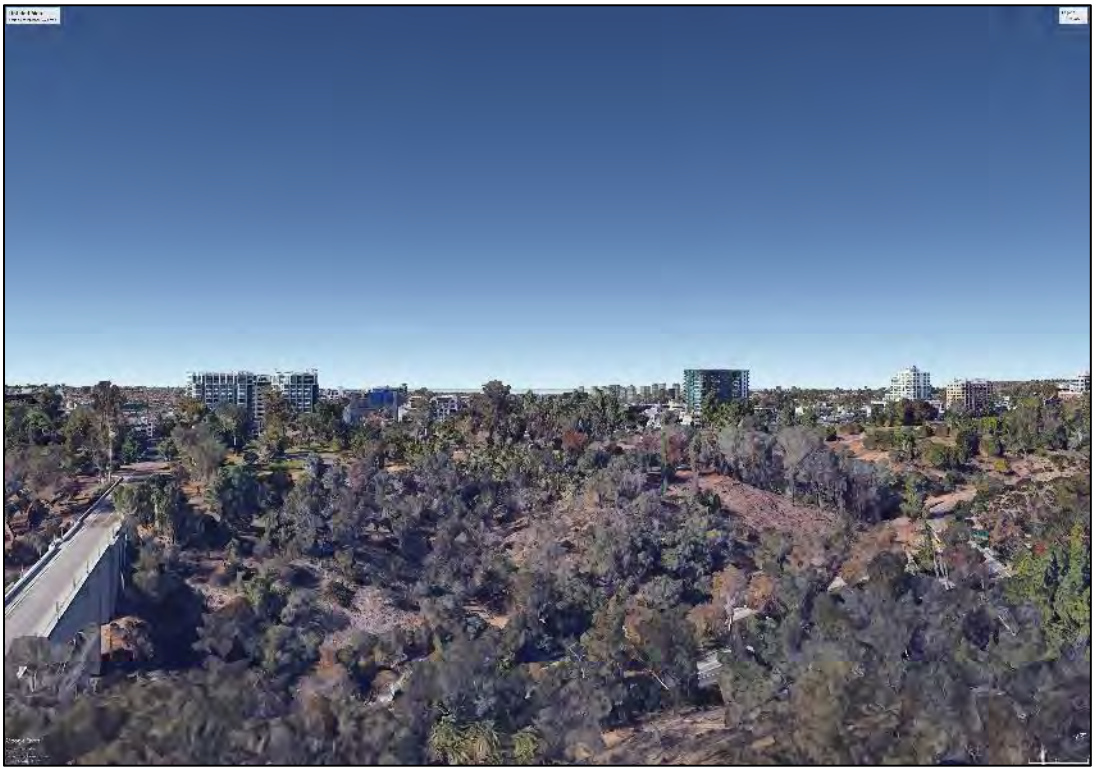

Figure 3.6-13 Additional Visual Simulation for Alternative 4 from the Highest Point in Balboa Park (NHL), the California Tower
Simulation by KTU&A.

3.7 Architectural Historic Properties

To ensure consistency, properties previously identified as eligible for listing in the CRHR and Local Register are treated as NRHP-eligible for the purposes of this analysis. In addition to those properties identified in the SCIC records search and BERD inventory (see Attachment B), additional NRHP, CRHR-eligible and locally eligible properties were identified by searching the California Historical Resources Inventory Database for the City of San Diego (sandiego.cfwebtools.com) and reviewing the City of San Diego *Draft Old Town San Diego Community Plan Area Historic Resources Reconnaissance Survey: Historic Context & Survey Report* (Galvin Preservation Associates, 2018), *Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report* (Galvin Preservation Associates, 2017) and the *Uptown Community Plan Area Historic Resources Survey Report* (City of San Diego, 2016).

3.7.1 Within the Proposed Action Area

3.7.1.1 Consolidated Aircraft Plant 2 Historic District (P-37-028238)

ASM conducted an intensive-level survey and evaluation of the Proposed Action Area and prepared a concurrent Evaluation Report for the architectural properties within that area (see Appendix I of the EIS). There is one historic property located within the Proposed Action Area: the Consolidated Aircraft Plant 2 Historic District. The Navy has determined that the district is eligible for listing in the NRHP. Therefore, the Consolidated Aircraft Plant 2 Historic District meets the qualifications as a historic property pursuant to Section 106 (36 CFR 800) of the NHPA. Significant WWII and Cold War planes, orbiters, and missiles were designed and manufactured at the plant. During WWII, those planes were built in large part by women, known as “Rosie the Riveters.” The plant was established by Reuben H. Fleet, member of the International Air & Space Hall of Fame and National Aviation Hall of Fame. The plant is architecturally significant as an example of the massive manufacturing complexes built for aircraft production. The district has seven contributing resources, OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69) (Table 3.7-1). The contributing resources of the district are located within the Proposed Action Area (Figure 3.7-1). The boundaries of the Consolidated Aircraft Plant 2 Historic District include OTC Site 1 and the Taylor Street Complex; OTC Site 2 is excluded from the boundary.

Under Criterion A, the Consolidated Aircraft Plant 2 Historic District is recommended eligible under the theme of WWII and subthemes of Aircraft Manufacturing and Homefront/Labor. The period of significance is 1941–1945, starting with the completion of the plant in October of 1941, and ending in 1945 when production of WWII-era aircraft ended at Plant 2. B-24 heavy bombers and PBY *Catalinas* played essential roles during WWII and were essential weapons in the success of the Allies in both the Pacific and European war theaters. They were designed in San Diego at Consolidated Aircraft and constructed here and at other plants in the U.S. Women comprised a significant portion of the workforce at the plant (40 percent at the peak in 1943), part of the nationwide utilization of women on the homefront during WWII.

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for listing in the NRHP under Criterion A under the theme of the Cold War and sub-theme of Manufacturing. During the plant’s association with the Cold War, numerous significant aircraft, orbiters, and missiles were manufactured and/or assembled here including: *Terrier* Surface-to-Air Missile, F-102 and F-106 interceptor aircraft; *Atlas* and *Centaur* tanks; mid-fuselages of orbiters *Enterpris*e, *Columbia*, *Challenger, Discovery*, and *Atlantis*; and Ground Launch Cruise Missile, Transporter Erector-Launcher, and Launch-Control-Center. *Terrier* Surface-to-Air Missile prototypes helped lay the groundwork for U.S. Naval Surface-to-Air Missile advancements (1950-1953). The period of significance is 1950–1988, beginning with the first significant

Cold War-era manufacturing and ending in 1988, when production of the Cold War countermeasures ceased at the facility and the Air Force deemed it excess property. The contributing resources to the district for this period of significance are the same as the contributing resources for the WWII-era.

Table 3.7-1 Consolidated Aircraft Plant 2 Historic District

Building No.	Building Name	Current Function	Year Built	Contributor
OTC 1	South Administration/ Warehouse Facility	Operational storage, administrative office, research lab	1941	Yes
OTC 2	Administration/Research Lab Facility	Research lab, Research Development Test & Evaluation lab, administrative office	1941	Yes
OTC 3	Former Lockheed Martin Facility	General purpose warehouse, operational storage, exchange retail store, research lab, general purpose auditorium	1941	Yes
OTC 7	Staging Warehouse/ Camouflage Building / Paint Shop	Paint and blasting shop, general purpose warehouse, administrative office	1941	Yes
OTC 8	Warehouse / Drop Hammer Building	Storage	1941	Yes
OTC 30	Storage Facility	Storage facility, administrative	1941	Yes
OTC 69	Pedestrian Bridge	Pacific Highway pedestrian bridge	1942	Yes

Under Criterion B, Consolidated Aircraft Plant 2 Historic District is recommended eligible for listing in the NRHP under the theme of WWII and sub-theme of Aircraft Manufacturing for its association with Reuben H. Fleet. For a property to be eligible under Criterion B, an individual must have gained importance within their field *and* the property must be associated with their productive life and significant accomplishments (NPS, 1991, p. 15). Fleet founded Consolidated, which was the leading U.S. manufacturer of military training planes, expanded aircraft manufacturing in San Diego, and made significant contributions to the innovations and growth of aerospace technology in the U. S. His importance to the field of aviation is recognized by his acceptance to the International Air & Space Hall of Fame and National Aviation Hall of Fame. The Consolidated Aircraft Plant 2 Historic District is the only remaining property associated with Fleet's productive career in San Diego. Of the three aircraft manufacturing sites associated with Fleet, only Plant 2 remains (Plant 1 in San Diego and an earlier plant in Buffalo, New York, have been demolished). Fleet and Consolidated established Plant 2 to further the company's expansion of aircraft manufacturing in San Diego. Additionally, Fleet maintained an office in Plant 2. His primary residence in San Diego during his productive career has also been demolished. Given there are no other comparable properties extant associated with Fleet's career in San Diego, Consolidated Aircraft Plant 2 Historic District is the best representation of his career.

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for listing in the NRHP under Criterion C for the WWII theme of Architecture, with a sub-theme of Aircraft Manufacturing and Assembly Plants. The period of significance under Criterion C is 1941, the year of construction for the plant. The large-scale design of Buildings 1, 2, 3, 7, and 8 represents a property type developed during the Industrial Revolution, which suited the massive industrial construction program that the nation's private manufacturers used to produce military aircraft essential to the war effort during WWII. The plant buildings were among the last manufacturing buildings built in the U.S. or Europe that represented the value of plentiful natural light and air in an industrial setting. The major manufacturing buildings at Plant 2 represent a distinctive type of permanent military architecture seen in aircraft production and assembly installations with massive assembly line buildings. The contributors to the historic district under Criterion C are limited to Buildings 1, 2, 3, 7, and 8.

Figure 3.7-1 Consolidated Aircraft Plant 2 Historic District

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The character-defining features of the Consolidated Aircraft Plant 2 Historic District include the following:

- massive size of OTC Site 1 Buildings 1, 2, and 3
- rectangular form and horizontal orientation of all the buildings
- broad expanses of steel sash, multi-pane industrial windows
- corrugated iron cladding
- high sawtooth roofs with skylights
- steel trusses between buildings
- remaining segments of monorail system
- interior overhead crane systems
- wide expanses of interior space
- views of the buildings from the immediate setting

3.7.1.2 Building 34 (P-37-035551)

A former Navy salvage yard building is located within OTC Site 2. It was previously determined ineligible for listing in the NRHP. Its eligibility was reconsidered as part of the concurrent reevaluation of the Consolidated Plant 2 Historic District and confirmed to be ineligible (see Appendix I of the EIS).

3.7.1.3 La Playa Trail (P-37-028552)

The historic-era site, La Playa Trail, consists of several historic public streets (Midway Drive between Rosecrans Street and Barnett Avenue; Enterprise Street between Midway Drive and Sports Arena Boulevard; and Rosecrans Street between Nimitz Boulevard and Pacific Highway) (see Appendix I of the EIS, Attachment B).

3.7.2 Outside the Proposed Action Area

Within the APE, there are 703 architectural properties considered NRHP-eligible for the purpose of this analysis (Table 3.7-2 and Figure 3.7-2). The Status Codes column of Table 3.7-2 identifies codes established by the California SHPO that have been previously assigned to properties that indicate their eligibility for the NRHP, CRHR, and/or the Local Register. The APE includes properties eligible for the NRHP (1D, 1S, 2D, 2D2, 2S, 2S2, 3, 3B, 3D, 3S), properties listed in the CRHR (1D, 1S, 2D, 2D2, 2S, 2S2), properties eligible or listed in the San Diego Register of Historic Places (codes that begin with 5) and a few properties that need further evaluation to confirm their eligibility (codes that begin with 4).

The list of architectural properties includes five National Historic Landmarks (NHLs): 4000 Mason (Estudillo House), San Diego Presidio, Balboa Park, *Berkeley* Ferry, and *Star of India.* Estudillo House and San Diego Presidio are located within ½ mile of the Proposed Action Area; Balboa Park, *Berkeley* Ferry, and *Star of India* are all located at the 2-mile mark. A sixth NHL, the Mission Beach Coaster, is located 3 miles from the Proposed Action Area.

The list of architectural properties also includes 17 historic districts identified by the City of San Diego through designation or surveys for Midtown Pacific Highway, Old Town, or Uptown community plan areas. In particular, the Marine Corps Recruit Depot Historic District (MCRD) is noteworthy due to its proximity to the Proposed Action Area. MCRD comprises 25 contributing resources in an area of approximately 110 acres. It is eligible for listing on the statewide level of significance under Criteria A and C, in the areas of military and architectural history.

Table 3.7-2 Historic Architectural Properties within the APE

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
0 Balboa Park	Balboa Park El Prado	-	**	1D	Y	-
0 Heritage Park Row	McConaughy House	1887	-	3S	-	Y
0 Heritage Park Row	Temple Beth Israel	1889	P-37-021907	3S	-	Y
0 Heritage Park Row	Bushyhead House	1887	-	3S	-	Y
0 Heritage Park Row	Burton House	1893	-	3S	-	Y
0 Heritage Park Row	Christian House	1889	-	3S	-	Y
0 Heritage Park Row	Senlis Cottage, Hippen Cottage	1893	-	3S	-	Y
0 Heritage Park Row	Sherman Gilbert House	1887	-	3S	-	Y
0 Kenyon St.	Hebrew. Cemetery	-	-	NO DPR	-	-
0 N. Harbor Dr.	Spanish Landing (SHL)	-	-	NO DPR	-	-
0 Spruce St.	Spruce Street Suspension Bridge	1912	P-37-021725	3S	-	-
0 Taylor St.	Presidio Gardens	-	P-37-021902	5S1	-	Y
0 Taylor St.	Serra Palms	1769	P-37-021903	5	-	Y
0 Washington St.	Washington Ave. / 6th Ave. Separation Bridge	-	-	2D2	-	-
100 W. Nutmeg St.	First Avenue Bridge	1931	P-37-022026	5	-	-
100 W. Robinson Ave.	Curlew Street Canyon	1910	-	5	-	-
1002 Brookes Ave.	Murray James Home	1911	P-37-021608	3	-	-
1003 Brookes Ave.	David Saylor Home	1910	P-37-021609	3	-	-
101 W. Brookes Ave.	Liggett and Stelzer Home	1928	P-37-021604	3	-	-
101 W. Robinson Ave.	Sallies House	1912	P-37-021680	4	-	-
106 W. Thorn St.	Alda Ferris Residence	1910	P-37-021692	3	-	-
107 W. Walnut Ave.	Mary Price Home	1912	P-37-021713	5	-	-
109 W. Brookes Ave.	Benjamin Apartments	1929	P-37-021605	3	-	-
1105 W. Quince St.	McNaughton Home	1924	P-37-021007	4	-	-
113 W. Robinson Ave.	Plaisted House	1926	P-37-021681	4	-	-
114 Kalmia St.	Farm House	-	P-37-021267	5	-	-
119 W. Brookes Ave.	Phillip Barney Home	-	P-37-021600	5	-	-
120 W. Upas St.	Goodwin Apartments; John Novotny Home	-	P-37-021705	3	-	-
124 Pennsylvania Ave.	Claus E. Lagersberg Home	-	P-37-021667	3	-	-
125 W. Brookes Ave.	Frazier House	-	P-37-021601	3	-	-
126 W. Spruce St.	Mary J. Spalding	-	P-37-021686	3S	-	-
128 W. Pennsylvania Ave.	Carrie Macomber House	1909	P-37-021668	3	-	-
1301 W. Sassafras St.	Depew Home	1934	P-37-021009	5	-	-
1302 Washington Pl.	King Residence	1913	P-37-028726	5S1	-	-
1306 N. Harbor Dr.	Star of India	-	-	1D	Y	-
1306 N. Harbor Dr.	Berkeley Ferry	-	-	1D	Y	-
135 W. Kalmia St.	Ballentine House	-	P-37-021264	3S	-	-
135 W. Spruce St.	Videan Home	1920	P-37-021687	3S	-	-
136 Redwood St.	Ernest and Ileen White Residence	1898	-	5S1	-	-
136 W. Brookes Ave.	James and Lillie North Home	1909	P-37-021602	3	-	-
137 Pennsylvania Ave.	Salisbury Apartments	1911	P-37-021664	3	-	-
138 W. Pennsylvania Ave.	Mrs. E.B. Hopkins Home	1908	P-37-021669	3	-	-
1398 Lieta St.	-	1937	P-37-034343	5S1	-	-
140 Quince St.	Rebecca Schiller Residence	1913	P-37-037013	3	-	-
140 W. Thorn St.	Harry Gregg Home	1909	P-37-021695	3	-	-
1405 W. Pennsylvania Ave.	Bettancourt Home	1955	P-37-021673	3	-	-
1417 Sutter St.	William K. and Edith Potter Spec House #1	1920	P-37-035203	3S	-	-
1432 W. Montecito Wy	Ellen Sessions Home	1911	P-37-021656	3	-	-
1433 Puterbaugh St.	Don and Rita Keller Residence	1948	-	5S2	-	-
1501 Washington Pl.	Cavalry Cemetery Site	1874	P-37-021898	5	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
1505 W. Lewis St.	Norton House	1910	P-37-021806	4	-	-
1506 Plumosa Wy	Dickenson-Williams Home	1911	P-37-021674	3	-	-
1515 W. Lewis St.	William Galbraith House	1910	P-37-035244	4	-	-
1520 Fort Stockton Dr.	Henrietta C.H. Nesmith Greeley Residence	1915	P-37-028214	5S2	-	-
1525 W. Lewis St.	Edith Huff House	1913	P-37-021808	4	-	-
1527 W. Lewis St.	Barr House	1910	P-37-021809	4	-	-
1530 Fort Stockton Dr.	1530 Fort Stockton Drive	1921	P-37-035245	5S1	-	-
1603 Torrance St.	Sarah Brock Residence	1925	P-37-021701	5S1	-	-
1610 Plumosa Wy	Dement House	1915	P-37-021824	3	-	-
1614 Torrance St.	Charles W. Brown Residence	1927	P-37-035500	3	-	-
1616 W. Lewis St.	Sessions Nursery	1921	P-37-021810	4	-	-
1625 Plumosa Wy	McFetridge House	1921	P-37-023989	3	-	-
1636 Torrance St.	Leo Dorn Home	1913	P-37-021703	3	-	-
1648 Winder St.	-	-	P-37-021058	4	-	-
1674 Torrance St.	John Holland Residence	1913	P-37-021704	3	-	-
1701 Winder St.	Carleton Home	1909	P-37-021059	3	-	-
1702 Winder St.	Townsend Skidmore Home	1921	P-37-021060	3	-	-
1704 Fort Stockton Dr.	Alfred Johnson House	1910	P-37-021769	4	-	-
1710 Winder St.	Fred Buss Homes	1921	P-37-021061	3	-	-
1740 Fort Stockton Dr.	Gaston House	1912	P-37-021770	4	-	-
1747 Hancock St.	Mission Brewing Co, San Diego	1913	P-37-020974	3S	-	-
1751 Hancock St.	Mission Brewing Company/ American Agar Co.	1912-13	P-37-023914	1S	-	-
1760 W. Lewis St.	Nathan Rigdon and Morris B. Levin House	-	P-37-028510	3S	-	-
1778 Sutter St.	Fred Forster House	1931	P-37-021882	4	-	-
1787 Fort Stockton Dr.	Thomas Burger House	1914	P-37-027662	4	-	-
1802 Puterbaugh St.	Gould Home	1910	P-37-021840	3	-	-
1808 Titus St.	E.K. Park House	-	P-37-021883	3	-	-
1809 W. Montecito Wy.	-	1913	P-37-035573	5S1	-	-
1818 W. Montecito Wy.	Willier House	1930	P-37-021817	3	-	-
1819 Sheridan Ave.	Smith House	1913	P-37-021857	3	-	-
1820 Titus St.	Strom House	-	P-37-021884	3	-	-
1830 Altamira Pl.	Lomax House	-	P-37-019107	5S1	-	-
1834 Sheridan Ave.	Rogers Home	1911	P-37-021858	5	-	-
1835 Fort Stockton Dr.	Stockwell House	1913	P-37-021772	3	-	-
1845 Sunset Blvd.	Ambrose House	1921	P-37-021866	3	-	-
1845 Fort Stockton Dr.	Dilley / Wallace House	1924	-	5S1	-	-
1847 Altamira Pl.	-	1913	P-37-025686	5S1	-	-
1850 Sunset Blvd.	Kelly Home	1915	P-37-021867	3	-	-
1855 Fort Stockton Dr.	Yates House	1914	P-37-021773	3	-	-
1855 Altamira Pl.	Hathaway House No. 2	1925		3S	-	-
1863 Altamira Pl.	Hathaway / Leigh House	c.1925	P-37-027668	3S	-	-
1875 Sunset Blvd.	McKittick House	-	P-37-028515	5S1	-	-
1882 Sheridan Ave.	Phipps House	1910	P-37-021859	3	-	-
1885 Sheridan Ave.	Dr. Leon C. and Dr. Louise D. Long House	1919	P-37-028516	3S	-	-
1895 Sunset Blvd.	Miller House	1925	P-37-021868	3	-	-
1895 Hancock St.	Canada Dry Building	1946	P-37-032934	5S2	-	Y
1911 Titus (BERD)	Wiseman House	1926	-	3S	-	Y
1912 Sunset Blvd.	Escobedo House	1925	P-37-021869	3	-	-
1915 Sunset Blvd.	Nelson House	1912	P-37-033146	5	-	-
1929 Titus St.	Holland House	1926	P-37-021886	3S	-	Y

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
1955 Sunset Blvd.	Nelson Home	1912	P-37-021871	3	-	-
1956 Linwood St.	Showley Home; Dickenson Home	-	P-37-021811	3S	-	Y
1960 Alameda Ter.	Hill House	1924	P-37-021738	3	-	-
1969 Alameda Ter.	Reynolds House	1914	P-37-021739	3	-	-
1977 Titus St.	James and Florence Riach House	1927		3S; 4X	-	Y
1980 Alameda Ter.	William Page House	1917	P-37-021740	3	-	-
1981 Linwood St.	Read Home	-	P-37-021812	3S	-	Y
1984 Guy St.	Joseph W. Potter House	1925	-	3S	-	Y
1995 Guy St.	Barker House	1916	P-37-021778	3	-	Y
200 W. University Ave.	Brant Street Canyon	1910	-	5	-	-
202 Redwood St.	Horace Day Home	1910	P-37-021677	3	-	-
2031 Sunset Blvd.	McKnight Home	1919	P-37-021872	3	-	-
2036 Orizaba Ave.	Villa Orizaba	1910-1918	P-37-021818	5	-	-
2044 Sunset Blvd.	Sheldon House	1925	P-37-021873	3	-	-
205 W. Laurel St.	Laurel Apartments	-	P-37-021273	3	-	-
2054 Columbia St.	Buck Coupland Home; Armstrong Residence	-	P-37-020950	5	-	-
2055 Sunset Blvd.	Miller Home	1920s	P-37-021874	3	-	-
206 W. Robinson Ave.	Charles Hubbard Home	1909	P-37-021682	3	-	-
209 W. Upas St.	Bernard Levi Home	1912	P-37-021706	3	-	-
210 Maple St.	Wegeforth House	1917	P-37-021654	3	-	-
211 W. Laurel St.	Strahlmann Residence; Turner House	-	P-37-021272	4	-	-
211 W. Robinson Ave.	Oriel Sheffield Home	1912	P-37-021683	5	-	-
211 W. Walnut Ave.	Mina Colton Home	1911	P-37-021712	3	-	-
2112 Pine St.	Lillian Arnett House	1916		5S1	-	-
212 Quince St.	Buck Pickett Home	1908	P-37-021676	3	-	-
2120 Hickory St.	Newell House	1916	P-37-021796	3	-	-
2121 Fort Stockton Dr.	Nathan Rigdon Spec House #1	-	P-37-027846	3S	-	-
2121 Sunset Blvd.	Mitchell Home	1926	P-37-021875	3	-	-
2124 Sunset Blvd.	Wagenhals House	1921	P-37-021876	3	-	-
2140 Sunset Blvd.	Schachtmayer House	1914	P-37-021877	3	-	-
2141 India St.	Parcell Building; Moorsten Building	-	P-37-020980	5	-	-
215 W. Palm St.	Leland Stanford Home	1925	P-37-021663	3	-	-
2150 Sunset Blvd.	Schachtmayer Home	1924	P-37-019109	3	-	-
2154 Fort Stockton Dr.	Lenahan Residence	1914	P-37-018999	5S1	-	-
2156 Guy St.	Gray House	1925	P-37-021779	3	-	Y
2165 Albatross St.	John Foster Couts Residence	1892	-	3S	-	-
2174 Guy St.	Stobeck House	1926	P-37-021780	4	-	Y
220 W. Spruce St.	Barrow Residence	1936	P-37-021688	3S	-	-
2200 Sunset Blvd.	Pillard Gate Way	1915	P-37-021917	5	-	Y
2200 Pacific Hwy.	-	c.1910s	-	NO DPR	-	-
2202 Sunset Blvd. (BERD)	Birner Home	1940	-	5S2	-	Y
2203 Fort Stockton Dr.	McCambridge House	1914	P-37-021774	3	-	-
2206 Fort Stockton Dr.	Stewart House	1918	P-37-027731	3	-	-
2206 Juan St. (Local)	Gordan and Garnet Thompson House	1930	-	5S2	-	Y
2212 La Callecita (Local)	Louis and Evelyn Robinson House	1926	-	3S	-	Y
2218 Sunset Blvd.	Coleman Home	1939	P-37-021880	4	-	Y
2225 Hickory St.	Ryan Home	1930	P-37-021797	3	-	-

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223/233 W. Juniper St.	Klauber House	1911	-	5S1	-	-
2231 Albatross St.	Dr. Alexander L. Verner Residence	-	P-37-021066	3S	-	-
2231 La Callecita	Cunningham House	1948	P-37-027714	3S	-	Y
2243 Guy St.	Hervey K. Graham and Alva M. Graham	1936	P-37-035264	2S	-	Y
2251 Brant St.	Klindt Home	-	P-37-021079	4	-	-
2251 San Juan Rd.	Dr. and Mrs. Franklin G. Lindemulder Residence	1935	-	2S	-	Y
2252 Union St.	Charles Marks Home; Savior Residence	-	P-37-021040	3	-	-
2258 Fort Stockton Dr.	Thomas Parker House	1915	P-37-021776	4	-	-
2265 Fort Stockton Dr.	Winther House	1918	P-37-021777	3	-	-
2266 San Diego Ave. (Survey)	-	1956	-	5S3	-	Y
2275 Albatross St.	F W. and Mary Jackson Home	-	P-37-021067	3	-	-
2293 San Juan Rd.	William Mason Fortesque Residence	1936	-	5S2	-	Y
2295 Whitman St.	Theodore M. Smith House	-	P-37-021899	3	-	-
2304 Juan St.	The United States Holding Company Residence	1954	P-37-035519	3S	-	Y
2306 Pine St.	-	1938	P-37-033135	5S1	-	-
2308 Kettner Blvd.	San Diego Macaroni Manufacturing Co	1924	-	5S1	-	-
2315 Fort Stockton Dr.	John W. Snyder Company Model Home #2	-	-	5S1	-	-
232 W. Brookes Ave.	Guy Sensor Home	1905	P-37-021606	3	-	-
2320 Hickory St.	Anderson Home	1928	P-37-021798	3	-	-
2324 Pine St.	Lloyd Gray House	1931	P-37-036986	3	-	-
2329 Pine St.	Martha Robinson House	1927	P-37-021821	3	-	-
2330 Union St.	Staples Apartments	-	P-37-021042	5	-	-
2333 Albatross St.	Elwyn B. (Jay) Jr. and Martin Gould House	1914	P-37-028217	5S2	-	-
2340 Sillwater Rd., Suite A–D	United Airlines 1931 Hanger and Terminal	1931	P-37-028620	3	-	-
2344 Pine St.	Lydia Schweider House	1926	P-37-021822	3	-	-
2345 Union St.	Castillian Apartments	-	P-37-021043	4	-	-
2360 Albatross St.	Henry J. Schnell Home	-	P-37-021068	3	-	-
2360 Hickory St.	Anewalt Home	-	P-37-021799	3	-	-
2366 Front St.	Garrettson House, Town House	1896	P-37-021234	3S	-	-
237 W. Brookes Ave.	Edgar Muller House	1908	P-37-021607	3	-	-
2372 1st Ave.	Parkinson Flats	-	P-37-021302	4	-	-
2400 India St.	McDonough Building, General Uniform Co.	1930	P-37-020982	5S	-	-
2400 Presidio Dr.	Alexander and Nancy Highland House	1934	P-37-023767	4S	-	-
2401 Kettner Blvd.	Red Diamond Battery Co; Botanical Interiors	-	P-37-021000	5	-	-
2404 India St.	McDonough Building, General Uniform Co.	1930	-	5S	-	-
2405 Jefferson St. (Demo)	Hernandez House	-	P-37-021803	5	-	Y
2405 Union St.	Zauri House	-	P-37-021044	3	-	-
2408 1st Ave.	Long Waterman House	-	P-37-020907	1S	-	-
2414 San Diego Ave. (Survey)	-	1938	-	5S3	-	Y

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2420 Presidio Dr. (Local)	Claude and Edna Bradley Woolman House	1930	-	3S	-	Y
2422 San Diego Ave.	El Campo Santo Cemetery	-	P-37-021852	5S	-	Y
2425 1st. Ave.	Lawson House; Galas House	-	P-37-021304	3	-	-
2427 Presidio Dr.	H.L. Hurd House	1932	P-37-021829	3S	-	Y
2430 Union St.	Fred W. Osborne or Osborne Residence	1888	-	5S1	-	-
2436 Presidio Dr.	Lascoe Home	1927	P-37-021831	5S2	-	Y
2440 Albatross St.	Roberts House	1906	P-37-021069	4	-	-
2440 Marilouise Wy.	Hodge House	1939	P-37-021813	3	-	Y
2440 Pine St.	Green House	1931	P-37-021823	4	-	-
2440 State St.	Gist Home; Architects Office	-	P-37-021020	3	-	-
2441 Presidio Dr.	Faden Home	1932	P-37-021832	4	-	Y
2454 Presidio Dr.	Tanner Home	1928	P-37-021833	3	-	Y
2454 State St.	Collier House	-	P-37-021021	3	-	-
2455 Brant St.	Fitzpatrick Home; Jessop Home	-	P-37-021080	3	-	-
246 W. Upas St.	W. P. Polhemus Residence	1911	P-37-021709	3	-	-
2465 Curlew St.	Hirte House	-	P-37-021206	5	-	-
2470 Union St.	Tucker House, Jones Residence	1912	P-37-021046	3S	-	-
2482 San Diego Ave.	Whaley House	1856	P-37-021853	3S	-	Y
2489 San Diego Ave. (Survey)	-	1938	-	5S3	-	Y
2490 Presidio Dr.	Hansen House	1939	P-37-021834	3	-	Y
2495 Jefferson St. (Survey)	-	c.1927	-	5S3	-	Y
2501 San Diego Ave. (Survey)	-	c.1925	-	5S3	-	Y
2504 Albatross St.	Dr. F. J. Campbell Home	1911	P-37-021562	3	-	-
2505 San Diego Ave.	James Parkinson House	1912	P-37-021854	5	-	Y
2508 1st Ave.	Timken Residence	1888	P-37-021458	4S	-	-
2513 Union St.	Kavanaugh House	-	P-37-037010	5S2	-	-
2515 Front St.	Wm. Taylor Smith Home	1912	P-37-021623	4	-	-
2515 San Diego Ave.	Gatewood House	1873	P-37-028601	5S	-	Y
2521 San Diego Ave. (Survey)	-	c.1910	-	5S3	-	Y
2525 San Diego Ave. (Survey) ***	-	c.1925	-	5S3	-	Y
2528 Front St.	Fish Home	1925	P-37-021624	3	-	-
2533 Congress St. (Survey)	-	1914	-	5S3	-	Y
2540 Albatross St.	Curtiss Home	1929	P-37-021563	3	-	-
2540 Congress St.	Connors House	1919	-	3S	-	Y
2540 Presidio Dr.	Schulman House; Ward House		P-37-021835	2S	-	Y
2540 San Diego Ave.	Immaculate Conception of Blessed Virgin Mary	1914	P-37-021856	3	-	Y
2542 Front St.	W.L. Hulick Home	1923	P-37-021625	3	-	-
2550 McCain Rd.	McCain House	c.1910	-	NO DPR	-	-
2554 Front St.	Jorres Home	1895	P-37-021626	3	-	-
2574 Plum St.	Borman and Eleanor Roulette Residence	1927	-	5S1	-	-
2600 Juan St.	Presidio Hills Golf Course	-	P-37-021900	3	-	Y
2600 Presidio Dr.	Fort Stockton; Fort Stockton Site	-	P-37-021906	5S	-	Y

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2601 Kettner Blvd.	Parks Bungalows; New Poet Rentals	-	P-37-021002	5	-	-
2610 San Diego Ave.	St. Joseph's Rectory/ Old Town Convent	1908	P-37-028798	1D	-	Y
2612 San Diego Ave.	San Diego Union Office	1850	P-37-020916	1D	-	Y
2616 San Diego Ave.	Pedporena Adobe	1838	P-37-020915	1D	-	Y
2626 Clove St.	-	1937	-	5S1	-	-
2630 Chatsworth Blvd.	Henry Gilbert Fenton House	1922	P-37-035503	5S2	-	-
2645 1st Ave.	James Gillmore House	1909	P-37-021459	3	-	-
2646 Front St.	Easterbrook Home	1914	P-37-021627	3	-	-
2660 Calhoun St.	Casa De Juan Bandini	1827-1829	P-37-020912	1D	-	Y
2670 2nd Ave.	Wegeforth Home	1921	P-37-021478	4	-	-
2672 Poinsettia Dr.	James and Alice Lee House	1928	P-37-032943	5S2	-	-
2684 Jonquil Dr.	Charles J. and Hazel W. Hassell Residence	1929	P-37-035518	5S1	-	-
2700 Barnson Pl.	Edythe Churchill	1925	P-37-021583	4	-	-
2705 Barnson Pl.	Jackman House	1934	P-37-021584	4	-	-
2710 N. Harbor Dr.	Coast Guard Group Air Station San Diego; Hangar 2	-	-	3S	-	-
2720 4th Ave.	Bertha Mitchell House	1905	P-37-028414	3	-	-
2724 Congress St.	Casa de Muchado y Stewart	1835	P-37-028795	1D	-	Y
2727 Presidio Dr.	Serra Museum	1929	P-37-021905	3S	-	Y
2727 Presidio Dr.	San Diego Presidio (NHL)	1769	P-37-023919	1S	Y	Y
2727 Presidio Dr.	Presidio Park	1769	P-37-021901	3	-	Y
2731 San Diego Ave.	San Diego Courthouse	1847	P-37-033491	2D	-	Y
2732 Azalea Dr.	Raymond and Margaret Taylor Residence	1927	-	5S2	-	-
2733 San Diego Ave.	Colorado House	1851	P-37-033489	1D	-	Y
2735 Barnson Pl.	Dunn Residence	1934	P-37-021586	3	-	-
2737 San Diego Ave.	Casa de Rodriguez	LATE 1830S	P-37-033490	2D	-	Y
2740 San Diego Ave.	Plaza; San Diego Viejo; Washington Square	-	-	1D	-	Y
2745 San Diego Ave.	Casa de Machado	1835	P-37-020913	1D	-	Y
2747 Brant St.	Marie Pettey Home	1936	P-37-021588	3	-	-
2750 Kettner Blvd. (BERD)	-	-	-	2S2	-	-
2750 Rosecrans St.	Gustav A. Hanssen House	1914	P-37-029331	3S	-	-
2755 Brant St.	Fenstermaker House	1931	P-37-021589	3	-	-
2765 2nd Ave.	Emmett G. O'Neill Residence	1924	P-37-028219	5S1	-	-
2765 Brant St.	F.E. Marcy Home	1933	P-37-027611	3	-	-
2766 Barnson Pl.	A.L. Verner Residence	1937	P-37-021587	3	-	-
2766 W. Olive St. (BERD)	A.L. Verner Residence	-	-	3S	-	-
2769 San Diego Ave.	Wrightington Adobe Reconstruction	-	-	2S	-	Y
2801 Albatross St.	Gifford Home	1906	P-37-021564	3	-	-
2808 4th Ave.	Amy Strong House	1906		NO DPR	-	-
2820 Chatsworth Blvd.	Matie and Charles E. Summer Residence	1915	P-37-027664	5S2	-	-
2829 Albatross St.	Connell Home	1906	P-37-021565	3	-	-
2829 Juan St. (Demo)	Caltrans District 11 Office Building	1953-1964	P-37-033808	2S2	-	Y
2836 Juan St. (Survey)	-	-	-	5S3	-	Y

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2909 Chatsworth Blvd.	Oral and Mildred Carpenter Residence	1945	-	5S2	-	-
2928 Second Ave.	Edith H. Hawley House	1938	-	5S1	-	-
2929 1st Ave.	Sylvester Tripp House	1927	P-37-021461	3	-	-
2937 2nd Ave.	W. F. and Dido Ludington Home	1922	P-37-021479	4	-	-
2939 4th Ave.	James and Mary Wilson Home	1918	P-37-021514	3	-	-
2947 1st Ave.	Chauncey Hammond Home	1907	P-37-021462	3	-	-
2951 4th Ave.	Schaufelberger Apartments	1923	P-37-021515	3	-	-
2961 1st Ave.	John H. Zitt House	1920	P-37-032945	3	-	-
2963 4th Ave.	Stephen Connell Apartments	1923	P-37-021516	3	-	-
2965 2nd Ave.	Hugo Kayes Home	1912	P-37-021480	4	-	-
2965 Front St.	Harland Home	1916	P-37-021631	3	-	-
2965 Union St.	Snyder Home	1906	P-37-021048	3	-	-
300 W. Spruce St.	Maple Street Canyon	1910	P-37-021722	5	-	-
3005 California St.	Castagnola Home	-	P-37-020939	5	-	-
3008 1st Ave.	Joseph Brennan Home	1929	P-37-021464	3	-	-
3009 Union St.	Price Home	1912	P-37-021049	3	-	-
3018 State St.	Wuest House	1913	P-37-021022	3	-	-
3020 2nd Ave.	Mary Cossett House	1906	P-37-021481	4	-	-
3020 Dumas St.	John Gordon McGregor Residence	1928	-	5S1	-	-
3023 1st Ave.	Glen Funcheon Home	1929	P-37-021465	3	-	-
3027 Homer St.	-	1915	P-37-023746	4R	-	-
3029 Union St.	J.H. McKie House	1908	P-37-021050	3	-	-
303 W. Olive St.	Wolf Home	1911	P-37-021659	3	-	-
303 W. Thorn St.	G.W. Lane House	1905	P-37-021693	3	-	-
3030 State St.	Wuest House	1913	P-37-021023	3	-	-
3030 Dumas St.	3030 Dumas Street	1930	P-37-035263	3S	-	-
3031 5th Ave.	R.W. Lemon Home	1895	P-37-021525	3	-	-
3032 Union St.	John Wandry Home	1908	P-37-021051	3	-	-
3033 Elliott St.	William R. and Minerva D. Welton Residence	1926	P-37-035262	5S1	-	-
3036 Elliott St.	Quality Building and Securities Co Spec House	1925	-	5S1	-	-
304 W. Robinson Ave.	Mary Richardson Home	1915	P-37-021684	5	-	-
304 W. Thorn St.	Emilie Styris Home	1906	P-37-021696	3D	-	-
3040 1st Ave.	Bishop's Schools of San Diego	1909	P-37-021466	3	-	-
3042 State St.	Wuest House	1913	P-37-021024	5S1	-	-
3045 Homer St.	-	1913	P-37-023747	4R	-	-
3045 James St.	Thomas J. and Maud B. Brownrigg House	1913	-	5S1	-	-
3051 Rosecrans Blvd. (BERD)	-	1961	-	2S2	-	-
3065 3rd Ave.	William F. Franzen House and Cabinet Shop	1916	P-37-028790	3	-	-
3065 Union St.	Napoleon J. Roy House	1906	P-37-031822	5	-	-
3065 Rosecrans Pl. (BERD)	Peninsula Center	1960	-	2S2	-	-
307 W. Laurel St.	Johnson Flats; Centre City Realty	-	P-37-021274	3	-	-
3070 2nd Ave.	Douglas Fleming Home	1911	P-37-021482	4D	-	-
3100 Brant St.	Charles W. Fox Residence	1908	P-37-021591	3; 5S2	-	-
3105 Goldsmith St.	-	1935	P-37-023744	4R	-	-
3105 Eliott St.	-	1930	P-37-023741	4R	-	-
3107 Zola St.	Casa Marrero	1292	P-37-028462	3S; 4D2	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
3111 Elliott St.	-	1930	P-37-023742	4R	-	-
312 W. Brookes Ave.	Chase House	1898	P-37-021603	3	-	-
3123 Goldsmith St.	-	1927	P-37-023745	4R	-	-
3130 1st Ave.	Howard J. Edwards Residence	1912	P-37-021467	4	-	-
3130 Second Ave.	Emily Hill Wadsworth Residence	1924	-	5S2	-	-
3130 Shadowlawn St. (BERD)	Beardsley, John, and Florence Porterfield House	1933	-	1S	-	-
3131 Front St.	Robert Hart House	1918	P-37-021632	4	-	-
3131 Elliott St.	David G. Fleet House	1935	P-37-023743	4R	-	-
3138 1st Ave.	R.H. Gunnis House	1920	P-37-021468	3	-	-
3140 2nd Ave.	Joseph and Helena Bowman House	1913	P-37-021483	4D	-	-
3141 2nd Ave.	Dr. and Mrs. Fred D. Arthur Home	1928	P-37-021484	4D	-	-
3141 Curlew St.	Sweet Home	1909	-	3S	-	-
3145 Brant St.	James D. Bobbitt Home	1932	P-37-021592	3	-	-
315 W. Walnut Ave.	Joseph Kendall Residence	1911	P-37-021714	3	-	-
3155 2nd Ave.	Charles Conner Home	1906	P-37-021485	4D	-	-
316 W. Upas St.	H.H. Miken Home	1911	P-37-021707	3	-	-
31622nd Ave.	Lucy Coulter Home	1915	P-37-021486	1S	-	-
3162 Front St.	Charles O'Neall House	1912	P-37-021628	4	-	-
3170 Curlew St.	Capt. A.A. Ackerman Home	1912	P-37-021610	3D	-	-
3172 1st Ave.	Dr. Oscar J. Kendall House	1912	P-37-028508	4	-	-
3190 Mission Blvd.	Giant Dipper Roller Coaster	-	-	1S	Y	-
3200 2nd Ave.	Jessie Ward Home	1920	P-37-021487	4D	-	-
3200 Sixth Ave.	Salomon Apartments	1958	P-37-028157	3S	-	-
3203 2nd Ave.	A.J. Bradley Residence	1916	P-37-021488	4D	-	-
321 W. Robinson Ave.	First Church of the United Brethren in Christ	1912	P-37-028424	3	-	-
321 W. Walnut Ave.	Margaret McVey House	1911	P-37-021715	3	-	-
3212 Brant St.	Hurlburt Home	1924	P-37-021593	3	-	-
3218 2nd Ave.	Mary Kraemer Home	1915	P-37-021489	4D	-	-
3221 Homer St.	David O. Dryden Speculation House	1915	-	5B	-	-
3223 W. Curlew St.	Gilman Gist Home	1927	P-37-021611	3D	-	-
3225 2nd Ave.	Wood/Forney Residence	-	P-37-018279	5S1	-	-
3225 4th Ave. (BERD)	Farnham Home	1912	-	3S	-	-
3226 Brant St.	Eva Shore Residence	1922	P-37-021594	3	-	-
3226 W. Curlew St.	Edward & Jenny Alling Estate	1911	P-37-021612	3D	-	-
3226 W. Spruce St. (BERD)	Ed Alling Estate	1911	-	3S	-	-
3231 2nd Ave.	George Mason Home	1904	P-37-021490	4D	-	-
3231 Front St. (BERD)	The Iver and Algeline Lawson House	-	-	3S	-	-
3231 Front St.	3231 Front Street	1925	P-37-035284	3S	-	-
3240 Curlew St.	Edward Hallenbeck Home	1910	P-37-021613	3D	-	-
3241 2nd Ave.	Margaret Pecha Home	1910	P-37-021491	4D	-	-
3248 Brant St.	Roberta Frank Home	1924	P-37-030871	3	-	-
3250 2nd Ave.	Avery Dodge Home	1912	P-37-021492	4D	-	-
3255 2nd Ave.	Otis Residence	1910	P-37-028594	5S1	-	-
3264 Curlew St.	James Churchill Home	1912	P-37-021614	3D	-	-
3265 2nd Ave.	D'hemencourt Home	1913	P-37-021493	4D	-	-
3268 Brant St.	Hurlburt Home	1925	P-37-021596	3	-	-
327 W. Pennsylvania Ave.	Grace Davenport Home	1908	P-37-021670	3	-	-
3270 2nd Ave.	Walter M. Baker Residence	1927	P-37-021494	4D	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
3300 3rd Ave.	William Mason Fortescue Residence	1909	P-37-028524	5S1	-	-
3302 Pacific Hwy.	General Dynamics Facilities	-	-	NO DPR	-	-
3303 2nd Ave.	Frank Mertzman Home	1908	P-37-028547	4S	-	-
3305 Yonge St.	Zweck House	1948	-	3S	-	-
3310 2nd Ave.	McCarthy House	1909	P-37-021496	4D	-	-
3311 Udall St.	Mack and Ruth Esterson House	1947	-	5S2	-	-
3315 2nd Ave.	John and Mary Gallagher Residence	-	P-37-023995	5S1	-	-
3328 6th Ave.	Florence Mead Home	1911	P-37-021537	3	-	-
3330 Albatross St.	Stone Residence	1908	P-37-021567	3	-	-
3330 6th Ave.	-	1911	P-37-028584	5S2	-	-
3333 Front St. (BERD)	H. E. Anthony Residence	1906	-	2S2	-	-
3335 Brant St.	Joseph Browne Home	1906	P-37-021597	3	-	-
3340 6th Ave.	-	1906	P-37-028587	5S2	-	-
335 W. Thorn St.	Thomas Anderson Home	1924	P-37-021697	3D	-	-
3353 Albatross St.	Alice Lee Home #2	1905	P-37-028532	5S	-	-
3353 Brant St.	Harry L. Stone Home	1913	P-37-021598	3	-	-
3355 Front St.	Harry Logan Home	1893	P-37-021634	3S	-	-
3367 Albatross St.	Alice Lee House #4	1912	P-37-028477	5S	-	-
3370 Albatross St.	Marshall Home	1911	P-37-021570	3	-	-
338 W. Thorn St.	Raymond Low. Home	1926	P-37-021698	3D	-	-
3402 Albatross St.	Ernest Fleet Home	1909	P-37-021571	3	-	-
3407 Albatross St.	Teats House #3	1922	P-37-021572	3	-	-
3408 6th Ave.	W.H. Pringle Home	1898	P-37-021538	3	-	-
3415 Albatross St.	Teats House #2	1912	P-37-021573	3	-	-
3415 Elliott St.	John and Lou Ernsting House	1925	-	5S1	-	-
3420 Union St.	Hunter Homes	1919	P-37-021053	3	-	-
3425 Albatross St.	Colton Home	1923	P-37-021574	3	-	-
3427 Freeman St.	Fred and Helen Jarboe Rental Property	1925	-	5S2	-	-
3440 Ibis St.	George and Margaret Peterson Home	1923	P-37-021650	3	-	-
345 W. Laurel St.	Campbell House	-	P-37-021275	3	-	-
3472 Union St.	Jackson Home	1912	P-37-021054	3	-	-
3485 Hawk St.	Osborn House	1912	P-37-021648	4	-	-
3500 Sports Arena Blvd.	San Diego Sports Arena	1966	P-37-035181	5S3	-	Y
3501 Front St.	Helen Ames Residence	1907	P-37-021635	4	-	-
3503 Jackdaw St.	-	1939	-	5S1	-	-
3506 Albatross St.	Archie Murphy Home	1909	P-37-021575	3	-	-
3510 Dove Ct.	Henry Bear Home	1926	P-37-021616	3	-	-
3514 Albatross St.	Kynder Home	1908	P-37-021576	4	-	-
3518 3rd Ave.	Day's Little House	1912		5S1	-	-
3519 Dove Ct.	Louis Thompson Home	1926	P-37-030068	3S	-	-
3520 W. Curlew St.	Dolly Schindler Home	1928	P-37-021615	5	-	-
3522 Union St.	Ross House	1923	P-37-021055	3	-	-
3525 5th Ave.	John W. Rice Building	1913	P-37-021526	3	-	-
3528 1st Ave.	Professor E.L. Hardy Home	1911	P-37-021470	4	-	-
3530 State St.	Jessie Rush Gray Home	1916	P-37-021025	3	-	-
3534 Reynard Wy.	Baron Company Building	1928	P-37-021678	3	-	-
3536 Front St.	Edward F. Flynn Home/ Tenney Home	1898	P-37-021637	3S	-	-
3538 Front St.	Hattie Shute Home	1890	P-37-021638	5	-	-
3539 Union St.	W. F. Houser Home	1911	P-37-021056	5	-	-

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3540 1st Ave.	Clarence Decker House	1919	P-37-021471	4	-	-
3543 3rd Ave.	Mary Avery Home	1913	P-37-021500	3	-	-
3544 Albatross St.	Babcock Home	1927	P-37-021577	3	-	-
3545 Albatross St.	Wakefield House	1912	P-37-021578	3	-	-
3545 Front St.	Henry Conley Home	1895	P-37-021639	3	-	-
3547 Union St.	Gibbons Home	1911	P-37-021057	4	-	-
3551 Front St.	John and Annie Moore Home	1893	P-37-028550	3	-	-
3557 3rd Ave.	Alfred Lamotte Home	1925	P-37-021501	3	-	-
3559 Albatross St.	James O'Keefe Home	1912	P-37-021579	5	-	-
3560 Front St.	Emily Steinbach Home	1908	P-37-021641	4	-	-
3565 3rd Ave.	J.W. and Eva Rice Home	1913	P-37-035501	3	-	-
3565 Albatross St.	O'Keefe Apartments	1906	P-37-021580	5	-	-
3576 3rd Ave.	Albert Hill Home	1907	P-37-021503	3	-	-
3576 Front St.	Elizabeth Cox Home	1890	P-37-021642	3	-	-
3594 3rd Ave.	Leona Frazier Home	1912	P-37-021504	3	-	-
3600 3rd Ave.	James and Lillie North Home	1908	P-37-035198	3	-	-
3600 N. Eagle St.	Eagle Street Canyon	1910	P-37-021721	5	-	-
3605 Dove Ct.	Theodore Byram Home	1928	P-37-021618	3	-	-
3612 Elliott St.	La Casa Hermosa - A.M. Southard Co. House	1927	P-37-029329	3S	-	-
3620 Front St.	Frank Grandier Home	1890	P-37-021643	3	-	-
3621 4th Ave.	Maria Schmidt Home	1899	P-37-021519	3	-	-
3643 6th Ave.	Charles Vallin House	1898	P-37-021539	3	-	-
3653 3rd Ave.	Clark Myers House	1914	P-37-021506	3	-	-
3665 Jackdaw St.	Mary and Julia Pickett Spec House #1	1929	-	5S1	-	-
3666 4th Ave.	Marie Petershagen Apartments	1912	P-37-021520	4	-	-
3668 6th Ave.	John and Georgia Day Apartments	1925	P-37-021540	3	-	-
3674 6th Ave.	All Saints Episcopal Church	1906	P-37-021541	3	-	-
3676 Eagle St.	Deacon House	-	P-37-027509	5S1	-	-
3680 6th Ave.	Mary Doyle Home	1924	P-37-021542	3	-	-
3690 6th Ave.	Courtney Home	1925	P-37-021543	3	-	-
3692 5th Ave.	Tujaque Building	1928	P-37-021527	3	-	-
3695 3rd Ave.	Mahler Home	1907	P-37-021507	3	-	-
3695 India St.	El Indio	1916	P-37-020983	4D	-	-
3696 3rd Ave.	Historic Company House	1911	P-37-028460	5S1	-	-
3696 Albatross St.	-	1923	-	5S1	-	-
3697 India St.	Harrington Grocery	1916	P-37-020984	4D	-	-
3700 1st Ave.	Curlew Street Canyon	1910	P-37-021720	5	-	-
3702 5th Ave.	Tujaque Building	1928	P-37-021528	3	-	-
3703 Albatross St.	Henry J. Lang Spec House #2	1923	-	5S1	-	-
3705 Pringle St.	Higbee Home	1925	P-37-021836	3	-	-
3707 Columbia St.	Wyatt & Josephine Earp House	1913	P-37-020952	5D	-	-
3708 Columbia St.	Townsend Cottage	1913	P-37-020953	5D	-	-
3710 7th Ave.	Marion Wincote Home	1903	P-37-021553	3	-	-
3715 India St.	Smith House	1921	P-37-020985	4D	-	-
3717 India St.	Marquis Public Theatre	1927	P-37-020986	4D	-	-
3718 1st Ave.	Hall-Sherman House	1890	P-37-019174	5S1	-	-
3720 3rd Ave.	Siess House	1907	P-37-028902	5S1	-	-
3725 Wellbourn St.	Irving Brockett Home	1927	P-37-021716	3; 5S2	-	-
3727 1st Ave.	Catherine Parker House	1910	P-37-021474	3	-	-
3729 Amaryllis Dr.	Arthur and Martha Bradshaw. Residence	1927	P-37-027712	5S2	-	-

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3730 Columbia St.	Hauser Home	1912	P-37-020954	5D	-	-
3731 Brant St.	Lang House	1927	P-37-021599	3	-	-
3731 India St.	Jolin and Young Importers	1913	P-37-020987	4D	-	-
3733 Robinson Mews	Sunnyslope Lodge	-	P-37-017157	5S1	-	-
3734 6th Ave.	Damon Handley Home	1909	P-37-021544	3	-	-
3734 Columbia St. (BERD)	Stranger House, Bracey Rental	-	-	5S2	-	-
3735 India St.	Savoir Faire	1915	P-37-020988	4D	-	-
3737 India St.	Doodle Burgers	1925	P-37-020989	4D	-	-
3738 Columbia St.	Bungalow	1912	P-37-020955	5D	-	-
3738 Front St. (BERD)	Sonnenschmidt Home	1909	-	3S	-	-
3741 India St.	India Street Cottages	1921	P-37-020990	4D	-	-
3744 4th Ave.	Lillah Beckett Apartments	1905	P-37-021521	3	-	-
3744 Columbia St.	Stanger House	1929	P-37-020956	5D	-	-
3745 Pringle St.	Massingill Home	1920	P-37-021837	3	-	-
3747 Eagle St.	Ida R. Hedges House	1905	-	3	-	-
3748 Columbia St.	Kamamura House	1929	P-37-020957	5D	-	-
3758 Front St.	Butler C. Sonnenschmidt Home	1909	P-37-021645	3	-	-
3760 3rd Ave.	John Hornibrook House	1907	P-37-021508	3	-	-
3768 Albatross St.	John Nuttal House	1906	P-37-023916	3S	-	-
3770 Wellbourn St.	Milton Mason Home	1914	P-37-021717	3	-	-
3772 Pringle St.	Crippen Home	1920	P-37-021838	3	-	-
3775 Front St.	Alfred Barker Home	1911	P-37-021646	3	-	-
3776 Front St.	Irving J. Gill Home	1906	P-37-021647	3S	-	-
3783 3rd Ave.	George Blodgett House	1910	P-37-021509	3	-	-
3786 Albatross St.	Arthur Dickerson House	1916	P-37-021582	3	-	-
3800 Brant St.	Brant St. Canyon	1910	P-37-021719	5	-	-
3814 Hawk St. (BERD)	Leisenring Home	1920	-	3S	-	-
3815 1st Ave.	Melville Hermann House	1926	P-37-021475	3	-	-
3817 1st Ave.	Frederick W. Elliott House	1906	P-37-021476	3	-	-
3817 Pringle St.	Cook House	1926	P-37-021839	3	-	-
3818 Eagle St.	Knicks House	1925	P-37-021619	3	-	-
3819 Hawk St.	Willa Leisenring Home	1920	P-37-021649	3	-	-
3821 1st Ave.	I.M. and H.B. Hone Residence	1912	P-37-021477	3	-	-
3821 5th Ave.	El Comado Apartments	1920	P-37-021529	3	-	-
3825 5th Ave.	Guild Theatre	1913	P-37-021530	3	-	-
3844 Eagle St.	Bradt Residence	1914	P-37-021620	4	-	-
3846 5th Ave.	Paul and Lydia Battle Offices	1924	P-37-021531	3	-	-
3848 3rd Ave.	A.E. Dodson Home	1915	P-37-021510	3	-	-
3849 Eagle St.	Golden Home	1924	P-37-021621	3	-	-
3890 Twiggs St.	Casa Larga	1934	P-37-021892	3S	-	Y
3902 Alameda Dr.	George Kirkpatrick House	1915	P-37-021727	4	-	Y
3907 Hawk St.	Alexander Schreiber Spec House #2	1920	-	5S1	-	-
3910 Henry St.	Marcy House	1926	P-37-021784	4	-	-
3910 Eagle St.	Pacific Building Company Spec. House #1	1912	P-37-027663	3S	-	-
3911 Saint James Pl.	Merrick Home	1912	P-37-021843	4	-	-
3912 Saint James Pl.	Thurston Home	1932	P-37-021844	4	-	-
3916 Alameda Pl. (Local)	Nancy Johnson And Richard Carter House	1914	-	5S3	-	Y
3917 Alameda Dr.	Irving Brockett House	1917	P-37-035901	4	-	Y
3917 Hawk St.	Alexander Schreiber Spec House #1	1920	-	5S1	-	-
3919 Harney St. (Survey)	-	1923	-	5S3	-	Y

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
3920 Alameda Pl.	Steicher House	1920	P-37-021729	3	-	Y
3920 Conde St. (Survey)	-	1925	-	5S3	-	Y
3924 Henry St.	Wahrenberger House	1924	P-37-028217	3; 5S2	-	-
3931 Portola Pl.	Gossow House	1911	P-37-021828	5	-	-
3932 Alameda Pl.	Mack House	1918	P-37-028966	2S	-	Y
3939 Saint James Pl.	Harold B. And Augusta Starkey House	1912	P-37-029332	3	-	-
3941 Mason St. (Survey)	-	1953	-	5S3	-	Y
3944 Alameda Pl.	Drishaus House	1920	P-37-021730	3	-	Y
3945 Alameda Pl.	William Boland House	1920	P-37-021731	3	-	Y
3950 Alameda Pl.	Robert Hamilton House	1914	P-37-021737	4	-	Y
3950 Conde St.	Adobe Chapel of the Immaculate Conc	-	P-37-028599	4S	-	Y
3959 Harney St. (Demo)	Vecclione House	1905	P-37-021781	5	-	Y
3960 Alameda Pl. (Local)	M.B. and Ida Irvin Spec House No. 1	1923	-	3S	-	Y
3966 Mason St.	Mason Street School	1865	P-37-020917	1D	-	Y
3970 Harney St. (Survey)	-	1913	-	5S3	-	Y
3986 Albatross St. (BERD)	Arthur Dickerson House	1916	-	3S	-	-
3994 Jackdaw St.	George L. Myars Property	1922	P-37-028478	5S3	-	-
4000 Mason St.	Estudillo House	1827	NPS-70000143-0000; SHL-0053; P-37-028600	1D; 1S	Y	Y
4001 Henry St.	Starkey House	1926	P-37-021786	3	-	-
4002 Wallace St.	Rose-Robinson Adobe Reconstruction	-	-	2D2	-	Y
4003 Goldfinch / 820 W. Washington St.	P.D. Griswold Building	1913	-	5S1	-	-
4005 Pacific Hwy.	Als Ice Cream; Citizens Trucking Co	-	P-37-021005	4	-	-
4016 Wallace St.	Old Town San Diego	1821	NPS-71000182	1D	-	Y
4017 Harney St.	Derby-Pendleton House	1851	P-37-021782	3S	-	Y
4019 Hawk St.	4019 Hawk Street	1919-1920	P-37-035285	5S1	-	-
4030 Alameda Dr.	Barreiro House	1920	P-37-021732	3	-	-
4030 Sunset Rd. (Local)	C. Arnholt Smith Spec House	1932	-	5S1	-	Y
4040 5th Ave.	4040 Fifth Avenue	1912	-	NO DPR	-	-
4041 Ibis St. (BERD)	Green Manor	-	-	2S2	-	-
4044 Lark St.	-	1915	P-37-021804	3	-	-
4052 Albatross St.	Conrad and Ida Felger Residence	1913	P-37-027713	5S2	-	-
406 W. Nutmeg St.	Robert Hubbard Home	1922	P-37-028455	3S	-	-
4060 Alameda Dr.	Crozier House	1924	P-37-021733	4	-	-
4070 Jackdaw St.	Mission Hills Congregational Church	1920	P-37-021652	3	-	-
4072 Saint James Pl.	Irvin House	1921	P-37-021847	3	-	-
4075 Alameda Dr.	Burton Home	1914	P-37-021734	3	-	-
4075 Couts St.	Charles and Marie Brenner House	1926	-	2S	-	Y
4077 5th Ave.	-	-	P-37-018408	5S1	-	-
408 W. Nutmeg St.	St. Paul's Parish	1908	P-37-021657	3	-	-
410 W. Upas St.	Evangeline Caven Bungalow	1913	P-37-028417	5S1	-	-
4100 Alameda Dr.	Sign Pillar	1910	P-37-021914	5	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
4100 Loma Pass	Sign Pillar	1910	P-37-021915	5	-	-
4100 Sunset Blvd.	Pillars	1915	-	5S2	-	Y
4105 Alameda Dr.	4105 Alameda Drive	1923	P-37-034945	3S	-	-
4106 Alameda Dr.	McCabe Home	1915	P-37-021735	3	-	-
4109 Sports Arena Blvd., Suite A	4109 Sports Arena Boulevard, Suite A	1977	-	NO DPR	-	-
4109 Sports Arena Blvd., Suite B	4109 Sports Arena Boulevard, Suite B	1977	-	NO DPR	-	-
411 W. Thorn St.	Lillian Herriman Residence	1926	P-37-021699	3	-	-
4115 Miller St.	Bingham House	1932	P-37-021815	3	-	Y
4115 Twiggs St.	Robert Patterson and Lulu Bolam House	1929	-	2S	-	Y
4119 Palmetto Wy.	Boulter/Melhorn House	1920-1921	P-37-028576	3S	-	-
412 University Ave.	Jimmy Wong's Golden Dragon Neon Sign	1955	-	5S1	-	-
4126 Stephens St.	Kelly Home	1915	P-37-021861	3	-	-
4129 Falcon St.	John W. Donohue Spec House # 1	1910	P-37-033134	5D	-	-
4130 Alameda Dr.	Jenney House	1915	P-37-021736	3	-	-
4136 Wallace St.	Carrillo House	1850	P-37-021900	2S	-	Y
4141 Lark St.	Joel L. Brown House		P-37-027665	5S1	-	-
4143 Sunset Blvd.	Thompson Home	1925	P-37-021881	5	-	Y
4144 Lark St.	John F. Forward Jr. House	1923	-	5S1	-	-
4145 Hermosa Wy.	Bresler House	1918	P-37-021787	3	-	-
4145 Miller St.	Bown House	1927	P-37-021814	3S	-	Y
4145 Randolph St.	Wilson Home	1917	P-37-021841	4	-	-
4145 Stephens St.	Irvin Home	1920s	P-37-021862	3	-	-
4145 Twiggs St. (Survey)	-	1959	-	5S3	-	Y
4146 Miller St.	Whitney House	1927	P-37-021816	3	-	Y
4151 Stephens St.	-	1920	P-37-027612	5S1	-	-
4151 Taylor St. (Survey)	-	1928	-	5S3	-	Y
4154 Lark St.	Ostrander House	1915	P-37-021805	3	-	-
4161 Stephens St.	Halliday Home	1920s	P-37-021863	3	-	-
4167 Palmetto Wy.	-	1918	-	5S1	-	-
4167-4169 Jackdaw St.	Nos. 4167 and 4169 Jackdaw Street	-	-	5S1	-	-
4176 Arden Wy.	Woldt House	1927	P-37-021749	3	-	-
4181 Stephens St.	-	1920	-	5S1	-	-
4186 Jackdaw St.	Alberta Security Company House	1914	-	3S	-	-
4188 Arden Wy.	-	1925	-	5S1	-	-
4191 Stephens St.	Hoff Home	1920s	P-37-027506	3	-	-
4195 Stephens St.	-	1920	-	5S1	-	-
4199 Sunset Blvd.	Pillars	1915	P-37-021916	5	-	Y
420 W. Walnut Ave.	Dr. Robert G. Sharp Office	1907	P-37-021711	3	-	-
4201 Randolph St.	Francis W. Parker School	1913-1966	P-37-019059	3S	-	-
4204 Arden Wy.	Landale House	1918	P-37-021750	3	-	-
4204 Saint James Pl.	Jacobson Home	1925	P-37-021848	3	-	-
4220 Arden Wy.	Ballard House	1913	P-37-021752	3S	-	-
4221 Arden Wy.	Adams House	1912	P-37-021751	4	-	-
4222 Randolph St.	Couts House	1926	P-37-021842	3	-	-
4229 Arden Wy.	Brown House	1920	P-37-021753	3	-	-
4230 Arden Wy.	Long House	1914	P-37-021754	3	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
4230 Arista St.	Hoffman House	1948	P-37-021762	3	-	Y
4231 Witherby St.	Jeanette E. and George R. Daley House	1926	-	3S	-	-
4238 Arden Wy.	Lovett House	1913	P-37-021755	3	-	-
4239 St. James Pl.	Morris B. Irvin Spec House #2	1922	-	5S1	-	-
4240 Arden Wy.	Eastman House	1912	P-37-021756	3	-	-
4241 Arden Wy.	Ladd House	1920	P-37-021757	3	-	-
4243 Jackdaw St.	-	1922	P-37-034946	5B	-	-
4244 Altamirano Wy.	Goodwin Home	1920	P-37-021743	3	-	Y
4244 Ampudia St.	Timken House	1927	P-37-021745	4	-	Y
4244 Arden Wy.	R.H. Robbins House	1912	P-37-021758	3	-	-
4247 Saint James Pl.	Robinson House	1911	P-37-021849	3	-	-
4250 Arguello St.	Eager House	1917	P-37-021759	3	-	-
4251 Arguello St.	Swayne House	1914	P-37-021760	3	-	-
4252 Aloha Pl.	Miller Home	1928	P-37-021741	3	-	-
4252 Arista St. (Local)	Shapley Depew House	1931	-	5S1	-	Y
4253 Palmetto Wy.	Pepin House	1913	P-37-021819	3	-	-
4266 Arista St.	J. Rex Murray and Alice M. Murray Spec House	1930	P-37-032949	3; 5S2	-	Y
4274 Randolph St.	Dr. and Mrs. Andrew. B. and Augusta I. Wessels House	1927	P-37-035265	5S1	-	-
4275 Arguello St.	J.B. Hunt House	1935	P-37-021761	3	-	-
4276 Trias St.	Walter And Nettie Bellon House	1933	-	5S2	-	-
4277 Cosoy Wy.	Cella House; J.M. Schelling House		P-37-021768	2S	-	Y
4282 Aloha Pl.	Emmans Home	1928	P-37-021742	4	-	-
4285 Altamirano Wy.	R.R. West. "Spec" House #1	1934	P-37-029967	5S2	-	-
4287 Hortensia St. (BERD)	John James Coker House, Archie Vik House	1927	-	3S	-	-
4290 Rudolph St.	4290 Randolph Street	1927	P-37-035211	3S	-	-
4291 Arista St.	Anderson House	1940	P-37-021765	3	-	-
4297 Pacific Hwy AF Plant 19	Air Force Plant 19 Historic District	-	-	1D	-	Y
430 W. Spruce St.	Lascoe Residence	1923	P-37-018409	3S	-	-
4300 Altamirano Wy.	Lamp Post	1915	P-37-021918	5	-	-
4305 Hortensia St.	Kelly Home	1926	P-37-021801	3	-	-
4309 Arista St.	Melcher House	1938	P-37-021766	5	-	-
4309 Plumosa Wy.	Mintzer House	1925	P-37-021826	3	-	-
4316 Hermosa Wy.	Sampson House	1918	P-37-021788	3	-	-
4322 Sierra Vista St.	Chadwick Home	1915	P-37-021860	5	-	-
4330 Witherby St.	4330 Witherby Street	1926	-	3S	-	-
4332 Hermosa Wy.	Leite House	1910	P-37-021789	3	-	-
4337 Valle Vista St.	Butler House	1910	P-37-021895	3	-	-
434 W. Thorn St.	Herman Ascher Home	1915	P-37-021700	3D	-	-
4340 Valle Vista St.	Smith House	1911	P-37-021896	3	-	-
4346 Valle Vista St.	Richard S. Requa Home	1912	P-37-021897	4	-	-
435 W. Spruce St.	Adelbert H. Sweet Home	1914-1915	-	1S	-	-
435 W. Thorn St.	Morris and Lilian Herriman Residence	1926	-	52	-	-
4351 Ampudia St.	4351 Ampudia Street	1928	-	3S	-	-
4366 Altamirano Wy.	Macdonald House	1916	P-37-021744	3	-	-
4370 Trias St.	John W. Snyder Company Model Home #3	1925	-	5S1	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
4382 Ampudia St.	Taylor House	1926	P-37-021746	3	-	-
4386 Trias St.	-	1926	P-37-032944	3S	-	-
4399 Hermosa Wy.	Fred Heilbron House	1920	P-37-021790	3	-	-
4401 Trias St.	Ricker House	1925	P-37-021888	4	-	-
4411 Hermosa Wy.	Stone House	1916	P-37-021791	3; 5S2	-	-
4425 Hermosa Wy.	Niven House	1916	P-37-021792	3	-	-
4455 Hermosa Wy.	Harvey Allen House	1923	P-37-027510	3	-	-
4460 Trias St.	Richard Coffman House	1930	P-37-021889	4	-	-
4460 Hermosa Wy.	4460 Hermosa Way	1924	P-37-035498	3S	-	-
4467 Ampudia St.	Trepte House	1926	P-37-027671	3	-	-
4474 Hortensia St.	Brooks House	1925	-	3	-	-
4476 Ampudia St.	Schuler House	1927	P-37-021748	5	-	-
4476 Hortensia St.	R.C. Gemmell House	1916	P-37-027615	5S1	-	-
4479 Trias St.	Leonard Ellis House	1908	P-37-021890	3	-	-
4481 Hortensia St.	Bird Home	1924	P-37-021802	4	-	-
4490 Hermosa Wy.	C.G. Foote House	1920	P-37-021795	3	-	-
4494 Hortensia St.	-	1927	P-37-033137	5B	-	-
4520 Trias St.	William Templeton Johnson House	1920	P-37-021891	3	-	-
4620 Pacific Hwy. (Survey)	-	1966	-	5S3	-	Y
4620 Trias St. (BERD)	Shattuck House	1920	-	3S	-	
4875-4883 Naples St.	-	1953	P-37-034331	3S	-	-
516-522 Thorn St.	-	1913	P-37-028586	5S2	-	-
525 W. Spruce St.	Park Manor	1926	P-37-023930	3	-	-
532 W. Grape St.	Vue de Leau Apartments	1913	P-37-020973	4S	-	-
540 W. Thorn St.	Fred F. Thomas Home	1909	P-37-021694	3	-	-
545 W. Laurel St.	Clayton House	1907	P-37-021276	4S	-	-
5961 Linda Vista Dr.	Rehab of Kirby Johnson Prop	-	-	NO DPR	-	-
600 Laurel St.	Cabrillo Bridge/El Prado Complex	1915	-	1D	Y	-
629 Pennsylvania Ave.	Julia Ann Smith House	1912	P-37-021665	3	-	-
648 W. Hawthorn St.	Fiesta Apartments	1911	-	5S1	-	-
704 Sutter St.	John K. Smith Home	1910	P-37-021690	5	-	-
704 W. Pennsylvania Ave.	Charles C. Crouch House	1927	P-37-021671	3	-	-
720 Heber Ave. (BERD)	Science Building	1922	-	3B	-	Y
736 Sutter St.	Harry Freeborn Home	1911	P-37-021691	4	-	-
800 W. Ivy St.	Adams-Henry Company Building	1913	-	5S	-	-
800-808 W. Washington St. / 4010 Falcon St.	Funcheon Building	1929	-	52	-	-
817 W. Pennsylvania Ave.	Oscar and Ida Carlson Home	1928	P-37-021672	4	-	-
826 W. Ivy St.	Henry Adams Building	1913	P-37-020991	5S	-	-
First Ave. between Palm and Nutmeg	First Avenue Bridge	1931	P-37-028420	5S1	-	-
Rosecrans between Udall and Voltaire	El Disembarcadero	-	P-37-028409	5S1	-	-
Marine Corps Recruit Depot Historic District	Marine Corps Recruit Depot Historic District	-	-	1D	-	Y
Naval Training Center Historic District	Naval Training Station	-	-	1D	-	-
Arnold and Choate's Historic District (Survey)	Arnold and Choate's Historic District (Survey)	1890-1951	-	5D3	-	-
Dove Street Historic District (Survey)	Dove Street Historic District (Survey)	1928-1948	-	5D3	-	-
Fort Stockton Historic District (Survey)	Fort Stockton Historic District (Survey)	1910-1939	-	5D1	-	-

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
George Marston Hist. Dist. (Survey)	George Marston Hist. Dist. (Survey)	-	-	5D3	-	Y
Heart of Banker's Hill Historic District (Survey)	Heart of Banker's Hill Historic District (Survey)	1870-1940	-	5D3	-	-
Horton's Addition Historic District (Survey)	Horton's Addition Historic District (Survey)	1871-1940	-	5D3	-	-
Inspiration Heights Historic District (Survey)	Inspiration Heights Historic District (Survey)	1887, 1909-1942	-	5D3	-	Y
Inspiration View Historic District (Survey)	Inspiration View Historic District (Survey)	1925-1936	-	5D3	-	-
Little Italy Historic District	Little Italy Historic District	-	-	-	-	-
Marine View Historic District (Survey)	Marine View Historic District (Survey)	1891-1950	-	5D3	-	-
Marston Family Historic District (Survey)	Marston Family Historic District (Survey)	1904-1918	-	5D3	-	-
Mission Hills Historic District (Survey)	Mission Hills Historic District (Survey)	1908-1942	-	5D1	-	-
Mission Hills Expansion Historic District (Survey)	Mission Hills Expansion Historic District (Survey)	1908-1942	-	5D3	-	-
North Florence Heights Historic District (Survey)	North Florence Heights Historic District (Survey)	1890-1940	-	5D3	-	-
Northwest Mission Hills Historic District (Survey)	Northwest Mission Hills Historic District (Survey)	1908-1950	-	5D3	-	Y
Ocean Beach Cottage Emerging District (Survey)	Ocean Beach Cottage Emerging District (Survey)	-	-	-	-	-
Second Avenue Historic District (Survey)	Second Avenue Historic District (Survey)	1871-1945	-	5D3	-	-

Legend: - = no data; BERD = Built Environment Resources Directory; DPR = Department of Parks and Recreation; NHL = National Historic Landmark; Local = San Diego Register of Historical Resources; SHPO = State Historic Preservation Office; Survey = Community Plan Area survey for either Midway-Pacific Highway, Old Town, or Uptown; Y = yes.

Notes: * California Historical Resource Status Codes, defined at https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf and https://ohp.parks.ca.gov/pages/1069/files/tab8.pdfNRHP, CRHR, and local eligibility are indicated by codes in this records search, and include:
NRHP-eligible: 1D, 1S, 2D, 2D2, 2S, 3, 3B, 3D, 3S
CRHR listed: 1D, 1S, 2D, 2D2, 2S
Locally eligible=codes that begin with 5
Needs further evaluation=codes that begin with 4
** Records search results did not include SHPO P-Numbers for all architectural properties
*** Separate building at same address

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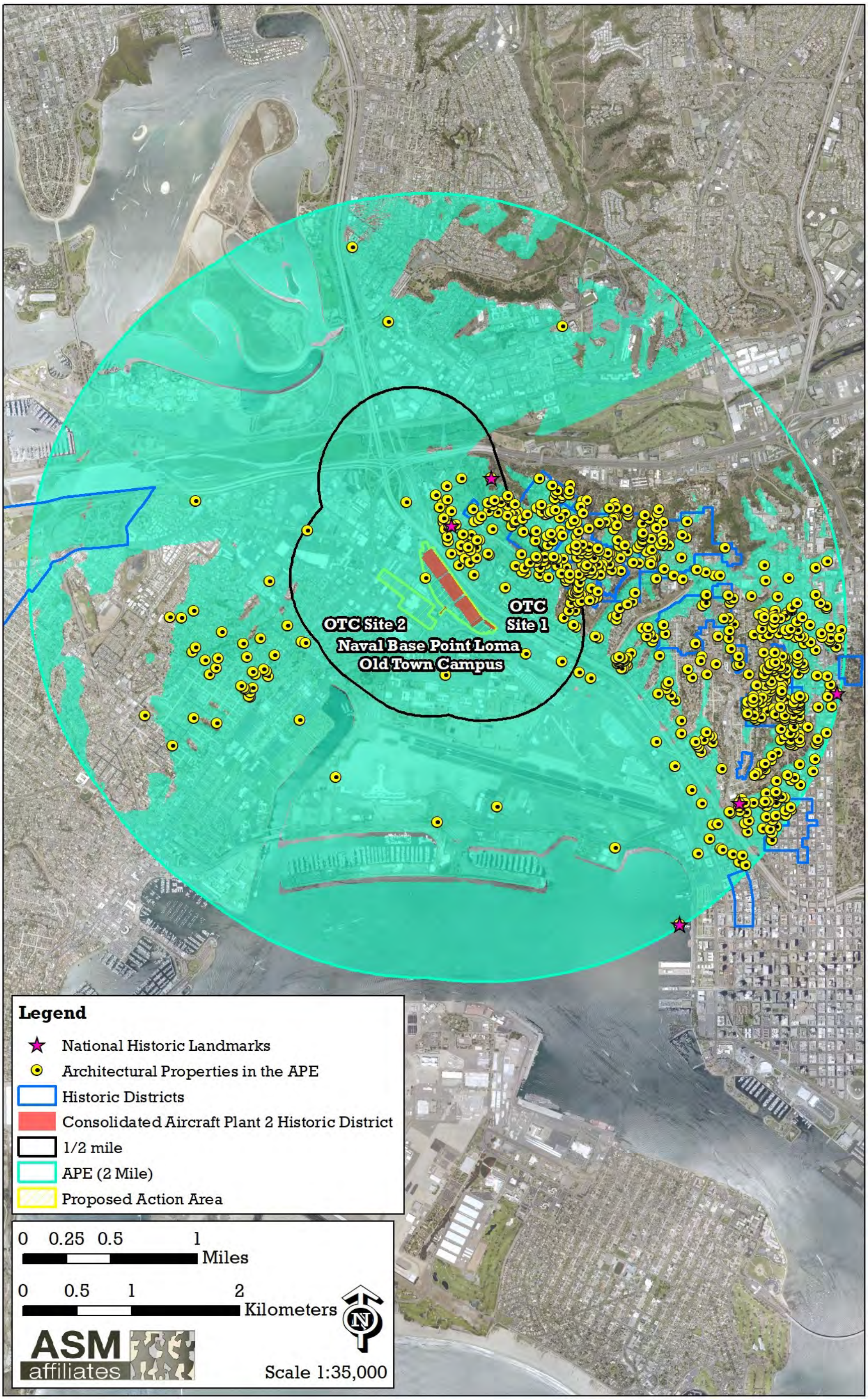

Figure 3.7-2 Historic Architectural Properties within the APE

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The period of significance is 1921-1940. Under Criterion A, the district is strongly associated with the nation's emergence as a world power as reflected in the efforts of the Navy to develop a west coast advance expeditionary base in support of ships deployed to protect American interests in the Pacific arena. In Marine Corps history, the district is significant as a symbol of the Marine Corps coming of age as a distinctive branch of the military in the early decades of the twentieth century. Under Criterion C, the district is an example of the work of master architect Bertram Goodhue; a distinguished example of site planning; a distinguished example of Spanish Colonial Revival architecture; and as an important example of military base architecture (JRP, 1990).

In addition to the records search, a reconnaissance-level survey was conducted to document views towards the Proposed Action Area within the APE to assess the potential for effects on historic properties located outside the Proposed Action Area. The survey was conducted by Laura Taylor Kung and Marilyn Novell, both Senior Architectural Historians; and Shannon Davis, Director of Architectural History, over the course of several days: March 9 and 10 and July 14 and 15, 2020. Prior to the field survey, Geographic Information System (GIS) maps were developed and uploaded to tablets for use in the field. The GIS maps included the boundaries of the Proposed Action Area, the boundaries of the APE, and the location of historic properties that had been identified to be included in the survey and assessment of effects. The maps also included links to the DPR forms for each historic property. Photographs were taken of each resource, as well as views toward the Proposed Action Area.

The survey team considered whether the alternatives would be visible from each property surveyed. For those properties from which the alternatives would be visible, the team then considered whether that view would be adversely affected by the alternatives, following the methodology outlined in Section 4, and the visual simulations provided in Section 3.6. The survey team generally focused on the views from primary facades as they were not able to access the rear facades of private properties. Results of the survey are discussed in Sections 4.3 and 5.2.

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4.0 Methodology for Assessing Effects on Historic Properties

4.1 Criteria of Adverse Effect

As the Proposed Undertaking is subject to compliance with Section 106 of the NHPA, the process to determine adverse effects follows that established in 36 CFR 800.5(a). The criteria of adverse effect are defined in 36 CFR 800.5(a)(1).

"An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative."

Examples of adverse effects on historic properties identified in 36 CFR 800.5(a)(2) include, but are not limited to:

i. Physical destruction of or damage to all or part of the property.

ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the *Secretary's Standards for the Treatment of Historic Properties* (36 CFR part 68) (*Standards*) and applicable guidelines.

iii. Removal of the property from its historic location.

iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.

v. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.

vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.

vii. Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

4.2 Assessing Visual Effects

There is no universally accepted yardstick for measuring visual effects, nor federal guidance. To ensure a thorough and complete analysis of visual effects, ASM augmented the Section 106 (36 CFR 800) regulations of the NHPA and SOI *Standards* with more specific guidance that has been developed by two state agencies—the Delaware SHPO (Delaware SHPO, 2003) and the Wyoming Bureau of Land Management and Wyoming State Historic Preservation Office (Wyoming BLM, 2006)—and recent guidance from NPS staff and Argonne National Laboratory at the Visual Resources Stewardship Conference (Sullivan, et al., 2018).

Because visual effects do not always damage the defining characteristics of an historic property in any physical manner, assessing them can be difficult and complicated, and is almost always subjective. If we are to consider that a historic property is affected when its historic significance and integrity have been diminished, determining how a project harms a property's historical significance and integrity is essential to any assessment. In assessing the visual effects to historic properties, the criteria for significance and the aspects of integrity are factors that require careful evaluation and can provide a defensible qualitative method for determining visual effects on historic properties.

For purposes of this analysis, the following definitions have been employed (some of which have also been defined earlier in this report):

Historic Property: a historic site, district, building, structure, or object that is either eligible for inclusion in the NRHP or listed therein.

Foreground: zone of distance nearest to viewer location in which changes to the view are dominant and create the greatest contrast.

Middleground: zone of distance between foreground and background in which detail is still apparent.

Background: zone of distance far from viewer location in which the human eye typically does not perceive line or texture and only sees outlines of form and splashes of color.

Distant Background: zone of distance furthest from viewer location, detail will not be visible.

Views: the expansive and/or panoramic prospect of a broad range of vision which may be naturally occurring or deliberately contrived (NPS, 2009, p.7-9).

Scenic Views: any scenic resources or resources that are visually and aesthetically important and that contribute to an historic property's significance.

Designed Views: historic designed landscapes often include views, vistas, or view corridors purposefully incorporated into the original design and orientation of the resource. In these cases, the view itself is a significant characteristic of the historic property.

Visual Effects: any aspect of a proposed project that will be seen from or will be in the view of a historic property. A visual effect may be beneficial or adverse; the determination that a visual effect exists does not automatically imply that the effect is adverse.

Adverse Visual Effect: An effect that changes the character of physical features within a property's setting that contribute to its historic significance or introduces visual elements that diminish the integrity of the property's significant historic features.

Adverse visual effects may be created when an undertaking is visible within the views of the historic property, or when it introduces an element that is incompatible with the criteria under which the property is eligible. Simply because an undertaking will be visible from an historic property does not mean it automatically will create an adverse visual effect. Therefore, it is necessary to evaluate the visual changes and alterations the undertaking will introduce to the property. In assessing adverse visual effects on a historic property, it is necessary to identify the criterion or criteria under which the resource is eligible and what qualities or characteristics of the resource contribute to its significance or eligibility. For example, if a resource is eligible for its innovative engineering qualities, visual effects on the property may not be adverse, whereas if the property is eligible on the basis of its architectural significance, an adverse effect very well may be created.

Adverse visual effects should be determined on a case-by-case basis, weighing the following factors:

- **Significance.** An historic built environment resource's significance and its relevant aspects of integrity must be taken into account in order to evaluate the Proposed Undertaking's effect on the property's eligibility for listing in the NRHP.
- **Character-Defining Features.** The alteration of character-defining features (including views and open space) can affect an historic property's integrity of setting, feeling, association, or design.
- **Compatibility.** Whether in an open space or a developed area, the compatibility of the project with the character of the project's location and surrounding area, including historic properties, is important. The character of the historic property's site and architectural features should be the basis for determining the appropriate characteristics of the proposed project. The compatibility of the project is determined by:
    - mass – the arrangement of the project's spaces
    - scale and proportion – the size and the proportion of the project to the surrounding structures and features
    - height – sometimes it may be necessary that a project height extend beyond that of the surrounding buildings and other features within view of the project; it is important that the height of the project not cause the line of sight to move so far up that the surrounding features are out of view, thereby detracting from the original view
    - shadows
    - color
    - the degree to which the project would contribute to the area's aesthetic value
    - the degree of contrast, or lack thereof, between the project and the background, surrounding scenery, or neighborhood
    - the amount of open space
- **Visual Contrast Rating.** Visual Contrast Rating (VCR) system (as defined in Sullivan, et al., 2018 and BLM, 1986) is a recommended method to determine the degree of contrast of a proposed undertaking on the setting of historic properties.
    - *No Contrast* occurs when the project elements will not be seen from the historic property and/or there is no change in the form, line, color and texture between the undertaking and the setting. With *No Contrast*, no historic properties are affected.
    - *Weak Contrast* occurs when the proposed project elements, or portions of the elements, can be seen but will not dominate the setting or attract the attention of the casual observer because the basic elements of form, line, color, and texture found in the setting are repeated in the project's physical elements. With *Weak Contrast*, there is no adverse effect to historic properties.
    - *Moderate Contrast* occurs when the proposed project elements, or portions of the elements, begin to attract attention and begin to dominate the characteristic landscape. With *Moderate Contrast*, there is a potential adverse effect to historic properties.
    - *Strong Contrast* occurs when the proposed project elements, or portions of the elements, demand attention, cannot be overlooked, and are dominant on the landscape. With *Strong Contrast*, there is an adverse effect to historic properties.

4.3 Properties with Potential for Adverse Effects Outside the Proposed Action Area

Following the methodology and definitions outlined above, the Proposed Undertaking has the potential to be dominant within the foreground view at a distance up to ½ mile. Therefore, all historic properties (110 districts, buildings, and structures) within the ½-mile radius were surveyed to document views towards the Proposed Action Area and determine the potential for adverse effects (Table 4.3-1 and Figure 4.3-1).

Within the area beyond ½ mile and up to 2 miles, a sample of the 703 historic properties (architectural) were surveyed. A sample of 5 percent, or 35 properties, was selected to confirm that views of the alternatives between ½ mile and 2 miles away would be limited to middleground views (see distance zone definitions in Sections 2.0 and 4.2) and would not create a negative contrast to the visual setting of those properties. The 35 properties selected for the sample are identified in Table 4.3-1. They represent the geographic distribution and attributes/property types of the 703 properties in that area. Specifically, 75 percent of the properties within the 2-mile APE are single-family residences; therefore, 75 percent of the 35 properties selected for the sample were also single-family residences. Other property types found in the APE include multifamily residences, 1- to 3-story commercial buildings, churches, and cemeteries. Examples of each of those property types were included in the sample. All property types categorized as a landscape by the NRHP were included in the sample, as those property types typically include views as a character-defining feature, either because they were incorporated into the designed landscape or are directly related to the historical significance of the property (NPS, 1997, p. 22). The landscape property types within the APE are parks, natural features (canyons), and the plaza of Old Town San Diego.

The geographic distribution of the properties within the APE were predominately in the southeastern quadrant of the 2-mile radius; therefore, a majority of the properties selected for the sample were also located in the southeastern quadrant. Properties included in the other quadrants of the APE were selected based on the concentration of resources in other areas as well as consideration of those areas from which the alternatives will be the most visible. If the survey of the 5 percent sample had demonstrated a moderate or strong contrast to the views and/or setting of those properties, the size of the sample would have been increased. However, the results of the survey of the 5 percent sample supported the conclusion that the alternatives would only result in a weak contrast to the views and setting of the properties in the sample; therefore, there was no reason to increase the size of the sample.

Table 4.3-1 Historic Architectural Properties Surveyed for Assessment of Effects

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
0 Balboa Park	Balboa Park El Prado	-	**	1D	Y	-
0 Heritage Park Row	McConaughy House	1887	-	3S	-	Y
0 Heritage Park Row	Temple Beth Israel	1889	P-37-021907	3S	-	Y
0 Heritage Park Row	Bushyhead House	1887	-	3S	-	Y
0 Heritage Park Row	Burton House	1893	-	3S	-	Y
0 Heritage Park Row	Christian House	1889	-	3S	-	Y
0 Heritage Park Row	Senlis Cottage, Hippen Cottage	1893	-	3S	-	Y
0 Heritage Park Row	Sherman Gilbert House	1887	-	3S	-	Y
0 Spruce St.	Spruce Street Suspension Bridge	1912	P-37-021725	3S	-	-
0 Washington St.	Washington Ave./ 6th Ave. Separation Bridge	-	-	2D2	-	-
100 W. Robinson Ave.	Curlew Street Canyon	1910	-	5	-	-
1306 N. Harbor Dr.	Star of India	-	-	1D	Y	-
1306 N. Harbor Dr.	Berkeley Ferry	-	-	1D	Y	-
137 Pennsylvania Ave.	Salisbury Apartments	1911	P-37-021664	3	-	-
1501 Washington Pl.	Cavalry Cemetery Site	1874	P-37-021898	5	-	-
1674 Torrance St.	John Holland Residence	1913	P-37-021704	3	-	-
1747 Hancock St.	Mission Brewing Co, San Diego/ American Agar Co.	1913	P-37-020974 and P-37-023914	1S	-	-
1818 W. Montecito Wy.	Willier House	1930	P-37-021817	3	-	-
1820 Titus St.	Strom House	-	P-37-021884	3	-	-
1882 Sheridan Ave.	Phipps House	1910	P-37-021859	3	-	-
1895 Hancock St.	Canada Dry Building	1946	P-37-032934	5S2	-	Y
1911 Titus (BERD)	Wiseman House	1926	-	3S	-	Y
1929 Titus St.	Holland House	1926	P-37-021886	3S	-	Y
1956 Linwood St.	Showley Home; Dickenson Home	-	P-37-021811	3S	-	Y
1977 Titus St.	James and Florence Riach House	1927	-	3S; 4X	-	Y
1981 Linwood St.	Read Home	-	P-37-021812	3S	-	Y
1984 Guy St.	Joseph W. Potter House	1925	-	3S	-	Y
1995 Guy St.	Barker House	1916	P-37-021778	3	-	Y
2156 Guy St.	Gray House	1925	P-37-021779	3	-	Y
2174 Guy St.	Stobeck House	1926	P-37-021780	4	-	Y
2200 Sunset Blvd.	Pillard Gate Way	1915	P-37-021917	5	-	Y
2206 Juan St. (Local)	Gordan and Garnet Thompson House	1930	-	5S2	-	Y
2212 La Callecita (Local)	Louis and Evelyn Robinson House	1926	-	3S	-	Y
2218 Sunset Blvd.	Coleman Home	1939	P-37-021880	4	-	Y
2231 La Callecita	Cunningham House	1948	P-37-027714	3S	-	Y
2243 Guy St.	Hervey K. Graham and Alva M. Graham	1936	P-37-035264	2S	-	Y
2251 San Juan Rd	Dr. and Mrs. Franklin G. Lindemulder Residence	1935	-	2S	-	Y
2266 San Diego Ave. (Survey)	-	1956	-	5S3	-	Y
2275 Albatross St.	F W. and Mary Jackson Home	-	P-37-021067	3	-	-
2293 San Juan Rd.	William Mason Fortesque Residence	1955	-	5S2	-	Y
2304 Juan St.	The United States Holding Company Residence	1954	P-37-035519	3S	-	Y
232 W. Brookes Av.	Guy Sensor Home	1905	P-37-021606	3	-	-
2400 Presidio Dr.	Alexander and Nancy Highland House	1934	P-37-023767	4S	-	-

Table 4.3-1 Historic Architectural Properties Surveyed for Assessment of Effects

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
2405 Jefferson St. (Demo)	Hernandez House	-	P-37-021803	5	-	Y
2414 San Diego Ave. (Survey)	-	1938	-	5S3	-	Y
2420 Presidio Dr. (Local)	Claude and Edna Bradley Woolman House	1930	-	3S	-	Y
2422 San Diego Ave.	El Campo Santo Cemetery	-	P-37-021852	5S	-	Y
2427 Presidio Dr.	H.L. Hurd House	1932	P-37-021829	3S	-	Y
2436 Presidio Dr.	Lascoe Home	1927	P-37-021831	5S2	-	Y
2440 Marilouise Wy.	Hodge House	1939	P-37-021813	3	-	Y
2441 Presidio Dr.	Faden Home	1932	P-37-021832	4	-	Y
2454 Presidio Dr.	Tanner Home	1928	P-37-021833	3	-	Y
2482 San Diego Ave.	Whaley House	1856	P-37-021853	3S	-	Y
2489 San Diego Ave. (Survey)	-	1938	-	5S3	-	Y
2490 Presidio Dr.	Hansen House	1939	P-37-021834	3	-	Y
2495 Jefferson St. (Survey)	-	c.1927	-	5S3	-	Y
2501 San Diego Ave. (Survey)	-	c.1925	-	5S3	-	Y
2505 San Diego Ave.	James Parkinson House	1912	P-37-021854	5	-	Y
2515 San Diego Ave.	Gatewood House	1873	P-37-028601	5S	-	Y
2521 San Diego Ave. (Survey)	-	c.1910	-	5S3	-	Y
2525 San Diego Ave. (Survey)	-	c.1925	-	5S3	-	Y
2533 Congress St. (Survey)	-	1914	-	5S3	-	Y
2540 Congress St.	Connors House	1919	-	3S	-	Y
2540 Presidio Dr.	Schulman House; Ward House	-	P-37-021835	2S	-	Y
2540 San Diego Ave.	Immaculate Conception of Blessed Virgin Mary	1914	P-37-021856	3	-	Y
2600 Juan St.	Presidio Hills Golf Course	-	P-37-021900	3	-	Y
2610 San Diego Ave.	St. Joseph's Rectory / Old Town Convent	1908	P-37-028798	1D	-	Y
2612 San Diego Ave.	San Diego Union Office	1850	P-37-020916	1D	-	Y
2616 San Diego Ave.	Pedporena Adobe	1838	P-37-020915	1D	-	Y
2645 1st Ave.	James Gillmore House	1909	P-37-021459	3	-	-
2660 Calhoun St.	Casa De Juan Bandini	1827-1829	P-37-020912	1D	-	Y
2710 N. Harbor Dr.	Coast Guard Group Air Station San Diego; Hangar 2	-	-	3S	-	-
2724 Congress St.	Casa de Muchado y Stewart	1835	P-37-028795	1D	-	Y
2727 Presidio Dr.	Serra Museum	1929	P-37-021905	3S	-	Y
2727 Presidio Dr.	San Diego Presidio	1769	P-37-023919	1S	Y	Y
2727 Presidio Dr.	Presidio Park	1769	P-37-021901	3	-	Y
2731 San Diego Ave.	San Diego Courthouse	1847	P-37-033491	2D	-	Y
2733 San Diego Ave.	Colorado House	1851	P-37-033489	1D	-	Y
2737 San Diego Ave.	Casa de Rodriguez	LATE 1830S	P-37-033490	2D	-	Y
2740 San Diego Ave.	Plaza; San Diego Viejo; Washington Square	-	-	1D	-	Y
2745 San Diego Ave.	Casa de Machado	1835	P-37-020913	1D	-	Y

Table 4.3-1 Historic Architectural Properties Surveyed for Assessment of Effects

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
2769 San Diego Ave.	Wrightington Adobe Reconstruction	-	-	2S	-	Y
2829 Juan St. (Demo)	Caltrans District 11 Office Building	1953-1964	P-37-033808	2S2	-	Y
2836 Juan St. (Survey)	-	-	-	5S3	-	Y
2939 4th Ave.	James and Mary Wilson Home	1918	P-37-021514	3	-	-
3130 Shadowlawn St. (BERD)	Beardsley, John, and Florence Porterfield House	1933	-	1S	-	-
3190 Mission Blvd.	Giant Dipper Roller Coaster	-	-	1S	Y	-
3500 Sports Arena Blvd.	San Diego Sports Arena	1966	P-37-035181	5S3	-	Y
3612 Elliott St.	La Casa Hermosa - A.M. Southard Co. House	1927	P-37-029329	3S	-	-
3700 1st Ave.	Curlew Street Canyon	1910	P-37-021720	5	-	-
3815 1st Ave.	Melville Hermann House	1926	P-37-021475	3	-	-
3817 Pringle St.	Cook House	1926	P-37-021839	3	-	-
3821 1st Ave.	I.M. and H.B. Hone Residence	1912	P-37-021477	3	-	-
3890 Twiggs St.	Casa Larga	1934	P-37-021892	3S	-	Y
3902 Alameda Dr.	George Kirkpatrick House	1915	P-37-021727	4	-	Y
3916 Alameda Pl (Local)	Nancy Johnson and Richard Carter House	1914		5S3	-	Y
3917 Alameda Dr.	Irving Brockett House	1917	P-37-035901	4	-	Y
3919 Harney St. (Survey)	-	1923	-	5S3	-	Y
3920 Alameda Pl.	Steicher House	1920	P-37-021729	3	-	Y
3920 Conde St. (Survey)	-	1925	-	5S3	-	Y
3932 Alameda Pl.	Mack House	1918	P-37-028966	2S	-	Y
3941 Mason St. (Survey)	-	1953	-	5S3	-	Y
3944 Alameda Pl.	Drishaus House	1920	P-37-021730	3	-	Y
3950 Alameda Pl.	Robert Hamilton House	1914	P-37-021737	4	-	Y
3950 Conde St.	Adobe Chapel of the Immaculate Conception	-	P-37-028599	4S	-	Y
3959 Harney St. (Demo)	Vecclione House	1905	P-37-021781	5	-	Y
3960 Alameda Pl. (Local)	M.B. and Ida Irvin Spec House No. 1	1923	-	3S	-	Y
3966 Mason St.	Mason Street School	1865	P-37-020917	1D	-	Y
3970 Harney St. (Survey)	-	1913	-	5S3	-	Y
4000 Mason St.	Estudillo House	1827	NPS-70000143-0000; SHL-0053; P-37-028600	1D; 1S	Y	Y
4002 Wallace St.	Rose-Robinson Adobe Reconstruction	-	-	2D2	-	Y
4016 Wallace St.	Old Town San Diego	1821	NPS-71000182	1D	-	Y
4017 Harney St.	Derby-Pendleton House	1851	P-37-021782	3S	-	Y
4030 Sunset Rd (Local)	C. Arnholt Smith Spec House	1932	-	5S1	-	Y
4041 Ibis St. (BERD)	Green Manor	-	-	2S2	-	-
4044 Lark St.	-	1915	P-37-021804	3	-	-
4075 Couts St.	Charles and Marie Brenner House	1926	-	2S	-	Y
4100 Sunset Blvd.	Pillars	1915	-	5S2	-	Y
4115 Miller St.	Bingham House	1932	P-37-021815	3	-	Y
4115 Twiggs St.	Robert Patterson and Lulu Bolam House	1929	-	2S	-	Y
4136 Wallace St.	Carrillo House	1850	P-37-021900	2S	-	Y

Table 4.3-1 Historic Architectural Properties Surveyed for Assessment of Effects

Address	Historic Name	Year	SHPO Primary Number	Status Code(s)*	NHL	1/2 mile
4143 Sunset Blvd.	Thompson Home	1925	P-37-021881	5	-	Y
4145 Miller St.	Bown House	1927	P-37-021814	3S	-	Y
4145 Twiggs St. (Survey)	-	1959	-	5S3	-	Y
4146 Miller St.	Whitney House	1927	P-37-021816	3	-	Y
4151 Taylor St. (Survey)	-	1928	-	5S3	-	Y
4199 Sunset Blvd.	Pillars	1915	P-37-021916	5	-	Y
4229 Arden Wy.	Brown House	1920	P-37-021753	3	-	-
4230 Arista St.	Hoffman House	1948	P-37-021762	3	-	Y
4241 Arden Wy.	Ladd House	1920	P-37-021757	3	-	-
4244 Altamirano Wy.	Goodwin Home	1920	P-37-021743	3	-	Y
4244 Ampudia St.	Timken House	1927	P-37-021745	4	-	Y
4266 Arista St.	J. Rex Murray and Alice M. Murray Spec House	1930	P-37-032949	3; 5S2	-	Y
4275 Arguello St.	J.B. Hunt House	1935	P-37-021761	3	-	-
4277 Cosoy Wy.	Cella House; J M Schelling House	-	P-37-021768	2S	-	Y
4297 Pacific Hwy. AF Plant 19	Air Force Plant 19 Hist. Dist.	-	-	1D	-	Y
4305 Hortensia St.	Kelly Home	1926	P-37-021801	3	-	-
4479 Trias St.	Leonard Ellis House	1908	P-37-021890	3	-	-
4520 Trias St.	William Templeton Johnson House	1920	P-37-021891	3	-	-
4620 Pacific Hwy. (Survey)	-	1966	-	5S3	-	Y
4875-4883 Naples St.	-	1953	P-37-034331	3S	-	-
4252 Arista St. (Local)	Shapley Depew House	1931	-	5S1	-	Y
Naval Training Center Historic District	Naval Training Station	-	-	1D	-	-
George Marston Historic District (Survey)	-	-	-	5D3	-	Y
Northwest Mission Hills Historic District (Survey)	-	1908-1950	-	5D3	-	Y
Inspiration Heights Historic District (Survey)	-	1887, 1909-1942	-	5D3	-	Y

Legend: - = no data; BERD = Built Environment Resources Directory; Local = San Diego Register of Historical Resources; NHL = National Historic Landmark; NPS = National Park Service; SHPO = State Historic Preservation Office; Survey = Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report.

Notes: * California Historical Resource Status Codes defined at https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf. https://ohp.parks.ca.gov/pages/1069/files/tab8.pdf
NRHP, CRHR, and local eligibility are indicated by codes in this records search, and include:
NRHP-eligible: 1D, 1S, 2D, 2D2, 2S, 3, 3S
CRHR listed: 1D, 1S, 2D, 2D2, 2S
Locally eligible=codes that begin with 5
Needs further evaluation=codes that begin with 4** Records search results did not include SHPO P-Numbers for all architectural properties.

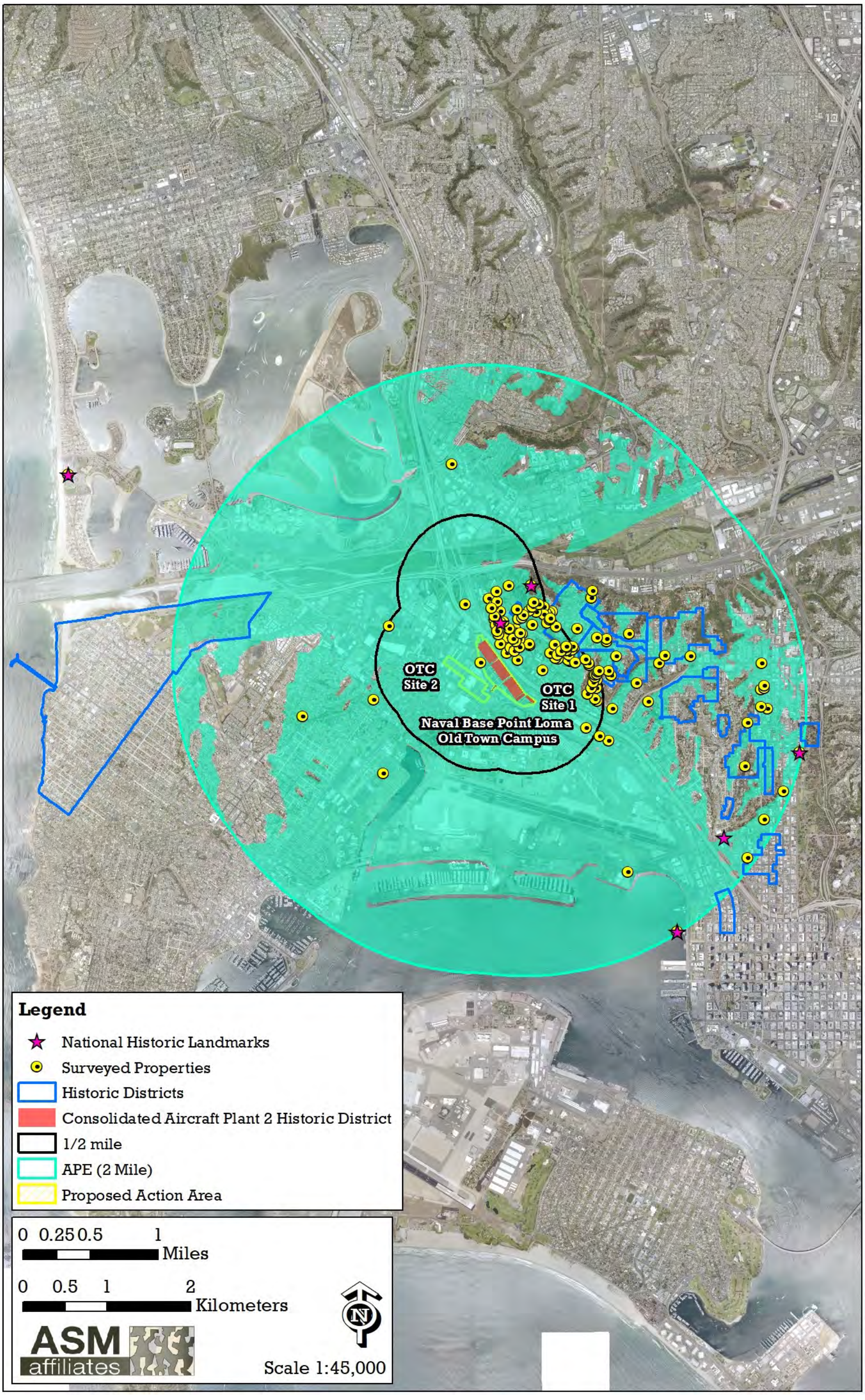

Figure 4.3-1 Historic Architectural Properties Surveyed for Assessment of Effects

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5.0 Historic Properties Affected

Analysis of effects is presented below for each alternative both within and outside of the Proposed Action Area. Within the APE, the potential adverse effects (as defined by NHPA) to occur from the Proposed Undertaking are physical destruction or damage (i), alterations not consistent with the *Standards* (ii), and changes to setting (iv), visual, atmospheric, or audible elements (v). Other potential adverse effects were not identified or further analyzed.

5.1 Alternative 1

This alternative would consist of revitalization of the OTC Site 1 to meet NAVWAR's facility requirements with Navy-funded capital improvements only. This would potentially include consolidating NAVWAR operations into two of the existing buildings on OTC Site 1; other buildings and structures would be demolished except for the pedestrian bridge (Facility 69). The existing buildings at OTC Site 2 would not be modified under this alternative, and there would be no ground disturbance in this area.

The OTC Recapitalization Plan prepared by Makers Architecture (2020) was reviewed for this analysis as it provides additional detail about the proposed alterations to the existing buildings in the Proposed Action Area under Alternative 1. Buildings 2 and 3 would be significantly altered to convert them to administrative, operations, and secure annex spaces. This would include superstructure repairs such as the addition of columns and footings as well as seismic upgrades. All exterior finishes, walls, and roof materials would be removed down to the steel structural system. New insulated metal siding, roofing and glazing systems would be added. Interior demolitions and reconfigurations would include new walls, windows, skylights, doors, flooring, ceilings, heating, ventilation, air conditioning, fire protection, electrical, fire alarm and security systems as well as abatement of existing hazardous materials. The size and volume of the interior spaces would be altered, with construction of new/additional office spaces to create a significant increase in usable square footage (Makers Architecture 2020).

5.1.1 Within Proposed Action Area

5.1.1.1 OTC Site 1

Proposed Construction

Under Alternative 1, ground disturbance would only occur at OTC Site 1. No archaeological resources have been identified within OTC Site 1. Based on geological and historic mapping data, there is low potential for buried or previously unidentified archaeological resources within OTC 1. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Construction and demolition associated with Alternative 1 would result in physical damage to the Consolidated Aircraft Plant 2 Historic District. Under Alternative 1, the contributing resources of the Consolidated Aircraft Plant 2 Historic District that would be retained include OTC Site 1 Buildings 2 and 3, and the pedestrian bridge (Facility 69). The other contributing resources would be demolished. The OTC Recapitalization Plan recommends substantial alterations to Buildings 2 and 3, including removal of all exterior finishes down to the steel structural system, new insulated metal siding, roofing, and glazing systems. The size and volume of the interior spaces would be altered, with construction of new/additional office spaces to create a substantial increase in usable square footage. As proposed, the rehabilitation of Buildings 2 and 3 do not comply with the *Standards*. Therefore, construction and demolition associated with Alternative 1 would result in physical damage to the Consolidated Aircraft

Plant 2 Historic District per criteria of adverse effect (i) with demolition of all but three contributing resources and alterations of two resources inconsistent with the *Standards* per criteria of adverse effect (ii) under 36 CFR 800.5(a)(2). As such, Alternative 1 would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District, and therefore would result in an adverse effect to historic properties under the NHPA.

Portions of the La Playa Trail (P-37-028552) are located within the Proposed Action Area. The trail is assumed to be NRHP-eligible as the property is believed to be listed on the City of San Diego Historical Resources Board register; it is unknown if the city has evaluated this resource, as no documentation was provided by the records search, and the resource is not listed on the City of San Diego Historical Resources Board register. La Playa Trail consists of several historic public streets (Midway Drive between Rosecrans Street and Barnett Avenue; Enterprise Street between Midway Drive and Sports Arena Boulevard; and Rosecrans Street between Nimitz Boulevard and Pacific Highway). Alternative 1 would not change any of the associated historic public streets and, therefore, have no effect on La Playa Trail under the NHPA.

Proposed Operations

After construction, the Navy would continue to operate OTC Site 1 as a NAVWAR facility. Proposed operations at OTC Site 1 would have no effect on historic properties, especially after the proposed renovation or demolition of the contributing resources of the Consolidated Aircraft Plant 2 Historic District renders the district ineligible. Operations would not involve ground disturbance, and therefore would have no effect on archaeological resources.

5.1.1.2 OTC Site 2

There are no known historic properties within OTC Site 2. No construction or demolition activities would occur at OTC Site 2 under Alternative 1. Continued operations would not involve ground disturbance, and therefore would have no effect on archaeological resources. No historic properties would be affected.

5.1.2 Outside Proposed Action Area

This section assesses effects within the APE excluding the Proposed Action Area (i.e., excluding OTC Site 1 and OTC Site 2). Effects are assessed following the criteria of adverse effects (see Section 4.1). Applicable criteria of adverse effects outside the Proposed Action Area are:

i. Physical destruction of or damage to all or part of the property.

iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.

v. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

5.1.2.1 Physical Damage

No construction or demolition activities would occur outside the Proposed Action Area. The MRCD is the only historic property close enough to the Proposed Action Area to consider for potential vibration effects under this alternative. However, the type of construction and demolition work proposed for Alternative 1 within the Proposed Action Area is not anticipated to result in ground vibration strong enough to cause structural damage to nearby properties, including MRCD. That conclusion is based on physical damage (or lack thereof) that typically results from standard construction methods to adjacent or nearby historic properties. Therefore, construction and demolition activities associated with

Alternative 1 would not result in physical damage to nearby historic properties outside the Proposed Action Area per criteria of adverse effect (i) under 36 CFR 800.5(a)(2).

5.1.2.2 Setting and Views

Alternative 1 would not cause adverse effects to the views and setting of historic properties outside the Proposed Action Area. Reconstructed Buildings 2 and 3 would not change in terms of mass[1], scale, height, or shadows, and the new buildings proposed for construction would not be discernably different in terms of mass, scale, height, or shadows from the buildings that would be demolished. Although San Diego Presidio, Northwest Mission Hills, and many residential properties in the Old Town and Uptown community plan areas have an expansive view that includes the Proposed Action Area, given the distance and range of visible building types, change to the mass, scale, height, or shadows would be compatible to their historic views, and would result in No Contrast per the VCR system. Therefore, the historic character of their views and their setting would not be affected. Portions of the Proposed Action Area would be more visible from MCRD. However, there would be no discernable change to the scale, mass, height, or shadows to MCRD's historic or current views and setting thus resulting in a No Contrast VCR. There are no historic properties outside the Proposed Action Area for which the views or setting would adversely change as a result of Alternative 1.

Alternative 1 would have no permanent impact on the auditory quality of historic properties within the APE. Potential changes to the current noise levels due to noise associated with construction, repair, renovation, and/or demolition would be temporary. The new building usage would include office, laboratory, and warehouse activities that would not create any substantial change to noise levels beyond existing conditions (see EIS Section 3.13.7.2).

As such, Alternative 1 would not change the character of the physical features within a property's setting nor introduce visual, atmospheric, or audible elements that diminish the integrity of any historic properties outside the Proposed Action Area per criteria of adverse effect (iv) and (iv) under 36 CFR 800.5(a)(2).

5.1.3 Summary of Effects within APE

No archaeological resources have been identified in the Proposed Action Area for Alternative 1. Therefore, the Proposed Undertaking would result in no adverse effects to known archaeological resources. Based on geological and historic mapping data, there is low potential for buried or previously unidentified archaeological resources within OTC 1. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan in consultation with SHPO, Tribes, and other interested parties.

Alternative 1 would result in physical damage to the Consolidated Aircraft Plant 2 Historic District per criteria of adverse effect (i) with demolition of all but three contributing resources and alterations of two resources inconsistent with the *Standards* per criteria of adverse effect (ii) under 36 CFR 800.5 (a)(2). As such, Alternative 1 would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District, and therefore would result in an adverse effect to historic properties under the NHPA.

Per the criteria of adverse effect as defined by 36 CFR 800.5(a)(2), Alternative 1 would not result in physical damage to historic properties within the APE that are outside of the Proposed Action Area (i), change of the character of the physical features within the property's setting (iv), nor introduce visual, auditory, or atmospheric elements that diminish the integrity of any historic properties (v). As such,

[1] Shape, form, and size of a building.

Alternative 1 would result in no adverse effects to historic properties outside the Proposed Action Area under the NHPA.

5.2 Alternatives 2-5

Alternatives 2 and 4 both consist of construction of new Navy facilities and high-density mixed-use development. Once the NAVWAR facility is built, the remaining land on OTC Site 1 and OTC Site 2 would be developed as mixed-use, with residential, hotel, office, and/or retail. Alternatives 3 and 5 contain lower density development compared to Alternatives 2 and 4. Alternatives 4 and 5 also include a transit center. For the purposes of assessing the impacts to the historic properties in the APE, all four alternatives include multiple (48 to 69) mid-rise buildings (9 to 21 stories tall), and Alternatives 4 and 5 include 35 and 21 high rise buildings (22 stories or more), respectively, and therefore would result in similar effects to historic properties.

5.2.1 Within Proposed Action Area

5.2.1.1 OTC Site 1

Proposed Construction

Under Alternatives 2-5, ground disturbance would occur at OTC Site 1. Similar to Alternative 1, no archaeological resources have been identified within OTC Site 1. Based on geological and historic mapping data, there is low potential for buried or previously unidentified archaeological resources within OTC 1. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Proposed construction activities under Alternatives 2-5 would result in the demolition of all contributing resources of the Consolidated Aircraft Plant 2 Historic District. Alternatives 2-5 would therefore result in physical damage to the Consolidated Aircraft Plant 2 Historic District per criteria of adverse effect (i) under 36 CFR 800.5(a)(2). As such, Alternatives 2-5 would result in loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District, and result in an adverse effect to historic properties under the NHPA.

Similar to Alternative 1, Alternatives 2-5 would have no effect on La Playa Trail (P-37-028552) located within the Proposed Action Area.

Proposed Operations

After construction, the Proposed Action Area would contain a NAVWAR facility along with a combination of mixed use residential, office, hotel, retail space, and other uses. Proposed operations at OTC Site 1 would have no effect on historic properties, especially after the proposed demolition of the contributing resources of the Consolidated Aircraft Plant 2 Historic District renders the district ineligible. Operations would not involve ground disturbance, and therefore would have no effect on archaeological resources.

5.2.1.2 OTC Site 2

Proposed Construction

Under Alternatives 2-5, ground disturbance associated with proposed construction would occur at OTC Site 2. There are no known historic properties within OTC Site 2. Based on geological and historic mapping data, there is low potential for buried or previously unidentified archaeological resources within OTC 2. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an

archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Proposed Operations

No historic properties would be affected by the proposed operations at OTC Site 2. There are no known historic properties within OTC Site 2. Operations would not involve ground disturbance, and therefore would have no effect on archaeological resources.

5.2.2 Outside Proposed Action Area

This section assesses effects within the APE excluding the Proposed Action Area (i.e., excluding OTC Site 1 and OTC Site 2).

5.2.2.1 Physical Damage

No construction or demolition activities would occur outside the Proposed Action Area. Three historic properties are located nearby the Proposed Action Area: MCRD (300 feet), Casa Larga, and 2495 Jefferson Street (450 feet). However, the type of construction and demolition work, including foundation drilling, proposed for Alternatives 2-5 within the Proposed Action Area is not anticipated to result in ground vibration strong enough to cause structural damage to nearby properties. Planned construction or demolition activities with the potential to create adverse effects from vibration would occur only within the Proposed Action Area. Therefore, Alternatives 2-5 would not result in physical damage to nearby historic properties outside the Proposed Action Area per criteria of adverse effect (i) under 36 CFR 800.5(a)(2).

5.2.2.2 Setting and Views

Alternative 2-5 would have no permanent impact on the auditory quality of historic properties within the APE. Potential changes to the current noise levels due to noise associated with construction, repair, renovation, and/or demolition would be temporary. The new building usage would include office, laboratory, and warehouse activities that would not create any substantial change to noise levels beyond existing conditions (see EIS Section 3.13.7.2). As such, Alternatives 2 through 5 would not introduce atmospheric or audible elements that diminish the integrity of any historic properties per criteria of adverse effect (v) under 36 CFR 800.5(a)(2).

Alternatives 2-5 have the potential to cause adverse effects to the views and setting of historic properties outside the Proposed Action Area. Setting is defined as “the physical environment of a historic property,” including its relationship to surrounding features and open space (NPS, 1991, p. 45). Setting includes not only the boundaries of the property but also its surroundings (NPS, 1991, p. 45). Under NHPA Section 36 CFR 800.5(a)(2), a project would result in an adverse effect if it changes physical features within a property’s setting, thereby diminishing that aspect of a property’s integrity. According to the SOI’s *Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building* (*Guidelines*), it is not recommended to introduce new construction into a setting that is visually incompatible with the historic property (NPS, 2017, p. 146). Furthermore, “new construction should be appropriately scaled and located far enough away from the historic building to maintain its character and that of the site and setting” (NPS, 2017, p. 26). Integrity of setting can be adversely affected by adjacent new construction regardless of whether views are a character-defining feature of that property. Alternatives 2-5 include multiple towers that would be visible at a height greater than 9 stories, with some towers more than 22 stories. To determine whether Alternatives 2-5 would be visually incompatible with the views and setting of historic properties in the APE, ASM applied the assessment of effects methodology outlined in Section 4. ASM conducted a reconnaissance survey of

145 historic properties, which included all 110 properties within ½ mile of the Proposed Action Area plus 35 properties (5 percent sample) between ½ mile and 2 miles from the Proposed Action Area. ASM considered whether the alternatives would be within the foreground, middleground, or background views. Properties for which Alternatives 2-5 would be within the background view would not result in a Moderate or Strong Contrast VCR and therefore would not result in an adverse visual effect. ASM considered the compatibility of Alternatives 2-5 with the current and historic views. Compatibility was determined by considering elements of Alternatives 2-5, such as mass, scale and proportion, height, shadows, and color.

During the survey of the sample of the properties between ½ mile and 2 miles from the Proposed Action Area, it was determined that Alternatives 2-5 would be within the middleground view for all 35 properties and the change in views would be a weak contrast VCR, and therefore result in no adverse visual effect. The survey results also determined that the Proposed Action Area would be within the foreground view of 77 of the 110 historic properties within the ½-mile radius (Table 5.2-1), and thus have the potential for an adverse effect to views and setting. The other 33 properties would have no visibility of the Proposed Action Area; therefore, Alternatives 2-5 would not have the potential to adversely affect views or setting for those 33 properties.

Further analysis was conducted to determine which of those 77 properties have views toward the Proposed Action Area that are ***character-defining features***. If prior documentation (prior survey forms, nominations, or survey reports) for those properties did not conclusively identify whether views are a ***character-defining feature,*** ASM made a professional judgement based on the criteria for eligibility for each resource as to whether views should be considered a character-defining feature (see column six of Table 5.2-1). Thirteen properties were identified that have views as a character-defining feature. Of the 13 properties, one had a Weak Contrast VCR and therefore would not be adversely affected.

Based on additional analysis of the 77 properties where the alternatives of the Proposed Action Area would be within the foreground view; 19 properties were identified that would be adversely affected by Alternatives 2-5 (see final column of Table 5.2-1). This includes the 12 properties with views as a character-defining feature that also had a Moderate or Strong Contrast VCR. The 19 properties would be adversely affected because Alternatives 2-5 would introduce new construction into the setting that is visually incompatible with the historic properties, would not be appropriately scaled, and would not be located far enough away from the historic properties to maintain the character of their setting. The setting of those 19 properties historically and currently has no high-rise structures and open views with no contemporary intrusion and the setting would be impacted by the new construction (Figures 5.2-1 and 5.2-2). The mass, scale, and height of the new construction, specifically the new towers, would be an incompatible change to the setting of these 19 properties (Figure 5.2-3). For all 19 properties, Alternatives 2-5 would create Strong or Moderate Contrast VCR (see Table 5.2-1, fifth column). Additional details for these properties are provided below.

Thirteen of the 19 properties are located in Old Town State Historic Park. Views from Old Town State Historic Park toward the Proposed Action Area, including the central plaza, are among the most impacted (see Figure 5.2-2). The porch of the current Cosmopolitan Hotel (Casa de Bandini) is slightly elevated, allowing for a broader view of the Proposed Action Area incompatible with the historic view (Figures 5.2-6 and 5.2-7). Other buildings in the Old Town State Historic Park facing the Proposed Action Area include the San Diego Union Office, Pedporena Adobe, and Casa de Estudillo (NHL) (Figure 5.2-8). The Casa de Machado-Stewart is located closer to the Proposed Action Area with a primary façade facing directly toward the proposed new construction (Figure 5.2-9). Similarly, the Mason Street School is located west of the plaza and closer to the Proposed Action Area (Figure 5.2-10). Properties in Old Town State Historic Park for which the primary facade does not face the Proposed Action Area

(resources located on the west side of San Diego Avenue) would not have an effect to their views, but mass, scale, and height of the new construction would be an incompatible change to their setting, specifically to San Diego Courthouse, Colorado House, Casa de Rodriguez, and Casa de Machado.

Outside of the Old Town State Historic Park, several properties are located in such close proximity to the Proposed Action Area that although their primary facades do not face the Proposed Action Area, the mass, scale, and height of the new construction would be an incompatible change to their setting. Those properties include MCRD, 2495 Jefferson St., and Casa Larga (Figure 5.2-12). Of note, six properties are close enough to the Proposed Action Area for the views to be classified as Moderate or Strong however views are not among their character-defining features. Unlike MCRD, 2495 Jefferson St., and Casa Larga, those six properties are not in such close proximity to the Proposed Action Area that the new construction would be considered an incompatible change to their setting. Those properties are Temple Beth Israel, Whaley House, 2495 Jefferson St., Immaculate Conception of Blessed Virgin Mary, 3919 Harney St., and Adobe Chapel of the Immaculate Conception. The rear façade of the William Mason Fortesque Residence was designed towards the views of the San Diego Bay, as is noted in its nomination for local designation. The new construction under Alternatives 2-5 would be visible from San Diego Presidio (NHL) where the view is a character-defining feature (Figure 5.2-4). The proposed new towers would constitute a partial interruption in the historic views, and the mass, scale, and height would be visually incompatible with the foreground view from all of these properties and result in a Strong Contrast VCR (Figure 5.2-5).

The APE also includes many residential neighborhoods, 17 of which have been identified by the city as eligible historic districts. Three districts (Northwest Mission Hills, Inspiration Heights, and George Marston) are located within ½ mile of the Proposed Action Area. Northwest Mission Hills and Inspiration Heights include “viewshed” as a “resource” for both districts (City of San Diego, 2016, pp. D-54 and D-112). The Northwest Mission Hills Historic District is due north of the Proposed Action Area, and Alternatives 2-5 would disrupt the character-defining viewshed from the district (see Figures 3.6-8 and 3.6-9). Alternatives 2-5 would result in an incompatible change to scale, massing, and height and create a Strong Contrast VCR. Inspiration Heights Historic District is located ½ mile east of the Proposed Action Area. An urban canyon is the open space focal point for the district, and the significant viewsheds are towards the canyon, not in the direction of the Proposed Action Area and therefore they would not be interrupted by Alternatives 2-5 (City of San Diego, 2016, pp. D-54). The George Marston Historic District does not include viewshed as a significant resource. The remaining 15 historic districts, including the Mission Hills Historic District, are located in the sample survey of the ½-mile to 2-mile radius. The survey results for the ½-mile to 2-mile radius concluded there would be no substantial change to the mass, scale, height, shadows, and color to their views and Weak Contrast VCRs for those 15 historic districts.

Based on the above analysis, Alternatives 2-5 would change the character of physical features within the settings that contribute to historic significance and introduce visual elements that diminish the integrity of 19 historic properties per criteria of adverse effect (iv) and (v) under 36 CFR 800.5(a)(2) (see Table 5.2-1, final column).

Table 5.2-1 Historic Properties within the APE with Effects to Views and Setting

Address	Historic Name	Year	SHPO Status Code(s)*	VCR	CDF Views	Adverse Effect
Marine Corps Recruit Depot	Marine Corps Recruit Depot		1D	strong	N	Y
0 Balboa Park	Balboa Park El Prado	-	1D	weak	N	N
0 Heritage Park Row	McConaughy House	1887	3S	weak	N	N
0 Heritage Park Row	Temple Beth Israel	1889	3S	moderate	N	N

Address	Historic Name	Year	SHPO Status Code(s)*	VCR	CDF Views	Adverse Effect
0 Heritage Park Row	Bushyhead House	1887	3S	weak	N	N
0 Heritage Park Row	Burton House	1893	3S	weak	N	N
0 Heritage Park Row	Christian House	1889	3S	weak	N	N
0 Heritage Park Row	Senlis Cottage, Hippen Cottage	1893	3S	weak	N	N
0 Heritage Park Row	Sherman Gilbert House	1887	3S	weak	N	N
1306 N. Harbor Dr.	*Star of India*	-	1D	weak	N	N
1306 N. Harbor Dr.	*Berkeley* Ferry	-	1D	weak	N	N
1674 Torrance St.	John Holland Residence	1913	3	weak	N	N
1747/1751 Hancock St.	Mission Brewing Company/ American Agar Co.	1912-13	1S	weak	N	N
1895 Hancock St.	Canada Dry Building	1946	5S2	weak	N	N
1911 Titus (BERD)	Wiseman House	1926	3S	weak	N	N
1929 Titus St.	Holland House	1926	3S	weak	N	N
1977 Titus St.	James and Florence Riach House	1927	3S; 4X	weak	N	N
1981 Linwood St.	Read Home	-	3S	weak	N	N
2206 Juan St. (Local)	Gordan and Garnet Thompson House	1930	5S2	weak	N	N
2231 La Callecita	Cunningham House	1948	3S	weak	N	N
2243 Guy St.	Hervey K. Graham and Alva M. Graham	1936	2S	weak	N	N
2251 San Juan Rd.	Dr. and Mrs. Franklin G. Lindemulder Residence	1935	2S	weak	N	N
2266 San Diego Ave. (Survey)	-	1956	5S3	weak	N	N
2293 San Juan Rd.	William Mason Fortesque Residence	1955	5S2	moderate	Y	Y
2400 Presidio Dr.	Alexander and Nancy Highland House	1934	4S	weak	N	N
2414 San Diego Av. (Survey)	-	1938	5S3	weak	N	N
2427 Presidio Dr.	H.L. Hurd House	1932	3S	weak	N	N
2440 Marilouise Wy.	Hodge House	1939	3	weak	N	N
2441 Presidio Dr.	Faden Home	1932	4	weak	N	N
2482 San Diego Ave.	Whaley House	1856	3S	moderate	N	N
2490 Presidio Dr.	Hansen House	1939	3	weak	N	N
2495 Jefferson St. (Survey)	-	c.1927	5S3	strong	N	N
2540 Congress St.	Connors House	1919	3S	weak	N	N
2540 San Diego Ave.	Immaculate Conception of Blessed Virgin Mary	1914	3	moderate	N	N
2600 Juan St.	Presidio Hills Golf Course	-	3	weak	N	N
2610 San Diego Ave.	St. Joseph's Rectory/ Old Town Convent	1908	1D	weak	N	N
2612 San Diego Ave.	San Diego Union Office	1850	1D	strong	Y	Y
2616 San Diego Ave.	Pedporena Adobe	1838	1D	moderate	Y	Y
2660 Calhoun St.	Casa de Juan Bandini	1827-1829	1D	strong	Y	Y
2710 N. Harbor Dr.	Coast Guard Group Air Station San Diego; Hangar 2	-	3S	weak	N	N
2724 Congress St.	Casa de Machado y Stewart	1835	1D	strong	Y	Y
2727 Presidio Dr.	Serra Museum	1929	3S	weak	N	N
2727 Presidio Dr.	San Diego Presidio (NHL)	1769	1S	strong	Y	Y

Address	Historic Name	Year	SHPO Status Code(s)*	VCR	CDF Views	Adverse Effect
2731 San Diego Ave (Old Town SHP)	San Diego Courthouse	1847	2D	strong	N	Y
2733 San Diego Ave (Old Town SHP)	Colorado House	1851	1D	strong	N	Y
2737 San Diego Ave (Old Town SHP)	Casa de Rodriguez	1830s	2D	strong	N	Y
2740 San Diego Ave.	Plaza; San Diego Viejo; Washington Square	-	1D	strong	Y	Y
2741 San Diego Ave (Old Town SHP)	Casa de Machado	1835	1D	strong	N	Y
2836 Juan St. (Survey)	-	-	5S3	weak	N	N
2495 Jefferson St. (Survey)	-	c.1927	5S3	strong	N	Y
3500 Sports Arena Blvd.	San Diego Sports Arena	1966	5S3	weak	N	N
3890 Twiggs St.	Casa Larga	1934	3S	strong	N	Y
3919 Harney St. (Survey)	-	1923	5S3	moderate	N	N
3920 Conde St. (Survey)	-	1925	5S3	weak	N	N
3941 Mason St. (Survey)	-	1953	5S3	weak	N	N
3950 Alameda Pl.	Robert Hamilton House	1914	4	weak	N	N
3950 Conde St.	Adobe Chapel of the Immaculate Conception	-	4S	moderate	N	N
3966 Mason St.	Mason Street School	1865	1D	strong	Y	Y
3970 Harney St. (Survey)	-	1913	5S3	weak	N	N
4000 Mason St.	Casa de Estudillo (NHL)	1827	1D; 1S	strong	Y	Y
4002 Wallace St.	Rose-Robinson Adobe Reconstruction	-	2D2	strong	Y	Y
4016 Wallace St. (Old Town SHP)	Old Town San Diego State Historic Park	1821	1D	strong	Y	Y
4100 Sunset Blvd.	Pillars	1915	5S2	weak	N	N
4136 Wallace St.	Carrillo House	1850	2S	weak	N	N
4143 Sunset Blvd.	Thompson Home	1925	5	weak	N	N
4145 Miller St.	Bown House	1927	3S	weak	N	N
4145 Twiggs St. (Survey)	-	1959	5S3	weak	N	N
4151 Taylor St. (Survey)	-	1928	5S3	weak	N	N
4199 Sunset Blvd.	Pillars	1915	5	weak	N	N
4230 Arista St.	Hoffman House	1948	3	weak	N	N
4252 Arista St. (Local)	Shapley Depew House	1931	5S1	weak	N	N
4266 Arista St	J. Rex Murray and Alice M. Murray Spec House	1930	3; 5S2	weak	N	N
4620 Pacific Hwy. (Survey)	-	1966	5S3	weak	N	N
4875-4883 Naples St.	-	1953	3S	weak	N	N
George Marston Hist Dist. (Survey)	-	-	5D3	weak	N	N
Northwest Mission Hills Historic District (Survey)	-	1908-1950	5D3	strong	Y	Y

Address	Historic Name	Year	SHPO Status Code(s)*	VCR	CDF Views	Adverse Effect
Inspiration Heights Historic District (Survey)	-	1887, 1909-1942	5D3	weak	Y	N

Legend: - = no data; BERD = Built Environment Resources Directory; CDF = Character-Defining Feature; Local = San Diego Register of Historical Resources; N = No; NHL = National Historic Landmark; SHPO = State Historic Preservation Office; Survey = Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report; VCR = View Contrast Rating; Y = Yes.

Note: * California Historical Resource Status Codes, defined at https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf.

Figure 5.2-1 View from Robinson Rose Adobe toward Proposed Action Area, Looking Southwest

Figure 5.2-2 KOP #6 (OT-1) from Old Town for Alternative 4. View toward the Southwest

Figure 5.2-3 View from the Central Plaza of the Old Town State Park looking toward Proposed Action Area

Figure 5.2-4 View from Bench in San Diego Presidio/Presidio Park looking Southwest toward the Proposed Action Area

Figure 5.2-5 KOP #8 from San Diego Presidio/Presidio Park looking Southwest towards Alternative 4

Figure 5.2-6 Casa de Bandini at 2660 Calhoun Avenue, looking Northeast

Figure 5.2-7 View from Casa de Bandini looking South toward the Proposed Action Area. Red arrow indicates approximate center point of the Proposed Action Area.

Figure 5.2-8 View from Casa de Estudillo (NHL) looking Southwest toward the Proposed Action Area. Red arrow indicates approximate center point of the Proposed Action Area.

Figure 5.2-9 View from Casa de Machado-Steward looking Southwest toward the Proposed Action Area. Red arrow indicates approximate center point of the Proposed Action Area.

Figure 5.2-10 View from Mason Street School looking Southwest toward the Proposed Action Area. Red arrow indicates approximate center point of the Proposed Action Area.

Figure 5.2-11 View from Casa Larga, 3890 Twiggs Street, looking Southwest toward the Proposed Action Area. Red arrow indicates approximate center point of the Proposed Action Area.

5.2.3 Alternatives 2-5 Summary of Effects within APE

No archaeological resources have been identified in the Proposed Action Area for Alternatives 2-5. Based on geological and historic mapping data, there is low potential for buried or previously unidentified archaeological resources within OTC Site 1 and OTC Site 2. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Alternatives 2-5 would result in physical damage to the Consolidated Aircraft Plant 2 Historic District per criteria of adverse effect (i) with demolition of all contributing resources, which is inconsistent with the *Standards* per criteria of adverse effect (ii) under 36 CFR 800.5 (a)(2). As such, Alternatives 2-5 would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District, and therefore would result in an adverse effect to historic properties under the NHPA.

Per the criteria of adverse effect as defined by 36 CFR 800.5(a)(2), Alternatives 2-5 would change the character of the physical features within the property's setting (iv) and introduce visual elements that diminish the integrity of significant features (v) to 19 properties within the APE. Those historic properties would have a significant change to scale, massing, height, and Strong or Moderate Contrast VCR within the views from those historic properties. Implementation of Alternatives 2-=5 would alter one of the characteristics of those historic properties that qualify the property for inclusion in the NRHP and therefore would result in an adverse effect to historic properties.

As such, Alternatives 2-5 would result in adverse effects to 20 historic properties (architectural) within the APE under the NHPA (see Table 5.2-1).

5.3 Finding of Effect

5.3.1 Alternative 1

No archaeological resources have been identified in the Proposed Action Area for Alternative 1. Therefore, the Proposed Undertaking would result in no adverse effects to known archaeological resources. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Construction and demolition associated with Alternative 1 would result in physical damage to the Consolidated Aircraft Plant 2 Historic District per criteria of adverse effect (i) with demolition of all but three contributing resources and alterations of two of the remaining resources inconsistent with the *Standards* per criteria of adverse effect (ii) under 36 CFR 800.5(a)(2). Alternative 1 would therefore result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District.

Per the criteria of adverse effect as defined by 36 CFR 800.5(a)(2), Alternative 1 would not result in physical damage to historic properties within the APE that are outside the Proposed Action Area (i), change of the character of the physical features within the property's setting (iv), nor introduce visual, auditory, or atmospheric elements that diminish the integrity of any historic properties (v).

As such, implementation of Alternative 1 would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District and would result in an adverse effect to historic properties under the NHPA.

5.3.2 Alternatives 2-5

No archaeological resources have been identified in the Proposed Action Area for Alternatives 2-5. Therefore, the Proposed Undertaking would result in no adverse effects to known archaeological resources. To reduce the risk of damage to unknown archaeological sites, the Navy will develop an archaeological monitoring plan as a management measure in consultation with SHPO, Tribes, and other interested parties.

Alternatives 2-5 Construction of Alternatives 2-5 would result in the demolition of all contributing resources of the Consolidated Aircraft Plant 2 Historic District. Alternatives 2-5 would therefore result in physical damage to the Consolidated Aircraft Plant 2 Historic District per NHPA criteria of adverse effect (i) and would result in the loss of NRHP eligibility for the Consolidated Aircraft Plant 2 Historic District.

Per the criteria of adverse effect as defined by 36 CFR 800.5(a)(2), Alternatives 2 through 5 would also change the character of the physical features within the property's setting (iv) to 19 properties within the APE and introduce visual elements that diminish the integrity of significant features (v). Those historic properties would have a significant change to scale, massing, height, and contrast within the views from those historic properties. As such, implementation of Alternatives 2-5 would alter one of the characteristics of those historic properties that qualify the property for inclusion in the NRHP, including two properties that are also designated NHLs: Casa de Estudillo and San Diego Presidio.

As such, Alternatives 2-5 would result in adverse effects to 20 historic properties (architectural) within the APE under the NHPA (Tables 5.3-1 and Figure 5.3-1).

Table 5.3-1 Historic Properties with Adverse Effects

Address	Historic Name	Year	SHPO Status Code*	Adverse Effect: Demolition	Adverse Effect: Views and Setting
4297 Pacific Highway	Consolidated Aircraft Plant 2 Historic District	1941-1942	3D	Y	-
Marine Corps Recruit Depot	Marine Corps Recruit Depot		1D		Y
4016 Wallace St (Old Town SHP)	Old Town San Diego State Historic Park	1821	1D	-	Y
2612 San Diego Ave (Old Town SHP)	San Diego Union Office	1850	1D	-	Y
2616 San Diego Ave (Old Town SHP)	Pedporena Adobe	1838	1D	-	Y
2724 Congress St (Old Town SHP)	Casa de Machado-Stewart	1835	1D	-	Y
2731 San Diego Ave (Old Town SHP)	San Diego Courthouse	1847	2D	-	Y
2733 San Diego Ave (Old Town SHP)	Colorado House	1851	1D	-	Y
2737 San Diego Ave (Old Town SHP)	Casa de Rodriguez	1830s	2D	-	Y
2741 San Diego Ave (Old Town SHP)	Casa de Machado	1835	1D	-	Y
3966 Mason St (Old Town SHP)	Mason Street School	1865	1D	-	Y
4000 Mason St (Old Town SHP)	Casa de Estudillo (NHL)	1827	1D	-	Y
4000 Wallace St. (Old Town SHP)	Rose-Robinson Adobe Reconstruction	-	2D2	-	Y
2660 Calhoun St. (Old Town SHP)	Casa de Juan Bandini	1827-1829	1D	-	Y
2740 San Diego Ave. (Old Town SHP)	Plaza; San Diego Viejo; Washington Square	-	1D	-	Y
3890 Twiggs St	Casa Larga	1834	3S	-	Y
2495 Jefferson St. (Survey)	2495 Jefferson St.	c.1927	5S3	-	Y
2727 Presidio Dr.	San Diego Presidio (NHL)	1769	1S	-	Y
2293 San Juan Rd.	William Mason Fortesque Residence	1936	5S2	-	Y
Northwest Mission Hills Historic District (Survey)	Northwest Mission Hills Historic District	1908-1950	5D3	-	Y

Legend: - = no data; N = no; NHL = National Historic Landmark; SHP = State Historic Park; SHPO = State Historic Preservation Office; Survey = Community Plan Area survey for either Midway-Pacific Highway, Old Town, or Uptown t; Y = yes.

Note: * California Historical Resource Status Codes, defined at https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf.

Figure 5.3-1 Historic Properties with Adverse Effects

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6.0 Personnel

Shannon Davis, ASM Director of Architectural History (M.A., Historic Preservation, George Washington University, Washington, D.C.), meets the SOI's *Professional Qualification Standards* (36 CFR 61) for Architectural Historian and Historian and served as Project Manager. Ms. Davis directed the identification of historic properties in the APE, developed the methodology, participated in the assessment of effects and mitigation recommendations, and reviewed all sections of the report.

Mark S. Becker, ASM Director of Archaeology, Carlsbad Office (Ph.D., Anthropology, University of Colorado, Boulder), meets the SOI's *Professional Qualification Standards* (36 CFR 61) for Archaeology and served as Senior Archaeologist. Dr. Becker directed the archaeological documentation of the OTC resources and authored the geoarchaeological section of the report.

Marilyn Novell, ASM Senior Architectural Historian (M.S., History of Architecture and Urbanism, University of California, Berkeley), meets the SOI's *Professional Qualification Standards* for Architectural Historian and Historian and served as Senior Architectural Historian. Ms. Novell participated in the identification of historic properties in the APE, in the assessment of effects, and preparation of the report.

Laura Taylor Kung, ASM Senior Architectural Historian (M.A., Historic Preservation Planning, Cornell University), meets the SOI's *Professional Qualification Standards* for Architectural Historian and served as Architectural Historian. Ms. Kung participated in the identification of historic properties in the APE, in the assessment of effects, and preparation of the report.

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Attachments

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Attachment A

South Coastal Information Center Records Search Results

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South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
scic@mail.sdsu.edu

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM
CLIENT IN-HOUSE RECORDS SEARCH

Company: ASM Affiliates

Company Representative: Nick Doose

Date: 6/29/2020

Project Identification: NAVWAR Old Town Campus Visual APE #33490

Search Radius: 2 Miles

Historical Resources: SELF

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: SELF

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: SELF

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: SELF

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Copies: 2116 +988 Excel Lines

Hours: 2

This is not an invoice. Please pay from the monthly billing statement

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Attachment B

Summary of South Coastal Information Center Resources

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Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
NPS-70000143; SHI-0053; P-37-028600		4000 Mason St	Estudillo House			HP2. Single Family Property	1D/1S	
NPS-71000182-9999		4016 Wallace St	Old Town San Diego			HP39. Other	1	
P-3736	CA-SDI36				SD-00304, SD-00320, SD-00733, SD-03461, SD-09324, SD-14750, SD-16448			
P-3737	CA-SDI37			(N.C. Nelson)	SD-00304, SD-00320, SD-00733, SD-03461, SD-09324, SD-14750	AH16. Other		
P-3738	CA-SDI38				SD-00304, SD-00320, SD-00546, SD-04769, SD-05495, SD-06015, SD-08458, SD-14791			
P-3741	CA-SDI41				SD-00304, SD-00320, SD-00546, SD-02699, SD-03461, SD-04293, SD-04338, SD-04350, SD-04677, SD-05674, SD-06015, SD-13755, SD-14791, SD-15064			
P-3742	CA-SDI42				SD-00304, SD-00320, SD-03461, SD-04712, SD-08447, SD-08448			
P-3743	CA-SDI43				SD-00304, SD-00320, SD-00607, SD-03461, SD-04712, SD-07543, SD-13883			
P-3744	CA-SDI44				SD-03461, SD-04712, SD-13883			
P-3752	CA-SDI52				SD-00304, SD-00320, SD-03461, SD-08959, SD-12867			
P-3753	CA-SDI53				SD-00304, SD-00320, SD-00733, SD-03461, SD-09324, SD-13438, SD-14676, SD-14750, SD-16448			
P-3754	CA-SDI54				SD-00304, SD-00320, SD-00733, SD-03461, SD-09324, SD-14676, SD-14750			
P-37-004611	CA-SDI-004611				SD-00304, SD-00320, SD-17021			
P-37-004675	CA-SDI-004675				SD-00304, SD-00320, SD-04350, SD-08175, SD-09625, SD-17397			
P-37-009292	CA-SDI-009292				SD-14791			
P-37-010530	CA-SDI-010530				SD-02410, SD-04347, SD-05658, SD-07543, SD-10531, SD-11667, SD-16448			
P-37-011021	CA-SDI-011021				SD-04507, SD-05648, SD-07620, SD-13962, SD-17392			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-011722	CA-SDI-011722				SD-02628, SD-03556, SD-04338, SD-04339, SD-04350, SD-05238, SD-05674, SD-17397			
P-37-011766	CA-SDI-011766				SD-02628, SD-03556, SD-04338, SD-04339, SD-04350, SD-05238, SD-05674, SD-17397			
P-37-011767	CA-SDI-011767				SD-02628, SD-02985, SD-03429, SD-03556, SD-04339, SD-04350, SD-04868, SD-05238, SD-05674, SD-05708, SD-06159, SD-07471, SD-08458, SD-17314, SD-17397			
P-37-011824	CA-SDI-011824				SD-04554, SD-14791			
P-37-012126	CA-SDI-012126				SD-02983, SD-02985, SD-03000, SD-03556, SD-04868, SD-05238, SD-05709, SD-08458, SD-17397			
P-37-012127	CA-SDI-012127				SD-03556, SD-04350, SD-04868, SD-05238, SD-05708, SD-06159, SD-07471, SD-17397			
P-37-012128	CA-SDI-012128				SD-02985, SD-03556, SD-04350, SD-05238, SD-17397			
P-37-012129	CA-SDI-012129				SD-02985, SD-03556, SD-04350, SD-05238, SD-17397			
P-37-012131	CA-SDI-012131							
P-37-012132	CA-SDI-012132				SD-02985, SD-03556, SD-05238, SD-17397			
P-37-012220	CA-SDI-012220				SD-02985, SD-03556, SD-04350, SD-04868, SD-05238, SD-05708, SD-06159, SD-07471, SD-17397			
P-37-012453	CA-SDI-012453				SD-02699, SD-03461, SD-06629, SD-07807, SD-15064			
P-37-012469	CA-SDI-012469				SD-03470			
P-37-012862	CA-SDI-012862				SD-02985, SD-03556, SD-05238, SD-17397			
P-37-013329	CA-SDI-013329				SD-02788, SD-10928			
P-37-013663	CA-SDI-013663				SD-14791, SD-14815, SD-17021			
P-37-013664	CA-SDI-013664				SD-14791, SD-17021			
P-37-013665	CA-SDI-013665				SD-03670, SD-12977, SD-14791, SD-17021, SD-17107			
P-37-013666	CA-SDI-013666				SD-14791, SD-17107			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-013667	CA-SDI-013667				SD-14791			
P-37-013747	CA-SDI-013761			1994 (Mooney & Associates)	SD-03461			
P-37-014068	CA-SDI-014018		NTC-S-1	1995 (Ogden Environmental)				
P-37-014230	CA-SDI-014062		NTCH-S-1	(KEA Environmental)				
P-37-014247	CA-SDI-014074		Juan/Taylor sts Dump	(Walter Enterprises)	SD-03246, SD-14791, SD-14815, SD-17021			
P-37-014380	CA-SDI-014152		The Heron Site	(ASM Affiliates, Inc.)	SD-03385, SD-08175, SD-08458, SD-09625			
P-37-014688	CA-SDI-014291		Silvas Garden Parcel, Meserve Cast Stone Company Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791			
P-37-014689	CA-SDI-014292		Aguilar/Serrano Adobe Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791			
P-37-014690	CA-SDI-014293		Blocks 407-427 Late Prehistoric Deposits	(California Dept. of Parks & Recreation)	SD-14791			
P-37-014691	CA-SDI-014294		Osuna Adobe Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791			
P-37-014692	CA-SDI-014295		Machado-Smith House Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791, SD-17182			
P-37-014693	CA-SDI-014296		Snook/Clayton Adobe Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791			
P-37-014694	CA-SDI-014297		Light-Freeman Adobe Site	(California Dept. of Parks & Recreation)	SD-04554, SD-14791			
P-37-014695	CA-SDI-014298				SD-04554, SD-14791			
P-37-014958								
P-37-014963					SD-17397			
P-37-015531					SD-16448			
P-37-015532								
P-37-015533								
P-37-015534								
P-37-015535								
P-37-015536								
P-37-015537								
P-37-015538								

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-015539								
P-37-015540								
P-37-015541								
P-37-015542								
P-37-015543								
P-37-015544								
P-37-015545								
P-37-015546								
P-37-015547								
P-37-015548					SD-17581			
P-37-015549								
P-37-015550								
P-37-015551					SD-13458			
P-37-015552								
P-37-015553								
P-37-015554								
P-37-015556	CA-SDI-014307	Old Town Congress & Harney		(Gallegos & Associates)	SD-04822, SD-05292			
P-37-015809	CA-SDI-014427			1997 (Recon)				
P-37-015821	CA-SDI-013712			1997 (Affinis)	SD-04542, SD-13035			
P-37-015938	CA-SDI-014527			1997 (Gallegos)	SD-06185, SD-08067			
P-37-016279			Cabrillo Freeway	1998 (Caltrans)	SD-13321, SD-14549, SD-15281			
P-37-016537	CA-SDI-014951		NTC-227	1998 (Mooney & Associates)	SD-03737			
P-37-016538	CA-SDI-014952		SDm-W-291	1998 (Brian F. Smith & Associates)	SD-08016			
P-37-017157		3733 Robinson Mews	Sunnyslope Lodge	1999 (Historic Site Board)			1S	
P-37-018279		3225 2nd Ave	Wood/Forney Residence	1999 (Historic Site Board)				
P-37-018393			"Falcon St" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018394			"Rothgeb-Over" Sidewalk Stamp	2000 (Scott A. Moomjian)				

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-018395			"Guatelli" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018396			"Wearn & Oleson" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018397			"I Bower" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018398			"J.F. Over" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018399			Falcon St Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018400			"Oewinders" Or "Dewinders" Sidewalk Stamp	2000 (Scott A. Moomjian)				
P-37-018408		4077 5th Ave	Mercy Hospital Historic Complex	2000 (HSB 397)				
P-37-018409		430 W Spruce St	Ralph D Lacoe House	2000 (HSB 399)		HP2. Single Family Property	3S	
P-37-018867		906 W Lewis St		2000 (Marie Burke Lia)				
P-37-018890	CA-SDI-015737		Group 671 - Temp 1	2000 (Brian F. Smith & Assoc.)	SD-07696			
P-37-018891	CA-SDI-015738		Group 671 - Temp 2	2000 (Brian F. Smith & Assoc.)	SD-07696			
P-37-018949		2255 Pine St		2000 (Archaeos)				
P-37-018950		1847 Lyndon Road	Residence	2000 (Archaeos)		HP2. Single Family Property	6Z	
P-37-018999		2154 Fort Stockton Dr	Lenahan Residence	2000 (Hrb)		HP2. Single Family Property	5S1	
P-37-019058		1406 Plumosa Way		2000 (Maria Burke Lia)				
P-37-019059		4201 Randolph St	Francis W Parker School Lower Campus	2000 (Marie Burke Lia)				
P-37-019107		1830 Altamira Pl	Lomax House	2001 (SD City HSB 427)				
P-37-019109		2150 Sunset Blvd	Schachtmayer Home	2001 (SD City HSB 429)		HP2. Single Family Property	3S	
P-37-019174		3718-3724 1St Ave	Hall-Sherman House	2001 (City of San Diego #445)				
P-37-019194			530a Temp 1	2001 (Brian F. Smith)	SD-07690, SD-08175, SD-09625, SD-14791			
P-37-020902		836 Washington Ste.	Champlain House	2002 (N/A)		HP6. Commercial Building, 1-3 Stories		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-020907		2408 1St Ave	Long-Waterman House	2002 (N/A)			1S	
P-37-020909		3000 Mission Blvd	Mission Beach Roller Coaster	2002 (N/A)				
P-37-020912		2660 Calhoun St	Casa De Juan Bandini	2002 (N/A)		HP2. Single Family Property	1D	
P-37-020913		2741 San Diego Ave	Casa De Machado	2002 (N/A)		HP2. Single Family Property	1D	
P-37-020914; P-37-020913; P-37-028795	CA-SDI-021062	2724 Congress St	Casa De Machado Y Stewart	2002 (N/A); 2013 (Laguna Mountain)		HP2. Single Family Property; HP44. Adobe Building/ Structure; AH2. Foundations	1D	
P-37-020915	CA-SDI-021087	2616 San Diego Ave	Pedrorena Adobe; Pedrorena-Altamirano and the San Diego Union Building	2002 (N/A); 2014 (California Dept. of Parks and Recreation)		HP2. Single Family Property	1D	
P-37-020916		2612 San Diego Ave	San Diego Union Office	2002 (N/A)		HP2. Single Family Property	1	
P-37-020917		3966 Mason St	Mason St School	2002 (N/A)		HP15. Educational Building	1D	
P-37-020918		0 Maple St	Waldo D. Waterman Monument	2007 (N/A)		HP26. Monument/Mural/ Gravestone	6	
P-37-020939		3005 California St	Castagnola Home	2002 (University of San Diego)			5S2	
P-37-020950		2054 Columbia St	Buck Coupland Home; Armstrong Residence	2002 (University of San Diego)			5S2	
P-37-020951		3686-3688 Columbia St	Cowles Homes / Dickenson Residence	2002 (University of San Diego)		HP2. Single Family Property	7R	
P-37-020952		3707 Columbia St	Wayatt & Josephine Earp House / McGurk House	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-020953		3708-20 Columbia St	Townsend Cottage / Marquis Cottages	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-020954		3730-36 Columbia St	Hauser Home / Pecoraro Rentals	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-020955		3738 Columbia St	Bungalow	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-020956		3744-46 Columbia St	Stanger House / Bracey Rental	2002 (University of San Diego)		HP2. Single Family Property	5D	
P-37-020957		3748 Columbia St	Kamamura House / Bracey Rental	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-020958		2329 Curlew St	Curlew Apartments / Dickerson Apartments	2002 (University of San Diego)		HP2. Single Family Property	6	
P-37-020959		2450 Curlew St	Thurnell House	2002 (University of San Diego)			7R	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-020973		532 W Grape St	Vue De Leau Apartments	2002 (University of San Diego)			7N	
P-37-020974		1747 Hancock St	Mission Brewing Co.; San Diego Linen Supply Co	2002 (University of San Diego)			3S	
P-37-020976		730, 736 W Hawthorn, 2101-2119	Hawthorne Apartments; Hawthorne St Bungalows	2002 (University of San Diego)			7R	
P-37-020980		2141-2165 India St	Parcell Building; Moorsteen Building	2002 (University of San Diego)			5S2	
P-37-020981		2215 India St	Hardy Building; San Diego Florist Supplies	2002 (University of San Diego)			7R	
P-37-020982		2400-2404 India St	McDonough Building, General Uniform Co.	2002 (University of San Diego)			5S2	
P-37-020983		3695 India St	El Indio			HP6. Commercial Building, 1-3 Stories	7N	
P-37-020984		3697 India St	Harrington Grocery / Bernie's Corner	2002 (University of San Diego)		HP6. Commercial Building, 1-3 Stories	7N	
P-37-020985		3715 India St	Smith House/Canora's Sandwich Terr/ Chameleon Rec	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-020986		3717 India St	Marquis Public Theatre	2002 (University of San Diego)		HP6. Commercial Building, 1-3 Stories; HP10	7N	
P-37-020987		3731 India St	Jolin and Young Importers; Martin Photographer	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-020988		3735 India St	Saveoir Faire	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-020989		3737 India St	Doodle Burgers	3741-3753 India St		HP6. Commercial Building, 1-3 Stories	7N	
P-37-020990		3741-3753 India St	India St Cottages	3741-3753 India St		HP2. Single Family Property	7N	
P-37-020991		826 W Ivy	Henry Adams Building	2002 (University of San Diego)			5S2	
P-37-020995		2055 & 2055 1/2 Kettner Blvd	Zolezzi House; Vincenzo Rental	2002 (University of San Diego)			7R	
P-37-020996		2062-2064 Kettner Blvd	Keene House	2002 (University of San Diego)			7R	
P-37-020997		2210-2220 Kettner Blvd	Jill Building; Raylor Dykema Manufacturing	2002 (University of San Diego)			7R	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-020998		2227-2229 Kettner Blvd	Crivella House; Huffman House	2002 (University of San Diego)			7R	
P-37-020999		2251-2253 Kettner Blvd	Castagnola House; Castagnola Duplex	2002 (University of San Diego)			7R	
P-37-021000		2401 Kettner Blvd	Red Diamond Battery Co; Botanical Interiors	2002 (University of San Diego)			5S2	
P-37-021001		2419 Kettner Blvd	Castagnola Home	2002 (University of San Diego)			7R	
P-37-021002		2601-2611 Kettner Blvd	Parks Bungalows; New Poet Rentals	2002 (University of San Diego)			5S2	
P-37-021003		3416 Kite (Horton) St	McCleod Home / Carroll Residence	2002 (University of San Diego)		HP2. Single Family Property	7R	
P-37-021004		802 W Nutmeg St	Jones Home; Rhoda Morris Residence	2002 (University of San Diego)			7R	
P-37-021005		4005 Pacific Hiway	Als Ice Cream; Citizens Trucking Co	2002 (University of San Diego)			7N	
P-37-021006		1044 W Quince St	Dr. Fred Holmes Home / Anne Tarantino Residence	2002 (University of San Diego)		HP2. Single Family Property	7R	
P-37-021007		1105 W Quince St	McNaughton Home / Thompson Residence	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-021008		1227 W Quince St	Oliver Winston Home / Frett-McGuire Residence	2002 (University of San Diego)		HP2. Single Family Property	7R	
P-37-021009		1301 W Sassafras St	Residence	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-021010		1321 W Sassafras St	Prudden Home / Swanson Rental	2002 (University of San Diego)		HP2. Single Family Property	7R	
P-37-021020		2440-2442 State St	Gist Home; Architects Office	2002 (University of San Diego)			3S	
P-37-021021		2454 State St	Collier House	2002 (University of San Diego)			3S	
P-37-021022		3018 State St	Wuest House / One of the "Three Sisters"	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021023		3030-3032 State St	Wuest House / One of the "Three Sisters"	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021024		3042 State St	Wuest House / One of the "Three Sisters"	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021025		3530 State St	Jessie Rush Gray Home / Faust Residence	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021040		2252-54-56 Union St	Charles Marks Home; Saveior Residence	2002 (University of San Diego)			3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021042		2330 Union St	Staples Apartments; Maxsted Apartments	2002 (University of San Diego)			5S2	
P-37-021043		2345 Union St	Castillian Apartments	2002 (University of San Diego)			7N	
P-37-021044		2405 Union St	Zauri House	2002 (University of San Diego)			3S	
P-37-021046		2470 Union St	Tucker House, Jones Residence	2002 (University of San Diego)			3S	
P-37-021048		2965 Union St	Snyder Home / Goodman-Phelps House	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021049		3009 Union St	Price Home / Dinant Rental	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021050		3029 and 3031 Union St	J.H. McKie House / Wuest House	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021051		3032 Union St	John Wandry Home / Tarantino House	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021053		3420-3422 Union St	Hunter Homes / Taylor House	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-021054		3472 Union St	Jackson Home / Thulin Residence	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021055		3522 Union St	Ross House / Russell Residence	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021056		3539 Union St	W.F. Houser Home / Martin Rental	2002 (University of San Diego)		HP2. Single Family Property	5S2	
P-37-021057		3547-3549 Union St	Gibbons Home / Harper Residence	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-021058		1648 Winder St	Wellborn	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-021059		1701, 1701 1/2, 1703 Winder	Carleton Home / Lopez Rental	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021060		1702 Winder St	Townsend Skidmore Home / Art Colony Cottage	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021061		1710 Winder St	Fred Buss Homes / Sunbow Stained Glass	2002 (University of San Diego)		HP2. Single Family Property	3S	
P-37-021066		2231 Albatross St	Dr. Alexander L. Verner Residence	2002 (University of San Diego)			3S	
P-37-021067		2275 Albatross Or 233 W Juniper	F W and Mary Jackson Home	2002 (University of San Diego)			3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021068		2360 Albatross	Henry J Schnell Home; Harborview Chateau Guest House	2002 (University of San Diego)			3S	
P-37-021069		2440 Albatross St	Edward and Lillian Roberts House	2002 (University of San Diego)		HP2. Single Family Property	7N	
P-37-021078		2214 Brant St	Talbot Home	2002 (University of San Diego)			7R	
P-37-021079		2251-53 Brant St	Klindt Home	2002 (University of San Diego)				
P-37-021080		2455 Brant St	Fitzpatrick Home; Jessop Home	2002 (University of San Diego)			3S	
P-37-021206		2465 Curlew St/ 427 W Laurel	Hirte House	2002 (University of San Diego)			5S2	
P-37-021232		2257 Front St	Judge Monroe Anderson House	2002 (University of San Diego)			3S	
P-37-021233		2265-2271 Front St	Charles Bofish House; Kenninger House	2002 (University of San Diego)				
P-37-021234		2366 Front St	Garrettson House, Town House	2002 (University of San Diego)			3S	
P-37-021260		234 W Juniper	Elwayn Gould House; Gould House	2002 (University of San Diego)			7R	
P-37-021264		135 W Kalmia	Ballentine House	2002 (University of San Diego)			3S	
P-37-021267		114 Kalmia	Farm House	2002 (University of San Diego)			5S2	
P-37-021268		128 Kalmia St	Anderson Building; Chisholm Building	2002 (University of San Diego)				
P-37-021271; P-37-021275		345 W Laurel St	Campbell House; F H W Drummond Residence; Drummond House	2002 (University of San Diego)			3S	
P-37-021272		211 W Laurel St	Strahlmann Residence; Turner House	2002 (University of San Diego)			7N	
P-37-021273		205 Laurel St	Laurel Apartments	2002 (University of San Diego)			3S	
P-37-021274		307,-09,-11,-15 Laurel St	Johnson Flats; Centre City Realty	2002 (University of San Diego)				
P-37-021275		345 Laurel St		2002 (University of San Diego)				
P-37-021276		545 W Laurel St	William Clayton House	2002 (University of San Diego)			4S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021302		2372 1St Ave	Parkinson Flats	2002 (University of San Diego)			7N	
P-37-021304		2425 1St Ave	Lawson House; Galas House	2002 (University of San Diego)			3S	
P-37-021458		2508 1St Ave	Timken Residence			HP2. Single Family Property	7N	
P-37-021459		2645 1St Ave	James Gillmore House			HP2. Single Family Property	3S	
P-37-021460		2730 1St Ave	R.J. Otto Home			HP2. Single Family Property	7	
P-37-021461		2929 1St Ave	Sylvester Tripp House			HP3. Multiple Family Property	3S	
P-37-021462		2947 1St Ave	Chauncey Hammond Home			HP2. Single Family Property	3S	
P-37-021464		3008-3024 1St Ave	Joseph Brennan Home	2002 (Compushare)			3S	
P-37-021465		3023 1St Ave	Glen Funcheon Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021466		3040-72 1St Ave	Bishop's Schools of SD	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021467		3130 1St Ave	Howard J. Edwards Residence / Terrace Apartments	2002 (Compushare)			7N	
P-37-021468		3138 1St Ave	R.H. Gunnis House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021470		3528 1St Ave	Professor E.L. Hardy Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021471		3540 1St Ave	Clarence Decker House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021472		3554 1St Ave	H.E. Anthony Home	2002 (Compushare)		HP2. Single Family Property	6	
P-37-021473		3568 1St Ave	Dr. Lionel I. Rideout Home	2002 (Compushare)		HP2. Single Family Property		
P-37-021474		3727-3731 1St Ave	Catherine Parker House / B.S. Chase House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021475		3815 1St Ave	Melville Hermann House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021476		3817 1St Ave	Frederick W Elliott House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021477		3821 1St Ave	I.M. & H.B. Hone Residence	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021478		2670 2nd Ave	Wegeforth Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021479		2937-2945 2nd Ave	W.F. & Dido Ludington Home / William Bradley Home	2002 (Compushare)		HP2. Single Family Property	7N	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021480		2965 2nd Ave	Hugo Kayes Home / Mabel Culbertson Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021481		3020 2nd Ave	Mary Cossett House / Henry Leisenring House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021482		3070 2nd Ave	Douglas Fleming Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021483		3140 2nd Ave	Joseph & Helena Bowman House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021484		3141 2nd Ave	Dr. & Mrs. Fred D. Arthur Home	2002 (Compushare)		HP3. Multiple Family Property	7N	
P-37-021485		3155 2nd Ave	Charles Conner Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021486		3162 2nd Ave	Lucy Coulter Home / Hortense Coulter Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021487		3200 2nd Ave	Jessie Ward Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021488		3203 2nd Ave	A.J. Bradley Residence	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021489		3218 2nd Ave	Mary Kraemer Home	2002 (Compushare)		HP2. Single Family Property	4D	
P-37-021490		3231 2nd Ave	George Mason Home / Ernest Fleet Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021491		3241 2nd Ave	Margaret Pecha Home / Deroy Saum Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021492		3250 2nd Ave	Avery Dodge Home / Marcus Ogden Home	2002 (Compushare)		HP2. Single Family Property	4D	
P-37-021493		3265 2nd Ave	D'Hemencourt Home / Henry Walker Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021494		3270 2nd Ave	Walter M. Baker Residence	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021496		3310 2nd Ave	McCarthy House / Swartz House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021499; P-37-028790		3065 3rd Ave	Franzen Home; the William F. Franzen House & Cabinet Shop / Meadows Home	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021500		3543 3rd Ave	Mary Avery Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021501		3557 3rd Ave	Alfred Lamotte Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021502; P-37-035501		3565 3rd Ave	J.W & Eva Rice Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021503		3576-78 3rd Ave	Albert Hill Home	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021504		3594 3rd Ave	Leona Frazier Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021505; P-37-035198		3600 3rd Ave	James & Lillie North Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021506		3653 3rd Ave	Clark Myers House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021507		3695 3rd Ave	Mahler Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021508		3760 3rd Ave	John Hornibrook House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021509		3783 3rd Ave	George Blodgett House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021510		3848-50 3rd Ave	A.E. Dodson Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021514		2939 4th Ave	James & Mary Wilson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021515		2951-57 4th Ave	Schaufelberger Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021516		2963 4th Ave	Stephen Connell Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021518		3612-18 4th Ave	Ernsting Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021519		3621-29 4th Ave	Maria Schmidt Home	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021520		3666-72 4th Ave	Marie Petershagen Apartments	2002 (Compushare)			7N	
P-37-021520		3666 4th Ave	Marie Petershagen Apartments	2002 (Compushare)		HP3. Multiple Family Property	4	
P-37-021521		3744-46 4th Ave		2002 (Compushare)				
P-37-021521		3744 4th Ave	Lillah Beckett Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021524		2868 5th Ave	No. 3 Fire Station	2002 (Compushare)		HP9. Public Utility Building	3	
P-37-021525		3031 5th Ave	R W Lemon Home	2002 (Compushare)			3S	
P-37-021525		3031 5th Ave	R.W Lemon Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021526		3525 5th Ave		2002 (Compushare)				
P-37-021526		3525 5th Ave	John W Rice Building	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021527		3692 5th Ave		2002 (Compushare)				
P-37-021527		3692 5th Ave	Tujaque Building	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021528		3702 5th Ave	Tujaque Building, Elsa Mini Mart	2002 (Compushare)			3S	
P-37-021528		3702 5th Ave	Tujaque Building	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021529		3821 5th Ave	El Comado Apartments	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021530		3825 5th Ave	Guild Theatre	2002 (Compushare)		HP10. Theater	3	
P-37-021531		3846 5th Ave	Paul & Lydia Battle Offices	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021537		3328 6th Ave	Florence Mead Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021538		3408 6th Ave	W.H. Pringle Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021539		3643 6th Ave	Charles Vallin House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021540		3668 6th Ave	John & Georgia Day Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021541		3674 6th Ave	All Saints Episcopal Church	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021542		3680 6th Ave	Mary Doyle Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021543		3690 6th Ave	Courtney Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021544		3734 6th Ave	Damon Handley Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021552		3657 7th Ave	Mary A. Hill Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021553		3710-20 7th Ave	Marion Wincote Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021554		3803 7th Ave	Graystone Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021562		2504 Albatross St	Dr. F. J. Campbell Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021563		2540 Albatross St	Curtiss Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021564		2801 Albatross St	Gifford Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021565		2829 Albatross St	Connell Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021566		2865 Albatross St	S.M. Bingham House	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021567		3330 Albatross St	Stone Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021570		3370 Albatross St	Marshall Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021571		3402 Albatross St	Ernest Fleet Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021572		3407 Albatross St	Teats House #3	2002 (Compushare)			3S	
P-37-021573		3415 Albatross St	Teats House #2	2002 (Compushare)			3S	
P-37-021574		3425 Albatross St	Colton Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021575		3506 Albatross St	Archie Murphy Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021576		3514 Albatross St	Kynder Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021577		3544 Albatross St	Babcock Home	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021578		3545-47 Albatross St	Wakefield House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021579		3559 Albatross St	James O'keefe Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021580		3565 Albatross St	O'keefe Apartments	2002 (Compushare)		HP3. Multiple Family Property	5S2	
P-37-021582		3786 Albatross St	Arthur Dickerson House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021583		2700 Barnson Pl	Edythe Churchill Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021584		2705 Barnson Pl	Jackman House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021585		2725 Barnson Pl	Daveison Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021586		2735 Barnson Pl	Dunn Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021587		2766 Barnson Pl	A.L. Verner Residence	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021588		2747 Brant St	Marie Pettey Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021589		2755 Brant St	Fenstermaker House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021591		3100 Brant St	Charles W Fox Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021592		3145 Brant St	James D. Bobbitt Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021593		3212 Brant St	Hurlburt Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021594		3226 Brant St	Eva Shore Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021596		3268 Brant St	Hurlburt Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021597		3335 Brant St	Joseph Browne Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021598		3353-55 Brant St	Harry L. Stone Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021599		3731 Brant St	Lang House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021600		119 W Brookes Ave	Phillip Barney Home	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	5S2	
P-37-021601		125 W Brookes Ave	Frazier House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021602		136 W Brookes Ave	James & Lillie North Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021603		312 W Brookes Ave	Chase House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021604		101-107 W Brookes St	Liggett & Stelzer Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021605		109-115 W Brookes St	Benjamin Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021606		232 W Brookes Ave	Guy Sensor Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021607		237 W Brookes Ave	Edgar Muller House	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021608		1002 W Brookes Ave	Murray James Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021609		1003 Brookes Ave	Daveid Saylor Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021610		3170 Curlew St	Capt. A.A.Ackerman Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021611		3223 W Curlew St	Gilman Gist Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021612		3226 W Curlew St	Edward & Jenny Alling Estate	2002 (Compushare)		HP2. Single Family Property	3D	
P-37-021613		3240 Curlew St	Edward Hallenbeck Home	2002 (Compushare)		HP2. Single Family Property	3D	
P-37-021614		3264 Curlew St	James Churchill Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021615		3520 W Curlew St	Dolly Schindler Home	2002 (Compushare)		HP2. Single Family Property	5	
P-37-021616		3510 Dove Ct	Henry Bear Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021618		3605 Dove Ct	Theodore Byram Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021619		3818 Eagle St	Knicks House	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021620		3844 Eagle St	Bradt Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021621		3849 Eagle St	Golden Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021622		3934 Eagle St	John Zweck Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021623		2515 Front St	Wm. Taylor Smith Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021624		2528 Front St	Fish Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021625		2542 Front St	W.L. Hulick Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021626		2554 Front St	Jorres Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021627		2646 Front St	Easterbrook Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021628		3162 Front St	Charles O'neall House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021629		3136 Front St	John F. Anderson Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021631		2965 Front St	Harland Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021632		3131-33 Front St	Robert Hart House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021633		3333 Front St		2002 (Compushare)			2S2	
P-37-021633; P-37-028336		3333 Front St	H.E. Anthony Residence	2002 (Compushare)		HP2. Single Family Property	2S2	
P-37-021634		3355 Front St	Harry Logan Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021635		3501 Front St	Helen Ames Residence	2002 (Compushare)		HP2. Single Family Property	7N	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021636		3525 Front St	G and Eva Hoff Home	2002 (Compushare)			7N	
P-37-021637		3536 Front St	Edward F. Flynn Home/Tenney Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021638		3538 Front St	Hattie Shute Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021639		3545 Front St	Henry Conley Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021641		3560 Front St	Emily Steinbach Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021642		3576 Front St	Elizabeth Cox Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021643		3620 Front St	Frank Grandier Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021644		3629 Front St	Montgomery Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021645		3758 Front St	Butler C. Sonnenschmidt Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021646		3775 Front St	Alfred Barker Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021647		3776 Front St	Irving J. Gill Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021648		3485 Hawk St	Osborn House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021649		3819 Hawk St	Willa Leisenring Home	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021650		3440 Ibis St	George & Margaret Peterson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021652		4070 Jackdaw St	Mission Hills Congregational Church	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021653; P-37-021273		205 W Laurel St	Laurel Apartments	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021654		210 Maple St	Wegeforth House	2002 (Compushare)			3S	
P-37-021656		1432 W Montecito Way	Ellen Sessions Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021657		408 W Nutmeg St	St Paul's Parish	2002 (Compushare)		HP16. Religious Building	3	
P-37-021658; P-37-028455		406 W Nutmeg St	Robert Hubbard Home	2002 (Compushare)			3S	
P-37-021659		303-319 Olive St	Wolf Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021660		401-413 Olive St	Kier Manor	2002 (Compushare)		HP5. Hotel/Motel	3	
P-37-021662		303-305 W Olive St	John Fox Home	2002 (Compushare)			7R	
P-37-021663		215 W Palm St	Leland Stanford Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021664		137 Pennsylvania Ave	Salisbury Apartments	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021665		629 Pennsylvania Ave	Julia Ann Smith House	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021667		124-126 W Pennsylvania Ave	Claus E. Lagersberg Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021668		128 W Pennsylvania Ave	Carrie Macomber House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021669		138 W Pennsylvania Ave	Mrs. E.B. Hopkins Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021670		327 W Pennsylvania Ave	Grace Davenport Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021671		704 W Pennsylvania Ave	Charles C. Crouch House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021672		817 W Pennsylvania Ave	Oscar & Ida Carlson Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021673		1405 W Pennsylvania Ave	Bettancourt Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021674		1506 Plumosa Way	Dickenson-Williams Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021676		212 Quince St	Buck Pickett Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021677		202 Redwood St	Horace Day Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021678		3534 Reynard Way	Baron Company Building	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021679; P-37-028424		321 W Robinson Ave	1St Church of United Brethren In Christ of SD	2002 (Compushare)		HP16. Religious Building	3	
P-37-021680		101 W Robinson Ave	Sallies House	2002 (Compushare)		HP3. Multiple Family Property	3S	
P-37-021681		113 W Robinson Ave	Plaisted House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021682		206 W Robinson Ave	Charles Hubbard Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021683		211 W Robinson Ave	Oriel Sheffield Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021684		304 W Robinson Ave	Mary Richardson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021686		126 W Spruce St	Mary J. Spalding	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021687		135 W Spruce St	Videan Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021688		220 W Spruce St	Barrow Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021690		704 Sutter St	John K. Smith Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021691		736 Sutter St	Harry Freeborn Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021692		106-108 Thorn	Alda Ferris Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021693		303 W Thorn St	G.W Lane House	2002 (Compushare)		HP2. Single Family Property	3	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021694; P-37-028589		540 W Thorn St	Fred F. Thomas Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021695		140 W Thorn St	Harry Gregg Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021696		304 W Thorn St	Emilie Styris Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021697		335 W Thorn St	Thomas Anderson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021698		338 W Thorn St	Raymond Low Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021699		411-435 W Thorn St	Lillian Herriman Residence	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021700		434 W Thorn St	Herman Ascher Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021701		1603 Torrance St	Sarah Brock Residence	2002 (Compushare)		HP2. Single Family Property; HP38. Women's Property	3S	
P-37-021702; P-37-035500		1614 Torrance St	Charles W Brown Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021703		1636 Torrance St	Leo Dorn Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021704		1674 Torrance St	John Holland Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021706		209 W Upas St	Bernard Levi Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021707		316-322 Upas St	H.H. Miken Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021708; P-37-021705		120-126 W Upas St	Goodwin Apartments; John Novotny Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021709		246 W Upas St	W.P. Polhemus Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021710		401-425 University Ave	Allen Hawley Building	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	7R	
P-37-021711		420 W Walnut Ave	Dr. Robert G. Sharp Office	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	3S	
P-37-021712		211 W Walnut Ave	Mina Colton Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021713		107-117 W Walnut	Mary Price Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021714		315 W Walnut Ave	Joseph Kendall Residence	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021715		321 W Walnut Ave	Margaret McVey House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021716		3725 Wellbourn St	Irving Brockett Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021717		3770 Wellbourn St	Milton Mason Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021718		Maple and Reynard Way	Invertebrate Fossils	2002 (Compushare)		HP39. Other	7	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021719		3800 Brant St	200 W University Ave Runs SW to 3800 N, Brant St Canyon	2002 (Compushare)		HP32. Rural Open Space	5	
P-37-021720		3700 1St Ave		2002 (Compushare)		HP31. Urban Open Space	5	
P-37-021721		3600 N Eagle St		2002 (Compushare)		HP31. Urban Open Space	5	
P-37-021722		300 W Spruce St	Maple St Canyon	2002 (Compushare)		HP31. Urban Open Space	5	
P-37-021723; P-37-022026		100 W Nutmeg St	Bridge 57c-0416	2002 (Compushare)		HP19. Bridge	5	
P-37-021725		0 Spruce St	Bridge	2002 (Compushare)		HP19. Bridge	3S	
P-37-021727		3902 Alameda Dr	George Kirkpatrick House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021729		3920 Alameda Pl	Steicher House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021730		3944 Alameda Pl	Drishaus House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021731		3945 Alameda Pl	William Boland House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021732		4030 Alameda Dr	Barreiro House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021733		4060 Alameda Dr	Crozier House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021734		4075 Alameda Dr	Burton Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021735		4106 Alameda Dr	McCabe Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021736		4130 Alameda Dr	Jenney House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021737		3950 Alameda Pl	Robert Hamilton House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021738		1960 Alameda Ter	Hill House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021739		1969 Alameda Ter	Reynolds House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021740		1980 Alameda Ter	William Page House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021741		4252 Aloha Pl	Miller Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021742		4282 Aloha Pl	Emmans Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021743		4244 Altamirano Way	Goodwin House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021744		4366 Altamirano Way	Macdonald House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021745		4244 Ampudia St	Timken House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021746		4382 Ampudia St	Taylor House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021748		4476 Ampudia St	Schuler House	2002 (Compushare)		HP2. Single Family Property	5S2	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021749		4176 Arden Way	Woldt House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021750		4204 Arden Way	Landale House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021751		4221 Arden Way	Adams House	2002 (Compushare)		HP2. Single Family Property	4	
P-37-021752		4220 Arden Way	Ballard House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021753		4229 Arden Way	Brown House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021754		4230 Arden Way	Long House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021755		4238 Arden Way	Lovett House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021756		4240 Arden Way	Eastman House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021757		4241 Arden Way	Ladd House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021758		4244 Arden Way	R H Robbins House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021759		4250 Arguello St	Eager House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021760		4251 Arguello St	Swayne House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021761		4275 Arguello St	J B Hunt House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021762		4230 Arista St	Hoffman House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021763		4257 Arista St	Rucker House	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021764; P-37-032949		4266 Arista St	J. Rex Murray and Alice M. Murray Spec House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021765		4291 Arista St	Anderson House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021766		4309 Arista St	Melcher House	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021767; P-37-028599		3950 Conde St	Adobe Chapel of the Immaculate Conception	2002 (Compushare)			7N	
P-37-021768		4277 Cosoy Way	Cella House, J M Schelling House	2002 (Compushare)			7N	
P-37-021769		1704 Fort Stockton Dr	Alfred Johnson House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021770		1740 Fort Stockton Dr	Gaston House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021772		1835 Fort Stockton Dr	Stockwell House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021773		1855 Fort Stockton Dr	Yates House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021774		2203 Fort Stockton Dr	McCambridge House	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021776		2258 Fort Stockton Dr	Thomas Parker House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021777		2265 Fort Stockton Dr	Winther House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021778		1995 Guy St	Barker House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021779		2156 Guy St	Gray House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021780		2174 Guy St	Stobeck House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021781		3959 Harney St	Vecclione House	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021782		4017 Harney St	Derby-Pendleton House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021783		3803 Henry St	Bailey House, Perry House	2002 (Compushare)			7R	
P-37-021784		3910 Henry St	Marcy House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021785; P-37-028217		3924 Henry St	Wahrenberger House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021786		4001 Henry St	Starkey House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021787		4145 Hermosa Way	Bresler House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021788		4316 Hermosa Way	Sampson House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021789		4332 Hermosa Way	Leite House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021790		4399 Hermosa Way	Fred Heilbron House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021791		4411 Hermosa Way	Stone House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021792		4425 Hermosa Way	Niven House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021794		4480 Hermosa Way	Geistweit House	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021795		4490 Hermosa Way	C.G. Foote House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021796		2120 Hickory St	Newell House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021797		2225 Hickory St	Ryan Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021798		2320 Hickory St	Anderson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021799		2360 Hickory St	Anewalt Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021800		4287 Hortensia St	John James Coker House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021801		4305 Hortensia St	Kelly Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021802		4481 Hortensia St	Bird Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021803		2405 Jefferson St	Hernandez House	2002 (Compushare)			5S2	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021804		4044 Lark St	Mission Hills United Methodist Church	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021805		4154 Lark St	Ostrander House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021806		1505 W Lewis St	Norton House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021808		1525 W Lewis St	Edith Huff House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021809		1527 W Lewis St	Barr House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021810		1616-1630 W Lewis St	Sessions Nursery	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	7N	
P-37-021811		1956 Linwood St	Showley Home, Dickenson Home	2002 (Compushare)			3S	
P-37-021812		1981 Linwood St	Read Home	2002 (Compushare)			3S	
P-37-021813		2440 Marilouise Way	Hodge House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021814		4145 Miller St	Bown House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021815		4115 Miller St	Bingham House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021816		4146 Miller St	Whitney House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021817		1818 W Montecito Way	Willier House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021818		2036 Orizaba Ave	Villa Orizaba	2002 (Compushare)			3S	
P-37-021819		4253 Palmetto Way	Pepin House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021821		2329 Pine St	Martha Robinson House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021822		2344 Pine St	Lydia Schweider House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021823		2440 Pine St	Green House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021824		1610 Plumosa Way	Dement House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021826		4309 Plumosa Way	Mintzer House	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021827		3916 Portola Pl	Conklin Home	2002 (Compushare)		HP2. Single Family Property	7	
P-37-021828		3931 Portola Pl	Gossow House	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021829		2427 Presidio Dr	H L Hurd House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021831		2436 Presidio Dr	Lascoe Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021832		2441 Presidio Dr	Faden Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021833		2454 Presidio Dr	Tanner Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021834		2490 Presidio Dr		2002 (Compushare)	SD-16963	HP2. Single Family Property	3	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021835		2540 Presidio Drive		2002 (Compushare)	SD-16963			
P-37-021836		3705 Pringle St	Higbee Home	2002 (Compushare)	SD-17299	HP2. Single Family Property	3S	
P-37-021837		3745 Pringle St	Massingill Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021838		3772 Pringle St	Crippen Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021839		3817 Pringle St	Cook House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021840		1802 Puterbaugh St	Gould Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021841		4145 Randolph St	Wilson Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021842		4222 Randolph St	Couts House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021843		3911 Saint James Pl	Merrick Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021844		3912 Saint James Pl	Thurston Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021845		3933 Saint James Pl	Stalland Home	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021847		4072 Saint James Pl	Irvin House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021848		4204 Saint James Pl	Jacobson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021849		4247 Saint James Pl	Robinson House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021850		2305 San Diego Ave	Cardwell House (Demolished)	2002 (Compushare)				
P-37-021851		2350 San Diego Ave	Cobblestone/Haraszthy Jail	2002 (Compushare)				
P-37-021852		2422 San Diego Ave	El Campo Canto Cemetery	2002 (Compushare)			5S	
P-37-021853		2482 San Diego Ave	Whaley House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021854		2505 San Diego Ave	James Parkinson House	2002 (Compushare)		HP6. Commercial Building, 1-3 Stories	5S2	
P-37-021856		2540 San Diego Ave	Church of Immaculate Conception/ Immaculate Conception	2002 (Compushare)		HP16. Religious Building	3S	
P-37-021857		1819 Sheridan Ave	Smith House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021858		1834 Sheridan Ave	Rogerts Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021859		1882 Sheridan Ave	Phipps House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021860		4322 Sierra Vista St	Chadwick Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021861		4126 Stephens St	Kelly Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021862		4145 Stephens St	Irvill Home	2002 (Compushare)		HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021863		4161 Stephens St	Halliday Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021865		1815 Sunset Blvd	Fuller House	2002 (Compushare)		HP2. Single Family Property	7R	
P-37-021866		1845 Sunset Blvd	Ambrose House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021867		1850 Sunset Blvd	Kelly Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021868		1895 Sunset Blvd	Miller House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021869		1912 Sunset Blvd	Escobedo House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021871		1955 Sunset Blvd	Nelson Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021872		2031 Sunset Blvd	McKnight Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021873		2044 Sunset Blvd	Sheldon House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021874		2055 Sunset Blvd	Miller Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021875		2121 Sunset Blvd	Mitchell Home	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021876		2124 Sunset Blvd	Wagenhals House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021877		2140 Sunset Blvd	Schachtmayer House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021879		2202 Sunset Blvd	Coleman Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021880		2218 Sunset Blvd	Coleman Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021881		4143 Sunset Blvd	Thompson Home	2002 (Compushare)		HP2. Single Family Property	5S2	
P-37-021882		1778 Sutter St	Fred Forster House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021883		1808 Titus St		2002 (Compushare)			3S	
P-37-021884		1820 Titus St	Strom House	2002 (Compushare)			3S	
P-37-021885		1911 Titus St	Wiseman House	2002 (Compushare)			3S	
P-37-021886		1929 Titus St	Holland House	2002 (Compushare)			3S	
P-37-021887		4246 Trias St	Pauline W House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021888		4401 /4405 Trias St	Ricker House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021889		4460 Trias St	Richard Coffman House	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021890		4479 Trias St	Leonard Ellis House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021891		4520 Trias St	William Templeton Johnson House	2002 (Compushare)		HP2. Single Family Property	3	
P-37-021892		3890 Twiggs St	Casa De Lopez/ Casa Larga	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021893; P-37-028602		3919 Twiggs St (Demolished)	Emmett House Site	2002 (Compushare)		HP2. Single Family Property	6	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-021894		4155 Twiggs St	Luca Bolam House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021895		4337 Valle Vista St	Butler House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021896		4340 Valle Vista St (Sierra Vista)	Smith House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021897		4346 Valle Vista St	Richard S. Requa Home	2002 (Compushare)		HP2. Single Family Property	7N	
P-37-021898		1501 Washington Pl	Pioneer Park/ Calvary Cemetery Site	2002 (Compushare)		HP40. Cemetery	5	
P-37-021899		2295 Whitman St	Theodore M. Smith House	2002 (Compushare)		HP2. Single Family Property	3S	
P-37-021900		2600 Juan St	Presidio Hills Golf Course	2002 (Compushare)		HP39. Other	5S2	
P-37-021900		4136 Wallace St	Carrillo House	2002 (Compushare)		HP2. Single Family Property	7L	
P-37-021901		2727 Presidio Dr	Presido Park	2002 (Compushare)	SD-08175	HP44. Adobe Building/Structure	3	
P-37-021902		0 Taylor St	Fransciscan Gardens Site/Cemetery, On Taylor St	2002 (Compushare)				
P-37-021903		0 Taylor St	Serra Palm Site, On Taylor St	2002 (Compushare)		HP26. Monument/Mural/Gravestone:	5	
P-37-021904		Old Town-Taylor St	Presidio Excavation Site/Presidio Park	2002 (Compushare)				
P-37-021905		2727 Presidio Dr	Serra Museum-Library & Tower Gallery; 2727 Presidio	2002 (Compushare)			3S	
P-37-021906		2600 Presidio Dr	Fort Stockton Site; Cosoy Way & Presidio Dr.	2002 (Compushare)			5S	
P-37-021907		0 Heritage Park Rw	Temple Beth Israel	2002 (Compushare)		HP16. Religioius Building	1	
P-37-021914		4100 Alameda Dr	Sign Pillar	2002 (Compushare)		HP28. St Furniture	5S2	
P-37-021915		4100 Loma Pass	Sign Pillar	2002 (Compushare)		HP28. St Furniture	5S2	
P-37-021916		4199 Sunset Blvd		2002 (Compushare)		HP28. St Furniture	5	
P-37-021917		2200 Sunset Blvd	Pillared Gateway	2002 (Compushare)		HP28. St Furniture	5S2	
P-37-021918		4300 Altamirano Way	Lamp Post	2002 (Compushare)		HP28. St Furniture	5S2	
P-37-022004		2750 San Diego Av	Light-Freeman House, Old Town, San Diego State Park	2002 (SHPO)				

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-022026			First Ave Bridge, Maple Canyon	2002 (N/A)				
P-37-022040		Se Corner of Central Ave and University Ave	Schilling Block	2002 (Caltrans)				
P-37-022041		NE Corner of 40th St & University Ave	Blue Goose Market & Liquor and Adjacent Storefront	2002 (Caltrans)				
P-37-023712		418 W Ivy St		2001 (Archaeos)			7	
P-37-023716		2164 Albatross St		2001 (Archaeos)			7	
P-37-023717		2137-2145 Brant St		2001 (Archaeos)			7	
P-37-023718		2147-2153 Brant St		2001 (Archaeos)			7	
P-37-023719		2265-2271 Curlew St & 425-431 W Juniper St		2001 (Archaeos)			7	
P-37-023721		424 W Ivy St	La Frenere Residence	2001 (Archaeos)			7R	
P-37-023722		530-532 W Ivy St		2001 (Archaeos)			7	
P-37-023723		531 W Juniper St		2001 (Archaeos)			7	
P-37-023724		535 W Juniper St		2001 (Archaeos)			7	
P-37-023725		2157 Union St		2001 (Archaeos)			7	
P-37-023726		2165 Union St		2001 (Archaeos)			7	
P-37-023727		2217 Union St		2001 (Archaeos)			7	
P-37-023728		2254-2256 Union St		2001 (Archaeos)			7	
P-37-023729		2270-2276 Union St	Schlegal House	2001 (Archaeos)			7N	
P-37-023730		2416-2422 India St		2001 (Archaeos)			7	
P-37-023731		2167-2169 Brant St		2001 (Archaeos)			7	
P-37-023732		2252-2254 Brant St		2001 (Archaeos)			7	
P-37-023737		2166-2168 Union St		2001 (Archaeos)			7	
P-37-023738		2230 Union St		2001 (Archaeos)			7	
P-37-023739		2244-2246 Union St		2001 (Archaeos)			7	
P-37-023740		3124 Dumas St		2001 (Archaeos)		HP2. Single Family Property	6Z	
P-37-023741		3105 Elliott St		2001 (Archaeos)		HP2. Single Family Property	4R	
P-37-023742		3111 Elliott St		2001 (Archaeos)		HP2. Single Family Property	4R	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-023743		3131 Elliott St	Daveid G. Fleet House	2001 (Archaeos)		HP2. Single Family Property	4R	
P-37-023744		3105 Goldsmith St		2001 (Archaeos)		HP2. Single Family Property	4R	
P-37-023745		3123 Goldsmith St		2001 (Archaeos)		HP2. Single Family Property	4R	
P-37-023746		3027 Homer St		2001 (Archaeos)		HP2. Single Family Property	4R	
P-37-023747		3045 Homer St				HP2. Single Family Property	4R	
P-37-023767		2400 Presidio Dr	Alexander & Nancy Highland House			HP2. Single Family Property	7N	
P-37-023793		2165 Albatross St	John Foster Couts Residence, Max Mayer Residence				3S	
P-37-023859			Group 663, Isolate	2001 (Brian F. Smith)	SD-08016			
P-37-023895			Quince St Foot Bridge	2001 (N/A)	SD-17588			
P-37-023895		Quince St (Between 3rd & 4th Aves)						
P-37-023908		3300 3rd Ave		2001 (N/A)				
P-37-023908; P-37-028524		3300 3rd Ave	William Mason Fortescue Residence					
P-37-023914		1751 Hancock St	Mission Brewing Company/ American Agar Co.	2001 (N/A)			1S	
P-37-023916		3768 Albatross St	John Nuttal House	2001 (N/A)		HP2. Single Family Property	3S	
P-37-023919/Missing		2727 Presidio Dr	San Diego Presidio	2001 (N/A)		HP14. Government Building	1S	
P-37-023921		2727 Presidio Dr		2001 (N/A)				
P-37-023928		3500 Midway Dr	Dutch Flats/Ryan Field	2001 (N/A)				
P-37-023930		525 W Spruce St	Park Manor	2001 (N/A)		HP3. Multiple Family Property	2S3	
P-37-023941			Group 601, Temp 1	2001 (Brian F. Smith and Associates)	SD-07694, SD-13537			
P-37-023942			Group 601, Temp 2	2001 (Brian F. Smith and Associates)	SD-07694			
P-37-023955		3240 Curlew St		2001 (Scott A. Moomjian)				
P-37-023989		1625 Plumosa Way	McFetridge House	2001 (Alex Bevil)		HP2. Single Family Property	3S	
P-37-023995		3315 2nd Ave	John and Mary Gallagher Residence	2001 (N/A)				
P-37-024056			P-Sanger 2-1910	2001 (Marie Burke Lia)				
P-37-024057				2001 (Marie Burke Lia)				

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-024258		Kettner Blvd& Kalmia St Isolate		2001 (Rmw Paleo Associates)	SD-18165			
P-37-024390	CA-SDI-016172		Doma Site	2002 (Affinis)	SD-14797			
P-37-024558	CA-SDI-016288		Smvts-S-1	2002 (Harris Archaeological Cons.)	SD-09625, SD-17810			
P-37-024559	CA-SDI-016289		Smvts-S-2	2002 (Harris Archaeological Cons.)	SD-09625, SD-17397			
P-37-024560	CA-SDI-016290		Smvts-S-3	2002 (Harris Archaeological Cons.)	SD-09625, SD-17397			
P-37-024697			Hawk St/Alberta Place Historic Dist.	2002 (Caltrans- D. Dominici)	SD-07876			
P-37-024729		1003 Alberta Pl		2002 (Caltrans- D. Dominici)	SD-07876, SD-16831			
P-37-024735		3851 Hawk St		2002 (Caltrans- D. Dominici)	SD-07876, SD-17267			
P-37-025104	CA-SDI-016634		Hl-S-1	2003 (James & Briggs Archaeological)				
P-37-025493	CA-SDI-016926		Discovery C	2004 (Mooney & Associates)				
P-37-025494	CA-SDI-016927		Discovery D	2004 (Mooney & Associates)				
P-37-025686		1847 Altamira Place		2004 (Is Architecture)				
P-37-025686		1847 Altamira				HP2. Single Family Property		
P-37-025786	CA-SDI-017145		Nts 1920s Dump	2004 (Kyle Consulting)				
P-37-026553	CA-SDI-017418	2470 San Diego Avenue		2005 (Cheever, Collett, and Gilmer)				
P-37-026842	CA-SDI-017577		Archstone-1	2005 (Mooney, Jones, & Stokes)	SD-09742			
P-37-027055	CA-SDI-017688		Block 4536	2005 (Edaw)	SD-10325, SD-14791, SD-17602			
P-37-027056	CA-SDI-017689		Block 4548	2005 (Edaw)	SD-10325, SD-14791			
P-37-027057	CA-SDI-017690		Block 4549	2005 (Edaw)	SD-10325, SD-14791			
P-37-027058	CA-SDI-017691		Block 4550	2005 (Edaw)	SD-10325, SD-14791			
P-37-027059	CA-SDI-017692		Block 4553	2005 (Edaw)	SD-10325, SD-14791			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-027060	CA-SDI-017693		Block 4554	2005 (Edaw)	SD-10325, SD-14791			
P-37-027357	CA-SDI-017879		Rock Academy and Church	2006 (Brian F. Smith & Associates)	SD-11168			
P-37-027506		4191 Stephens St	Hoff Home	2006 (Vonn Marie May)		HP2. Single Family Property	3S	
P-37-027508		3140 3rd Ave		2006 (Is Architecture)				
P-37-027509		3676 Eagle St	Deacon House	2006 (Ronald V. May, Rpa)				
P-37-027510		4455 Hermosa Way	Harvey Allen House	2006 (Ronald V. May, Rpa)		HP2. Single Family Property	3S	
P-37-027611		2765 Brant St	Arthur & Helen Johnson-Mickey Wright-Samuel Wood Hamill House	2006 (Beth Montes)		HP2. Single Family Property	3S	
P-37-027612		4151 Stephens St	M.B. Irvin & A. Schreiber House	2006 (Vonn Marie May)				
P-37-027615		4476 Hortensia St	Gemmell- Requa House	2006 (Vonn Marie May)				
P-37-027662		1787 Fort Stockton Drive	Thomas Burger House	2006 (Timothy and Laurie Bostrom)		HP2. Single Family Property	7N	
P-37-027663		3910 Eagle St	Pacific Building Company Spec. House #1	2006 (Beth Montes)			3S	
P-37-027664		2820 Chatsworth Blvd	Matie and Charles E. Summer Residence	2006 (Archaeos)			5S2	
P-37-027665		4141 Lark St	Joel L. Brown House	2006 (Vonn Marie May)				
P-37-027668		1863 Altamira Place	Hathaway/Leigh House	2006 (Ronald V. May, Rpa)		HP2. Single Family Property		
P-37-027671		4467 Ampudia St	Johnson - Trepte House	2006 (Vonn Marie May)		HP2. Single Family Property	3S	
P-37-027712		3729 Amaryllis Dr	Arthur and Martha Bradshaw Residence	2006 (Archaeos)			5S2	
P-37-027713		4052 Albatross St	Conrad and Ida Felger Residence	2006 (Archaeos)			5S2	
P-37-027714		2231 La Callecita	Dr. Bernard Poland/Cunningham House	2006 (Legacy 106 Inc)				
P-37-027715		3960 Alameda Place		2006 (Scott A. Moomjian)		HP2. Single Family Property	6Z	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-027729		2533 Congress St	John & Florence Lillpop Residence	2006 (Marie Burke Lia)			6Z	
P-37-027731		2206 Fort Stockton Dr	Stewart- Rigdon House	2006 (Vonn Marie May)		HP2. Single Family Property	3S	
P-37-027846		2121 Ft Stockton Dr	Nathan Rigdon Spec House #1	2006 (Beth Montes)		HP2. Single Family Property	3c	
P-37-027850	CA-SDI-018108		Atlas Project	2006 (Brain F. Smith & Associates)				
P-37-028154		4004 Lark St	A.H. and Mabel Blaisdell Speculation House	2007 (Archaeos)			6Z	
P-37-028157		3200 6th Ave	Salomon Apartments	2007 (Marie Burke Lia)			35	
P-37-028214		1520 Fort Stockton Dr	Henrietta C.H. Nesmith Greeley Residence	2007 (Ray Brandes)		HP2. Single Family Property; HP3. Multiple Family Property	5S2	
P-37-028217		2333 Albatross St	Elwayn B. (Jay) Jr. and Martin Gould House	2007 (Scott A. Moomjian)		HP2. Single Family Property	5S2	
P-37-028219		2765 2nd Ave	Emmett G. O'neill Residence	2007 (Neoma Goldhammer)				
P-37-028238			**Air Force Plant 19**	**2007 (U.S. Navy, Department of Defense); 2015 (Brewstere)**	**SD-16448**	**HP8. Industrial Building**		**Yes**
P-37-028336		3333 Front St	Herbert E. Anthony Residence	2007 (Dr. Ray Brandes)				
P-37-028397		3225 4th Ave	Farnham Home	2007 (Marie Burke Lia)		HP3. Multiple Family Property	3S	
P-37-028398		3235-3255 Fourth Ave		2007 (Scott A. Moomjian)		HP6. Commercial Building, 1-3 Stories	6Z	
P-37-028409		Rosecrans Between Udall and Voltaire	"Old Landing" Site of El Desembarcadero	2007 (J. Arbuckle)				
P-37-028414		2720 4th Ave	Bertha Mitchell House	2007 (Order of the Elks)		HP13. Community Center/Social Hall	3	
P-37-028417		410 W Upas St	Evangeline Caven Bungalow	2007 (Michael Tudury)				
P-37-028420		1St Ave Between Palm and Nutmeg	First Ave Bridge	2007 (N/A)	SD-17588			
P-37-028424		321 Robinson Ave	San Diego First Church United Brethren	2007 (N/A)			3S	
P-37-028431	CA-SDI-018352	Fort Stockton		2007 (N/A)	SD-14791			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-028440		4063 Eagle St		2007 (Urbana Preservation & Planning)		HP2. Single Family Property	6Z	
P-37-028444			Derby Dike Site	2007 (N/A)	SD-14791			
P-37-028455		406 W Nutmeg St	Robert Hubbard House	2007 (N/A)			3S	
P-37-028460		3696 3rd Ave	Historic Company House	2007 (N/A)				
P-37-028462		3107 Zola St	Casa Marrero	2007 (Historical Consultant)				
P-37-028477		3367 Albatross St	Alice Lee House #4	2007 (N/A)		HP2. Single Family Property	5S	
P-37-028478		3994 Jackdaw St	George L. Myars Property	2007 (Urbana Preservation & Planning)			5S3	
P-37-028490			Mary Cassitt Residence #4	2007 (N/A)				
P-37-028502			Franciscan Gardens Site	2007 (N/A)	SD-14791			
P-37-028508		3172 1St Ave	Dr. Oscar J. Kendall House	2007 (N/A)		HP2. Single Family Property	7N	
P-37-028509			R. H. Gunnis House	2007 (N/A)				
P-37-028510		1760 W Lewis St	Nathan Rigdon and Morris B. Levin House	2007 (Legacy 106 Inc)			3S	
P-37-028515		1875 Sunset Blvd	William and Fidelia McKittrick House	2007 (Legacy 106 Inc)		HP2. Single Family Property		
P-37-028516		1885 Sheridan Ave	Dr. Leon C and Dr. Louise D. Long House	2007 (Allen Hazard & Janet O'dea)		HP2. Single Family Property		
P-37-028524			William Mason Fortescue Residence	2007 (N/A)				
P-37-028525		3147 Front St	Charles A. Martin House	2007 (N/A)			7R	
P-37-028532		3353 Albatross St	Alice Lee Home #2	2007 (N/A)		HP2. Single Family Property	5S2	
P-37-028547		3303 2nd Ave	Mertzmann- Winans Residence	2007 (Dr. Ray Brandes)		HP2. Single Family Property	7N	
P-37-028550		3551 Front St	John & Annie Moore Home	2007 (N/A)		HP2. Single Family Property	3S	
P-37-028552			**Designated Sections of Midway Dr. (La Playa Trail)**	**2007 (N/A)**	**SD-16448**	**HP37. Highway/Trail**		**Yes**
P-37-028573	CA-SDI-018383		El Fandango Site	2007 (ASM Affiliates, Inc.)	SD-14791			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-028576		4119 Palmetto Way	Boulter/ Melhorn House	2007 (Legacy 106 Inc)		HP2. Single Family Property		
P-37-028582		504 Thorn St	Solar Apartments	2007 (Heritage Architecture and Planning)		HP3. Multiple Family Property		
P-37-028584		3330 6th Ave	Francis and Florence Mead Residence	2007 (Heritage Architecture and Planning)		HP2. Single Family Property		
P-37-028586		516-522 Thorn St		2007 (Heritage Architecture and Planning)		HP3. Multiple Family Property		
P-37-028587		3340 6th Ave		2007 (Heritage Architecture and Planning)		HP2. Single Family Property		
P-37-028588		2901 5th Ave		2007 (Heritage Architecture and Planning)				
P-37-028589		540 Thorn St		2007 (Heritage Architecture and Planning)				
P-37-028594		3255 2nd Ave	Otis Residence	2007 (N/A)				
P-37-028595	CA-SDI-021348		Casa De Cota Site	2007 (Historic Preservaion Dept.); 2014 (Erica Pawlowski, Dpr, Southern Service Center)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-028598			Mason St School	2007 (Historic Preservaion Dept.)				
P-37-028599			Chapel of Immaculate Conception "Adobe Chapel"	2007 (City of San Diego)				
P-37-028600	CA-SDI-018591		Casa De Estudillo; Casa De Estudillo	2007 (State of Califonia District Preservation Officer); 2008 (Department of Parks and Recreation)	SD-12334			
P-37-028601		2515 San Diego Ave	Gatewood House	2007 (Frida Trup)		HP6. Commercial Building, 1-3 Stories	5S2	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-028602			Emmett House Site	2007 (N/A)				
P-37-028619	CA-SDI-018401		Ryan Aeronautical Company Historic District	2007 (Affinis)	SD-13453, SD-13458, SD-14431			
P-37-028620		2340 Sillwater Road, Suite A-D	United Airlines 1931 Hanger and Terminal	2007 (Affinis)	SD-13453, SD-14431, SD-17581	HP8. Industrial Building		
P-37-028671		3614 Hyacinth Dr	Gertrude Ossenburg House	2007 (Linda A. Canada)				
P-37-028726		1302 Washington Place	King Residence	2007 (N/A)				
P-37-028790			The William F. Franzen House and Cabinet Shop	2007 (Johson & Johnson Architecture)				
P-37-028795		900 W 23rd St	Santa Fe Terminus Depot	2007 (N/A)				
P-37-028797	CA-SDI-018507		Gila House Site	2007 (N/A)				
P-37-028798		2610 San Diego Ave	St Joseph's Rectory/ Old Town Convent	2007 (Old Town Trolley Tours)				
P-37-028799			Protestant Cemetery Site Old Town San Diego	2007 (N/A)				
P-37-028823			San Pasqual Grave Site	2007 (N/A)				
P-37-028902		3720 3rd Ave	Siess House	2007 (N/A)				
P-37-028904			Spanish Landing Park	2007 (City of San Diego)	SD-13448, SD-13453, SD-13458, SD-14311, SD-14431			
P-37-028966		3932 Alameda Place	Mack House	2007 (Is Architecture)				
P-37-028979	CA-SDI-018584		A-1 Storage Lot	2007 (ASM Affiliates, Inc.)				
P-37-029025			Beach Cottage Community Plan Area (District)	2008 (N/A)				
P-37-029329		3612 Elliott St	La Casa Hermosa-A.M. Southard Co. House	2008 (Christianne Knoop & Beth Montes)		HP2. Single Family Property		
P-37-029331		2750 Rosecrans St	Katherine R. Stadler/Gustav A. Hanssen House	2008 (Ronald V. May)		HP2. Single Family Property		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-029332		3939 Saint James Pl	Harold B. & Augusta Starkey/Frank O. Wells House	2008 (Ronald V. May)		HP2. Single Family Property	3	
P-37-029333		2261 San Juan Road		2008 (Scott Moomjian)		HP2. Single Family Property	6Z	
P-37-029476			Paseo De Mission Hills - A	2008 (Icf Jones & Stokes)	SD-12064			
P-37-029700	CA-SDI-018995		Hcn-S-10	2008 (Laguna Mountain Environmental, Inc.)	SD-13461			
P-37-029967		4285 Altamirano Way	R.R. W "Spec" House #1	2008 (Scott Moomjian)		HP2. Single Family Property	52	
P-37-030068		3519 Dove Ct	The Baron X. Kouch/Norma Meyer Schuh Spec House #1	2008 (Legacy 106 Inc)		HP2. Single Family Property	3S	
P-37-030108		2415-2421 Union St	Rattray House	2008 (N/A)			6Z	
P-37-030188			Fema-SD-001	2008 (Urs Corporation)	SD-11823			
P-37-030582		3311 Udall St	Eterson, Wahrenberger	2009 (Scott A Moomjian)				
P-37-030583		1433 Puterbaugh St	Keller, Ruocco House	2009 (Scott A Moomjian)				
P-37-030584		4186 Jackdaw St	Alberta Security, Melhorn Construction	2009 (Christianne Knoop & Beth Montes)				
P-37-030871			Senator Lucy Killea / Ralph E. Hurlburt House	2009 (Vonn Marie May)				
P-37-030871		3248 Brant St	Roberta Frank Home			HP2. Single Family Property	3	
P-37-030928			Hcn-I-01	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030929			Hcn-I-02	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030930			Hcn-I-03	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030931			Hcn-I-04	2009 (Laguna Mountain Environmental, Inc.)				

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-030932			Hcn-I-05	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030933			Hcn-I-06	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030934			Hcn-I-07	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030935	CA-SDI-019628		Hcn-S-01	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030936	CA-SDI-019629		Hcn-S-02	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030937	CA-SDI-019630		Hcn-S-03	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030938	CA-SDI-019631		Hcn-S-04	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030939	CA-SDI-019632		Hcn-S-05	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030940	CA-SDI-019633		Hcn-S-06	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030941	CA-SDI-019634		Hcn-S-07	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030942	CA-SDI-019635		Hcn-S-08	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030943	CA-SDI-019636		Hcn-S-09	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030944	CA-SDI-019637		Hcn-S-11	2009 (Laguna Mountain Environmental, Inc.)				
P-37-030945	CA-SDI-019638		Hcn-S-12	2009 (Laguna Mountain Environmental, Inc.)				

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-030946			Building 11	2009 (Urs Corp)				
P-37-031423	CA-SDI-019958		Merrill Gardens Temp-1	2010 (Brian F. Smith & Associates)				
P-37-031822		3065 Union St	Napoleon J. Roy House	2011 (Archaeos)		HP2. Single Family Property	3S	
P-37-031861	CA-SDI-020221		Temp-1 (3921 Ampudia)	2011 (Brian F. Smith & Associates)	SD-17068, SD-18216			
P-37-031962	CA-SDI-020233		Smvts Temp 1	2011 (Brian F. Smith & Associates)	SD-14791			
P-37-032538	CA-SDI-020661		Fdr-S-1; Pico Motor Hotel	2012 (Laguna Mountain Environmental, Inc.)	SD-13746, SD-17021	AH2. Foundations; AH4. Privy Pits/Trash Scatters/Dumps; Ap3. Ceramic Scatter		
P-37-032540	CA-SDI-020663		Mvb-1	2012 (Brian F. Smith & Associates)	SD-13438	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-032549	CA-SDI-020670		Sg682-1	2012 (Brian F. Smith & Associates)	SD-13436	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-032899	CA-SDI-020784		T-Mobile W Presidio Park Project - Temp 1	2013 (Brian F. Smith & Associates)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-032934		1895 Hancock St	Canada Dry Building	2013 (Crawford Historic Services)		HP6. Commercial Building, 1-3 Stories	5S2	
P-37-032943		2672 Poinsettia Dr	James and Alice Lee House	2013 (Scott Moomjian)		HP2. Single Family Property	5S2	
P-37-032944		4386 Trias St	John Snyder/Ralph E. Hurlburt and Charles H. Tifal House	2013 (Legacy 106, Inc.)		HP2. Single Family Property	3S	
P-37-032945		2961 1St Ave	John Henry and Katherine Zitt Residence	2013 (Jaye Macaskill)		HP2. Single Family Property	3S	
P-37-032946		4364 Witherby St	Danforth & Bauer Spec House	2013 (Johnson & Johnson Architecture)		HP2. Single Family Property		
P-37-032949			J. Rex Murray & Alice M. Spec House	2013 (Scott Moomjian)		HP2. Single Family Property		
P-37-033122			Otm-I-1	2013 (Laguna Mountain)		AH16. Other		
P-37-033134		4129 Falcon St	John W Donohue Spec House #1	2013 (Allen Hazard & Janet O'dea)		HP2. Single Family Property		
P-37-033135		2306 Pine St		2013 (Vonn Marie May)		HP2. Single Family Property		
P-37-033137		4494 Hortensia St		2013 (Is Architecture)		HP2. Single Family Property		
P-37-033137		4494 Hortensia St				HP2. Single Family Property		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-033146		1915 Sunset Blvd	Henry H. and Lavina Nelson Speculation House #2	2013 (Legacy 106, Inc.)		HP2. Single Family Property	7N	
P-37-033270			Wf-S-1	2013 (Laguna Mountain)		AH14 (Ships/Barges)		
P-37-033271			Wf-I-1	2013 (Laguna Mountain)		AH16. Other		
P-37-033486			Fl-016	2013 (Ecorp)		AH16. Other		
P-37-033489	CA-SDI-021061		Colorado House Gdp #7; Gdp #07 (1977 General Development Plan Designation)	2013 (Laguna Mountain)		AH4. Privy Pits/Trash Scatters/Dumps; HP4. Ancillary Building; H5. Hotel/Motel; HP6. Commercial Building, 1-3 Stories		
P-37-033489		2733 San Diego Ave				HP5. Hotel/Motel; HP6. Commercial Building, 1-3 Stories; HP4. Ancillary Building	0	
P-37-033490	CA-SDI-021063	2737 San Diego Ave	Casa De Rodriguez/Racine & Laramie Gdp #5;	2013 (Laguna Mountain)		AH4. Privy Pits/Trash Scatters/Dumps; AH5. Well/Cistern; HP2. Single Family Property; HP6. Commercial Building, 1-3 Stories		
P-37-033491	CA-SDI-021064	2731 San Diego Ave	San Diego Courthouse	2013 (Laguna Mountain)		HP6. Commercial Building, 1-3 Stories; HP14. Government Building		
P-37-033537	CA-SDI-021080		Iso-G799-1	2014 (Brian F. Smith & Associates)	SD-15074	AH16. Other		
P-37-033555		2137 Pacific Hwy	Fat City Steakhouse; China Camp; Denny's; Formerly Top's Restaurant and Motel	2014 (Kathleen Crawford)		HP6. Commercial Building, 1-3 Stories		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-033557		13 Pomerado Road	Highway 395	2013 (Larry Tift, ASM Affiliates, Inc.); 2015 (Kent Manchen, Matt DeCarlo, ASM Affiliates, Inc.); 2017 (Haley Chateene, Pangis); 2017 (A. Foglia, K. Keckeisen, Pangis, Inc.); 2018 (Sarah Stringer-Bowsher, ASM Affiliates, Inc.)	SD-17576	Ah7. Road/Trail/Railroad Bed; HP37. Highway/Trail:		
P-37-033596			Broadstone Balboa Feature 1	2014 (ASM)		AH2. Foundations		
P-37-033808		2829 Juan St	Caltrans District 11 Former Office Building	2014 (Caltrans)		HP14. Government Building	4CM	
P-37-033893		2930 Barnard St	Barnard Elementary School	2013 (Timothy Yates, ICF International)		HP15. Educational Building	0	
P-37-033896			HVH-01	2014 (Doug Mengers, Matthew DeCarlo, Jerome Schaefer, ASM Affiliates)	SD-17223	AH14 (Ships/Barges) - Boat		
P-37-033920	CA-SDI-021307		Hilton-ASM-01	2014 (Larry Tift, ASM Affiliates, Inc.)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-034095	CA-SDI-021346		Alvarado's Lot; Casa De Alvarado (GDP 19a); Johnson Building (GDP 19); Alvarado Saloon (GDP 63); Alvarado-Llucia; "French Bakery"; Nottage Tin Shop and Residence (GDP 20a); Bradshaw and Anderson's Saloon (GDP 20b)	2014 (Bethany Weisberg, California Department of Parks and Recreation, Southern Service Center)		AH2. Foundations; AH4. Privy Pits/Trash Scatters/Dumps		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-034096	CA-SDI-021347		Casa De Serrano; Gdp#28a; Casa De Rafaela Serrano; Serrano-Soto-Rose; Ensworth Store	2014 (Bethany Weisberg, California Dept. of Parks and Recreation, Southern Service Center)	SD-17021	AH2. Foundations		
P-37-034097	CA-SDI-021349		Church-Asher; GSP #60 - Church's Lot; Church-Wallack-Asher	2014 (Bethany Weisberg, California Department of Parks and Recreation, Southern Service Center)		AH2. Foundations; AH4. Privy Pits/Trash Scatters/Dumps		
P-37-034098	CA-SDI-021350		La Tienda General (General Store); Casa De Alvarado; Gdp#37	2014 (Nicole Turner, Bethany Weisberg, California Department of Parks and Recreation, Southern Service Center)	SD-17021	AH2. Foundations; AH4. Privy Pits/Trash Scatters/Dumps		
P-37-034099	CA-SDI-021351		Wallack Store & May's Saddle Shop; Gdp#09 (Unidentified Store); Gdp#09a (May's Saddle Shop)	2014 (Bethany Weisberg, California Department of Parks and Recreation, Southern Service Center)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-034100	CA-SDI-021352		Ybarra-Wilder-Smith; Gdp#29; Machado-Smith House; Machado-Wilder-Smith; the Machado-Albert B. Smith House	2014	SD-17021	AH2. Foundations; AH4. Privy Pits/Trash Scatters/Dumps		
P-37-034101								
P-37-034303								
P-37-034304								
P-37-034305								
P-37-034306								
P-37-034307								

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-034308								
P-37-034309								
P-37-034310								
P-37-034311								
P-37-034312								
P-37-034313								
P-37-034314								
P-37-034315								
P-37-034316								
P-37-034317								
P-37-034318								
P-37-034319		4477 Pacific Hwy				HP8. Industrial Building	0	
P-37-034320								
P-37-034321								
P-37-034322		877 Sherman St	Property No. 21			HP6. Commercial Building, 1-3 Stories	6Y	
P-37-034323		5280 Anna Ave				HP8. Industrial Building	0	
P-37-034324		5265 Lovelock St				HP8. Industrial Building	0	
P-37-034325		5258- 5284 Anna Ave				HP8. Industrial Building	6Y	
P-37-034326		5225- 5245 Lovelock St				HP8. Industrial Building	6Y	
P-37-034327		4901- 4909 Pacific Hwy				HP8. Industrial Building	0	
P-37-034328		5202 Lovelock St				HP8. Industrial Building	6Y	
P-37-034329		4882 Naples St				HP3. Multiple Family Property	0	
P-37-034330		4874 Naples St				HP3. Multiple Family Property	0	
P-37-034331		4875- 4883 Naples St				HP3. Multiple Family Property	2S2	
P-37-034332								
P-37-034333								
P-37-034334		1177- 1205 Knoxville St				HP6. Commercial Building, 1-3 Stories	0	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-034335		1245 Knoxville St				HP6. Commercial Building, 1-3 Stories	0	
P-37-034336		1244 Knoxville St				HP8. Industrial Building	0	
P-37-034337		1458-1468 Morena Blvd				HP3. Multiple Family Property	0	
P-37-034338		1540 Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034339		1579 W Morena Blvd				HP3. Multiple Family Property	0	
P-37-034340		1623- 1645 W Morena Blvd				HP3. Multiple Family Property	0	
P-37-034341		1655 W Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034342		1717 W Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034343		1398 Lieta St			SD-17776	HP2. Single Family Property	0	
P-37-034344		1801 Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034345		1813- 1815 Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034346		1817 W Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034347		1865 Morena Blvd				HP3. Multiple Family Property	0	
P-37-034348		1901 Morena Blvd				HP3. Multiple Family Property	0	
P-37-034349		1915- 1917 Morena Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-034350		1929- 1935 Morena Blvd				HP3. Multiple Family Property	0	
P-37-034438								
P-37-034555	CA-SDI-021539							
P-37-034627	CA-SDI-021556							
P-37-034628								
P-37-034705								
P-37-034945		4105 Alameda Dr				HP2. Single Family Property		
P-37-034946		4243 Jackdaw St				HP2. Single Family Property		
P-37-035152								
P-37-035173								

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-035177								
P-37-035180								
P-37-035181		3500 Sports Arena Blvd	San Diego Sports Arena			HP42. Stadium/Sports Arena	6Y	
P-37-035198								
P-37-035203								
P-37-035203		1417 Sutter St	William K. and Edith Potter Spec House #1			HP2. Single Family Property	0	
P-37-035211		4290 Rudolph St				HP2. Single Family Property	0	
P-37-035244		1515 W Lewis St	William Galbraith House			HP2. Single Family Property	6Y	
P-37-035245		1530 Fort Stockton Dr				HP2. Single Family Property	0	
P-37-035262		3033 Elliott St	William R. and Minerva D. Welton Residence			HP2. Single Family Property	0	
P-37-035263		3030 Dumas St				HP2. Single Family Property	0	
P-37-035264		2243 Guy St	Hervey K. Graham and Alva M. Graham/ Ralph L. Frank House			HP2. Single Family Property	0	
P-37-035265		4274 Randolph St	Dr. and Mrs. Andrew B. and Augusta I. Wessels House			HP2. Single Family Property	0	
P-37-035274		2180 Chatsworth Blvd				HP6. Commercial Building, 1-3 Stories	0	
P-37-035284		3231 Front St				HP2. Single Family Property	0	
P-37-035285		4019 Hawk St	4019 Hawk St			HP2. Single Family Property	0	
P-37-035498		4460 Hermosa Way				HP2. Single Family Property	0	
P-37-035500								
P-37-035501								
P-37-035503		2630 Chatsworth Blvd	Henry Gilbert Fenton House			HP2. Single Family Property	0	
P-37-035510		44200 Taylor St	Padre Trail Inn			HP5. Hotel/Motel	0	
P-37-035512		3745 3rd Ave				HP2. Single Family Property	0	
P-37-035518		2684 Jonquil Dr	Charles J. and Hazel W Hassell Residence			HP2. Single Family Property	0	
P-37-035519		2304 Juan St	The United States Holding Company Residence			HP2. Single Family Property	0	
P-37-035551		**Sports Arena Blvd**	**Building 34 (salvage yard)**			**HP14 (Government building)**	**6Z**	**Y**
P-37-035570		1769-1797 San Diego Ave	California Auto Court			HP6. Commercial Building, 1-3 Stories		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-035573		1809 W Montecito Way				HP2. Single Family Property; HP30		
P-37-035576								
P-37-035578								
P-37-035592								
P-37-035597								
P-37-035601								
P-37-035608								
P-37-035610					SD-16535			
P-37-035613								
P-37-035614								
P-37-035615								
P-37-035616								
P-37-035634								
P-37-035649								
P-37-035651								
P-37-035652								
P-37-035657								
P-37-035660			IC Informal - Rnid-2947					
P-37-035841								
P-37-035899								
P-37-035901		3917 Alameda Dr	The Alberta Security Company/Martin V. Melhorn Speculation House #4	2015 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)		HP2. Single Family Property		
P-37-035901		3917 Alameda Dr	Irving Brockett House			HP2. Single Family Property	7N	
P-37-036032			Pacific Wern Bank	2014 (Tara Cubie, Ebi Consulting)		HP6. Commercial Building, 1-3 Stories (1-3 Story Commercial Building)		
P-37-036046			Machado-Smith Edible Date Palm; Phoneix Dactylifera At Machado-Smith House Garden Site	2016 (Alexander D. Bevil, California Department of Parks and Recreation)		HP30 (Trees/Vegetation) - Trees/Vegetation		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-036108		4307 3rd Avenue	Hillcrest Receiving Home	2013 (Shannon Davis & Jennifer Krintz, ASM Affiliates, Inc.)		HP14 (Government Building)		
P-37-036109		4307 3rd Avenue	Hillcrest Receiving Home School Building; IC Informal - Rnid-3101	2013 (Shannon Davis & Jennifer Krintz, ASM Affiliates, Inc.)		HP14. Government Building; HP15. Educational Building		
P-37-036173		Point Loma High School	Point Loma High School; IC Informal - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates)	SD-17187	HP15. Educational Building		
P-37-036174		Point Loma High School	Auto Shop; Building 10-13	0215 (Marilyn Novell & Shannon Davis, ASM Affiliates, Inc.)	SD-17187	HP15. Educational Building		
P-37-036175		Point Loma High School	Boys' Gymnasium; Building 07-07, Main Gym; Otis Resource Number - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates)	SD-17187	HP15 (Educational Building)		
P-37-036176		Point Loma High School	Boys Locker Room (Rotc); Building 06-06, Rotc IC Informal - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affilliates, Inc.)	SD-17187	HP15. Educational Building		
P-37-036177		Point Loma High School	Building 300; Building 10-12; IC Informal - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates)	SD-17187	HP15. Educational Building		
P-37-036178		Point Loma High School	Building 400; Building 09-11; IC Informal - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates, Inc.)	SD-17187	HP15. Educational Building		
P-37-036179		Point Loma High School	Building 600; Building 03-03; IC Informal - Rnid-3114	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates, Inc.)	SD-17187	HP15. Educational Building		
P-37-036180		Point Loma High School	Girls' Gymnasium; Small Gym, Building 07-08	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates, Inc.)	SD-17187	HP15. Educational Building		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-036181		Point Loma High School	Girls Locker Room; Building 05-05-	2015 (Marilyn Novell & Shannon Davis, ASM Affiliates)	SD-17187	HP15. Educational Building		
P-37-036347			Ccs-L-1 (Isolate); IC Informal - Rnid-3158	2017 (Andrew Pigniolo, Laguna Mountain Environmental, Inc.)		AH16. Other		
P-37-036520			28829-Iso-1; IC Informal - Rnid-3319	2016 (Paul Howard, City of San Diego)	SD-16901	AH16. Other		
P-37-036521			28829-Iso-2; IC Informal - Rnid-3319	2016 (Haley Chasteen, City of San Diego)	SD-16901	AH16. Other		
P-37-036522			Juan-H-1; IC Informal - Rnid-3320	2017 (Lauren Downs, AECOM)	SD-16902	HP28. St Furniture (St Furniture)		
P-37-036534			Creole Café Dining Room and Kitchen Buildings; Whaley House Complex; IC Informal - Rnid-3349	2017 (M. Mello, J. Hollins, AECOM)		HP6. Commercial Building, 1-3 Stories		
P-37-036756			IC Informal - Rnid-3433; San Diego International Airport Terminal 1; Building 1	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		
P-37-036757			IC Informal - Rnid-3433; San Diego International Airport Terminal 2; Building 2	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		
P-37-036758			IC Informal - Rnid-3433; San Diego International Airport Communter Terminal; Building 3/21	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		
P-37-036759			IC Informal - Rnid-3433; San Diego International Airport United Cargo Facility; Building 4	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-036760			IC Informal - Rnid-3433; San Diego International Airport Southw Airlines Cargo Facility; Building 5	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		
P-37-036761			IC Informal - Rnid-3433; San Diego International Airport American Airlines Hanger; San Diego International Airport Air Oasis Company Hangar; Building 11	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP39. Other		
P-37-036762			IC Informal - Rnid-3433; San Diego International Airport Procurement Warehouse; Building 14	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)	SD-17581	HP8. Industrial Building		
P-37-036763			IC Informal - Rnid-3433; San Diego International Airport Building 15; Building 15	2017 (Courtney Accardy, Brian F. Smith and Associates, Inc.)		HP39. Other		
P-37-036795	CA-SDI-022207		IC Informal - Rnid-3452; MC-S-1	2017 (Andrew Pigniolo, Laguna Mountain Environmental)	SD-17588	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-036964	CA-SDI-022251	1919 Pacific Highwy Temp-1	IC Informal - Rnid-3840	2018 (Courtney J. Accardy, Brian F. Smith and Associates, Inc.)	SD-18109	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-036975			Joel L. Brown Spec. House No. 2	2017		HP2. Single Family Property		
P-37-036976		2744 Azalea Drive	Watson Residence	2016		HP2. Single Family Property		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-036981		2285 Pine St		2016 (Rebecca McManus, Is Architecture)		HP2. Single Family Property		
P-37-036984		4152 Ibis St	The Holly and Nellie Perrine / Thomas Faulconer House	2015 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-16496	HP2. Single Family Property		
P-37-036986		2324 Pine St	The Captain Lloyd and Edith Gray / Lilian Rice / Wurster Construction Company House	2016 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-16498	HP2. Single Family Property	3S	
P-37-036986		2324 Pine St	Lloyd Gray House			HP2. Single Family Property	3	
P-37-036987			Elizabeth H. Maw, Eugene Hoffmann, Dennstedt Company House	2016 (Sarai and Paul W Johnson, Johnson & Johnson Architecture)	SD-16499	HP2. Single Family Property; HP4. Ancillary Building		
P-37-036994		3738 Lotus Dr	The Paul and Ada Hunt House	2015 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-16511	HP2. Single Family Property		
P-37-037001		2750 Fourth Avenue		2015 (Scott A. Moomjian, Scott A. Moomjian, Esq.)	SD-16519	HP39. Other		
P-37-037002			R. Douglas Maw & Eunice Maw House; Lucca Residence	2016 (Scott A. Moomjian, Scott A. Moomjian, Esq.)	SD-16520	HP2. Single Family Property		
P-37-037009			Town and Country; Town and Country Hotel; Town and Country Club; Convention Center; 7 Inns of America; Le Baron Hotel	2016	SD-16528	HP5. Hotel/Motel		
P-37-037010		2513/2515 Union St	Truax House	2016 (Soheuk Nakshab, Nakshab Development & Design, Inc.)	SD-16530	HP2. Single Family Property	3S	
P-37-037012		4180 3rd Ave		2015 (Emily and Ralph Lufkin)	SD-16532	HP3. Multiple Family Property		
P-37-037013		140 Quince St	Rebecca Schiller Residence	2016 (Ruth C. Alter, Archaeos)	SD-16533	HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-037023			Midway Post Office; Midway Postal Service Processing and Distribution Center	2016 (Brian F. Smith, Jennifer R. Kraft, Brian F. Smith and Associates, Inc.)	SD-16743	HP39. Other		
P-37-037028			Gladys May Benson House	2016 (Allen Hazard, Janet O'dea, Allen Hazard and Janet O'dea)	SD-16791	HP2. Single Family Property		
P-37-037070	CA-SDI-022271		IC Informal - Rnid-3874; Mission Hills-Hillcrest Library Temp-1	2018 (Andrew J. Garrison, Brian F. Smith and Associates, Inc.)	SD-17821	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-037081		3554-3590 Kettner Blvd & 1949 W Walnut St	Arts & Crafts Press; Rush Press	2016	SD-16796	HP6. Commercial Building, 1-3 Stories		
P-37-037090			IC Informal - Rnid-3889; Group 701 Isolate-1	2018 (Jillian L. Hahnlen, Brian F. Smith & Associates, Inc.)	SD-17605	AH4. Privy Pits/Trash Scatters/Dumps; AH16. Other		
P-37-037091			IC Informal - Rnid-3889; Group 701 Isolate-2	2018 (Jillian L. Hahnlen, Brian F. Smith & Associates, Inc.)	SD-17605	AH4. Privy Pits/Trash Scatters/Dumps; AH16. Other		
P-37-037092			IC Informal - Rnid-3889; Group 701 Isolate-3	2018 (Jillian L. Hahnlen, Brian F. Smith & Associates, Inc.)	SD-17605	AH4. Privy Pits/Trash Scatters/Dumps; AH16. Other		
P-37-037095			L. Madeline Gunn House; Gomez Residence	2016 (Scott A. Moomjian, Scott A. Moomjian, Esq.)	SD-16826	HP2. Single Family Property		
P-37-037104		1329 W Spruce St		2016 (K. Crawford, Office of Marie Burke Lia)	SD-16830	HP2. Single Family Property		
P-37-037115		3681-3685 3rd Avenue		2017 (J.R.K. Stropes, Brian F. Smith, Brian F. Smith and Associates, Inc.)	SD-17087	HP3. Multiple Family Property		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-037117		9132 Larga Court		2017 (J.R.K. Stropes, Stephen E. Griffin, Brian F. Smith, Brian F. Smith and Associates, Inc.)	SD-17089	HP3. Multiple Family Property		
P-37-037120		4310 Avalon Drive	Judge William A. and Annie B. Sloane House	2016		HP2. Single Family Property		
P-37-037124		3305 Voltaire St	Will C. Crawford and Katherine Crawford Residence	2016 (Vonn Marie May)		HP2. Single Family Property		
P-37-037129		3673-3677 1/2 3rd Avenue		2017 (J.R.K. Stropes, Brian F. Smith, Brian F. Smith and Associates, Inc.)	SD-17138	HP3. Multiple Family Property		
P-37-037197			Edwin Kennedy Hurlbert House	2003 (R. Alter, K. Crawford, S. Moomjian, Archaeos); 2016 (Wendy L. Tinsley Becker, Urbana Preservation & Planning, Llc)	SD-17266	HP2. Single Family Property		
P-37-037205		1965 Sunset Blvd	The Henry and Lavina Nelson / Martin V. Melhorn House	2017 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-17277	HP2. Single Family Property		
P-37-037206		2206 Juan St	The Gordon and Garnet Thompson / Alexander Schreiber House	2017 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-17278	HP2. Single Family Property		
P-37-037231		3244 Dumas St	The Minnie Scheibe / Bathrick Brothers Speculation House	2016 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-17279	HP2. Single Family Property		
P-37-037250		3202 Curtis St	The Augustus and Louise Cosgrove House	2017 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-17282	HP2. Single Family Property		
P-37-037251			William Thomas Straw House	2016 (Scott A. Moomjian, Scott A. Moomjian, Esq.)	SD-17284	HP2. Single Family Property		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-037252		4025 Eagle St		2017 (Scott A. Moomjian, Scott A. Moomjian, Esq.)	SD-17285	HP2. Single Family Property		
P-37-037254			The Robert J. Kelly House	2017 (Allen Hazard and Janet O'dea, Allen Hazard and Janet O'dea)	SD-17290	HP2. Single Family Property		
P-37-037274		2702 Willow St	W.M. and Gertrude G. Tappan Residence; Megan Guyott Residence; Edward Molloy, Frank Hope Jr. House	2014; 2017 (Sarai and Paul W Johnson, Johnson & Johnson)	SD-17293	HP2. Single Family Property; HP4. Ancillary Building		
P-37-037277		4125 Hermosa Way,	The Adelphi Security Company Speculation House	2017 (Ronald V. May, Kiley Wallace, Legacy 106, Inc.)	SD-17296	HP2. Single Family Property		
P-37-037288	CA-SDI-022320	915 Grape St	IC Informal - Rnid-3916; Temp-1	2018 (Jillian L. Hahnlen, Brian F. Smith & Associates, Inc.)	SD-18321	AH4. Privy Pits/Trash Scatters/Dumps		
P-37-037631	CA-SDI-022463		Li-S-1; IC Informal - Rnid-4091	2018 (Andrew Pigniolo, Laguna Mountain Environmental)		Ap15. Habitation Debris		
P-37-037632	CA-SDI-022464		Li-S-2; IC Informal - Rnid-4091	2018 (Andrew Pigniolo, Laguna Mountain Envrionmental)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-037633	CA-SDI-022465		Li-S-3; IC Informal - Rnid-4091	2018 (Andrew Pigniolo, Laguna Mountain Environmental)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-037634	CA-SDI-022466		Li-S-4; IC Informal - Rnid-4091	2018 (Andrew Pigniolo, Laguna Mountain Environmental)		AH4. Privy Pits/Trash Scatters/Dumps		
P-37-037635	CA-SDI-022467		Li-S-5; IC Informal - Rnid-4091	2018 (Andrew Pigniolo, Laguna Mountain Envrionmental)		AH4. Privy Pits/Trash Scatters/Dumps		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-037708			Resource Name - Teco-01	2017 (Arleen Garcia-Herbst, Spindrist Archaeological Consulting)	SD-17392	AH16. Other		
P-37-037709			Resource Name - Teco-02	2017 (Arleen Garcia-Herbst, Spindrift Archaeological Consulting)	SD-17392	AH16. Other		
P-37-037710			Resource Name - Teco-03	2017 (Arleen Garcia-Herbst, Spindrift Archaeological Consulting)	SD-17392	AH16. Other		
P-37-037723			Resource Name - the Dr. Charles and Nancy Rees / William Wahrenberger House	2018 (Ronald V. May and Kiley Wallace, Rpa, Legacy 106 Inc.)	SD-17445	HP2. Single Family Property		
P-37-037726					SD-17455			
P-37-037727					SD-17459			
P-37-037729					SD-17561			
P-37-037738	CA-SDI-022481		IC Informal - Rnid-4101		SD-17722			
P-37-037772	CA-SDI-022495		IC Informal - Rnid-4113		SD-17681			
P-37-037773	CA-SDI-022496		IC Informal - Rnid-4113		SD-17681			
P-37-037797			IC Informal - Rnid-4133					
P-37-037798	CA-SDI-022511		IC Informal - Rnid-4133					
P-37-037799	CA-SDI-022512		IC Informal - Rnid-4133					
P-37-037800	CA-SDI-022513		IC Informal - Rnid-4133					
P-37-037801	CA-SDI-022514		IC Informal - Rnid-4133					
P-37-037802	CA-SDI-022515		IC Informal - Rnid-4133					
P-37-038121	CA-SDI-022521		IC Informal - Rnid-4137					
P-37-038268			IC Informal - Rnid-4169					
P-37-038577					SD-17755			
P-37-038581					SD-17760			

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
P-37-038583					SD-17763			
P-37-038584					SD-17765			
P-37-038585					SD-17766			
P-37-038587					SD-17768			
P-37-038589					SD-17771			
P-37-038592					SD-17779			
P-37-038596					SD-17789			
P-37-038598					SD-17792			
P-37-038764					SD-17903			
P-37-038765					SD-17904			
P-37-038766					SD-17905			
		0 Harbor Dr						
		Heritage Park	Christian House					
		Heritage Park	McConaughy House					
		Heritage Park	Burton House					
		Heritage Park	Bushyhead House					
		Heritage Park	Senlis Cottage, Hippen Cottage					
		0 Kenyon St	Hebrew Cemetery					
		0 Taylor St	Derby Dike				7L	
		0 Taylor St						
		0 Trias St	San Pasqual Graves Site Blk 450					
		0 Washington St	Bridge 57c-0009					
		100 W Robinson Ave				HP31	5	
		102 Dickinson St				HP2. Single Family Property	6Z	
		104-118 Dickinson St				HP3	6Z	
		136 Redwood St	Ernest & Ileen White Residence					
		720 Heber Ave	Arts				3b	
		1433 Puterbaugh St	Don and Rita Keller Residence			HP2. Single Family Property	5S2	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		1504 Fort Stockton Dr				HP2. Single Family Property	0	
		1845 Fort Stockton Dr	Dilley / Wallace House			HP2. Single Family Property		
		1855 Altamira Place	Hathaway House No. 2			HP2. Single Family Property	3S	
		1977 Titus St	The James and Florence Riach / Quality Bldg. & Securities Co. House			HP2. Single Family Property	3S, 4x	
		200 W University Ave				HP32	5	
		2112 Pine St	Lillian Arnett House			HP2. Single Family Property		
		2200 Pacific Hwy				HP8. Industrial Building, HP6. HP6. Commercial Building, 1-3 Stories		
		2223 Soto St					6Y	
		223 W Juniper St	Klauber House			HP2. Single Family Property		
		2242 Pine St				HP2. Single Family Property	6Z	
		2251 San Juan Road	Dr. and Mrs. Franklin G. Lindemulder Residence			HP2. Single Family Property		
		2260 Columbia St	Foster-Kleiser Co. Building					
		2293 San Juan Road	William Mason Fortesque Residence			HP2. Single Family Property	5S2	
		2308 Kettner Blvd	San Diego Macaroni Manufacturing Co.; Sidewalk Stamp - San Diego Macaroni				6Y	
		2315 Fort Stockton Dr	John W Snyder Company Model Home #2			HP2. Single Family Property		
		2404 India St	McDonough Building, General Uniform Co.				5S	
		2430 Union St	Fred W Osborne Or Osborne Residence			HP2. Single Family Property		
		2540 Congress St	Connors House			HP2. Single Family Property	3S	
		2540 Cosoy Way	Schulman House, Ward House				3S	
		2550 Mccain Road	Mccain House			HP2. Single Family Property		
		2574 Plum St	Borman and Eleanor Roulette Residence			HP2. Single Family Property		
		2604 San Diego Ave	Casa De Aguirre House Site Blk 452					
		2626 Clove St				HP2. Single Family Property		
		2675 Rosecrans St	MOQ, Commanding Officer				1D	
		2710 N Harbor Dr	Coast Guard Group Air Station				3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		2729 San Diego Ave	Exchange Hotel Site				7L	
		2732 Azalea Dr	Raymond and Margaret Taylor Residence			HP2. Single Family Property	5S2	
		2734 Calhoun St	Congress Hall Site				7L	
		2735 Rosecrans St	Moq, Senior Medical Officer				1D	
		2740 San Diego Av						
		2750 Kettner					2S2	
		2755 Rosecrans St	Moq, Commanding Officer				1D	
		2766 W Olive	A L Verner Residence				3S	
		2769 San Diego Ave	Wrightington Adobe Reconstruction				2D2	
		2801 Rosecrans St	Moq, Commanding Officer				1D	
		2808 4th Ave	Amy Strong House					
		2909 Chatsworth Blvd	Oral and Mildred Carpenter/Judge Joseph A. Kilgarif Residence			HP2. Single Family Property	5S2	
		2928 2nd Ave.	The Edith H. Hawley House			HP2. Single Family Property		
		3020 Dumas St	John Gordon McGregor Residence			HP2. Single Family Property	0	
		3036 Elliott St	Quality Building and Securities Company Spec House			HP2. Single Family Property		
		3045 James St	Thomas J. and Maud B. Brownrigg House			HP2. Single Family Property		
		3051 Rosecrans					2S2	
		3065 Rosecrans Pl	Peninsula Center				2S2	
		3130 2nd Ave	Emily Hill Wadsworth Residence			HP2. Single Family Property	5S2	
		3130 Shadowlawn	Beardsley, John, and Florence Porterfield House				1S	
		3141 Curlew St	Sweet Home			HP2. Single Family Property	3S	
		3221 Homer St	Daveid O. Dryden Speculation House			HP2. Single Family Property	5b	
		3226 W Spruce	Ed Alling Estate				3S	
		3302 Pacific Hwy	General Dynamics Facilities					
		3305 Yonge St	Zweck House			HP2. Single Family Property	3S	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		3311 Udall St	Mack and Ruth Esterson House			HP2. Single Family Property	5S2	
		3415 Elliott St	John and Lou Ernsting House			HP2. Single Family Property		
		3427 Freeman St	Fred and Helen Jarboe Rental Property			HP2. Single Family Property	5S2	
		3503 Jackdaw St				HP2. Single Family Property; HP4. Ancillary Building		
		3518 3rd Ave	Day's Little House					
		3665 Jackdaw St	Mary and Julia Pickett Spec House #1			HP2. Single Family Property		
		3696 Albatross St				HP2. Single Family Property	0	
		3703 Albatross St	Henry J. Lang Spec House #2			HP2. Single Family Property	0	
		3738 Front St	Sonnenschmidt Home				3S	
		3747 Eagle St	Ida R. Hedges House			HP2. Single Family Property	3	
		3800 Twiggs St	Casa De Cota				7L	
		3814 Hawk St	Leisenring Home				3S	
		3907 Hawk St	Ralph E. Hurlburt/Alexander Schreiber Spec House #2			HP2. Single Family Property		
		3917 Hawk St	Ralph E. Hurlburt/Alexander Schreiber Spec House #1			HP2. Single Family Property		
		3940 Harney St	Gila House Site Blk 483					
		3969 3rd Ave	Hillcrest Company					
		3986 Albatross	Arthur Dickerson House				3S	
		4002 Wallace St	Rose-Robinson Adobe Reconstruction				2D2	
		4003 Goldfinch/ 820 W Washington St	P.D. Griswold Building			HP6. Commercial Building, 1-3 Stories	0	
		4040 5th Ave				HP2. Single Family Property, HP4. Ancillary Building		
		4075 Couts St	Charles and Marie Brenner House			HP2. Single Family Property		
		4041 Ibis St	Green Manor				2S2	
		4100 Sunset Blvd	Pillars				5S2	
		4109 Sports Arena Blvd, Suite A				HP6. Commercial Building, 1-3 Stories		

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		4109 Sports Arena Blvd, Suite B				HP6. Commercial Building, 1-3 Stories		
		4115 Twiggs St	Robert Patterson & Lulu Bolam House			HP2. Single Family Property		
		412 University Ave	Jimmy Wong's Golden Dragon Neon Sign					
		4144 Lark St	John F Forward Jr House			HP2. Single Family Property		
		4167 Palmetto Way				HP2. Single Family Property		
		4167-4169 Jackdaw St				HP2. Single Family Property; HP4. Ancillary Building		
		4181 Stephens St				HP2. Single Family Property		
		4186 Jackdaw St	Alberta Security Company-Melhorn Construction Company House			HP2. Single Family Property	3S	
		4188 Arden Way				HP2. Single Family Property		
		4195 Stephens St				HP2. Single Family Property		
		4231 Witherby St	Jeanette E. & George R. Daley House			HP2. Single Family Property; HP38. Women's Property	3S	
		4239 St James Place	Morris B. Irvin Spec House #2			HP2. Single Family Property		
		4276 Trias St	Walter and Nettie Bellon / Lester Olmstead / Olmstead Building Company House			HP2. Single Family Property	5S2	
		4297 Pacific Hwy	Building 1, Air Force Plant 19			HP8. Industrial Building		
		4297 Pacific Hwy	Air Force Plant 19					
		4297 Pacific Hwy	Air Force Plant 19					
		4297 Pacific Hwy	Air Force Plant 19					
		4297 Pacific Hwy	Air Force Plant 19					
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Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		4330 Witherby St	4330 Witherby St			HP2. Single Family Property	3S	
		435 W Spruce St	Adelbert H. Sweet Home			HP2. Single Family Property	1S	
		435 W Thorn St	Morris and Lilian Herriman Residence			HP2. Single Family Property	52	
		4351 Ampudia St				HP2. Single Family Property	3S	
		4370 Trias St	John W Snyder Company Model Home #3			HP2. Single Family Property		
		4474 Hortensia St	Brooks House, Bowers House			HP2. Single Family Property	3S	
		4620 Trias St	Shattuck House				3S	
		5961 Linda Vista Dr						
		600 Laurel St	Bridge				1D	
		648 W Hawthorn St	Fiesta Apartments					
		800 W Ivy St					5S	
		800-808 W Washington St/4010 Falcon St	Funcheon Building			HP6. Commercial Building, 1-3 Stories	52	
		Ampudia St	Protestant Cemetery Site					
		Bainbridge Ct	Bainbridge Court - Naval Training Center, San Dieg				6Y	
		Barnett Ave	Usmc Recruit Depot				2S	
		Barnett St	Naval Training Station				1S	
		Belleau and Vera Cruz	Building 111				6Y	
		Belleau and Vera Cruz	Building No.118				6Y	
		Belleau and Vera Cruz	Building 129				6Y	
		Camp Pendleton	Building 43321				6Y	
		Camp Pendleton	Building 43322				6Y	
		Camp Pendleton	Building 43532				6Y	
		Camp Pendleton	Building 43533				6Y	
		Chauncey Rd	Building 34 (Pwc), Paint Shop-Naval Training Cente				6Y	
		Chauncey Rd	Building #41				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Chauncey Rd	Building #42				6Y	
		Chauncey Rd	Building 153-Carpenter Shop-Naval Training Center				6Y	
		Chauncey Rd	Building 179-Marine Issue-Boathouse)-Naval Trainin				6Y	
		Chauncey Rd	Building 186-Office Building-Naval Training Center				6Y	
		Chauncey Rd	Building 187-Storehouse-Naval Training Center				6Y	
		Chauncey Rd	Building 188-Storehouse				6Y	
		Chauncey Rd	Building 189-Automotive Hobby Shop-Naval Training				6Y	
		Chauncey Rd	Building 219-Handball Courts-Naval Training Center				6Y	
		Chauncey Rd	Building 220, Office Building - Naval Training Sta				6Y	
		Chauncey Rd	Building 221-Locker & Dressing Room 1 & 2-Naval Tr				6Y	
		Chauncey Rd	Building 388-Lumber Shed-Naval Training Center				6Y	
		Chauncey Rd	Building #417				6Y	
		Chauncey Rd	Building #428				6Y	
		Chauncey Rd	Bldg #31, Pwc Workshop - Naval Training Station				6Y	
		Chauncey Rd	Building #33				6Y	
		Congress St	The Machado Stewart Adobe				1D	
		Cushing Rd	Building #453				1D	
		Cushing Rd	Building 190-Transportation Office-Naval Training				6Y	
		Cushing Rd	Building 191-Office				6Y	
		Cushing Rd	Building 237-Central Bedding-Naval Training Center				6Y	
		Cushing Rd	Building 238-Office				6Y	
		Cushing Rd	Building 271-Swimming Pool #1				6Y	
		Cushing Rd	Building 328-NTC Headquarters-Naval Training Cente				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Cushing Rd	Building 330-Storehouse-Naval Training Center				6Y	
		Cushing Rd	Building 331-Beq-Naval Training Center				6Y	
		Cushing Rd	Building 332-School Building-Naval Training Center				6Y	
		Cushing Rd	Building 333-School Building-Naval Training Center				6Y	
		Cushing Rd	Building 361-Gas Pump Facility-Naval Training Cent				6Y	
		Cushing Rd	Building #454				1D	
		Cushing Rd	Public Toilet				6X	
		Decatur Rd	Building 32-Exchange Warehouse				1D	
		Decatur Rd	Building 200-Headquarters Building-Naval Training				1D	
		Decatur Rd	Bldg 43a				6Y	
		Decatur Rd	Building #43				6Y	
		Decatur Rd	Building #44a				6Y	
		Decatur Rd	Building #44				6Y	
		Decatur Rd	Building #45				6Y	
		Decatur Rd	Building 174-Public Works Storage-Naval Training C				6Y	
		Decatur Rd	Building 180-Cpo Club-Naval Training Center				6Y	
		Decatur Rd	Building 185-Metal Machine Shop-Naval Training Cen				6Y	
		Decatur Rd	Building 231-School				6Y	
		Decatur Rd	Building 232, Uniform Outlet Store - Naval Trainin				6Y	
		Decatur Rd	Building 234, Storehouse - Naval Training Station				6Y	
		Decatur Rd	Building 235-Storehouse-Naval Training Center				6Y	
		Decatur Rd	Building 262-School Building-Naval Training Center				6Y	
		Decatur Rd	Building 303-Center Fire Station-Naval Training Ce				6Y	
		Decatur Rd	Building 313-Classroom Building-Naval Training Cen				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Decatur Rd	Building 315-Brigade Headquarters-Naval Training C				6Y	
		Decatur Rd	Building 316-Photo Shop-Naval Training Center				6Y	
		Decatur Rd	Building 355-Office-Naval Training Center				6Y	
		Decatur Rd	Building 386-Storehouse (Cpo Club)-Naval Training				6Y	
		Decatur Rd	Decatur Road - Naval Training Center, San Diego				2D2	
		Decatur Rd	Ingram Plaza - Naval Training Center, San Diego				2D2	
		Decatur Rd	Lawrence Court - Naval Training Center, San Diego				2D2	
		Decatur Rd	Decatur Court - Naval Training Center, San Diego				6Y	
		Decatur Rd	Electrical Pad				6X	
		Dewey Rd	Building 22-Pump House-Naval Training Center				1D	
		Dewey Rd	Dewey Road - Naval Training Center, San Diego				2D2	
		Dewey Rd	John Paul Jones Court - Naval Training Center, San				2D2	
		Dewey Rd	School Building				6X	
		Dewey Rd	Middle Marker Building				6X	
		Dewey Rd	Electrical Pad				6X	
		Dewey Rd	Electrical Pad				6X	
		Dewey Rd	Electrical Pad				6X	
		Evans Rd	Building 286-School Building-Naval Training Center				6Y	
		Evans Rd	Building 287-School Building-Naval Training Center				6Y	
		Evans Rd	Building 288-Laundry-Naval Training Center				6Y	
		Evans Rd	Building 293-Office				6Y	
		Evans Rd	Building 378-Training Aids Building-Naval Training				6Y	
		Evans Rd	Building 379-School Building-Naval Training Center				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Evans Rd	Building 393-Storehouse (Paint Locker)-Naval Train				6Y	
		Evans Rd	Building 394-Storehouse (Paint Locker)-Naval Train				6Y	
		Farragut Rd	Building 227-Storage-Naval Training Center				6Y	
		Farragut Rd	Building 298-Regiment Hq-Naval Training Ctr				6Y	
		Farragut Rd	Farragut Court - Naval Training Center, San Diego				6Y	
		Harney St	Sherman Gilbert House				3S	
		Harney St	McConaughy House				3S	
		Harney St	Bushyhead House				3S	
		Harney St	Burton House				3S	
		Harney St	Christian House				3S	
		Harney St	Senlis Cottage, Hippen Cottage				3S	
		Juan St	Temple Beth Israel; Relocation of 1St Synagogue				3S	
		Laning Rd	Building 338 (Pwc), South Reservoir - Naval Traini				6Y	
		Laning Rd	Building 365 (Pwc), Pump House, Naval Training Sta				6Y	
		Laning Rd	Gatehouse 10				6Y	
		Luning Rd	Building 334-Office Building-Naval Training Center				6Y	
		Luning Rd	Building 338-South Resevoir-Naval Training Center				6Y	
		Luning Rd	Building 365-Pump House-Naval Training Center				6Y	
		Lytton Ave	Building 20-Gatehouse #1-Naval Training Center				1D	
		Lytton Ave	Building 21-Pass				1D	
		Lytton Ave	Building 368-Pump House-Naval Training Center				1D	
		Macdonough Rd	Building 304-Office Building-Naval Training Center				6Y	
		Macdonough Rd	Building 314-School Building-Naval Training Center				6Y	
		Macdonough Rd	Building 20				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Macdonough Rd	Building 30				6Y	
		Marine Corps Recruit Depot	Building 514				6Y	
		Mason St	Casa De Bandini				7L	
		Mayo Pl	Building 177-Library				1D	
		Mayo Pl	Building 208-North Chapel-Naval Training Center				1D	
		Mayo Pl	Building 226-Dry Cleaner				6Y	
		Mayo Pl	Building 228-Cold Storage Warehouse-Naval Training				6Y	
		Mayo Pl	Building 383-School Building & Offices-Naval Train				6Y	
		Mayo Pl	Patio Cover				6X	
		Pacific Hwy	Building 2-Air Force Plant 19				6Y	
		Pacific Hwy	Building 3-Air Force Plant 19				6Y	
		Pacific Hwy	Building #4				6Y	
		Pacific Hwy	Building #5				6Y	
		Pacific Hwy	Building #6				6Y	
		Pacific Hwy	Building #7				6Y	
		Pacific Hwy	Building #8 - Air Force Plant #19				6Y	
		Pacific Hwy	Building 27-Air Force Plant 19				6Y	
		Pacific Hwy	Building 28-Air Force Plant 19				6Y	
		Pacific Hwy	Building 33-Air Force Plant 19				6Y	
		Pacific Hwy	Building 36-Air Force Plant 19				6Y	
		Pacific Hwy	Interplant Bridge-Air Force Plant 19				6Y	
		Perry Rd	Building 8-Office				1D	
		Perry Rd	Building 11-Child Care Center				1D	
		Perry Rd	Building 194-Office Building				1D	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Perry Rd	Perry Road - Naval Training Center, San Diego				2D2	
		Porter Rd	Building #48				1D	
		Porter Rd	Building #75				6Y	
		Porter Rd	Building 199-Garage Quarter X-Naval Training Cente				6Y	
		Porter Rd	Building 239-Storage-Naval Training Center				6Y	
		Porter Rd	Building 240-Gas Meter Building-Naval Training Cen				6Y	
		Porter Rd	Electrical Pad				6X	
		Presidio Dr	San Diego Presidio				1S	
		Reynard Way	Invertebrate Fossils				7R	
		Roosevelt Rd	Building 198-Gatehouse #3-Naval Training Center				1D	
		Roosevelt Rd	Building 201-Office Building-Naval Training Center				1D	
		Roosevelt Rd	Building 210-Swimming Pool #1				1D	
		Roosevelt Rd	Roosevelt Road - Naval Training Center, San Diego				2D2	
		Roosevelt Rd	Sign Pad Gate 3				6X	
		Rosecrans St	Building 346-North Reservoir-Naval Training Center				1D	
		Rosecrans St	Building 350-Gate House #6-Naval Training Center				6Y	
		Rosecrans St	Building 364-Gardener Tool Shed-Naval Training Cen				1D	
		San Diego Ave	San Diego Union Office				1D	
		Sims Rd	Building 1-Commissary				1D	
		Sims Rd	Building 23-Naval Investigative Services				1D	
		Sims Rd	Sims Road - Naval Training Center, San Diego				2D2	
		Sims Rd	Electrical Pad				6X	
		Sims Rd	Electrical Pad				6X	
		Stockton Rd	Building 408				6Y	
		Stockton Rd	Building #412				6Y	
		Truxtun Rd	Building 6				1D	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Truxtun Rd	Building 18-Bachelors Enlisted Quarters-Naval Training Center				1D	
		Truxtun Rd	Building 25-Bachelor's Enlisted Quarters-Naval Training Center				1D	
		Truxtun Rd	Building 35-Auditorium				1D	
		Truxtun Rd	Building 175-School Building-Naval Training Center				1D	
		Truxtun Rd	Building 178-Retail Store				1D	
		Truxtun Rd	Building 195-Navy Medical Clinic				1D	
		Truxtun Rd	Building 36-School Building-Naval Training Center				6Y	
		Truxtun Rd	Building 37-School Building-Naval Training Center				6Y	
		Truxtun Rd	Building 38-Compressor House-Naval Training Center				6Y	
		Truxtun Rd	Building 39-Switch House-Naval Training Center				6Y	
		Truxtun Rd	Building #46				6Y	
		Truxtun Rd	Building 158-Office				1D	
		Truxtun Rd	Building 159-Laundry Facilities-Naval Training Cen				1D	
		Truxtun Rd	Building 207-Laundry Facilities-Naval Training Cen				1D	
		Truxtun Rd	Building 241-School Building-Naval Training Center				6Y	
		Truxtun Rd	Building 242-School Building-Naval Training Center				6Y	
		Truxtun Rd	Building 251-School Building-Naval Training Center				6Y	
		Truxtun Rd	Building 301-Office Building				6Y	
		Truxtun Rd	Building 302-Office Building				6Y	
		Truxtun Rd	Building 305-Classroom Building-Naval Training Cen				6Y	
		Truxtun Rd	Building 306-Classroom Building-Naval Training Cen				6Y	

Primary No.	Trinomial No.	Address	Name	Recording Events	Record and Updates	Description	SHPO Status Code	Within Proposed Action Area
		Truxtun Rd	Building 366-Office Building-Naval Training Center				1D	
		Truxtun Rd	Bldg #7				1D	
		Truxtun Rd	Building 19-Bachelor Enlisted Quarters- Navy Train				1D	
		Truxtun Rd	Building 26-Bachelor Enlisted Quarters-Naval Train				1D	
		Truxtun Rd	Building 176-School Building-Naval Training Statio				1D	
		Truxtun Rd	Luce Court - Naval Training Center, San Diego				2D2	
		Truxtun Rd	Sellers Plaza - Naval Training Center, San Diego				2D2	
		Truxtun Rd	Truxtun Road - Naval Training Center, San Diego				2D2	
		Truxtun Rd	Electrical Pad				6X	
		Truxtun Rd	Electrical Pad				6X	
		Truxtun Rd	Electrical Pad				6X	
		W Walnut St	Maary Price Home, Mary Price Home				5S2	
		Wallace St	N E Section of Old Town, Presidio Hills Golf Cours				5S2	
		Washington Ave	Washington Ave				2D2	
		Washington Ave Overcross	Washington Avenue Overcros				2D2	
		Woodworth Way	Building 182-Garage				1D	
		Woodworth Way	Building 373-Garage				1D	
		Woodworth Way	Transformer House				1D	
		Woodworth Way	Fish Ponds				6X	
		Worden Rd	Building 30-Community Facility Building				1D	
		Worden Rd	Building #49				6Y	
		Worden Rd	Building 214-Navy Campus Education Center-Naval Tr				6Y	

Attachment C

Summary of South Coastal Information Center Resources

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IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-02894	1122894	City of San Diego	1993	Mitigated Negative Declaration Replacement of Water and Sewer Pipes: La Jolla, Uptown, Mission Valley, Midway and Navajo Communities	City of San Diego Planning Department	X	
SD-03094	1123094	Mason, Roger	1994	Cultural Resources Survey Report for Two Proposed Locations for the Naval Engineering Facility Air Force Plant 19, San Diego and a Portion of NAS Miramar	Chambers Group, Inc.	X	
SD-03461	1123461	Kyle, Carolyn, and Roxana L. Phillips	1998	Cultural Resource Constraint Study for the North Bay Redevelopment Project City of San Diego, California	Gallego & Associates	X	
SD-04000	1124000	Various		Dutch Flats/Ryan Field	Various	X	
SD-05507	1125507	Wade, Sue, Stephen R. Van Wormer, and Dayle M. Cheever	1990	Historic Properties Inventory for Secondary Treatment, Clean Water Program for Greater San Diego, San Diego, California (DEP No. 89-0744)	RECON	X	
SD-05596	1125596	City of San Diego	1992	Mitigated Negative Declaration for Group Job 600	City of San Diego	X	
SD-06899	1126899	Widell, Cherilyn	1996	National Register Engineering Laboratory at Hanger 19	Cherilyn Widell	X	
SD-10134	1130134	Schaefer, Jerry	2006	Final Cultural Resource Constraints Analysis for the Barnett Avenue Bikeway Project San Diego California	ASM Affiliates	X	
SD-10515	1130515	U.S. Department of The Navy		Request for Historical Designation for Air Force Plant 19	U.S. Department of The Navy	X	
SD-12200	1132200	City of San Diego	2009	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)	City of San Diego Development Services Department	X	
SD-13491	1133491	U.S. Department of Transportation	2011	Section 106 Consultation for the Mid-Coast Corridor Transit Project, San Diego County, CA	U.S. Department of Transportation	X	
SD-15151	1135151	Brunzell, David	2015	Cultural Resources Assessment of the Crown Castle/ Verizon Fiber PUC Project, San Diego, California (BCR Consulting Project No. Syn1404)	BCR Consulting LLC	X	
SD-16448	1136448	Garcia-Herbst, Arleen	2015	Cultural Resources Inventory for the Pacific Beach Pipeline Project, City of San Diego, CA	Spindrift Archaeological Consulting, LLC	X	
SD-16601	1136601	Cogstone Resource Management, Inc.	2015	San Diego River Bridge Double Track Project (CP Tecolote to CP Friar) Cultural Resources Technical Report	Cogstone Resource Management, Inc.	X	
SD-00278	1120278	Carrico, Richard	1978	Historical Study of the Proposed Old Town Square San Diego, California	Westec Services, Inc.		X
SD-00320	1120320	Carrico, Richard	1977	Cultural Resource Inventory of the United Stated Coast Guard Air Station Administration Building, San Diego, California	Westec Services, Inc.		X
SD-00546	1120546	Cupples, Sue Ann	1975	An Archaeological Survey of the San Diego River Valley	San Diego State University Foundation		X
SD-00639	1120639	Flower, Douglas, Darcy Ike, and Linda Roth	1982	Archaeological Investigation at Old Town San Diego State Historic Park Volume 1, Historical Research and Field Investigation	Flower, Ike and Roth Archaeological Consultants		X
SD-00698	1120698	Carrillo, Charles and Charles Bull	1979	Archaeological Investigation of the MTDB Fixed Guideway Project Route, Center City to San Ysidro	Recon		X
SD-00717	1120717	Kaldenberg, Russell L.	1975	Results of an Archaeological Test at the Friars Road Condominiums Project	Recon		X
SD-00733	1120733	Jacques, Terri and Richard Carrico	1981	Cultural Resources Inventory of the United States Coast Guard Air Station (Five Structures) San Diego, California	Westec Services, Inc.		X
SD-00975	1120975	Hector, Susan	1985	Historical and Archaeological Survey of the Old Town Office Project Area (Recon Number R-1557)	Recon		X
SD-01138	1121138	Loughlin, Barbara A.	1974	An Environmental Impact Report (Archaeology) for Science Applications Incorporated of a Forty Acre Parcel Including University Hospital in San Diego, California.	San Diego State University		X
SD-01158	1121158	Kupel, Douglas E. and Chris White	1983	Archaeological Survey of the Frontage Road Near the 8/15 Interchange.	Caltrans		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-01159	1121159	Kupel, Douglas E. and Charles Carillo	1982	Archaeological Survey Report of the Calhoun Street Parking Lot Block 408 Old San Diego, 11825-910065-5957005.	Caltrans		X
SD-01160	1121160	Kupel, Douglas E.	1982	Archaeological Survey Report of the Old Town Excess Parcel Sale Blocks 379, 380, and 395, Old San Diego 11825-910065-5957005.	Caltrans		X
SD-01161	1121161	Kupel, Douglas E.	1982	Archaeological Survey Report of the Old Town Maintenance Station Blocks 363,364,378,396 and 397, Old San Diego.	Caltrans		X
SD-01175	1121175	Hector, Susan	1986	Tecolote Canyon Archaeological Survey.	Recon		X
SD-01471	1121471	Scientific Resource Surveys, Inc.	1982	Archaeological / Historical Survey Report on Housing Commission Site 17, San Diego, California	Scientific Resource Surveys, Inc.		X
SD-01504	1121504	Van Wormer, Stephen	1987	Historical and Archaeological Investigations at the Vpc Kilns, County Mental Health Facility, San Diego, California	Recon		X
SD-01610	1121610	White, Christopher W.	1965	San Diego Presidio Excavation	San Diego State University		X
SD-01641	1121641	Woodward, Jim and Dan Foster	1982	Excavation of the Franklin House Foundation Along San Diego Avenue Old Town San Diego State Historic Park	Department of Parks and Recreation		X
SD-01754	1121754	Polan, H. Keith	1981	Site Eighteen: An Archaeological Reconnaissance	Heritage Environmental Services		X
SD-02069	1122069	City of San Diego	1984	Draft Environmental Impact Report Atlas Hotel Specific Plan	City of San Diego		X
SD-02186	1122186	Advanced Science Inc.	1992	Cultural Resources Impact Survey for the San Diego River Outfall Project	Advanced Science, Inc.		X
SD-02355	1122355	Smith, Brian F.	1992	Results of an Archaeological Study for the Great Wall Cafe Project	Brian F. Smith and Associates		X
SD-02434	1122434	Cardenas, Sean	1992	Old Town Restaurant Old San Diego Development Permit and Demolition Permit Proposed Negative Declaration	City of San Diego		X
SD-02519	1122519	Schulz, Peter	1987	Archaeological Investigations at the Rose-Robinson Site, Old Town, San Diego			X
SD-02523	1122523	Wallace, William	1973	Archaeological Investigations at the Casa Machado De Silvas, Old Town, San Diego	William Wallace		X
SD-02551	1122551	Smith, Brian F. and Larry Pierson	1992	Archaeological and Historical Study, Ocean Beach Gateway Project	Brian F. Smith and Associates		X
SD-02608	1122608	Olsen, Richard V.	1991	Archaeological Monitoring for the Sludge Management Facility Twelve-Inch Force Main, Accelerated Phase San Diego Water Utilities San Diego, California	Advanced Sciences, Inc		X
SD-02628	1122628	Carrico, Richard, Joyce Clevenger, Anne Cooper, and Dennis Gallegos	1990	Historic Properties Inventory Report for the Mission Valley Water Reclamation Project, San Diego California	Erce		X
SD-02688	1122688	Smith, Brian F. and Larry J. Pierson	1992	Results of an Archaeological Study for the Great Wall Cafe Project, San Diego, California	Brian F. Smith and Associates		X
SD-02699	1122699	Carrico, Richard and et al.	1992	Phase 1 Historic Properties Inventory of the Mid-Coast Corridor Transportation Alternatives, San Diego, California	Ogden Environmental and Energy Services Co		X
SD-02759	1122759	Kyle, Carolyn et al.	1992	Cultural Resource Evaluation for the Eastbound Harbor Drive Flyover, San Diego, California	Gallegos & Associates		X
SD-02778	1122778	Westec, Inc.	1984	Harcor Square Draft Environmental Impact Report	Westec Services, Inc.		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-02782	1122782	Gross, G. Timothy, Stephen R. Van Wormer, Mary Robbins-Wade, Sue A. Wade, and Dayle M. Cheever	1991	the Sludge Management Facility, Twelve-Inch Force Main, Accelerated Phase, San Diego Water Utilities, San Diego, California. Part 11: Non-Navy Property Sunset Cliffs Shoreline Park to the San Diego River No. 90-0209	Affinis/Recon		X
SD-02788	1122788	Olsen, Richard and Sue Wade	1993	Archaeological Monitoring Results Report for Construction of Middletown Trunk Sewer, Phase 1 San Diego Water Utilities San Diego, California	Advances Sciences Inc		X
SD-02823	1122823	City of San Diego	1994	Proposed Mitigated Negative Declaration for Sewer and Water Group Job 55 in Greater North Park and Hillcrest, San Diego County, California	City of San Diego Planning Department		X
SD-02824	1122824	City of San Diego	1992	Proposed Mitigated Negative Declaration for Group Job 612 the Installation of Sewer and Water Mains in Midway/Pacific Highway, San Diego, California	City of San Diego Planning Department		X
SD-02894	1122894	City of San Diego	1993	Mitigated Negative Declaration Replacement of Water and Sewer Pipes: La Jolla, Uptown, Mission Valley, Midway and Navajo Communities	City of San Diego Planning Department		X
SD-02932	1122932	Schaefer, Jerry	1994	Cultural Resources Evaluation for the Proposed North Metro Interceptor Sewer Project, San Diego, Calif. Appendix F.	Brian F. Mooney and Associates		X
SD-02939	1122939	Manley, William R., Sue A. Wade, and Matt C. Bischoff	1994	Cultural Resources Survey Coastal Guard Group San Diego	William Manley Consulting		X
SD-02961	1122961	Carrico, Richard L.	1993	Archaeological Monitoring Report for Ca-SDi-10530h City of San Diego Dump Within the Mission Bay Interceptor Project, Hancock Street and Sports Arena Boulevard	Ogden Environmental and Energy Services Co., Inc.		X
SD-02967	1122967	Chambers Group, Inc.	1994	Request for Determination of Eligibility Report Environmental Assessment of In-Service Engineering Staging Facility and Engineering Lab at Hangar 19 San Diego, California	Chambers Group, Inc. and Myra L. Frank & Associates, Inc.		X
SD-02985	1122985	Kyle, Carolyn and Dennis Gallegos	1995	Archaeological Testing of Seven Sites for the Stardust Golf Course Realignment Project, City of San Diego, California, Volume I	Gallegos & Associates		X
SD-02997	1122997	Roth, Linda and Judy Berryman	1995	Historic Properties Eligibility Study of Pier 9, Naval Training Center, San Diego, San Diego County	Roth and Berryman		X
SD-03000	1123000	Kyle, Carolyn and Dennis Gallegos	1995	Archaeological Testing of Prehistoric Site CA-SDi-12126 for the North Mission Valley Interceptor Sewer Phase 2, City of San Diego, California	Gallegos & Associates		X
SD-03019	1123019	Kyle, Carolyn and Dennis Gallegos	1996	Historic Properties Inventory for the Sewer Replacement Groups 72 and 80 Project, City of San Diego	Gallegos & Associates		X
SD-03094	1123094	Mason, Roger	1994	Cultural Resources Survey Report for Two Proposed Locations for the Naval Engineering Facility Air Force Plant 19, San Diego and a Portion of NAS Miramar	Chambers Group, Inc.		X
SD-03107	1123107	City of San Diego	1996	Draft Environmental Impact Report for the University of San Diego Master Plan	City of San Diego		X
SD-03244	1123244	Ezell, Paul H.	1968	Archaeological Investigations at the Casa De Jose Manuel Machado (the Stewart House)	Paul H. Ezell & Noel D. Broadbert		X
SD-03246	1123246	Van Wormer, Stephen, James D. Newland, and Susan D. Walter	1995	Test Excavations of the Suspected Location of the Juan Maria Marron Adobe San Diego, Ca	Walter Enterprises		X
SD-03283	1123283	Clement, Dorene and Vanbueren, Thad M.	1993	Historic Architectural Survey Report and Historic Study Report for the Caltrans District 11 Office Complex Old Town, San Diego City/County	Dorene Clement		X
SD-03294	1123294	Williams, Jack S.	1996	San Diego Presidio Reader 1996	Center for Spanish Colonial Archaeology		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-03296	1123296	Williams, Jack S.	1997	A Tour Guide's Handbook for the Royal Presidio of San Diego	Center for Spanish Colonial Archaeology		X
SD-03297	1123297	Williams, Jack S.	1997	Preservation Crisis on Presidio Hill: Draft	Center for Spanish Colonial Archaeology		X
SD-03298	1123298	Williams, Jack S.	1996	the San Diego Presidio Archaeology Project 1994-1996	Center for Spanish Colonial Archaeology		X
SD-03299	1123299	Williams, Jack S.	1997	Adobe Ramparts: Archaeology and the Evolution of the Presidio of San Diego	Center for Spanish Colonial Archaeology		X
SD-03371	1123371	Carrico, Richard L. and Andrew R. Pigniolo	1995	Historic Properties Inventory of the Naval Training Center, San Diego, San Diego County, California Archaeology Survey and Assessment, and Appendix A, Record Search Confirmation and Site Forms	Ogden Environmental and Energy Services Co., Inc.		X
SD-03382	1123382	Case, Robert P and Richard L. Carrico	1998	Cultural Resources Survey for Sewer Group Job 619, Three Pipeline Segments in the Mission Hills District, San Diego, California	Mooney and Associates		X
SD-03387	1123387	Vurbeff, Scott	1998	Final Environmental Impact Report for State Route 56 Between SR 56 West and SR56 East	City of San Diego Engineering and Capital Projects Dept		X
SD-03395	1123395	Rosen, Martin D.	1998	Seismic Retrofit Programmatic Agreement for Garnet Ave, North Harbor Drive, West Mission Bay Drive	Caltrans		X
SD-03429	1123429	Cooley, Theodore and Patricia Mitchell	1996	Limited Data Recovery Investigations at Site Ca-SDi-11767, a La Jolla Complex Site Along the Lower San Diego River Valley Mission Valley West Light Transit Project, San Diego, California	Ogden		X
SD-03461	1123461	Kyle, Carolyn and Roxana L. Phillips	1998	Cultural Resource Constraint Study for the North Bay Redevelopment Project City of San Diego, California	Gallego & Associates		X
SD-03470	1123470	Clevenger, Joyce, Kathleen Crawford, and Richard L Carrico	1994	Cultural Resource Monitoring and Testing Program Dodson's Corner Old Town State Historic Park San Diego, California	Ogden Environmental and Energy Services (Ogden)		X
SD-03473	1123473	Dietler, John, and Richard L Carrico	1998	Cultural Resources Survey for the Proposed Liew Hotel, Mission Valley, San Diego, California	Mooney and Associates		X
SD-03485	1123485	Case, Robert P. and Richard L. Carrico	1999	Cultural Resources Survey for the North Metro Interceptor Diversion 3a Pipeline Project (CIP No. 46-104.0), San Diego, California	Mooney and Associates		X
SD-03556	1123556	Gilmer, Jo Anne and Dayle M. Cheever	1997	Results of an Archaeological Monitoring of the North Mission Valley Interceptor Sewer Replacement- Phase II. San Diego, California.	F.C.I. Constructors		X
SD-03577	1123577	Robbins-Wade, Mary and Richard D. Shultz	1999	Archaeological Monitoring for Sewer and Water Group Job 529 Point Loma, San Diego, California	Dietrich Corporation		X
SD-03677	1123677	Kyle, Carolyn	1999	Cultural Resource Survey for the Torrance Canyon Residence Project City of San Diego, California	Frank and Maureen Flores		X
SD-03683	1123683	Alter, Ruth	1999	Results of the Historic Building Assessment for 1128 Oliver Avenue, San Diego, California	Randall Dorris		X
SD-03715	1123715	Cheever, Dayle M.	1997	Cultural Resource Monitoring and Recovery of Historic-Era Resources at 2470 San Diego Avenue	Triarc Asset Management		X
SD-03775	1123775	Clevenge, Joyce M.	1997	Mitigation Monitoring Report for the North Annex Seismic Replacement Facility (NASRF) University of California San Diego Medical Center	UCSD, Facilities Design and Construction		X
SD-03936	1123936	Various		Emmett G. O'Neill Residence	Various		X
SD-03956	1123956	Gallegos, Dennis and Carolyn Kyle	1997	Historical/Archaeological Survey Report for Task No. 23, Group Job 616 Canyon Sewer Main and Maintenance Access	Gallegos and Associates		X
SD-03962	1123962	Kelley-Markham	1993	First Church of Christ Scientist	Various		X
SD-03966	1123966	Various		Quince Street Foot Bridge	Various		X
SD-03985	1123985	Various		Mission Brewery/American Agar Company	Various		X
SD-03989	1123989	Various		Junipero Serra Museum	Various		X
SD-03992	1123992	Various		Fowler-Mack House	Various		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-03995	1123995	Various		Bernardini Building	Various		X
SD-04000	1124000	Various		Dutch Flats/Ryan Field	Various		X
SD-04002	1124002	Various		Park Manor Apartment Hotel	Various		X
SD-04029	1124029	Alter, Ruth C.	2000	Results of the Historic Building Assessment for 1847 Lyndon Road, San Diego, California	John Vitro		X
SD-04041	1124041	Moomjian, Scott A.	2000	Historical Assessment of the Design Center; 3601-3635 Fifth Avenue, San Diego, Ca 92103	Scott A. Moomjian		X
SD-04049	1124049	Lortie, Frank, and Dorene Clement	1996	Historic Resource Evaluation Report; Seismic Retrofit Project for Eleven Overcrossings on the Cabrillo Freeway, State Route 163, San Diego	Frank Lortie and Dorene Clement		X
SD-04096	1124096	Kyle, Carolyn, Roxana L. Phillips, Susan Bugbee, and Dennis R. Gallegos	1998	Cultural Resource Constrain Study for the North Bay Redevelopment Project, City of San Diego, Ca	Gallegos and Associates		X
SD-04149	1124149	Smith, Brian F. and Sharon Mcfarland	2000	An Archaeological Survey of the Center Court 8 Apartments Project, West Point Loma Boulevard, Loma Portal, San Diego, Ca.	Douglas Eilar and Associates and Brian F. Smith and Assoc.		X
SD-04281	1124281	Brandes, Ray	1996	Appendix E: Cultural Resources Report for the Proposed USD Master Plan EIR	Lettieri-Mcintyre and Assoc.		X
SD-04347	1124347	Carrico, Richard L.	1993	Archaeological Monitoring Report for Ca-SDi-1053oh City of San Diego Dump Within the Mission Bay Interceptor Project, Hancock Street and Sports Arena Blvd.	Ogden Environmental and Energy Services		X
SD-04350	1124350	Cooley, Theodore and Patricia Mitchell	1996	Limited Data Recovery Investigations at Site Ca-SDi-11767, a La Jolla Complex Site Along the Lower San Diego River Valley Mission Valley West Light Rail Transit Project, San Diego, Ca	Ogden Environmental & Energy Services Co., Inc.		X
SD-04523	1124523	Crawford, Kathleen and Richard Carrico	1995	Final Historic Properties Phase Ii Eligibility Study of the Naval Training Center, San Diego County, Ca	Ogden Environmental		X
SD-04531	1124531	Jackson Research Projects	1991	Management & Maintenance Plan for the Marine Corps Recruit Depot, San Diego, Ca	Jackson Research Projects		X
SD-04554	1124554	Davis, Kathleen	1996	Historical Property Survey Report for the Old Town San Diego State Historic Park Entrance Redevelopment Project	Davis, Kathleen		X
SD-04591	1124591	City of San Diego	1991	Public Notice of Proposed Mitigated Negative Declaration Mission Bay Sewer Interceptor (MBSIS), Phase II	City of San Diego		X
SD-04601	1124601	City of San Diego	1991	Mitigated Negative Declaration Group Job No. 468	City of San Diego		X
SD-04618	1124618	Allen, Rebecca, Rebecca Mccorkle-Apple, James Cleland, Christy Dolan, and Stephen Vanwormer	1997	Historic and Archaeological Resources Protection Plan for the Fleet Anti-Submarine Warfare Training Center, Pacific, San Diego, California	KEA Environmental, Inc.		X
SD-04693	1124693	Gallegos & Associates	2001	Casa De Aguirre 1853-1914: Data Recovery Program San Diego, California 96-7903 Appendices	Gallegos & Associates		X
SD-04712	1124712	Clevenger, Joyce M.	1998	Cultural Resource Survey for P2k96001924-P-1 2370 Soto Street, San Diego, Ca	James & Briggs Archaeological Services		X
SD-04726	1124726	Bevil, Alexander	1995	Architectural and Historical Assessment of the Villa Orizaba 2036 Orizaba Avenue San Diego, California 92103	Alezander D. Bevil		X
SD-04778	1124778	Caltrans	1997	Finding of Effect: Documentation for Seismic Retrofit Project, Quince Street Overcrossing and Richmond Street Overcrossing	Caltrans		X
SD-04786	1124786	Gallegos, Dennis R.	2001	Casa De Aguirre 1853-1914; Data Recovery Program San Diego, Ca 96-7903	Gallegos and Associates		X
SD-04867	1124867	Kea Environmental	1996	General Dynamic Facilities Demolition Project: Final Eir	KEA Environmental, Inc.		X

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SD-04868	1124868	Kinnetic Laboratories Incorporated	1996	Environmental Assessment for the North Mission Valley Interceptor Sewer Phase II- City Contract	Kinnetic Laboratories Incorporated		X
SD-04989	1124989	Moomjian, Scott	2001	Historical Assessment of the Harbor House 4335 Avalon Drive	Scott Moomjian		X
SD-05014	1125014	Smith, Brian	2001	An Archaeological Survey and Test Trenching of the Hancook Storage Project	Brian Smith		X
SD-05026	1125026	Moomjian, Scott	1999	Historical Assessment of the 535 Quince Street Building S.D. California 92103	Moomjian, Scott		X
SD-05073	1125073	Cheever, Dayle	2001	Cultural Resource Evaluations for the Hacienda Hotel, Harney Street Addition, Old Town, San Diego, Ca	Dayle Cheever		X
SD-05090	1125090	McFarland, Sharon	2000	An Archaeological Survey of the Center Court 8 Apartments Project, West Point Loma Boulevard, Loma Portal, San Diego, California	Douglas Eilar and Associates		X
SD-05140	1125140	Alter Ruth C.	2001	Letter Report: Results of the Historic Building Assessment for 2772 Evergreen Street, San Diego, California	Mary Lou and Regan Wright		X
SD-05142	1125142	Moomjian, Scott	2001	Historical Assessment for the Miller House 2020 Orizaba Avenue, San Diego, California 92103	Scott Moomjian		X
SD-05152	1125152	Moomjian, Scott	2001	Historical Assessment and Historical Assessment Addendum 1406 Plumosa Way, San Diego, California 92103	Scott Moomjian		X
SD-05164	1125164	Alter, Ruth	2001	Cultural Resources Report for the Historic Assessment of the House at 4230 Arista Street, San Diego, California	John and Laura Stoia		X
SD-05169	1125169	Cheever, Dayle	1997	Cultural Resource Monitoring and Recovery of Historic-Era Resources at 2470 San Diego Avenue	Recon		X
SD-05196	1125196	Brown, Joan	1997	Archaeological Monitoring of Construction Excavation, North Mission Valley Interceptor Sewer, Phase Ii, Dep No. 94-0573, Addendum to Dep No. 94-0160, Located in the City of San Diego, California	RMW Paleo Associates, Inc.		X
SD-05238	1125238	Gilmer Joanne and Dayle M. Cheever	1997	Results of Archaeological Monitoring of the North Mission Valley Interceptor Sewer Replacement Phse Ii	Recon		X
SD-05266	1125266	Smith, Brian F.	2001	An Archaeological Survey and Test Trenching of the Hancock Storage Project	Brian F. Smith & Assoc.		X
SD-05292	1125292	Kyle, Carolyn, Roxana Phillips, Susan Bugbee, and Dennis Gallegos	1996	Historical/Archaeological Test for Old Town Hitching Post Project a Portion of Lot 1 Block 481 (27) Old Town San Diego, California	Gallegos & Assoc.		X
SD-05354	1125354	Moomjian, Scott	2001	Historical Assessment of the 420-422 & 424 Brookes Avenue Buildings	Scott Moomjian		X
SD-05416	1125416	Flanigan, Kathleen	2001	Jeanette E. and George R. Daley House 4231 Witherby Street, San Diego, California 92103	Kathleen Flanigan		X
SD-05507	1125507	Wade, Sue, Stephen R. Van Wormer, and Dayle M. Cheever	1990	Historic Properties Inventory for Secondary Treatment, Clean Water Program for Greater San Diego, San Diego, California (Dep No. 89-0744)	Recon		X
SD-05596	1125596	City of San Diego	1992	Mitigated Negative Declaration for Group Job 600	City of San Diego		X
SD-05626	1125626	Smith, Brian and Sharon McFarland	2002	An Archaeological Survey of the Center Court 8 Apartments Project	Douglas Eilar and Associates & B. Smith & Associates		X
SD-05649	1125649	City of San Diego	1991	Proposed Mitigated Negative Declaration: Sewer Pump Station #43	City of San Diego		X
SD-05674	1125674	Pigniolo, Andrew	1991	Cultural Resource Testing and Evaluation for the Mission Valley West Light Rail Transit Project San Diego, California	ERC Env. and Energy Services Company (ERCE)		X
SD-05728	1125728	City of San Diego	1996	Proposed Mitigated Negative Declaration of the Group Job # 487	City of San Diego		X

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SD-05811	1125811	Pierson, Larry	2001	An Archaeological Survey of the Follett Residence Project	Larry Pierson		X
SD-05902	1125902	City of San Diego	1992	Proposed Negative Declaration for Old Town Commercial	City of San Diego		X
SD-05903	1125903	City of San Diego	1992	Deir for Riverwalk	City of San Diego		X
SD-05915	1125915	City of San Diego	1996	Mitigated Negative Declaration for Sewer and Water Group Job No. 639	City of San Diego		X
SD-05920	1125920	City of San Diego	1996	Mitigated Negative Declaration for Hufbauer Parking Lot	City of San Diego		X
SD-05921	1125921	City of San Diego	1993	Deir for North Metro Trunk Sewer	City of San Diego		X
SD-05966	1125966	City of San Diego	2001	Mitigated Negative Declaration for Sewer Group 634b	City of San Diego		X
SD-05976	1125976	City of San Diego	2000	Mitigated Negative Declaration for 2415 San Diego Ave.	City of San Diego		X
SD-06031	1126031	Duke, Curt	2001	Cultural Resource Assessment Cingular Wireless Facility No. SD 515-02 San Diego County, California	LSA Associates, Inc.		X
SD-06061	1126061	City of San Diego	2001	Proposed Mitigated Negative Declaration for Voltaire Mixed Use	City of San Diego		X
SD-06101	1126101	Kyle, Carolyn	1996	Historic Properties Inventory for the Sewer Replacement Groups 72 & 80 Project City of San Diego	Gallegos & Assoc.		X
SD-06159	1126159	Pigniolo, Andrew	1994	Historic Properties Evaluation for the North Mission Valley Interceptor Sewer Phase Ii Project City of San Diego, Ca	Andrew Pigniolo		X
SD-06185	1126185	Phillips, Roxana L., Carolyn Kyle, Kathleen Flanigan, and Susan Alter	1998	Historical/Archaeological Test of the Former Site of the Casa De Aguirre San Diego, California	Gallegos & Assoc.		X
SD-06202	1126202	Goldberg, Gail	2000	Appeal of the Historical Resources Board Decision to Designate 4045-/5 First Avenue, in the Uptown Community Planning Atea, Council District 2, As a City Historical Site	City of San Diego		X
SD-06382	1126382	City of San Diego	1995	Public Notice of a Proposed Mitigated Negative Declaration-Stardust Golf Course Reconfiguration	City Development Services Board		X
SD-06389	1126389	City of San Diego	1996	Proposed Mitigated Negative Declaration for Old Town Pottery Courtyard	City of San Diego		X
SD-06392	1126392	City of San Diego	1995	Negative Declaration and Notice to Public of Request for Release of Community Development Block Grant Funds (CDBG)	City of San Diego		X
SD-06408	1126408	City of San Diego	1996	Mitigated Negative Declaration for Sewer and Water Group Job 618	City of San Diego		X
SD-06441	1126441	Robbins-Wade, Mary	2002	Doma Lofts by City Mark--Archaeological Monitoring (Affinis Job No. 1611)	Affinis Environmental Services		X
SD-06492	1126492	Burke-Lia, Marie	1999	Letter Report 3681-3685 Third Avenue	Marie Burke-Lia		X
SD-06493	1126493	City of San Diego	1999	Historical Site Board Meeting of September 23, 1999, Item #5 Request of Historic Site Designation of the L.M. Earnhart House Located at 3202 Third Avenue, Uptown Community, San Diego	City of San Diego Historical Site Board		X
SD-06536	1126536	Flanigan, Kathleen	1999	Ralph D. Lacoe House Gilman A. Gist House 430 West Spruce Street San Diego, California 92103	Kathleen Flanigan		X
SD-06537	1126537	City of San Diego	1999	Historical Site Board Agenda of November 17, 1999, Action Item #8, Local House	Valentine and Nancy Hoy		X
SD-06545	1126545	City of San Diego	1997	San Diego Historical Site Board Registration Form for the John C. and Mary L. Gallagher Residence	City of San Diego		X
SD-06546	1126546	Flanigan, Kathleen	1998	Wood/Forney Residence 3225 2nd Avenue San Diego, California 92103	Kathleen Flanigan		X
SD-06564	1126564	City of San Diego	1999	Historical Site Board Agenda of August 26, 1999, Item #11 the E. Milton Barber House	City of San Diego		X
SD-06724	1126724	Rosen, Martin	2000	Cultural Resources North Harbor Drive Bridge-#57c-015	Martin Rosen		X

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SD-06752	1126752	Burke-Lia, Marie	1996	St. Joseph's Rectory/Old Town Convent, Site #369 and Casa De Aguirre, Site #42; Historical Site Redevelopment Plan	Marie Burke-Lia		X
SD-06879	1126879	Huey, Danielle	1998	Landfill Area Geotechnical Evaluation NTC San Diego	Dept. of the Navy		X
SD-06898	1126898	Widell, Cherilyn	1994	Demolition of Buildings 76, 78, 160, 196, 246, 309, 392, 556, Naval Training Center	Cherilyn Widell		X
SD-06899	1126899	Widell, Cherilyn	1996	National Register Engineering Laboratory at Hanger 19	Cherilyn Widell		X
SD-06921	1126921	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Sewer Group Job 619	City of San Diego		X
SD-06929	1126929	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Torrance Canyon Residence	City of San Diego		X
SD-06932	1126932	City of San Diego	1999	Notice of Preparation of a Draft EIR-Cambridge Square	City of San Diego		X
SD-06934	1126934	City of San Diego	1999	Public Notice of Proposed Negative Declaration-Cresta Villas	City of San Diego		X
SD-06995	1126995	City of San Diego	2000	Public Notice of Proposed Mitigated Negative Declaration Old Town Trolley	City of San Diego		X
SD-07007	1127007	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Villa Portofino	City of San Diego		X
SD-07011	1127011	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Gas Plus at Midway	City of San Diego		X
SD-07018	1127018	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration 3030 Front Street Sewer Replacement Project	City of San Diego		X
SD-07044	1127044	City of San Diego	1998	Mitigated Negative Declaration Holiday Inn (Formerly Ramada Inn)	City of San Diego		X
SD-07047	1127047	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration-Liew Hotel	City of San Diego		X
SD-07056	1127056	City of San Diego	1998	Public Notice of Proposed Mitigated Negative Declaration-Aase Residence	City of San Diego		X
SD-07086	1127086	City of San Diego	1998	Public Notice of Proposed Mitigated Negative Declaration-Holiday Inn (Formerly Ramada Inn)	City of San Diego		X
SD-07092	1127092	Crawford, Kathleen	2000	Response to Historical Resources Board Staff Report for 4045-4075 First Avenue	Kathleen Crawford		X
SD-07129	1127129	City of San Diego	1991	Notice of Preparation of a Draft Environmental Impact Report San Dieguito River Valley Regional Open Space Park Concept Plan	City of San Diego		X
SD-07154	1127154	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Torrance Canyon Residence	City of San Diego		X
SD-07168	1127168	City of San Diego	2000	Eir for Cambridge Square	City of San Diego		X
SD-07200	1127200	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Sewer and Water Group Job 601	City of San Diego		X
SD-07205	1127205	City of San Diego	1999	Public Notice of Proposed Mitigated Negative Declaration Sewer Group Job No. 619	City of San Diego		X
SD-07210	1127210	City of San Diego	1998	Public Notice of Proposed Mitigated Negative Declaration Sewer and Water Group Job 637	City of San Diego Engineering & Capital Projects		X
SD-07224	1127224	City of San Diego	2001	Public Notice of a Proposed Mitigatd Negative Declaration Sewer and Water Group and Water Group Job 681	City of San Diego		X
SD-07226	1127226	City of San Diego	2001	Public Notice of a Proposed Mitigated Declaration Sewer Main Replacement Group Job 672.	City of San Diego		X
SD-07227	1127227	City of San Diego	2001	Public Notice of a Proposed Mitigated Negative Declaration; Sports Arena Pad 'B' Service Station.	Arena 2000		X
SD-07356	1127356	City of San Diego	2002	Public Notice of a Proposed Mitigated Negative Declaration Nob Hill Place	City of San Diego		X
SD-07386	1127386	Crawford, Kathleen, and Scott Moomjian	2000	Historical Assessment of the Buildings Located at 4045, 4053, 4057, 4069, and 4075 First Avenue, San Diego, California, 92103	Marie Burke-Lia		X
SD-07388	1127388	Moomjian, Scott	1999	Public Notice of Eir-Cambridge Square	Scott Moomjian		X

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SD-07447	1127447	Duke, Curt	2001	Cultural Resource Assessment Cingular Wireless Facility No. 516-02 San Diego County, California	LSA Assoc., Inc.		X
SD-07449	1127449	Duke, Curt	2001	Cultural Resource Assessment Cingular Wireless Facility No. SD 473-01 San Diego County, California	LSA Assoc., Inc.		X
SD-07457	1127457	Kupel, Douglas E.	1982	the Calhoun Street Parking Lot: a Historical & Archaeological Investigation of Block 408 Old San Diego 11825-910065-5957005	Doug Kupel		X
SD-07469	1127469	Duke, Curt	2002	Cultural Resource Assessment At&T Wireless Services Facility No. 10090a San Diego County, California	LSA Assoc.		X
SD-07471	1127471	Pigniolo, Andrew	1994	Historic Properties Evaluation for the North Mission Valley Interceptor Sewer Phase Ii Project City of San Diego, California	Ogden Environmental		X
SD-07480	1127480	Miller, Jason	2001	Archaeological Monitoring During Excavation of Sewer Group Job 635	RMW Paleo Assoc.		X
SD-07509	1127509	Duke, Curt	2002	Cultural Resource Assessment Cingular Wireless Facility No. SD820-01 San Diego County, Ca	LSA Associates, Inc.		X
SD-07541	1127541	Robbins-Wade, Mary	1990	Cultural Resources Inventory-For the Hoffman Canyon Sewer Project San Diego	Affinis		X
SD-07543	1127543	Robbins-Wade, Mary	1991	Archaeological Survey & Monitoring Report for the Mission Bay Sewer Intercept System, Phase Ii	Affinis		X
SD-07546	1127546	Schaefer, Jerry	1990	Archaeological & Historical Investigations at El Campo Santa Cemetery & Mission Hills, San Diego	Brian F. Mooney Assoc.		X
SD-07608	1127608	Kyle, Carolyn	1994	Historical/Archaeological Test for the Casa De Aguirre Adobe Site City of San Diego, Ca	Gallegos & Assoc.		X
SD-07637	1127637	Robert Case	1998	Cultural Resources Monitoring Report for the Construction Grading at 520 Otsego Drive Mission Hills District, San Diego, California	Mooney and Associates		X
SD-07672	1127672	Pierson, Larry	2001	Results of a Historic Review for the Moseley Remodel Project San Diego, California	Brian F. Smith & Assoc.		X
SD-07690	1127690	Johnna Buysse and Brian F. Smith	2001	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Water and Sewer Group Job 530a, Old Town, San Diego	Brian F. Smith and Associates		X
SD-07694	1127694	Larry Pierson	2001	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at Sewer and Water Group 601, City of San Diego	Brian F. Smith and Associates		X
SD-07703	1127703	Brian F. Smith	2001	An Archaeological Survey and Test Trenching of the Hancock Storage Project	Brian F. Smith and Associates		X
SD-07807	1127807	Curt Duke	2002	At&T Wireless Services Facility No. 10085	LSA Associates		X
SD-07857	1127857	May, Ron V.	2002	Historical Nomination of the Schulman House: 4352 Trias Street in Mission Hills	Legacy 106, Inc.		X
SD-07884	1127884	Ruth C. Alter	2002	Cultural Resources Report for the Historical Evaluation of the 2865 Albatross Street, San Diego, Ca 92103	Brent and Laurie Woods		X
SD-07890	1127890	Richard Blum and Judy Blum	1996	the Mcdonald/Schreiber House	Richard and Judy Blum		X
SD-07928	1127928	Scott A. Moomjian	2001	Historical Assessment of the 420-422 and 424 Brookes Avenue Buildings, San Diego, California 92103-4917	Scott A. Moomjian		X
SD-07933	1127933	Scott A. Moomjian	2002	Historical Assessment of the 4055 and 4057 Third Avenue Residences, San Diego, Ca	Scott A. Moomjian		X
SD-07950	1127950	Curt Duke	2002	Cultural Resource Assessment At&T Wireless Services Facility No. 10012, San Diego County, Ca	LSA		X
SD-07968	1127968	Duke, Curt	2002	Cultural Resource Assessment At&T Wireless Services Facility No. 10010b San Diego County, Ca	LSA		X
SD-07970	1127970	Duke, Curt	2002	Cultural Resource Assessment At&T Wireless Services Facility No. 10085b San Diego County, Ca	LSA		X
SD-07998	1127998	May, Ronald V.	2002	Historical Nomination of the South Park Commercial Transit Historic District	Legacy 106		X
SD-08016	1128016	Pierson, Larry J.	2002	An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Sewer and Water Group 663 Project	Brian F. Smith and Associates		X

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SD-08025	1128025	Tang, Bai, Michael Hogan, Mariam Dahdul, Teresa Woodward, and Daniel Ballester	2002	Historical Resources Compliance Report Track Improvement, Between San Diego and National City and New Locomotive/ Car Service and Inspection Facility in National City, San Diego County, CA	CRM Tech		X
SD-08130	1128130	Moomjian, Scott A.	2002	Historical Assessment of the 4055 and 4057 Third Avenue Residences, San Diego, California 92103	Office of Marie Burke Lia, Attorney at Law		X
SD-08147	1128147	Harper, Kip	2002	Cultural Resource Assessment Cingular Wireless Facility No. SD 877-01 San Diego County, California	LSA		X
SD-08199	1128199	City of San Diego	2002	Public Notice Ofa Proposed Mitigated Negative Declaration; Naval Training Center Park General Development Plan	City of San Diego Development Services Department		X
SD-08265	1128265	City of San Diego	2002	Pulic Notice of Proposed Mitigated Negative Declaration of Nob Hill Place	Development Services Dept		X
SD-08359	1128359	City of San Diego	2001	Public Notice of a Proposed Negative Declaration for Brookes Avenue Townhouses	Development Services		X
SD-08369	1128369	Citysd1006	2001	Public Notice of a Proposed Mitigated Negative Declaration Sewer and Water Group 680	City Development Services		X
SD-08373	1128373	City of San Diego	2001	Public Notice of a Proposed Mitigated Negative Declaration Sewer Group 722	City Development Services		X
SD-08431	1128431	Case, Robert	2003	Cultural Resources Monitoring Report for the Ortiz Sewer and Water Group 673 Project (Ldr. No. 40-1033/W.O. No. 174061/183791) Uptown Community Planning Area City of San Diego, California	Mooney & Associates		X
SD-08450	1128450	Brandes, Ray	1981	Historic Resources Inventory for Uptown Area, San Diego, California	Department of Parks and Recreation		X
SD-08451	1128451	Brandes, Ray	1981	Historic Resources Inventory for Middletown Area, San Diego, California Completed by the University of San Diego, January 1981	Department of Parks and Recreation		X
SD-08542	1128542	Moomjian, Scott A.	2002	Historical Assessment Update of the Britt-Scripps House	Scott A. Moomjian, Esq		X
SD-08685	1128685	Gehl, Sharon L.	2003	Report for Designation City of San Diego, Millan House at 4301 Hermosa Way, San Diego, Ca	Sharon L. Gehl		X
SD-08788	1128788	Case, Robert	2003	Cultural Resources Monitoring Report for Sewer Group Job 722 (Ldr. No. 41-0620/Wo No. 175781) Loma Portal Community, City of San Diego, California	Mooney & Associates		X
SD-08825	1128825	Guerrero, Monica and Gallegos, Dennis R.	2003	Cultural Resource Survey for the Clairmont Regents, Cudahy Creek and Tecolote Creek Project, San Diego, California	Gallegos & Associates		X
SD-08852	1128852	Wade, Sue A., Stephen R. Van Wormer, and Dayle M. Cheever	1990	Historic Properties Inventory for North City Water Reclamation Facilities Clean Water Program for Greater San Diego, San Diego, California	Recon		X
SD-08872	1128872	Brown, Joan C.	2003	Archaeological Monitoring and Historic Era Trash Recovery During Excavations for the Construction of the Sewer Replacement Group 623b Project, Ldr. No. 41-0170, Located in the City of San Diego, California	SWCA Environmental		X
SD-08877	1128877	Alter, Ruth C.	2003	Results of the Historical Building Evaluation for 135 W Spruce Street, San Diego, California 92103	Louis & Vivian Ryan		X
SD-08917	1128917	Tinsley, Wendy L.	2001	Historical Assessment of the Buildings Located at 2525 - 2529, 2537-2547, 2539 1/2 and 2561 First Avenue San Diego California 92103	Office of Marie Burke Lia, Attorney at Law		X
SD-08927	1128927	City of San Diego	2003	Mitigated Negative Declaration for the Relocation of Buildings 158, 159, and 207 at the Naval Training Center (Ntc)	City of San Diego		X
SD-08983	1128983	Moomjian, Scott A.	2003	Historical Assessment of the 3815, 3817-3819, and 3821 First Avenue Buildings San Diego, California 92103	Scott A. Moomjian		X

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SD-09006	1129006	Wahoff, Tanya, and Andrew L. York	2003	Cultural Resources Monitoring for Sewer Group Job 672, San Diego, California	EDAW, Inc		X
SD-09007	1129007	Rosen, Martin D.	2004	Historical Resources Compliance Report for the Implementation of a Corridor Management Plan (CMP) on State Route 163 Through Balboa Park, City of San Diego, California	Martin D. Rosen		X
SD-09162	1129162	Case, Robert P.	2004	Cultural Resources Survey Report for the Paseo De Mission Hills Affordable Housing Project, City of San Diego, California	Mooney & Associates		X
SD-09179	1129179	IS Architecture	2004	Historical Resources Board Nomination for the Edith H. Hawley House, 2928 Second Avenue, San Diego, Ca 92103	IS Architecture		X
SD-09182	1129182	Montes, Beth	2004	Louis J. and Mildred S. Gill House (Louis J. Gill House #2)	Beth Montes		X
SD-09195	1129195	Montes, Beth	2004	Historical Assessment of the Joseph W. and Frances L. Herrick House, William F. Wahrenberger Architect, 4285 Trias Street, San Diego, Ca 92103	Beth Montes		X
SD-09196	1129196	Montes, Beth	2004	Historical Assessment of the Wayne Compton House, Wiliam F. Wahrenberger Architect, 4267 Trias Street, San Diego, Ca 92103	Beth Montes		X
SD-09197	1129197	Montes, Beth	2004	Historical Assessment of the William F. and Grace M. Wahrenberger House, 4277 Trias Street, San Diego, CA 92103	Beth Montes		X
SD-09209	1129209	Van Wormer, Stephen, Susan D. Walter, and Carolyn Kyle	2004	Historic Archaeological Investigations of a Late 1920s Dump from the Naval Training Station, Sand Diego, California	Kyle Consulting		X
SD-09219	1129219	Alter, Ruth C.	2004	Cultural Resources Report for the Evaluation and Historical Designation of the 2628 Rosecrans Street Residence, San Diego, California 92106	Archaeos		X
SD-09246	1129246	Pierson, Larry J.	2004	An Archaeological/Historical Survey of the Immenhausen Residence Project 3101 Horton Avenue, San Diego, California	Brian F. Smith & Associates		X
SD-09289	1129289	May, Ronald V., Dale Ballou May, Leland Bibb, Janey Chadwick, Richard M. Gadler, Susan Floyd, and Mary Platter Rieger	2003	Historical Nomination of the Gertrude H. and Clarence N. Beatty - Wayne D. McAllister House, 4356 Trias Street in Mission Hills	Legacy 106, Inc.		X
SD-09300	1129300	Moomjian, Scott A.	2004	Historical Assessment of Mission Hills Block 54 and the Buildings Located at 4003 Goldfinch/820 West Washington; 810-816 West Washington; 800-820 West Washington/410 Falcon Street; and 4011-4015, 4019-4023, 4025 & 4029 Goldfinch Street, …	Office of Marie Burke Lia		X
SD-09315	1129315	Montes, Beth	2003	Historical Review of 2502-2517 Second Avenue and 220 Laurel Street Apartments 1-4, San Diego California	Beth Montes Research		X
SD-09323	1129323	Burke Lia, Marie, Ray Brandes, Susan H. Carrico, Kathleen Flanigan, Anne Pierce Cooper, and Kathleen Crawford	1989	Historic Site Inventory of Harborview	Marie Burke Lia and Associates		X
SD-09377	1129377	Kyle, Carolyn	2001	Cultural Resources Monitoring for the Mission Hills Commons Project, City of San Diego, California	Kyle, Consulting		X

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SD-09405	1129405	Magno, Eileen	2005	Historic Property Survey Report for the First Avenue Bridge Over Maple Canyon (Bridge No. 57c-0416) Seismic Retrofit & Paint Project	City of San Diego		X
SD-09492	1129492	Palette, Drew and Office of Marie Burke Lia	2004	Cultural Resources Study for the Proposed Francis Parker Upper and Middle School Project	ASM Affiliates		X
SD-09516	1129516	Caterino, David	2005	the Cemeteries and Gravestones of San Diego County: An Archaeological Study	David Caterino		X
SD-09521	1129521	Case, Robert P.	2005	Cultural Resources Mitigation Monitoring Report Sewer Group 733 (Ldr. No. 42-0714), Peninsula Community Planning Area, City of San Diego, California	Mooney * Jones & Stokes		X
SD-09567	1129567	Van Wormer, Stephen R., Susan D. Walter, and Dennis R. Gallegos	2003	Historic Archaeological Investigations of a 1930s Naval Training Station Dump San Diego, California	Gallegos & Associates		X
SD-09617	1129617	Case, Robert	2005	Cultural Resources Monitoring Report for the Mayfair Homes Trilogy on Fifth Project (MND Project #6811), San Diego, California	Mooney Jones and Stokes		X
SD-09632	1129632	Kyle, Carolyn	2001	Cultural Resource Assessment/Evaluation for Cingular Wireless Site SD 414-3, San Diego, California	Kyle Consulting		X
SD-09664	1129664	Rosen, Martin	2005	Historic Property Survey Report, 4024 Juan Street, City of San Diego, California	California Department of Transportation		X
SD-09665	1129665	Cook, John	2005	Archaeological Monitoring for the Kearney Property, in Crest, San Diego County, California	ASM Affiliates		X
SD-09666	1129666	Moomjian, Scott	2005	Historical Assessment of the 4520 Trias Street Residence, San Diego, California, 92103	Scott Moomjian		X
SD-09705	1129705	Pierson, Larry J.	2005	An Archaeological/Historical Study for the Hillcrest Red Cross Project	Brian F Smith & Associates		X
SD-09723	1129723	Herrmann, Richard	2004	the Results of a Historical Resource Survey for the Porras Residence	Brian F. Smith& Associates		X
SD-09736	1129736	Alter, Ruth, and Todd Peterson	2004	Cultural Resources Report for the Evaluation and Historical Designation of the 3235 Homer Street Residence, San Diego, California 92106	Archaeos		X
SD-09742	1129742	Case, Robert P., and Carol Serr	2005	Cultural Resources Mitigation Monitoring Report for the Archstone Presidio View Apartment Project (Mv Pdo 99-0348), Mission Valley Community Planning Area, City of San Diego, California	Mooney, Jones & Stokes		X
SD-09743	1129743	Manley, Peter, and Robert Kimsky	2005	Fort Stockton Schrieber House Historical Designation Report			X
SD-09746	1129746	Crawford, Kathleen, and Scott Moomjian	2005	Historical Assessment of the Commercial Buildings Located at 3621-3649 India Street, San Diego, California 92103	Kathleen Crawford		X
SD-09752	1129752	Moslak, Ken	2005	Cultural Resources Study for the 7th Avenue and Brookes Avenue Sewer Rehabilitation Project	ASM Affiliates		X
SD-09955	1129955	Moomjian, Scott	2005	Historical Assessment of the Edward P. Alling House, 3226 Curlew Street San Diego, California 92103	Scott A. Moomjian, Esq		X
SD-09956	1129956	Crawford, Kathleen	2005	Historical Assessment of the Residence Located at 2003 Sunset Boulevard, San Diego, California 92103	Kathleen Crawford, Office of Marie Burke Lia,Attorney at Law		X
SD-09957	1129957	Crawford, Kathleen	2005	Historical Assessment of the Residence Located at 2031 Sunset Boulevard, San Diego, California 92103	Office of Marie Burke Lia		X
SD-09973	1129973	Alter, Ruth C.	2005	Cultural Resources Report for the Evaluation and Historical Designation of the 3527 Dumas Street Residence, San Diego California 92106	Archaeos		X
SD-09987	1129987	Case, Robert, and Carol Serr	2005	Cultural Resources Mitigation Monitoring Report for the Sewer Group 680 Project (Ldr. No. 41-0386), Bankers Hill City of San Diego, California	Mooney, Jones & Stokes		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-10008	1130008	Andrew Pigniolo and Kimberly Lauko	2005	Cultural Resource Monitoring Report for the Sewer Group 700 Project, City of San Diego, California	Laguna Mountain Environmental Inc.		X
SD-10121	1130121	Kyle, Carolyn	2005	Cultural Resource Monitoring for the Naval Training Center North Promenade Project, City of San Diego, California	Kyle Consulting		X
SD-10122	1130122	Kyle, Carolyn	2006	Cultural Resource Monitoring for the Naval Training Center Parking Lot G Project City of San Diego, California	Kyle Consulting		X
SD-10124	1130124	Kyle, Carolyn	2005	Cultural Resource Monitoring for the Naval Training Center Central Promenade Project City of San Diego, California	Kyle Consulting		X
SD-10134	1130134	Jerry Schaefer	2006	Final Cultural Resource Constraints Analysis for the Barnett Avenue Bikeway Project San Diego California	ASM Affiliates		X
SD-10140	1130140	Case, Robert and Carol J. Serr	2006	Cultural Resources Mitigation Monitoring Report for the Sewer Group 6814 Project (Ldr No. 40-0187), Uptown Community City of San Diego, California	Mooney Jones and Stokes		X
SD-10154	1130154	Becker, Mark S.	2006	Draft Cultural Resources Monitoring Report for the Hotel Circle South Project, San Diego, California, Project #14953, Work Order #424428, Pts Number 70523, Data Sheet Number 33621-1-D	ASM Affiliates		X
SD-10174	1130174	Moomjian, Scott A. and Ray Brandes	2005	Historical and Architectural Report for the Charles Bulter Residence	Dr. Ray Brandes and and Scott A. Moomjian, M.A., J.D.		X
SD-10263	1130263	Crawford, Kathleen	2006	Historical Assessment of the Residence Located at 2174 Guy Street, San Diego, California, 92103	Office of Marie Burke-Lia		X
SD-10287	1130287	Bonner, Wayne H., and Marnie Aislin-Kay	2005	Cultural Resource Records Search and Site Visit Results for Sprint Telecommunications Facility Candidate SD34xc855d (Stumps Market Light Standard), 3720-70 Voltaire Street, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-10300	1130300	May, Ronald V., and Dale Ballou May	2005	Historical Nomination of the Daniel A. and Clara E. Deacon House, 3676 Eagle Street, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-10301	1130301	May, Ronald V., and Dale Ballou May	2005	Historical Nomination of the Marion Delafield Sturges and Samuel Otis Dauchy / William Templeton Johnson House, 4455 Hermosa Way, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-10303	1130303	Johnson, Paul, and Sarai Johnson	2005	Maude Woolman Deeble House Historic Designation Report	Ferris Johnson and Associates Architects Inc.		X
SD-10304	1130304	May, Vonn Marie	2005	The Irvin / Schreiber House 4191 Stephens Street, San Diego, California	Vonn Marie May		X
SD-10305	1130305	Carmack, Shannon and Janet Hansen	2006	Cultural Resource Assessment for Verizon Wireless Remote Facility, City and County of San Diego	LSA		X
SD-10310	1130310	Kyle, Carolyn	2006	Cultural Resource Monitoring and Site Testing for the Sail Ho Golf Course Project Located Within the Former Naval Training Center City of San Diego, California	Kyle Consulting		X
SD-10314	1130314	May, Vonn Marie and Dwain Stratton	2003	George L. & Anna W. Barney House, 3530 7th Ave., San Diego, California, 92103	Dwain Stratton		X
SD-10316	1130316	May, Vonn Marie	2005	The Gemmell-Mead/ Requa House, 4476 Hortensia Street, San Diego, California	Vonn Marie May		X
SD-10317	1130317	May, Vonn Marie	2005	the Irvin- Schreiber House, 4151 Stephens Street, San Diego, California	Vonn Marie May		X
SD-10318	1130318	Montes, Beth, and Christianne Knoop	2005	Arthur & Helen Johnson- Mickey Wright- Samuel Wood Hamill House, 2765 Brant Street, San Diego, California, 92103	Beth Montes and Christianne Knoop		X

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SD-10325	1130325	Dolan, Christy and Cheryl Bowden-Renna	2006	Final Archaeological Monitoring and Trenching for the Caltrans District 11 New Headquarters (Blocks 4535,4536, 4549, 4550, 4553, 4554, and 4556) San Diego, California	EDAW, Inc.		X
SD-10358	1130358	May, Vonn Marie	2005	the Joel L. & Edith M. Brown House 4141 Lark Street, San Diego, California	Vonn Marie May		X
SD-10359	1130359	Alter, Ruth C.	2005	Cultural Resources Report for the Evaluation and Historical Designation of the 2820 Chatsworth Boulevard Residence, San Diego, California 92106	Archaeos		X
SD-10360	1130360	Montes, Beth, and Christianne Knoop	2005	Pacific Building Company Spec House #1 3910 Eagle Street San Diego, California 92103	Beth Montes and Christianne Knoop		X
SD-10361	1130361	Bostrom, Timothy and Laurie Bostrom	2006	the Dr. Thomas O. Burger / Henry J. Lang House 1787 Fort Stockton Drive San Diego, Ca 92103	Timothy and Laurie Bostrom		X
SD-10364	1130364	May, Ronald V. and Dale Ballou May	2005	Historical Nomination of the Richard M. and Laura M. Hathaway / Charles T. Leigh House 1863 Altamira Place, Mission Hills	Legacy 106, Inc.		X
SD-10365	1130365	May, Ronald V. and Dale Ballou May	2005	Historical Nomination of the Seifert-Melhorn House 1201 West Arbor, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-10366	1130366	May, Vonn Marie	2005	The Johnson-Trepte House, 4467 Ampudia Street, San Diego, California	Vonn Marie May		X
SD-10391	1130391	Alter, Ruth	2006	Cultural Resources Report for the Evaluation and Historical Designation of the 3729 Amaryllis Drive Residence, San Diego, California 92106	Archaeos		X
SD-10392	1130392	Alter, Ruth	2005	Cultural Resources for the Evaluation and Historical Designation of the 4052 Albatross Street Residence, San Diego, Ca 92103	Archaeos		X
SD-10393	1130393	May, Ronald V., and Dale Ballou May	2005	Historical Nomination of the Dr. Bernard Poland and Evelyn Cunningham House 2231 La Callecita, Mission Hills, San Diego	Legacy 106, Inc		X
SD-10394	1130394	Moomjian, Scott A.	2006	Historical Assessment of the 3960 Alameda Place Residence, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-10396	1130396	Hazard, Allen A., Janet M. O'dea, and William and Sarah Mccole	2005	Historical Nomination of the Tudor S. Rogers - Martin V. Melhorn House Inspiration Heights 4060 Alameda Drive San Diego, Ca 92103	Allen A. Hazard		X
SD-10401	1130401	May, Vonn Marie	2005	The C.E. Stewart - Nathan Rigdon House 2206 Fort Stockton Drive San Diego, California	Cultural Land Planning & Research		X
SD-10404	1130404	Crawford, Kathleen	2006	Historical Assessment of the Building Located at 2533 Congress Street, San Diego, California 92110	Office of Marie Burke Lia, Attorney at Law		X
SD-10444	1130444	May, Vonn Marie	2006	Uptown Historic Architectural and Cultural Landscape Reconnaissance Survey	IS Architecture		X
SD-10445	1130445	Montes, Beth and Christianne Knoop	2006	Nathan Rigdon Spec House #1, 2121 Ft. Stockton Drive, Ca 92103	Beth Montes and Christianne Knoop		X
SD-10515	1130515	U.S Department of the Navy		Request for Historical Designation for Air Force Plant 19	U.S. Department of the Navy		X
SD-10524	1130524	Arbuckle, J., and George Tays	1980	Survey of the Adobe Chapel of the Immaculate Conception	J. Arbuckle		X
SD-10528	1130528	Various		Misc. File Folder for Balboa Park; Buildings and HSB Documents	Various		X
SD-10531	1130531	Sawyer, William A., and Ivan H. Strudwick	2004	Archaeological Monitoring for the Sports Arena Arco Station, City and County of San Diego, California	LSA Associates, Inc.		X
SD-10533	1130533	Crawford, Kathleen	2005	Historical Assessment of the Residential Complex Located at 3200 Sixth Avenue San Diego, California 92101	Office of Marie Burke Lia, Attorney at Law		X
SD-10537	1130537	Ferris, Robert D., and Patricia Schaelchlin	1985	Survey of the Judge Monroe B. Anderson House	Robert D. Ferris, AIA		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-10542	1130542	Alter, Ruth C.	2006	Results of the Historical and Architectural Building Assessment for 4004 Lark Street, San Diego, California	Archaeos		X
SD-10551	1130551	Arrington, Cindy	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants		X
SD-10583	1130583	Brandes, Ray	2005	Historical and Architectural Report for the Henrietta C. H. Nesmith Greely Residence 1520 Fort Stockton Drive San Diego, California 92103 Assessor's Parcel Number 443-662-06 North Florence Heights Subdivision	Dr. Ray Brandes		X
SD-10584	1130584	May, Vonn Marie	2006	the William F. & Grace M. Wahrenberger House 3924 Henry Street San Diego, California	Cultural Land Planning and Research		X
SD-10585	1130585	Moomjian, Scott A.	2007	Historical Assessment of the Elwyn B. (Jay) Jr. & Marian Gould House 2333 Albatross Street San Diego, California 92101	Scott A. Moomjian, Esq.		X
SD-10607	1130607	Brandes, Dr. Ray	1984	The Anthony Residence	Dr. Ray Brandes		X
SD-10608	1130608	Price, Harry J.	2006	Scripps Mercy Hospital Conditional Use Permit - Historic Resources Review (Recon Number 4213a)	Recon		X
SD-10678	1130678	Pierson, Larry J.	2007	Results of Archaeological Monitoring at the Atlas Project	Brian F. Smith and Associates		X
SD-10744	1130744	Roth and Associates	1989	Archaeological / Historical / Architectural Assessment 3928 Conde Lot 3 Block 482 Old San Diego Planned District	Roth and Associates		X
SD-10759	1130759	Smith, Brian F.	1988	Results of a Cultural Resources Site Survey at the Old San Diego Inn	Brian F. Smith and Associates		X
SD-10774	1130774	Berryman, Judy and Linda Roth	1994	Cultural Resources Survey for 285 Linear Feet of Storm Drain, Walnut Avenue	TMI Environmental Services		X
SD-10781	1130781	Crawford, Kathleen	2007	Historical Assessment of the Building Complex Located at 3225 Fourth Avenue San Diego, California 92103	Office of Marie Burke Lia		X
SD-10782	1130782	Moomjian, Scott A.	2007	Historical Assessment of the 3235, 3245, 3251 & 3255 Fourth Avenue Buildings San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-10800	1130800	Arbuckle, J.	1980	Survey of "Old Landing Site", Site of El Desembarcadero			X
SD-10802	1130802	Various		Elks Lodge #168			X
SD-10806	1130806	Various		The Evangeline Caven Bungalow			X
SD-10810	1130810	Various		First Avenue Bridge			X
SD-10814	1130814	Various	1996	The First Church of the United Brethren in Christ-Thackeray Gallery			X
SD-10818	1130818	Various		Fort Stockton Site			X
SD-10823	1130823	Various		John C. and Mary L. Gallagher Residence			X
SD-10825	1130825	Various		General Dynamics Facilities, 3302 Pacific Highway, San Diego, Ca			X
SD-10826	1130826	Various		Gill House			X
SD-10833	1130833	Ferris, Robert D., and Marcia R. Ferris	1981	The D.F. Garrettson House 2366 Front Street, San Diego, California	AIA		X
SD-10848	1130848	Various		Mary Cassitt Residence #4, 3526 7th Avenue, San Diego, California			X
SD-10849	1130849	Various		Casa De Bandini, 2660 Calhoun Street, San Diego, California			X
SD-10864	1130864	Johnson, Paul W.	1996	Hardesty House, Architectural Designation Report	Ferris, Johnson, & Perkins Architects, Inc.		X
SD-10871	1130871	Various		Survey and Various Papers on the Derby Dike Historical Landmark #244			X
SD-10872	1130872	Various		Research Report for the Day's Little House			X
SD-10875	1130875	Various		Survey of the Derby-Pendleton House			X
SD-10878	1130878	Brandes, Dr. Ray	1982	Report for the Coulter Residence	Dr. Ray Brandes		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-10891	1130891	Bevil, Alexander D.	1998	Historical Site Designation Report, Milton F. Heller Residence, 3107 Zola Street, San Diego, California 92106	Alexander D. Bevil		X
SD-10894	1130894	Bevil, Alexander D.	1998	Historical Site Designation Report Alexander and Nancy Highland House, 2400 Presidio Drive, San Diego, California 92103-1018			X
SD-10895	1130895	Various		Hillcrest Company House, 3969 Third Avenue, San Diego, California			X
SD-10904	1130904	Reeves, Donald J. and Mark Sams	1986	Report on the Hubbard Residence	Donald J. Reeves		X
SD-10915	1130915	Bevil, Alexander D.	1998	Historical Site Designation Report for the Alexander and Nancy Highland House	Alexander D. Bevil		X
SD-10916	1130916	Various		Report for the Lee House #4			X
SD-10950	1130950	Bruegmann, Robert	1975	Application for the Registration of the Long-Waterman House, San Diego County	Historic American Building Survey		X
SD-10953	1130953	Bevil, Alexander D.	1991	Report for the Oscar J. Kendall House/ Spruce Lodge Apartments			X
SD-10954	1130954	Bevil, Alexander D.	1991	Report for the Kendall/ Russell H. Gunnis Apartments			X
SD-10962	1130962	Moomjian, Scott A.	2001	Historical Assessment of the Harper House 4335 Avalon Drive, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-10965	1130965	Hazard, Allen, and Janet O'dea	2005	Nomination for Historical Designation of the Dr. Leon Casper and Dr. Louise Davis Long House Mission Hills, 1885 Sheridan Avenue, San Diego, Ca 92103	Happy Hazard LLC		X
SD-10966	1130966	May, Ron V.	2006	Historical Nomination of the William and Fidelia McKittrick House, 1875 Sunset Boulevard, Mission Hills	Legacy 106, Inc.		X
SD-10968	1130968	May, Ronald V.	2006	Historical Nomination of the Nathan Rigdon and Morris B. Irvin House, 1760 W. Lewis Street, Mission Hills	Legacy 106, Inc.		X
SD-10974	1130974	Various		Melville Klauber House, 3060 Sixth Avenue, San Diego, California			X
SD-10984	1130984	Various		Alice Lee Residence Number 1, 3578 Seventh Avenue, San Diego, California			X
SD-10985	1130985	Various		Lee House #2, 3353 Albatross Street, San Diego, California 92103			X
SD-10989	1130989	Various		Marine Corps Recruit Depot, Barnett Avenue, San Diego, California			X
SD-10993	1130993	Various		George Marston House, 3525 Seventh Avenue, San Diego, California			X
SD-10994	1130994	Various		George Marston House Garden, 3525 Seventh Avenue, San Diego, California			X
SD-10995	1130995	Various		Charles A. Martin House, 3147 Front Street, San Diego, California			X
SD-10996	1130996	Various		William Mason Fortescue Residence, 3300 Third Avenue, San Diego, California 92103			X
SD-11007	1131007	Burke Lia, Marie	1991	Moorsteen Furniture Manufacturing Company Building, 2141-2165 India Street (APN 533-129-1)	Marie Burke Lia		X
SD-11008	1131008	Brandes, Ray, and Robert D. Ferris	1984	the Moore House, 3551 Front Street, San Diego, California	Ray Brandes		X
SD-11015	1131015	Various		Midway Drive Between Rosecrans Street & Barnett Avenue, Enterprise Street Between Nimitz Boulevard & Pacific Highway			X
SD-11016	1131016	Various		Mertzmann-Winan Residence, 3303 Second Avenue, San Diego, California 92103 (APN 452-534-06)			X
SD-11018	1131018	Bevil, Alexander D., William G. Harkins, and Stephanie R. Bevil	1998	Historical Assessment of the Leighton James Mcmurtie / James Winterow House, 4476 Ampudia Street, San Diego, California 92103 (APN 443-051-38)			X

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SD-11031	1131031	Various		El Campo Santo / Old Spanish Cemetery, Old Town, La Jolla Avenue at San Diego Avenue, San Diego, California			X
SD-11034	1131034	Various		the Otis House, 3255 Second Avenue, San Diego, California 92103			X
SD-11050	1131050	Heritage Architecture & Planning	2007	Francis and Florence Mead Residence, 3330 Sixth Avenue, San Diego, California 92103, APN 452-555-21	Heritage Architecture & Planning		X
SD-11051	1131051	Heritage Architecture & Planning	2007	Frederick F. Thompson Residence, 540 Thorn Street, San Diego, California 92103, APN 452-555-20	Heritage Architecture & Planning		X
SD-11053	1131053	Heritage Architecture & Planning	2007	3340 Sixth Avenue, San Diego, California 92103, APN 452-555-22	Heritage Architecture & Planning		X
SD-11054	1131054	Heritage Architecture & Planning	2007	516-522 Thorn Street, San Diego, California 92103, APN 452-555-19	Heritage Architecture & Planning		X
SD-11056	1131056	Heritage Architecture & Planning	2007	Solar Apartments, 504 Thorn Street, San Diego, California 92103, APN 452-555-19	Heritage Architecture & Planning		X
SD-11062	1131062	May, Ron V. and Dale Ballou May	2007	Historical Nomination of the Helen, Franklin, & Howard Thornton Boulter Martin V. Melhorn House 4119 Palmetto Way, North Florence Heights, Mission Hills, San Diego, California 92103	Legacy 106, Inc.		X
SD-11072	1131072	Bonner, Wayne H., Marnie Aislin-Kay, and Jonathan M. Wright	2006	Cultural Resource Records Search and Site Visit Results for Cricket Telecommunications Facility Candidate San-603f (Mission Hills Plaza), 928 Fort Stockton Drive, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-11077	1131077	Bonner, Wayne H., and Marnie Aislin-Kay	2006	Cultural Resource Records Search Results and Site Visit for Sprint Nextel Telecommunications Facility Candidate SD34xc840a (Liberty Station), 2280 Historic Decatur Road, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-11086	1131086	Case, Robert P.	2007	Cultural Resources Mitigation Monitoring Report for the Mayfair Homes Biarritz Project (Ldr Project No. 34029) San Diego, California	Jones & Stokes		X
SD-11098	1131098	Robbins-Wade, Mary	2006	Draft Archaeological Survey Report San Diego International Airport, Airport Master Plan, San Diego, California	Affinis		X
SD-11099	1131099	Robbins-Wade, Mary, and Stephen R. Van Wormer	2006	Historic Architectural Survey Report: San Diego International Airport Master Plan Update	Affinis		X
SD-11112	1131112	May, Ronald V., and Dale Ballou May	2006	Historical Nomination of the Lucius Jerome and Sadie Estelle Carpenter House, 2133 Pine Street, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-11135	1131135	Van Wormer, Stephen	2006	Ryan Aeronautical Company Historic District, 2701 North Harbor Drive, San Diego, Ca 92133	Walter Enterprises		X
SD-11138	1131138	Various		King Residence, 1302 Washington Place, San Diego, California; APN 443-684-09			X
SD-11168	1131168	Pierson, Larry J.	2007	Results of Archaeological Monitoring at the Rock Academy and Church, San Diego, California	Brian F. Smith and Associates		X
SD-11175	1131175	Greene, Richard and Brian F. Smith	2007	A Phase I Archaeological Assessment of the Wharf Project	Brian F. Smith and Associates		X
SD-11223	1131223	Johnson, Paul and Sarai Johnson	2007	the Frazen House & Cabinet Shop Historic Designation Report	Johnson & Johnson Architecture		X
SD-11231	1131231	Various		Old Town - Estudillo House, Chapel of the Immaculate Conception, Gilla House Site, Whaley House, Exchange Hotel, Johnson House, Mason St. School, San Blas Bell, Exchange Hotel, Casa De Machado-Stewart, Casa De Machado-Silvas…			X

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SD-11232	1131232	Various		Old Town - Miscellaneous Documents			X
SD-11237	1131237	Various		Presidio of San Diego			X
SD-11238	1131238	Various		Presidio Hills Golf Course			X
SD-11278	1131278	Various		Serra Palm Site			X
SD-11284	1131284	Ferris, Robert D.	1984	the Charles & Katherine Siess House, 3720 Third Avenue, San Diego, California 92101			X
SD-11286	1131286	Various		Spanish Landing Site			X
SD-11299	1131299	Various		Amy Strong Residence, 2808 Fourth Avenue Or 348 Olive Street, San Diego, California 92101; APN 452-666-04			X
SD-11301	1131301	Various		Suspension Bridge, Spruce Street Between Front Street and Brant Street			X
SD-11303	1131303	Various		A. H. Sweet Houses, 435 West Spruce and 3141 Curlew Street, San Diego, California 92103			X
SD-11307	1131307	Various		Teats House #1, 3560 Seventh Avenue, San Diego, California 92103			X
SD-11308	1131308	Various		Teats House #2, 3415 Albatross Street, San Diego, California 92103			X
SD-11309	1131309	Various		Teats House #3, 3407 Albatross Street, San Diego, California 92103			X
SD-11312	1131312	Bevil, Alexander	1991	Terrace Apartments / Howard J. Edwards Residence, 3130 1st Avenue, San Diego, California 92103; APN 452-611-09			X
SD-11314	1131314	Various		Thackeray Gallery, 321 Robinson Avenue, San Diego, California 92103; APN 452-053-01			X
SD-11321	1131321	Various		Tucker House, 2470 Union Street, San Diego, California 92101			X
SD-11334	1131334	Bevil, Alexander D.	1995	Architectural and Historical Assessment of the Villa Orizaba, 2036 Orizaba Avenue, San Diego, California 92103; APN 443-552-10			X
SD-11335	1131335	Various		Waldo D. Waterman Monument			X
SD-11343	1131343	Various		Ernest and Ileen White Residence, 136 Redwood Street, San Diego, California 92103			X
SD-11344	1131344	Various		Wiard Family Residence, 3536 Front Street, San Diego, California 92103; APN 452-392-17			X
SD-11349	1131349	Various		Neon Sign on Jimmy Wong's Golden Dragon Restaurant, 412-414 University Avenue, San Diego, California 92103; APN 444-671-10			X
SD-11350	1131350	Tarasuck, Marc	1995	Architectural and Historical Assessment for 3042 State Street, San Diego, California 92103			X
SD-11354	1131354	Smoyer, Walter J., and Elizabeth D. Smoyer	2006	Historical Assessment of the Residence Located at 1603 Torrance Street, San Diego, California 92103	Walter J. and Elizabeth D. Smoyer		X
SD-11356	1131356	Moomjian, Scott A.	2006	Historical Assessment of the Emily Hill Wadsworth Residence, 3130 Second Avenue, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-11358	1131358	IS Architecture	2006	Nos. 4167 and 4169 Jackdaw Street, San Diego, California 92103; APN 444-391-05	IS Architecture		X
SD-11359	1131359	Burke Lia, Marie	2007	1907 Kettner Boulevard, San Diego, California 92101			X
SD-11386	1131386	Ktu+A Planning and Landscape Architecture	2007	Marine Corps Recruit Depot Historic District Landscape Plan, Base Exterior Architecture Plan - Appendix D	Ktu+A Planning and Landscape Architecture		X
SD-11394	1131394	IS Architecture	2004	Historical Resources Board Nomination for the Residence at 1847 Altamira Place, San Diego, California	IS Architecture		X
SD-11399	1131399	IS Architecture	2007	Historical Resources Board Nomination for the C. Arnholt Smith Residence, 2293 San Juan Road, San Diego, California 92103	IS Architecture		X
SD-11402	1131402	IS Architecture	2006	Historical Resources Board Nomination for the William H. & Lotte B. Porterfield Residence 4411 Hermosa Way, San Diego, California 92103	IS Architecture		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-11407	1131407	IS Architecture	2001	the Mack House, 3932 Alameda Place, San Diego, Ca; APN 451-741-01	IS Architecture		X
SD-11454	1131454	Tinsley, Wendy L.	2007	Historical Resource Evaluation Report, 4063 Eagle Street, San Diego, Ca 92103, APN: 444-453-07-00	Urbana Preservation and Planning		X
SD-11460	1131460	Reddy, Seetha N.	2007	A Programmatic Approach for National Register Eligibility Determinations of Prehistoric Sites Within the Southern Coast Archaeological Region, California	Statistical Research, Inc.		X
SD-11465	1131465	May, Ronald V,. and Dale Ballou May	2005	Historical Nomination of the Marion Delafield Sturges and Samuel Otis Dauchy / William Templeton Johnson House, 4455 Hermosa Way, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-11466	1131466	May, Ronald V,. and Dale Ballou May	2005	Historical Nomination of the Louis R. and Muriel Dilley / Monroe E. and Olga J. Wallace House, 1845 Fort Stockton Drive, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-11469	1131469	May, Ronald V.	2007	Historical Nomination of the John W. Snyder Company Model Home #3, Ralph Hurlburt & Charles Tifal, Builders, 4370 Trias Street, Mission Hills, San Diego, California	Legacy 106, Inc.		X
SD-11470	1131470	May, Ronald V,. and Dale Ballou May	2007	Historical Nomination of the John W. Snyder Company Model Home #2, Ralph Hurlburt & Charles Tifal, Builders, 2315 Fort Stockton Drive, Mission Hills, San Diego, California	Legacy 106, Inc.		X
SD-11471	1131471	May, Ronald V., and Dale Ballou May	2004	Historic Resource Evaluation of the Commercial and Residential Buildings and Sites on Block 54, Arnold & Choate Map 334, Mission Hills, San Diego, California	Legacy 106, Inc.		X
SD-11477	1131477	May, Ronald V., and Dale Ballou May	2004	Archaeological Report on Historic Trash Deposits from the Alicante Project at 5th and Redwood Streets, San Diego, California	Legacy 106, Inc.		X
SD-11478	1131478	May, Ronald V., and Dale Ballou May	2005	History of the Martin V. and Alberta Melhorn House, 1740 Fort Stockton Drive, Mission Hills, San Diego	Legacy 106, Inc.		X
SD-11479	1131479	May, Ronald V., and Dale Ballou May	2005	Historical Evaluation, the Frank and Emma Connors House, 2540 Congress Street, San Diego, California 92110	Legacy 106, Inc.		X
SD-11511	1131511	Various		Naval Training Station Historic District - Amendment to the National Register of Historic Places Registration Form			X
SD-11529	1131529	Rosenberg, Seth A. and Brian F. Smith	2007	Archaeological Resource Report Form: Archaeological Survey of the Hampton Inn Suites Project	Brian F. Smith and Associates		X
SD-11540	1131540	Pierson, Larry J.	2007	Archaeological Resource Report Form: Archaeological Survey of the Frederickson Residence Project	Brian F. Smith and Associates		X
SD-11551	1131551	Moomjian, Scott A.	2008	Historical Assessment of the 2261 San Juan Road Residence, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-11552	1131552	May, Ronald V.	2006	Historical Nomination of the Harold B. and Augusta Starkey House, Frank O. Wells, Designer and Builder, 3939 St. James Place, Mission Hills	Legacy 160 Inc.		X
SD-11553	1131553	May, Ronald V.	2006	Historical Nomination of the Katherine Redding Stadler House, Gustav A. Hanssen, Architect, 2750 Rosecrans Street, Loma Portal, Point Loma, San Diego, California	Legacy 106 Inc.		X
SD-11555	1131555	Montes, Beth, and Christianne Knoop	2006	La Casa Hermosa - A.M. Southard Co. House, 3612 Elliott Street, San Diego, Ca 92106	Christianne Knoop and Beth Montes		X
SD-11572	1131572	Westec Services, Inc.	1984	Harbor Square Draft Environmental Impact Report	Westec Services, Inc.		X
SD-11574	1131574	BRG Consulting, Inc.	2003	Draft Environmental Impact Report for the Proposed San Diego County Administration Center Waterfront Park Development and Master Plan	Brg Consulting, Inc.		X

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SD-11613	1131613	Crawford, Kathleen A.	2008	3330 Sixth Avenue, San Diego, California 92103; APN 452-555-21	Office of Marie Burke Lia		X
SD-11614	1131614	Crawford, Kathleen A.	2008	540 Thorn Street, San Diego, California 92103; APN 452-555-20	Office of Marie Burke Lia		X
SD-11616	1131616	Crawford, Kathleen A.	2008	3340 Sixth Avenue, San Diego, California 92103; APN 452-455-22	Office of Marie Burke Lia		X
SD-11617	1131617	Crawford, Kathleen A.	2008	504 Thorn Street, San Diego, California 92103; APN 452-555-19	Office of Marie Burke Lia		X
SD-11618	1131618	Crawford, Kathleen A.	2008	516-522 Thorn Street, San Diego, California 92103, APN 452-555-19	Office of Marie Burke Lia		X
SD-11651	1131651	U.S. Coast Guard	2007	Removal of an Existing Concrete Floating Dock at CG Sector San Diego, 2710 North Harbor Drive, San Diego, California	U.S. Coast Guard		X
SD-11664	1131664	Kyle, Carolyn	2009	Cultural Resource Monitoring for the Shoreline Plaza Project Located Within the Former Naval Training Center, City of San Diego, California	Kyle Consulting		X
SD-11667	1131667	Kyle, Carolyn E.	2007	Cultural Resource Survey for the West City College Campus Project, San Diego, California	Kyle Consulting		X
SD-11670	1131670	Moomjian, Scott A.	2006	Historical Assessment of the R.R. West / West-King-Peterson Lumber Company "Spec" House #1, 4285 Altamirano Way, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-11671	1131671	Burke Lia, Marie	2008	Funcheon Building, 800-808 West Washington Street / 4010 Falcon Street, San Diego, California 92103, APN 444-414-12	Office of Marie Burke Lia		X
SD-11672	1131672	Burke Lia, Marie	2008	Ace Drug Building, 4003 Goldfinch / 820 West Washington Street, San Diego, California 92103, APN 444-414-12	Office Marie Burke Lia		X
SD-11683	1131683	Moomjian, Scott A.	2006	Historical Assessment of the Morris and Lillian Herriman Residence 435 West Thorn Street, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-11694	1131694	Smith, Brian F., and Adriane Dorrler	2008	Archaeological Resource Report Form: Archaeological Survey of the Springhill Suites Project	Brian F. Smith and Associates		X
SD-11719	1131719	Dahlin, Dondi Simone	2008	Nomination for Historical Designation of the Ida R. Hedges House, 3747 Eagle Street, Mission Hills	Dondi Simone Dahlin		X
SD-11731	1131731	Pigniolo, Andrew R., and Heather L. Kwiatkowski	2007	Cultural Resource Survey of 3456 and 3466 Wisteria Drive, City of San Diego, California (APNs 450-221-07 and 450-221-08)	Laguna Mountain Environmental, Inc		X
SD-11746	1131746	Moomjian, Scott A.	2008	Historical Assessment of the 1504 Fort Stockton Drive Residence San Diego, California 92103	Scott A. Moomjian, Esq		X
SD-11768	1131768	Robbins-Wade, Mary	2008	Archaeological Resources Inventory: 5th and Thorn Property, San Diego, California Project No. 105703	Affinis Environmental Services		X
SD-11794	1131794	Heritage Architecture and Planning	2008	2415-2421 Union Street, San Diego, CA 92101	Heritage Architecture and Planning		X
SD-11795	1131795	Alter, Ruth C.	2008	Cultural Resources Report for the Historical and Architectural Building Evaluation and Designation of 3020 Dumas Street, San Diego, California 92106	Archaeos		X
SD-11796	1131796	May, Vonn Marie and Tricia Olsen	2007	Florence A. Maddock-Henry J. Lang House, 3696 Albatross Street, San Diego, California	Cultural Land Planning and Research		X
SD-11798	1131798	May, Ronald V.	2006	Historical Nomination of the Baron X. Kouch / Norma Meyer Schuh Spec House #1, 3519 Dove Court, South Mission Hills, San Diego, California	Legacy 106		X
SD-11802	1131802	Moomjian, Scott A.	2008	Historical Assessment of the Walter and Nettie Bellon / Lester Olmstead / Olmstead Building Company House, 4276 Trias Street, San Diego, California 92103	Scott A. Moomjian		X
SD-11814	1131814	May, Ronald V., and Dale Ballou May	2008	Historical Nomination of the David H Ryan Spec House #1/Arthur a Kunze, Builder, 4330 Witherby Street~Mission Hills, San Diego, California	Legacy 106, Inc		X

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SD-11818	1131818	Hazard, Allen, and Janet O'dea	2007	Nomination for Historical Designation of the John F. Forward Jr. House, 4144 Lark Street, San Diego, CA 92103	Happy Hazard LLC		X
SD-11823	1131823	Kick, Maureen S.	2007	Cultural Resources Technical Report for the San Diego Vegetation Management Project	URS		X
SD-11826	1131826	Robbins-Wade, Mary	2008	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California Project. No. 42891	Affinis		X
SD-11845	1131845	Becker, Mark S., and Arleen Garcia-Herbst	2008	A Cultural Resources Survey Using the Archaeological Resources Report Form (Appendix D) for the Veterans Village of San Diego Project, San Diego, California	ASM Affiliates		X
SD-11883	1131883	Bonner, Wayne H., Marnie Aislin-Kay, and Kathleen Crawford	2008	Cultural Resource Records Search and Site Visit Results for T-Mobile Facility Candidate SD06503 (Chatsworth Blvd) Northeast Corner of Chatsworth Boulevard and Hyacinth Drive, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-11919	1131919	Potter, Elizabeth, and Jerry Schaefer	2007	Archaeological Monitoring of the A-1 Storage Project, San Diego, California	ASM Affiliates		X
SD-11955	1131955	Kim, Steve	2008	Proposed Federal Aviation Administration (Faa) Airport Surface Detection Equipment-Model X (Asde-X) Upgrade System to Serve San Diego International Airport (San), San Diego, California	Federal Aviation Administration		X
SD-12064	1132064	Case, Robert	2008	Cultural Resources Mitigation Monitoring Report for the Paseo De Mission Hills Affordable Housing Project, Mission Hills, City of San Diego, California	ICF Jones & Stokes		X
SD-12069	1132069	Moomjian, Scott, and Kathleen Crawford	2004	Historical Assessment of the Residence Located at 3100 Brant Street San Diego, California 92103	Office of Marie Burke Lia		X
SD-12070	1132070	Hazard, Allen, and Janet O'dea	2007	Nomination for Historical Designation of the Lillian Arnett House Mission Hills, 2112 Pine Street San Diego, California 92103			X
SD-12072	1132072	Moomjian, Scott	2008	Historical Assessment of the 2242 Pine Street Residence San Diego, California 92103	Scott A. Moomjian		X
SD-12078	1132078	U.S. Department of Homeland Security	2007	Draft Environmental Assessment: Construction of a Patrol Boat Pier and Floating Dock United States Coast Guard Sector San Diego, Harbor Drive Facility Port of San Diego, California	U.S. Department of Homeland Security		X
SD-12080	1132080	Alter, Ruth C.	2008	Cultural Resources Report for the Historical and Architectural Building Evaluation of 5055 N. Harbor Drive, San Diego, California 92106	Archaeos		X
SD-12098	1132098	Historical Resources Board		Historical Resource Nomination for 3131 Elliott Street	Historical Resources Board		X
SD-12099	1132099	Heritage Architecture & Planning	2007	Historical Resource Nomination for 2670 Second Avenue	Heritage Architecture & Planning		X
SD-12102	1132102	May, Ronald V. and Dale Ballou May	2007	Historical Nomination of the James and Florence Riach House, Quality Bldg. & Securities Co., Builders, 1977 Titus Street - Mission Hills / Middletown San Diego, California	Legacy 106, Inc.		X
SD-12119	1132119	Cook, John R.	2006	Cultural Resources Study for the Proposed Tecolote Canyon Long-Term Maintenance and Access Project and the Proposed Tecolote Canyon Wetlands Mitigation Project	ASM Affiliates		X
SD-12120	1132120	Robbins-Wade, Mary	2009	Hanalei Hotel Ballroom Archaeological Monitoring	Affinis		X
SD-12133	1132133	Hazard, Allen, and Janet O'dea	2007	Nomination for Historical Designation of the Homer Delawie House	Happy Hazard LLC		X
SD-12156	1132156	Johnson, Paul, and Sarai Johnson	2007	The Bolam House Historical Designation Report	Johnson and Johnson Architecture		X
SD-12157	1132157	Crawford, Kathleen	2007	Historical Resource Nomination for the Fred Jarboe Rental Property at 3427 Freeman Street	Kathleen Crawford		X

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SD-12159	1132159	May, Vonn Marie, and Tricia Olsen	2007	the Irvine M. and Flora Schulman / Louis Preibisius House 2540 Presidio Drive San Diego, Ca 92103	Vonn Marie May		X
SD-12161	1132161	Robbins-Wade, Mary	2009	Old Town Manhole Archaeological Monitoring	Affinis		X
SD-12167	1132167	Rosen, Martin	2009	Bridge Maintenance Activities on 22 Structures on Routes 5, 125, 163, and 274 in San Diego County Historic Property Survey Report	California Department of Transportation		X
SD-12174	1132174	Moomjian, Scott A.	2007	Historical Assessment of the Mack and Ruth Esterson/William Wahrenberger Spec House #3, 3311 Udall Street, San Diego, California 92106	Scott A. Moomjian, Esq.		X
SD-12175	1132175	Moomjian, Scott A.	2007	Historical Assessment of the Don and Rita Keller/Lloyd Ruocco House 1433 Puterbaugh Street San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-12176	1132176	Knoop, Christianne, and Beth Montes	2007	Historical Assessment of the Alberta Security Company-Melhorn Construction Company House 4186 Jackdaw Street San Diego, California 92103	Christianne Knoop and Beth Montes		X
SD-12192	1132192	May, Ronald	2007	Historical Nomination of the John and Cleo J. Zweck House 3305 Yonge Street - Point Loma	Legacy 106		X
SD-12194	1132194	Johnson, Paul, and Sarai Johnson	2007	the Jackson, Jones, Klauber, Train & Williams House Historic Designation Report	Johnson & Johnson Architecture		X
SD-12197	1132197	Moomjian, Scott A.	2007	Historical Assessment of the Oral & Mildred Carpenter/Judge Joseph & Helen Kilgarif Residence 2909 Chatsworth Boulevard San Diego, California 92106	Scott A. Moomjian, Esq.		X
SD-12198	1132198	May, Ronald V. and Dale Ballou May	2007	Historical Nomination of the Richard M. Hathaway Spec House No. 2 1855 Altamira Place - Mission Hills	Legacy 106		X
SD-12199	1132199	May, Ronald V. and Dale Ballou May	2007	Historical Nomination of the George A. Beatrice A. Bown House 4145 Miller Street - Inspiration Heights - San Diego - California	Legacy 106		X
SD-12200	1132200		2009	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)	City of San Diego Development Services Department		X
SD-12246	1132246	Pigniolo, Andrew, and Natalie Brodie	2008	Cultural Resource Survey of the Quince Street Public Right-Of-Way Vacation and Rezone Project at 2965 Front Street, City of San Diego, California	Laguna Mountain Environmental, Inc.		X
SD-12248	1132248	Moomjian, Scott	2007	Historical Assessment of the Raymond and Margaret Taylor Residence 2732 Azalea Drive, San Diego, California 92106	Scott Moomjian		X
SD-12249	1132249	Hazard, Allen, and Janet O'dea	2007	Nomination for Historical Designation of the Ralph Hurlburt/Alexander Schreiber Spec House #1 3917 Hawk Street San Diego, CA 92103	Happy Hazard LLC		X
SD-12252	1132252	May, Ronald and Dale Ballou May	2007	Historical Nomination of the Thomas M. and Zoe B. Hemphill House 4351 Ampudia Street - Mission Hills San Diego, California	Legacy 106, Inc.		X
SD-12282	1132282	May, Vonn Marie	2007	the Senator Lucy Killea / Ralph E. Hurlburt House 3248 Brant Street, San Diego, California 92103	Vonn Marie May		X
SD-12329	1132329	Moomjian, Scott A.	2007	Historical Assessment of the John and Caroline Bostick House 2436 Presidio Drive San Diego, California 92103	Scott A. Moomjina, Esq.		X
SD-12334	1132334	Smith, Erin, Michael Sampson, and Rachel Ruston	2009	Archaeological Findings for the Comfort Station #2 Replacement Project, Old Town San Diego Shp	California State Parks		X
SD-12339	1132339	Moomjian, Scott A.	2007	Historical Assessment of the 102 Dickinson Street Residence San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-12340	1132340	Moomjian, Scott A.	2007	Historical Assessment of the 104-118 Dickinson Street Buildings, San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-12341	1132341	Zepeda-Herman, Carmen	2008	Results of Cultural Resources Survey for the Shiraz Medical Center in San Diego, California	Recon Environmental, Inc.		X
SD-12344	1132344	Price, Harry	2009	Historical Resource Nomination for 4040 Fifth Avenue	Recon Environmental		X

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SD-12375	1132375	Stropes, Tracy A., and Brian F. Smith	2009	A Cultural Resource Monitoring Report for the East Point Loma Trunk Sewer Project	Brian F. Smith & Associates		X
SD-12382	1132382	Pierson, Larry J.	2008	Archaeological Resource Report Form: Mitigation Monitoring of the Pacifica Mini Warehouse Facility, Loma Portal Area, San Diego, California	Brian F. Smith & Associates		X
SD-12411	1132411	Pierson, Larry J.	2008	Archaeological Resource Report Form: Mitigation Monitoring of the Q Project	Brian F. Smith & Associates		X
SD-12421	1132421	Cook, John R., Deborah Huntley, and Sherri andrews	2000	Final: a Cultural Resources Inventory of the Proposed At&T / Pf. Net Fiber Optics Conduit Ocotillo to San Diego, California	ASM Affiliates, Inc.		X
SD-12422	1132422	Ni Ghabhlain, Sinead, and Drew Pallette	2001	A Cultural Resources Inventory for the Route Realignment of the Proposed Pf. Net / At&T Fiber Optics Conduit Oceanside to San Diego, California	ASM Affiliates, Inc.		X
SD-12430	1132430	URS Corp.	2009	Results of Architectural History Survey for Verizon Cellular Communications Tower Site - Solar Caterpillar 2200 Pacific Highway (APN: 760-071-03) San Diego, Ca 92101	URS Corp.		X
SD-12456	1132456	Gardner, Jill, and Mark Becker	2010	Archaeological Monitoring Report for the Veterans Village of San Diego Project, San Diego, California	ASM Affiliates		X
SD-12512	1132512	May, Vonn Marie	2008	the M.B. Irvin / A. Schreiber Spec House 4195 Stephens Street San Diego, California	Cultural Resource Planning and Research		X
SD-12515	1132515	Knoop, Christianne	2007	Historical Assessment of 4220 Arden Way			X
SD-12544	1132544	Bonner, Wayne, Sarah Williams, and Kathleen Crawford	2008	Cultural Resource Records Search Results and Site Visit for T-Mobile USA Candidate SD002867 (Presidio Park), Whitman Street Near Taylor Street and Moreno Boulevard, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-12555	1132555	Bonner, Wayne, Sarah Williams, and Kathleen Crawford	2008	Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate UCSD Medical Center, Located at 200 West Arbor Drive, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-12572	1132572	Chapman, Laurie	2008	Historical Nomination of the Arthur J. Dickerson House, 3786 Albatross Street, Cleveland Heights - Mission Hills San Diego, California	Legacy 106		X
SD-12573	1132573	IS Architecture	2008	Historical Resources Board Nomination for the Ralph H. Pratt Speculative House 3503 Jackdaw Street, San Diego, California 92103	IS Architecture		X
SD-12574	1132574	Hazard, Allen and Janet O'dea	2008	Nomination for Historical Determination of the Ralph Hurlburt/Alexander Schreiber Spec House #2, 3907 Hawk Street San Diego, Ca 92103	Happy Hazard LLC		X
SD-12587	1132587	Bonner, Wayne, Sarah Williams, and Kathleen Crawford	2009	Cultural Resource Records Search Results and Site Visit for Public Wireless Candidate Ca01068 (Liberty Station), 2520 Rosecrans Street, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-12641	1132641	Heritage Architecture & Planning	2010	David O. Dryden Speculation House Local Designation 3221 Homer Street, San Diego, CA 92106	Heritage Architecture & Planning		X
SD-12643	1132643	Johnson, Paul and Sarai Johnson	2008	Quality Building and Securities Company / Victor & Edna Wolff House: Nomination for Historic Designation	Johnson & Johnson Architecture		X
SD-12676	1132676	Alter, Ruth	2007	Cultural Resources Report for the Historical and Architectural Building Evaluation of 3725 Wellborn Street, San Diego, California 92103	Archaeos		X
SD-12734	1132734	San Diego Unified Port District	2001	Taxiway C Extension & Port Master Plan Amendment San Diego International Airport San Diego, California	San Diego Unified Port District		X
SD-12761	1132761	Pierson, Larry J.	2010	Archaeological Resource Report Form: Mitigation Monitoring of Water and Sewer Group 544 San Diego, California, W.O. Nos 185311 and 177001	Brian F. Smith & Associates		X

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SD-12768	1132768	United States Marine Corps	2005	Section 106 Compliance; Request for Finding of No Adverse Effect for Three Proposed Undertakings Located in the Marine Corps Recruit Depot Historic District, San Diego County	United States Marine Corps		X
SD-12818	1132818	Bowden-Renna, Cheryl	2010	Archaeological Monitoring Report for the Miramar Pipeline Repair Project, Naval Base Point Loma to Marine Corps Air Station Miramar, San Diego County, California	AECOM		X
SD-12819	1132819	Hammack, Elizabeth, and Joel Levanetz	2010	Historical Resources Technical Report Mission Hills Vons 450 West University Avenue	Heritage Architecture & Planning		X
SD-12841	1132841	Alter, Ruth C.	2010	Historical Resources Board Nomination for the Julia French Metcalf and George R. Metcalf Residence 3443 Elliott Street, San Diego, California 92106	IS Architecture		X
SD-12867	1132867	Chiang, Christina	2010	San Diego Midway Processing and Distribution Facility Property Disposition	URS Corporation		X
SD-12876	1132876	Case, Robert, Spencer Bietz, and Carol Serr	2010	Archaeological Monitoring Test, and Evaluation Report for the At&T Utility Undergrounding Project Old Town San Diego State Historic Park City of San Diego, California	Laguna Mountain Environmental, Inc.		X
SD-12993	1132993	Crawford, Kathleen	2011	Fat City Steakhouse, China Camp. Denny's, Formerly Top's Restaurant and Motel	Kathleen Crawford		X
SD-13006	1133006		2011	Master Storm Water System Maintenance Program - Draft Recirculated Program Environmental Impact Report	City of San Diego		X
SD-13126	1133126	Pierson, Larry J.	2011	Archaeological Resource Report Form: Mitigation Monitoring of Sewer & Water Group 730 San Diego, California	Brian F. Smith and Associates, Inc.		X
SD-13148	1133148	Stropes, Tracy A. and Brian F. Smith	2010	A Phase Iii Cultural Resources Data Recovery Program for SDi-16986 Hidden Meadows, San Diego County, California	Brian F. Smith and Associates, Inc.		X
SD-13149	1133149	Smith, Brian F.	2010	Cultural Resource Test Plan for the Salvation Army Vehicle Storage Area Project	Brian F. Smith and Associates, Inc.		X
SD-13151	1133151	Pierson, Larry J.	2010	Archaeological Resource Report Form: Mitigation Monitoring of Sewer & Water Group 747 Project	Brian F. Smith and Associates, Inc.		X
SD-13152	1133152	Pierson, Larry J.	2010	Archaeological Resource Report Form: Mitigation Monitoring of the Famosa Accelerated Water & Sewer Main Replacement Project San Diego, California	Brian F. Smith and Associates, Inc.		X
SD-13153	1133153	Smith, Brian F. and Tracy Stropes	2010	A Cultural Resource Test for the Batchelder Lot Split Project	Brian F. Smith and Associates, Inc.		X
SD-13156	1133156	Gottuso, Marc Anthony	2010	2574 Plum Street	Marc Anthony Gottuso		X
SD-13164	1133164	Moomjian, Scoot A.	2010	Historical Resource Research Report for the Richard and Viola Requa House 4346 Valle Vista San Diego, California 92103	Scott A. Moomjian		X
SD-13188	1133188	Coons, Bruce and Alana Coons	2011	John R. and Florence Porterfield Beardsley House	Bruce and Alana Coons		X
SD-13195	1133195	Caltrans	2011	Disposal of the Former California Department of Transportation District Office Complex	Caltrans		X
SD-13202	1133202	Rosen, Martin D.	2011	Cultural Resources Technical Assessment for the Program Environmental Impact Report for the San Diego River Park Master Plan, City of San Diego, California	ICF International		X
SD-13244	1133244	Weatherford, Ginger	2011	Section 106 Consulation for Proposed Collocation: SD Post Office, 2323 Midway Drive, San Diego, Ca	Ebi Consulting		X
SD-13270	1133270	Hazard, Allen and Janet O'dea	2011	Nomination for Historical Designation of the Alexander Schreiber Spec House #5 4167 Palmetto Way San Diego Ca 92103	Allen Hazard and Janet O'dea		X

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SD-13283	1133283	Ruston, Rachel S.	2011	Cultural Resources Review and Records Searches for Line 3010 Operations & Maintenance Potholing and Phase I & 2 Pipeline Integrity/ Retrofit Activities	ASM Affiliates		X
SD-13324	1133324	Dolan, Christy	2001	Historic Architectural Survey Report West Mission Bay Drive Bridge, San Diego County, San Diego, California	Kea Environmental, Inc.		X
SD-13327	1133327	Crawford, Kathleen A.	2011	1769-1797 San Diego Avenue, San Diego Ca, 92110	Office of Marie Burke Lia		X
SD-13328	1133328	IS Architecture	2010	Historical Resources Board Nomination for the Oakley J. & Grace P. Hall Residence 3510 Dove Court San Diego, California 92103	IS Architecture		X
SD-13329	1133329	May, Vonn Marie	2011	the Schreiber/ Irvin Spec House 4181 Stephems Street, Mission Hills	Vonn Marie May		X
SD-13331	1133331	Macaskill, Jaye E.	2011	Nomination to the City of San Diego Register of Historical Resources: the Mission Brewery Bottling Plant 1747 Hancock Street, San Diego, Ca 92101	Jaye E. Macaskill		X
SD-13348	1133348	Bray, Madeleine	2011	Archaeological Resources Survey Report for the Scripps Jones House Project, San Diego, Ca	Esa		X
SD-13362	1133362	Moomjian, Scott A.	2011	Historical Resource Research Report for the Charles & Marie Brenner House 4075 Couts Street San Diego, California 92103	Scott A. Moomjian		X
SD-13365	1133365	Hazard, Allen and Janet O'dea	2011	Nomination for Historical Designation of the Morris Irvin Spec. House No. 2 4239 Saint James Place San Diego, Ca 92103	Allen Hazard & Janet O' Dea		X
SD-13421	1133421	IS Architecture	2012	Historical Resources Board Nomination for the Leslie R. & Isabel M. Smith/ Charles H. Salyers Residence	IS Architecture		X
SD-13427	1133427	City of San Diego	2012	Water and Sewer Group 930	City of San Diego		X
SD-13436	1133436	Stropes, Tracy A. and Brian F. Smith	2012	Mitigation Monitoring Report for the Sewer Group 682 Project	Brian F. Smith and Associates		X
SD-13438	1133438	Strope, Tracy A. and Brian F. Smith	2012	Results of the Mitigation Monitoring Program for the Mission Brewery Villas Project	Brian F. Smith & Associates		X
SD-13448	1133448	Loftus, Shannon	2011	Cultural Resource Records Search and Site Survey At&T Site SD0332 Spanish Landing 4000 Block Harbor Drive Spanish Landing Next to Comfort Station #2 San Diego, San Diego County, California, 92101	Ace Environmental, LLC		X
SD-13450	1133450	Losee, Carolyn	2012	Telecommunicatons Project Inside Scripps/ Mercy Hospital in San Diego	Archaeological Resources Technology		X
SD-13453	1133453	Weatherford, Ginger	2011	Submission Packet, Fcc Form 620, for Proposed New Tower Project Harbor Drive Right of Way Along West Side of N. Harbor Drive, San Diego, San Diego County, Ca 92101	Ebi Consulting		X
SD-13458	1133458	Loftus, Shannon	2011	Cultural Resource Records Search and Site Survey At&T Site Ss0121 Commuter Terminal San Diego Port Authority Right-of Way on Harbor Drive San Diego, San Diego County, California 92101	Ace Environmental, LLC		X
SD-13461	1133461	Robbins-Wade, Mary	2012	Mission Valley Waterline Break Emergency Archaeological Monitoring	Affinis Environmental Services		X
SD-13469	1133469	Crawford, Kathleen	2012	2430 Union Street, San Diego, Ca 92101	Kathleen Crawford		X
SD-13472	1133472	Hazard, Allen and Janet O'dea	2011	Mary and Julia Pickett Spec House #1	Allen Hazard and Janet O' Dea		X
SD-13491	1133491	U.S. Department of Transportation	2011	Section 106 Consultation for the Mid Coast Corridor Transit Project, San Diego County, Ca	U.S. Department of Transportation		X
SD-13511	1133511	United States Marine Corps	2012	Section 106 Consultation for Modifications to Atm Machine, Building 10, Marine Corps Recruit Depot, San Diego	United States Marine Corps		X

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SD-13537	1133537	Aguilar, Jose "Pepe" and andrew R. Pigniolo	2012	Cultural Resource Monitoring Report for the Mission Hills Block 2e (Jobs 3 & 4) Utility Undergrounding Project, City of San Diego, California	Laguna Mountain Environmental		X
SD-13616	1133616	Moomjian, Scott A.	2012	Historical Resource Research Report Addendum for the Dr. Franklin & Leone Lindemulder/ Hurlburt, Frank & Slaughter/ Ralph Frank House 2551 San Juan Road San Diego, California 92105	Scott A. Moomjian		X
SD-13620	1133620	Cordileone, Joe and Diana Cordileone	2010	Hans Hirte Residence 2465 Curlew Street San Diego, California 92101	Joe and Diana Cordileone		X
SD-13672	1133672	United States Marine Corps	1997	Annual Report for Fy 1996-1997, Marine Corps Recruit Depot, San Diego, San Diego County	United States Marine Corps		X
SD-13681	1133681	Rosenberg, Seth A.	2008	Monitoring Report for Cultural Resources Monitoring at 2510 Juan Street	E2m		X
SD-13746	1133746	Case, Robert P. and Carol Serr	2011	Archaeological Monitoring, Test, and Evaluation Report for the Fiesta De Reyes Remodeling Project Old Town San Diego State Historic Park City of San Diego, California	Laguna Mountain Environmental, Inc.		X
SD-13755	1133755	Bowden-Renna, Cheryl	2011	Letter Report: Ets 21345 Cultural Resources Monitoring for Conduit Removal and Replacement, Pacific Highway Bridge, San Diego County, California- Io 7011103	AECOM		X
SD-13794	1133794	Moomjian, Scott A.	2011	Historical Resource Research Report for the Luigi G. Perna & Louise M. Perna House 2320 Hickory Street San Diego, California 92103	Scott A. Moomjian		X
SD-13859	1133859	City of San Diego	2012	Sewer and Water Group Job 732	City of San Diego		X
SD-13881	1133881	City of San Diego	2012	Sewer and Water Group 758	City of San Diego Developmental Services		X
SD-13883	1133883	Loftus, Shannon	2010	Clearwire Site Ca-SDg8200 Point Loma, Blvd., San Diego, Ca	Ace, Environmental		X
SD-13885	1133885	Loftus, Shannon	2012	At&T Site SD0391 Mcmillin Permanent 2750 Womble Road San Diego, San Diego County, California 92106	Ace Environmental		X
SD-13905	1133905	Crawford, Kathleen	2012	1895 Hancock Street, San Diego, Ca 92110	Office of Marie Burke Lia		X
SD-13918	1133918	ICF International	2012	San Diego River Park Master Plan Project Draft Program Environmental Impact Report	ICF International		X
SD-13921	1133921	Moomjian, Scott A.	2012	Historical Resource Research Report for the James & Alice Lee House 2672 Poinsettia Drive San Diego, California 92106	Scott A. Moomjian		X
SD-13922	1133922	May, Ronald V., Dale Ballou May, and Kiley Wallace	2012	Historical Nomination of the John Snyder/ Ralph E. Hurlburt and Charles H. Tifal House 4386 Trias Street- Mission Hills Nieghborhood San Diego, California	Legacy 106, Inc.		X
SD-13923	1133923	Macaskill, Jaye E.	2012	Nomination to the City of San Diego Register of Historical Resources: the John Henry & Katherine Zitt Residence 2961 1st Avenue, San Diego, Ca 92103	Jaye Macaskill		X
SD-13924	1133924	Johnson, Paul and Sarai Johnson	2012	the Danforth and Bauer Spech House Historical Nomination Research and Report	Johnson and Johnson Architecture		X
SD-13927	1133927	Moomjian, Scott A.	2012	Historical Resource Research Report for the J. Rex Murray and Alice M. Murray Spec House 4266 Arista Street San Diego, California 92103	Scott A. Moomjian		X
SD-13931	1133931	Hazard, Allen and Janet O'dea	2012	Nomination for Historic Designation John W. Donohue Spec House #1 4129 Falcon Street, San Diego Ca 92103	Allen Hazrd and Janet O'dea		X
SD-13932	1133932	May, Vonn Marie	2012	the Bessie H. Olds/ William F. Wahrenberger House 2306 Pine Street San Diego, Ca 92103	Vonn Marie May		X
SD-13934	1133934	IS Architecture	2012	Historical Resources Board Nomination for Samuel S. and Lulu B. Maxwell Residence 4494 Hortensia Street San Diego, California 92103	IS Architecture		X

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SD-13936	1133936	May, Ronald V. and Dale Ballou May	2012	Historical Nomination of the Henry H. and Lavina Nelson Speculation House #2 1915 Sunset Boulevard Inspiration Heights Neighborhood San Diego, California	Legacy 106, Inc.		X
SD-13962	1133962	Robbins-Wade, Mary	2004	Archaeological Resources Report, Tecolote Canyon Natural Park, San Diego, California	Affinis		X
SD-13981	1133981	Kraft, Jennifer R. and Tracy A. Stropes	2012	Mitigation Monitoring Report for the T-Mobile West, LLC Telecommunications Candidate	Brian F. Smith and Associates, Inc.		X
SD-13982	1133982	Kraft, Jennifer R. and Brian F. Smith	2012	Mitigation Monitoring Report for the Pacific Highway Trunk Sewer, San Diego, California	Brian F. Smith and Associates, Inc.		X
SD-13985	1133985	City of San Diego	2012	Sewer and Water Group Job 723	City of San Diego		X
SD-13989	1133989	May, Ronald V. and Kiley Wallace	2012	Historical Nomination of the B. Franklin and Helen Mahoney/ Richard Requa House 4105 Alameda Drive, Inspiration Heights Neighborhood San Diego, California	Legacy 106, Inc.		X
SD-13990	1133990	IS Architecture		Historical Resources Board Nomination for the Louis and Carmelita Fontanel House 4243 Jackdaw Street San Diego, California 92103	IS Architecture		X
SD-13992	1133992	City of San Diego	2011	Water Group Job 945	City of San Diego		X
SD-14033	1134033	Pham, Angela N. and James T. Daniels	2012	A Negative Monitoring Report Using the Archaeological Resources Report Form (Appendix D) for the Juan Street Rehabilitation Project, San Diego, California	ASM Affiliates, Inc.		X
SD-14037	1134037	Wolf, Scott and Sinead Ni Ghabhlain	2012	Results of Archaeological Monitoring for the Broadstone Little Italy Project, San Diego, California	ASM Affiliates, Inc.		X
SD-14163	1134163	Smith, Brian F.	2012	Phase I Archaeological Survey of the Old Town Community Church Project	Brian F. Smith and Associates, Inc.		X
SD-14218	1134218	IS Architecture	2013	Historical Resources Board Nomination for Lillie F.J. and James Dayton North Houses 3600 3rd Avenue and 136 Brookes Avenue San Diego, Ca 92103	IS Architecture		X
SD-14223	1134223	Hazard, Allen and Janet O'dea	2013	William K. and Edith Potter Spec House #1 APN 451-163-03	Allen Hazard and Janet O'dea		X
SD-14231	1134231	May, Ronald V. and Kiley Wallace	2012	Historical Nomination of the Marshall N. Rosenbluth/ Lincoln Rogers/ Carter Construction Company House 4290 Randolph Terrace Neighborhood San Diego, California	Legacy 106, Inc.		X
SD-14242	1134242	Bonner, Wayne, Sarah Williams, and Kathleen Crawford	2012	Cultural Resource Records Search and Site Visit Results for Sprint Nextel Candidate SD40xc308 (Cal Trans), 2829 Juan Street, San Diego, San Diego County, California	Michael Brandman Associates		X
SD-14267	1134267	Bowden-Renna, Cheryl	2012	Letter Report: Ets 22369- Cultural Resources Monitoring for Gas Line 49-32, Ecda 6 Digs, Old Town, San Diego County, California- Io 7011100	AECOM		X
SD-14311	1134311	Wilson, Stacie	2013	Letter Report: Ets 23917- Cultural Resources Monitoring Report for Replacement Activities for an Existing Capacitor and Installation of an Antenna, Spanish Landing, City of San Diego, California- Io 7011103	AECOM		X
SD-14312	1134312	Wilson, Stacie	2013	Letter Report: Ets 23918- Cultural Resources Monitoring Report for Replacement Activities for an Existing Capacitor and Installation of an Antenna, Spanish Landing, City of San Diego, California- Io 7011103	AECOM		X
SD-14350	1134350	May, Ronald V. and Kiley Wallace	2013	the Historic Nomination of the Nathan and Hattie Rigdon Speculation House #2	Legacy 106, Inc.		X
SD-14352	1134352	May, Ronald V. and Kiley Wallace	2013	Historical Nomination of the Morris and Ida Irvin Speculation House 1530 Fort Stockton Drive, North Florence Heights Neighborhood San Diego, California	Legacy 106, Inc.		X

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SD-14380	1134380	Pigniolo, andrew R.	2013	Cultural Resource Survey for the Old Town Avenue City of San Diego, California (APN #443-520-40-00)	Laguna Mountain Environmental, Inc.		X
SD-14383	1134383	Pigniolo, andrew R.	2013	Cultural Resource Monitoring Report of the Geological Reconnaissance Trenching for the Hacienda Apartments Project at Old Town Avenue City of San Diwgo, California (APN 443-520-40-00)	Laguna Mounatin Environmental, Inc.		X
SD-14398	1134398	City of San Diego	2013	Ocean Beach Community Plan and Local Coastal Program	City of San Diego		X
SD-14399	1134399	City of San Diego	2013	University Avenue Pipeline Cast Iron Replacement Project	City of San Diego		X
SD-14418	1134418	Loftus, Shannon	2012	Cultural Resources Records Search and Site Survey At&T Site Ss0106 Residence Inn 1747 Pacific Highway San Diego, San Diego County, California 92101	Ace Environmental, Inc.		X
SD-14421	1134421	Heritage Architecture and Planning	2013	William R. and Minerva D. Welton Residence Historical Nomination 3033 Elliott Street, San Diego California	Heritage Architecture and Planning		X
SD-14422	1134422	May, Ronald V.	2012	Historical Nomination of the Chaplain Thomas L. Kirkpatrick House 3030 Dumas Street Loa Portal Neighborhood San Diego, California	Legacy 106, Inc.		X
SD-14423	1134423	Moomjian, Scott A.	2013	Historical Resource Research Report for the Hervey K. Graham and Alva M. Graham Ralph L. Frank House 2243 Guy Street San Diego, California 92103	Scott A. Moomjian		X
SD-14424	1134424	May, Vonn Marie	2013	the James Dallas and Mary Hollis Clark House 4274 Rudolph Street, Mission Hills San Diego, California	Vonn Marie May		X
SD-14431	1134431	Farley, Sarah L.	2012	Addendum to Fcc Form 620 Harbor Drive Harbor Island Drive (Row), San Diego, San Diego County, California 92101 Ebi Project #61110632	Ebi Consulting		X
SD-14447	1134447	United States Marine Corps	2011	Marine Corps Recruit Depot Proposing to Demolish an Addition to Building 30	United States Marine Corps		X
SD-14451	1134451	Stalters, Dave	2012	Section 106 Consultation for Repairs to Hangar Two, Coast Guard Air Station San Diego, San Diego County	U.S. Coast Guard		X
SD-14469	1134469	Bullicruz, E.L.	2013	Section 106 Consultation for Steam Heat System Replacement, 15 Buildings, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14475	1134475	Bullicruz, E.L.	2013	Section 106 Consultation for Speaker System Installation, Building 31 and Parade Deck, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14481	1134481	Bullicruz, E.L.	2013	Section 106 Consultation for Installation of Three Fire Pits, West Side of Building Ten, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14483	1134483	Van Wormer, Stephen R.	2013	Historical Resources Compliance Report for the City of San Diego's Buchanan Canyon Sewer Replacement- B Accelerated San Diego County, California	Affinis		X
SD-14496	1134496	City of San Diego	2013	Sewer and Water Group Job 815	City of San Diego		X
SD-14552	1134552	Bullicruz, E.L.	2013	Section 106 Consultation for HVAC Installation, Building 16, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14558	1134558	Rickling, Brian S.	2013	Marine Corps Depot, San Diego, Ca Fy 2012 Project Study Elastomeric/ Historic Study	Heritage Architecture & Planning		X
SD-14559	1134559	Bullicruz, E.L.	2013	Section 106 Consultation for HVAC Installation, Building Eight, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14576	1134576	Loftus, Shannon	2012	Cultural Resource Records Search and Site Survey At&T Site SD0392 Nimitz LTE 2180 Chatsworth Boulevard San Diego, San Diego County, California 92106	Ace Environmental, LLC		X

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SD-14577	1134577	City of San Diego	2013	the Upas Street Pipeline Replacement Project	City of San Diego		X
SD-14611	1134611	May, Ronald V., and Kiley Wallace	2013	Historical Nomination of the Iver and Algeline Lawson House 3231 Front Street Bankers Hill Neighborhood San Diego, California	Legacy 06, Inc.		X
SD-14612	1134612	May, Ronald V., and Kiley Wallace	2012	Historical Nomination of the Alberta Security Co./ Martin V. Melhorn Speculation House #3 4019 Hawk Street- Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-14620	1134620	Kraft, Jennifer R., and Brian F. Smith	2013	Historic Structure Assessment, 2603 Dove Street, San Diego, California (APN 452-674-32)	Brian F. Smith and Associates, Inc.		X
SD-14676	1134676	Globa, Victor	2012	San Diego International Airport Draft Environmental Assessment Runway 9 Displaced Threshold Project San Diego, California Section 106 Consultation	Federal Aviation Administration		X
SD-14719	1134719	May, Ronald V. and Kylie Wallace	2013	Historical Nomination of the William and Vera Wylie Speculation House 4460 Hermosa Way Mission Hills Neighborhood San Diego, California	Legacy 106, Inc.		X
SD-14721	1134721	Moomjian, Scott A.	2013	Historical Resource Research Report for the Dr. Charles and Madeline Brown/ Brown-Olmstead Building Company Home 1614 Torrance Street San Diego, California 92103	Scott A. Moomjian		X
SD-14722	1134722	Hazard, Allen and Janet O'dea	2013	Nomination for Historical Designation of the John W. and Evelyn E. Rice House 3565 Third Ave. San Diego, Ca 92103	Allen Hazard and Jaent O'dea		X
SD-14724	1134724	Moomjian, Scott A.	2013	Historical Resource Research Report for the H.G. Fenton House 2630 Chatsworth Boulevard San Diego, California 92106	Scott A. Moomjian		X
SD-14740	1134740	City of San Diego	2014	Sewer Group Job 743	City of San Diego		X
SD-14741	1134741	Stropes, Tracy A.	2014	Cultural Resource Monitoring Report for the Sewer and Water Group 723 Project City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-14743	1134743	Tsunoda, Koji	2014	Historical Resources Compliance Report for the Washington Street Bridge Access Control Project San Diego County, California	Caltrans		X
SD-14750	1134750	Globa, Victor	2013	San Diego International Airport, Northside Improvements Project, San Diego Ca	Federal Aviation Administration		X
SD-14783	1134783	Farley, Sarah	2013	Sports Arena Lte/ Ensite #14068 (123432) 3500 Sports Arena Boulevard, San Diego, San Diego County, Ca 92110	Ebi Consulting		X
SD-14791	1134791	Pham, Angela, and Sinead N. Ghabhlain	2013	Cultural Resources Technical Report for Padre Trail Inn 4200 Taylor Street San Diego, California	ASM Affiliates, Inc.		X
SD-14797	1,134797	Roy, Julie	2014	Letetr Report: Ets 27195- Cultural Resources Monitoring Report for Emergency- Broadstone Little Italy- 120 Ft 3 in Pe Fir W/O Kettner Blvd, City of San Diego, California- Io 7011100	AECOM		X
SD-14799	1134799	Roy, Julie	2014	Letter Report: Ets 27156- Cultural Resources Monitoring Report for Replacement Activities for Pole P233174, Cmp- Pole Change Out, Community of Old Town, City of San Diego, California- Io 7011102	AECOM		X
SD-14813	1134813	Stropes, Tracy A.	2014	Cultural Resource Monitoring Report for the Sewer and Water Group 732 Project City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-14815	1134815	Roy, Julie	2014	Letter Report: ETS 26104- Cultural Resources Monitoring Report for Rehab Activities for the Relocation of a 4" and a 2" Gas Line in the Community of Old Town, City of San Diego, California- Io 000200456392	AECOM		X
SD-14821	1134821	Moomjian, Scott A.	2013	Historical Resource Research Report for the 3745 Third Avenue Residence San Diego, California 92103	Scott A. Moomjian		X

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SD-14830	1134830	Alter, Ruth C.	2013	2684 Jonquil Drive San Diego, 92106	Archaeos		X
SD-14831	1134831	Stovall, Randy, Sally Stovall, and Jaye Macaskill	2013	Nomination to the City of San Diego Register of Historical Resources: The United States Holding Company Residence 2304 Juan Street, San Diego, Ca 92103 (APN 443-340-43)	Randy and Sally Stovall, Jaye Macaskill		X
SD-14850	1134850	Palomar, Percival C.	2013	Section 106 Consultation for Satellite Antenna Installation, Building Five, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-14869	1134869	Loftus, Shannon	2013	Cultural Resource Records Search and Site Survey At&T Site SD0391 Point Loma Temp 2590 Womble Road Vista, San Diego County, California 92106	Ace Environmental, LLC		X
SD-14875	1134875	Loftus, Shannon	2013	Cultural Resource Record Search and Site Survey At&T Site SD0123 MCRD 2383 Midway Drive San Diego, San Diego County, California 92110	Ace Environmental, LLC		X
SD-14943	1134943	Roy, Julia and Stacie Wilson	2014	Letter Report: ETS 27560- Cultural Resources Survey for Pole P230571, Community of Hillcrest, City of San Diego, California- Io7011102	AECOM		X
SD-15024	1135024	Jennifer R. Kraft, David K. Grabski, and Brian F. Smith	2014	Phase I Cultural Resource Survey for the Amineh Project	Brian F. Smith		X
SD-15043	1135043	Jose Pepe Aguilar, Andrew R. Pigniolo, and Carol Serr	2012	Archaeological Monitoring, Testing, and Data Recovery at Site Ca-SDi-18995 (Hcn-S-10) for the Hotel Circle South Undergrounding Project, Mission Valley, City of San Diego, California	Laguna Mountain Environmental, Inc.		X
SD-15064	1135064	J. Tait Elder and Timothy A. Yates	2013	Mid-Coast Corridor Transit Project: Archaeological Resources Extended Phase I Investigation Results and Effects Assessment	ICF International		X
SD-15065	1135065	Carole Denardo, Rachael Greenlee, and Caprice Harper	2012	Mid-Coast Corridor Transit Project: Archaeological Survey Report, San Diego, California	Garcia and Associates		X
SD-15065							X
SD-15066	1135066	SANDAG	2013	Mid-Coast Corridor Transit Project: Historic Property Effects Report	SANDAG		X
SD-15074	1135074	Tracy A. Stropes	2014	Cultural Resource Monitoring Report for the Sewer and Water Group 799 Project	Brian F. Smith and Associates, Inc.		X
SD-15075	1135075	Jennifer R. Kraft and Brian F. Smith	2014	Cultural Resource Monitoring Report for the Sewer and Water Group 761 Project	Brian F. Smith and Associates, Inc.		X
SD-15091	1135091	Wayne H. Bonner, Sarah A. Williams, and Kathleen A. Crawford	2014	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SD06320a (I Pay One Arena) 3500 Sports Arena Boulevard, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc.		X
SD-15092	1135092	Wayne H. Bonner and Kathleen A. Crawford	2014	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06321a (SD321 Green Manor) 4041 Ibis Street, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc.		X
SD-15151	1135151	David Brunzell	2015	Cultural Resources Assessment of the Crown Castle/ Verizon Fiber PUC Project, San Diego, California (BCR Consulting Project No. Syn1404)	BCR Consulting LLC		X
SD-15176	1135176	Jennifer R. Kraft and Brian F. Smith	2014	Phase I Cultural Resource Survey for the 915 Grape Street Project City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-15255	1135255	Mary Robbins-Wade and Andrew Giletti	2014	Archaeological Monitoring of Geotechnical Testing, 2544 Juan Street; Project No. 381810 (Site Development Permit Application); Helix Project No. Cct-01	Helix Environmental Planning		X
SD-15286	1135286	Brian F. Smith and David K. Grabski	2015	Cultural Resource Monitoring Report for the Holiday Inn Express Project San Diego, California	Brian F. Smith and Associates, Inc.		X

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SD-15292	1135292	Kristin Tennesen	2014	ETS #26924, Cultural Resources Survey P2108472075, CMP Damaged Guy, San Diego, California (HDR #226915)	HDR		X
SD-15293	1135293	Kristin Tennesen	2014	ETC #26925, Cultural Resources Survey P736234, CMP, Pole Removal, San Diego, California (HDR #226921)	HDR		X
SD-15318	1135318	David K. Grabski and Brian F. Smith	2015	Cultural Resource Monitoring Report for the Upas Street Pipeline Replacement Project (Fifth Avenue & Park)	Brian F. Smith and Associates, Inc.		X
SD-15320	1135320	Brian F. Smith	2015	A Cultural Resources Study for 2484 Congress Street Old Town San Diego, California	Brian F. Smith and Associates, Inc.		X
SD-15515	1135515	David K. Grabski and Brian F. Smith	2015	Cultural Resource Monitoring Report for the Sewer Group 727 Project (Part of Sewer Group 3017), City of San Diego	Brian F. Smith and Associates		X
SD-15516	1135516	Brian F. Smith	2015	Results of Cultural Resource Monitoring at the Fourth Avenue Lofts Project (Project No. 375912)	Brian F. Smith and Associates		X
SD-15538	1135538	Jennifer R. Kraft and Brian F. Smith	2015	Cultural Resource Monitoring Report for the Ten on Columbia Project, San Diego, California	Brian F. Smith and Associates		X
SD-15546	1135546	Wayne H. Bonner and Kathleen A. Crawford	2014	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06866a (Peninsula Center) 3051 Rosecrans Place, #B, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15547	1135547	Wayne H. Bonner, Sarah A. Williams, and Kathleen A. Crawford	2013	Cultural Resources Records Search and Site Visit Results for T-Maobile West, LLC Candidate SD06866a (Peninsula Center) 3051 Rosecrans Place, #B, San Diego, San Diego County, California	Environmental Assessment Specialists		X
SD-15616	1135616	Wayne H. Bonner and Kathleen A. Crawford	2013	Cultural Resources Records Search and Site Visit Results for T Mobile West, LLC Candidate SD06120a (Baha'i Faith Center) 6545 Alcala Knolls Drive, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15617	1135617	Wayne H. Bonner and Kathleen A. Crawford	2013	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06120a (Baha'i Faith Center) 6545 Alcala Knolls Drive, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15620	1135620	Wayne H. Bonner, Sarah A. Williams, and Kathleen A. Crawford	2013	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SD06157a (SD157 Chatsworth-Pacific) 3704 Tennyson Street, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15621	1135621	Wayne H. Bonner and Kathleen A. Crawford	2014	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06157a (SD157 Chatsworth-Pacific) 3704 Tennyson Street, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15626	1135626	Wayne H. Bonner, Sarah A. Williams, and Kathleen A. Crawford	2013	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SD06321a (SD321 Green Manor) 4041 Ibis Street, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15627	1135627	Wayne H. Bonner and Kathleen A. Crawford	2014	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06320a (I Pay One Arena) 3500 Sports Arena Boulevard, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc		X
SD-15658	1135658	Don C. Perez	2014	Cultural Resources Survey San Terminal 2 South / Ensite #20302 (282094) 4051 Harbor Drive, San Diego, San Diego County, California 92101	EBI Consulting		X
SD-15696	1135696	May, Ronald V.	2015	Historical Nomination of the Nathan and Hattie Rigdon Speculation House #4, 1809 West Montecito Way - Mission Hills Neighborhood, San Diego, California	Legacy 106		X

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SD-15702	1135702	May, Ronald V.	2014	Historical Nomination of the Nancy Johnson & Richard Carter / Martin V. Melhorn House, 3916 Alameda Place - Mission Hills, San Diego, California	Legacy 106		X
SD-15705	1135705	Considine, Peter	2014	Mrs. H.C. Magee Residence/Richard Requa Home			X
SD-15765	1135765	David Brunzell	2015	Cultural Resources Assessment of the Albatross Project, San Diego, San Diego County, California (BCR Consulting Project No. Trf1521)	BCR Consulting		X
SD-15798	1135798	Don Perez	2014	Cultural Resources Survey, Sassafras / Ensite #20787 (280742), 3420 Kettner Boulevard, San Diego, San Diego County, California 92101, EBI Project No. 61146854	EBI Consulting		X
SD-15877	1135877	Carrie D. Wills, Sarah A. Williams, and Kathleen a Crawford	2014	Cultural Resource Records Search and Site Visit Results for At&T Mobility, LLC Candidate SD0201 (Tecolote Park), 3981 Tecolote Road, San Diego, San Diego County, California	First Carbon Solutions		X
SD-15926	1135926	Peter Dixon	2014	Historical Resource Research Report for the Alfred J. & Helen G. Cantoni / Ralph L. Frank/William B. Melhorn House, 2412 Pine Street, San Diego, California 92103			X
SD-15932	1135932	Ronald V. May and Kiley Wallace	2014	Historical Nomination of the Earle and Helen Brucker / Benjamin Torgerson House, 2555 Plum Street - Point Loma Neighborhood, San Diego, California	Legacy 106		X
SD-15936	1135936	Ronald V. May and Kiley Wallace	2014	Historical Nomination of the C. Wesley and Lucie Hall House, 4175 Arden Way - Inspiration Heights Neighborhood, San Diego, California	Legacy 106		X
SD-15941	1135941	Ronald May, Kiley Wallace, and Alexandra Wallace	2013	Supplemental Research Report of 4274 Randolph Street, the James and Mary Clark House, Mission Hills Neighborhood, San Diego, California	Legacy 106		X
SD-15948	1135948		2015	Addendum to Historical Resources Research Report for 215 West Washington Street, San Diego Ca 92103	Office of Marie Burke Lia		X
SD-15949	1135949	Brian F. Smith and Jennifer R. Kraft	2015	Historical Resource Research Report for the 1311 Sutter Street Building, San Diego, California 92103	Brian F. Smith and Associates, Inc.		X
SD-15953	1135953	Kristina Davison and Mary Robbins-Wade	2014	Archaeological Resources Survey, 1975 Hotel Circle South, San Diego, California Pts No. 307512	Affinis		X
SD-15954	1135954	Scott A. Moomjian	2015	Historical Resource Research Report for the 2360-2386 Linwood Street Residences, San Diego, California 92110			X
SD-15957	1135957	Scott A. Moomjian	2015	Historical Resource Research Report for the H.G. Fenton House 2630 Chatsworth Boulevard San Diego, California 92106			X
SD-15958	1135958	Scott A. Moomjian	2015	Historical Resource Research Report for the 3136 James Street Residence, San Diego, California 92103			X
SD-15959	1135959		2015	Estelle and William J. Mckenna Residence, 3315 Elliott Street, San Diego, Ca 92106	Heritage Architecture & Planning		X
SD-15960	1135960	Scott A. Moomjian	2015	Historical Resource Research Report for the 3612-3614 & 3616-3618 Fourth Avenue Buildings, San Diego, California 92103			X
SD-15961	1135961	Ruth C. Alter	2015	Rear Adm. Ammen and Henrietta P. Farenhold House/Richard S. Requa House	Archaeos		X
SD-15970	1135970	Scott A. Moomjian	2014	Historical Resource Research Report for the 4079 First Avenue Residence, San Diego, California 92103			X
SD-15976	1135976	Ronald V. May, Kiley Wallace, Shoshana Jones, and Alexandra Wallace	2014	Supplemental Research Report, the Ruth Lindley / Nathan Rigdon Speculation House #2, 1515 West Lewis Street - Mission Hills Neighborhood, San Diego, California	Legacy 106		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-15978	1135978	Allen Hazard and Janet O'dea	2015	Historic Designation of the William Joel Butler Spec. House, 1125 Fort Stockton Drive			X
SD-15980	1135980	Kathleen Crawford	2014	2119 Kettner Boulevard, San Diego, CA 92101	Marie Burke Lia		X
SD-15990	1135990	Ronald V . May and Kiley Wallace	2015	Historical Nomination of the Frederick and Della Haman Speculation House #2, 1840 West Montecito Way - Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-15991	1135991	Ronald V. May and Kiley Wallace	2015	Historic Nomination of the Joseph W. Potter House, 1984 Guy Street, San Diego, Ca 92103	Legacy 106, Inc		X
SD-15994	1135994	Ronald V. May and Kiley Wallace	2015	Historical Nomination of the Alberta Security Company / Martin V. Melhorn Speculation House #4, 3917 Alameda Drive - Inspiration Heights Neighborhood, San Diego, California	Legacy 106		X
SD-16003	1136003	Ian Scarlotta	2014	A Cultural Resources Survey Using the Archaeological Resources Report Form (Appendix D) for the Mission Valley Suites Project in Mission Valley, San Diego, California	ASM Affilates		X
SD-16158	1136158	Robert P. Case	2014	Cultural Resource Monitoring Report for the Harbor Drive Pipeline Replacement Project (Pts No. 206100) City of San Diego, California	Laguna Mountain Environmental		X
SD-16230	1136230	Julie Roy	2014	Letter Report: Ets 24921 - Cultural Resources Monitoring Report for Middletown Substation Project, City of San Diego, California - Io 7011104	ASM Affiliates		X
SD-16315	1136315	Ramos-Ponciano, Marcos	2015	Letter Report: Ets 29988 - Cultural Resources Monitoring Report for Maintenance Activities for Tl612 P279897, City of San Diego, San Diego County, California - Io 7074265	AECOM		X
SD-16329	1136329	Roy, Julie	2015	Letter Report: Ets 30376 - Cultural Resources Monitoring Report for Cmp, Trim for Inspection, D109401, Community of Old Town, City of San Diego, California - Io 6010250	AECOM		X
SD-16340	1136340	Wilson, Stacie	2015	Letter Report: Ets 31203 - Cultural Resources Monitoring Report for Pole Maintenance at Pole P235759, Mission Hills, San Diego County, California - Io 7074264	AECOM		X
SD-16383	1136383	Enriquez, Paul	2015	U.S. Border Patrol, San Diego Sector (SDc), Implementation of Energy Conservation Measures (Ecms) for Facilities in San Diego, El Cajon, San Ysidro, and Otay Mesa, All Located in San Diego County, California	U.S. Customs and Border Protection		X
SD-16424	1136424	Wills, Carrie D.	2015	Cultural Resource Records Search and Site Visit Results for At&T Mobility, LLC Candidate Ss0122 (Macys Fashion Valley), 7017 Friars Road, San Diego, San Diego County, California	Helix Environmental		X
SD-16425	1136425	Wills, Carrie D.	2015	Direct Ape Historic Architectural Assessment for At&T Mobility, LLC Candidate Ss0122 (Macys Fashion Valley), 7017 Friars Road, San Diego, San Diego County, California	Helix Environmental		X
SD-16448	1136448	Garcia-Herbst, Arleen	2015	Cultural Resources Inventory for the Pacific Beach Pipeline Project, City of San Diego, Ca	Spindrift Archaeological Consulting, LLC		X
SD-16496	1136496	May, Ronald V.	2015	Historical Nomination of the Holly and Nellie Perrine / Thomas Faulconer House 4152 Ibis Street - Mission Hills Neighborhood, San Diego, California	Legacy 106		X
SD-16498	1136495	May, Ronald V.	2016	Historical Nomination of the Captain Lloyd and Edith Gray / Lilian Rice / Wurster Construction Company House 2324 Pine Street - Mission Hills Neighborhood, San Diego, California	Legacy 106		X
SD-16499	1136499	Johnson, Paul	2016	the Elizabeth H. Maw, Eugene Hoffman Dennstedt Company House - Historic Nomination Research and Report	Johnson and Johnson Architecture		X

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SD-16511	1136511	May, Ronald V.	2015	Historical Nomination of the Paul and Ada Hunt House 3738 Lotus Drive - Loma Portal Neighborhood San Diego, California	Legacy 106		X
SD-16519	1136519	Moomjian, Scott A.	2015	Historical Resource Research Report for the 2750 Fourth Avenue Building San Diego, California 92103	Scott A. Moomjian, Esq.		X
SD-16520	1136520	Moomjian, Scott A.	2015	Historical Resource Research Report for the R. Douglas Maw & Eunice Maw House 3430 Elliott Street San Diego, California 92106	Scott A. Moomjian, Esq.		X
SD-16528	1136528	Meiser, M.K.	2016	Historical Resource Technical Report for Town & Country Hotel and Convention Center Redevelopment Project San Diego, California	AECOM		X
SD-16530	1136530	Nakhshab, Soheil	2016	Truax House, 2513/2515 Union Street & 540 W. Laurel, San Diego, CA 92101	Nakhshab Development and Design, Inc.		X
SD-16532	1136532	Lufkin, Emily	2015	Historical Nomination W.D. Hall House, 4180 3rd Ave. San Diego Ca 92103	Emily Lufkin		X
SD-16533	1136533	Alter, Ruth C.	2016	A.F. Cornell House, 140 Quince Street, San Diego, Ca 92103	Archaeos		X
SD-16535	1136535	Moomjian, Scott A.	2015	Historical Resource Research Report Addendum for the 2360-2386 Linwood Street Residences, San Diego, California 92110	Scott A. Moomjian, Esq.		X
SD-16537	1136537	Foglia, Shannon E.	2016	Cultural Resources Monitoring Report for Whaley House Complex Café and Shop Improvements Project	AECOM		X
SD-16551	1136551	Ni Ghabhlain, Sinead	2014	Cultural and Historical Resource Existing Conditions Report in Support of the Grant K-8 Whole Site Modernization Project, San Diego, California	ASM Affiliates		X
SD-16553	1136553	Davis, Shannon	2013	Draft Historic Technical Report for Hillcrest Receiving Home 4307 Third Avenue San Diego, San Diego County, California	ASM Affiliates, Inc		X
SD-16584	1136584	Loftus, Shannon L.	2016	Historic Architectural Resource-Inventory and Assessment At&T Site SD0010 Sports Arena Sector Add 3500 Sports Arena Boulevard San Diego, San Diego County, California 92110	Ace Environmental		X
SD-16585	1136585	Loftus, Shannon L.	2016	Cultural Resource Records Search and Site Survey At&T Site SD0010 Sports Arena Sector Add 3500 Sports Arena Boulevard San Diego, San Diego County, California 92110	Ace Environmental		X
SD-16594	1136594	Stalters, Dave	2016	Signs on Hangar One and Hangar Two at Air Station San Diego, 2710 Harbor Harbor Drive, San Diego County	United States Coast Guard		X
SD-16601	1136601	Cogstone Resource Management, Inc.	2015	San Diego River Bridge Double Track Project (Cp Tecolote to Cp Friar) Cultural Resources Technical Report	Cogstone Resource Management, Inc		X
SD-16627	1136627	Pigniolo, Andrew	2016	Cultural Resource Monitoring for the Zayo Trenching Project for 2461 San Diego Avenue, Old Town, City of San Diego, California (Project No. 469082)	Laguna Mountain Environmental, Inc		X
SD-16629	1136629	Pigniolo, Andrew, and Serr, Carol	2016	Cultural Resource Monitoring for the Xo Communications Project, 2251 San Diego Avenue, Old Town, City of San Diego, California	Laguna Mountain Environmental, Inc.		X
SD-16743	1136743	Smith, Brian F.	2016	Historical Resource Research Report for the Midway Postal Service Processing and Distribution Center, 2535 Midway Drive, San Diego, California 92138 Project No. 507152	Brian F. Smith and Associates		X
SD-16777	1136777	Stropes, J.R.K., and Smith, Brian F.	2016	Cultural Resource Monitoring Report for the Sewer and Water Group 758 Project City of San Diego Project No. 230024 Sewer WBS No. B-00365; Water WBS No. B-00074	Brian F. Smith and Associates		X

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SD-16780	1136780	Stropes, J.R.K., and Smith, Brian F.	2016	Phase I Cultural Resource Survey for the 2499 Pacific Highway Project City of San Diego Ccdp/Ccpdp/Cdp/Cup No. 2016-30 APN 533-021-01	Brian F. Smith and Associates		X
SD-16791	1136791	Hazard, Allen, and O'dea, Janet	2016	Historic Designation of the 1924 Gladys May Benson House	Allen Hazard & Janet O'dea		X
SD-16796	1136796	Ayala, Jennifer, and Burke Lia, Marie	2016	3554-3590 Kettner Blvd. & 1949 W. Walnut St., SD, Ca 92101	Office of Marie Burke Lia		X
SD-16802	1136802		2016	Uptown Community Plan Area Draft Historic Resources Survey Report	City of San Diego Planning Department		X
SD-16814	1136814	Pigniolo, Andrew R., and Serr, Carol	2017	Cultural Resource Monitoring for the Cox Congress Street Project, 3965arista Street, Old Town City of San Diego, California (Project No. 512671)	Laguna Mountain Environmental, Inc		X
SD-16826	1136826	Moomjain, Scott A.	2016	Historical Resource Research Report for the L. Madeline Gunn House 3045 Browning Street San Diego, California 92106	Scott A. Moomjian, Esq.		X
SD-16830	1136830	Crawford, Karen	2016	1329 West Spruce St., San Diego CA 92103	Office of Maria Burke Lia		X
SD-16831	1136831	May, Ronald V., and Wallace, Kiley	2016	Historical Nomination of the Alberta Security Company / Martin V. Melhorn Speculation House #6 1003 Alberta Place - Mission Hills Neighborhood San Diego, California	Legacy 106		X
SD-16878	1136878	Roland, Jennifer	2016	Phase I Investigation for the Verizon Wireless Linda Vista Antenna Installation Project, San Diego, San Diego County, California	Nwb Environmental Services, LLC		X
SD-16894	1136894	Stropes, J.R.K., and Smith, Brian F.	2017	A Cultural Resource Monitoring Report for the Old Town Rose Canyon Fault Trench Project, Project No. 479272 APN 760-102-10	Brian F. Smith and Associates		X
SD-16901	1136901	Ports, Kyle	2017	Letter Report: Ets 28829 - Cultural Resources Monitoring Report for C100, Old Town 12kv Extension, City of San Diego, California - Io 7074264	AECOM		X
SD-16902	1136902	Downs, Lauren	2017	Letter Report: ETS 35104.01 - Cultural Resources Monitoring Report for Emergency Gas Old Town, City of San Diego, California - Io 7074262	AECOM		X
SD-16963	1136963	Foglia, Alberto B.	2017	Archaeological Monitoring for Magnesium Bag Installation at 2535 Presidio Drive, San Diego, San Diego County, California (SDG&E ETS #35498, Pangis Project #1401.62)	Pangis		X
SD-17012	1137012	Pigniolo, Andrew and Serr, Carol	2017	Cultural Resource Monitoring for the Cox Trenching Project Along Conde Street to Service 2470 San Diego Avenue, Old Town City of San Diego, California (Project No. 39176)	Laguna Mountain Environmental, Inc.		X
SD-17021	11137021	Mclean, Roderic	2017	Life Along Juan Street Cultural Resources Testing, Data Recovery, and Monitoring Results Report Juan Street Repavement Project, City of San Diego, San Diego County, California	LSA		X
SD-17033	1137033	Goralogia, Elena, C. and Smith, Brian F.	2016	Cultural Resource Monitoring Report for the Sewer and Water Group 815 Project, City of San Diego Projecy No. 304625 Sewer Wbs No. B-00415; Water Wbs No. B-12045	Brian F. Smith and Associates, Int.		X
SD-17045	1137045	Smith, Brian F. and Garrison, andrew J.	2017	Cultural Resource Monitoring Report for the Upas Street Pipeline Replacement Project (Goldfinch to Front) City of San Diego Project No. 308072 Water WBS No. S-11022	Brian F. Smith and Associates, Inc.		X
SD-17052	1137052	Graham, Michelle D. and Meling, Juliette	2017	Final Report for the Cataloging, Inventory, and Curation of the Casa De Rodriguez Collection	California State Parks		X
SD-17068	1137068	Downs, Lauren	2017	Letter Report: ETS 32805 - Cultural Resources Monitoring Report for Relocation of Gas Meter, 2266 San Diego Ave., San Diego, California - IO 7074263	AECOM		X

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SD-17087	1137087	Stropes, J.R.K., and Smith, Brian F.	2017	Historical Resource Research Report for the 3681-3685 Third Avenue Building, San Diego, California 92103, Project No. 520816	Brian F. Smith and Associates, Inc.		X
SD-17089	1137089	Stropes, J.R.K.	2017	Historical Resource Research Report for the 3132 Larga Court Building, San Diego, California 92110 Project No. 552488	Brian F. Smith and Associates, Inc.		X
SD-17107	1137107	Connolly, Michael T.	2017	Ets #35554, Cultural Resources Survey for the Reloc Gas Riser, 4129 Mason Street Old Town Project, San Diego County, California	Hdr		X
SD-17124	1137124	Garrison, Andrew J., and Brian F. Smith	2017	Cultural Resource Monitoring Report for the Tecolote Canyon 8-Inch Sewer Main Replacement Project, City of San Diego, Project No. 354238, Sewer WBS No. B-11111	Brian F. Smith & Associates		X
SD-17138	17138	Stropes, J.R.K., and Brian F. Smith	2017	Historical Resource Research Report for the 3673-3677 1/2 Third Avenue Buildings, San Diego, California 92103, Project No. 520826	Brian F. Smith & Associates		X
SD-17182	1137182	Castells, Shelby, Gunderman, Larry Tift, and Jerry Schaefer	2017	Phase Ii Archaeological Testing at Ca-SDi-14295h, the Machado-Smith House Site, Old Town San Diego State Historic Park	ASM Affiliates, Inc.		X
SD-17187	1137187	Davis, Shannon	2016	Cultural Resources Evaluation Report Point Loma High School Whole Site Modernization, San Diego, San Diego County, California	ASM Affiliates, Inc.		X
SD-17219	1137219	Stringer-Bowsher, Sarah, Shelby Gunderman Castells, and Sinéad Ní Ghabláin	2015	Historical Context, Archaeological Research Design for the Treatment of Inadvertent Discoveries, and Mitigation Monitoring Plan for the Demolition of the Former Caltrans District 11 Office Complex, 2829 Juan St., San Diego, Old Town State Historic Park, C	ASM Affiliates, Inc.		X
SD-17223	1137223	Castells, Shelby Gunderman, Sarah Stringer-Bowsher, and Doug Mengers	2014	Results of Archaeological Monitoring for the Harbor View Hotel Project, San Diego, California	ASM Affiliates, Inc.		X
SD-17228	1137228	Brunzell, David	2016	Cultural Resources Assessment of the Crown Castle Sea World Das Nodes Project, San Diego, San Diego County, California (BCR Consulting Project No. Syn1616)	BCR Consulting LLC		X
SD-17231	1137231	Brunzell, David	2017	Cultural Resource Assessment of the Mtsa San Diego Fiber Trench Project, San Diego, California (BCR Consulting Project No. Syn1613)	BCR Consulting LLC		X
SD-17232	1137232	Brunzell, David	2017	San Diego 55 Fiber Project, San Diego County, California (BCR Consulting Project No. Syn1628)	BCR Consulting LLC		X
SD-17233	1137233	Brunzell, David	2017	San Diego 129 Project, San Diego County, California (BCR Consulting Project No. Syn1622)	BCR Consulting LLC		X
SD-17257	1137257	Magno, Eileen	2017	Historic American Buildings Survey Henry B. Jones House	Heritage Architecture & Planning		X
SD-17262	1137262		2016	Harry and Josephine Gregg / William Sterling Hebbard Residence, 140 West Thorn Street, San Diego, California 92103	Heritage Architecture & Planning		X
SD-17266	1137266	Becker, Wendy L. Tinsley	2016	Edwin Kennedy Hurlbert House 2930 Chatsworth Boulevard, San Diego, Ca 92106	Urbana Preservation & Planning, LLC		X
SD-17267	1137267	Hazard, Allen and Janet O'dea	2016	1920 Alberta Security Company / Martin V. Melhorn Spec. House #6 3851 Hawk Street, San Diego, Ca 92103	All Hazard & Janet O'dea		X
SD-17273	1137273		2017	Addendum to the Historical Resources Board Nomination for the Fred and Charlotte Heilbron House, 4399 Hermosa Way, San Diego, California 92103	Legacy 106, Inc.		X
SD-17277	1137277	May, Ronald V., and Kiley Wallace	2017	Historical Nomination of the Henry and Lavina Nelson / Martin V. Melhorn House 1965 Sunset Blvd., Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X

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SD-17278	1137278	May, Ronald V. and Kiley Wallace	2017	Historical Nomination of the Gordon and Garnet Thompson / Alexander Schreiber Hosue 2206 Juan Street, Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17279	1137279	May, Ronald V., and Kiley Wallace	2016	Historical Nomination of the Minnie Scheibe / Bathrick Brothers Speculation House 3244 Dumas Street, Loma Portal Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17281	1137281	May, Ronald V., and Kiley Wallace	2017	Historical Nomination of the Fred and Charlotte Heilbron House 4399 Hermosa Way, Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17282	1137282	May, Ronald V., and Kiley Wallace	2017	Historical Nomination of the Augustus and Louise Cosgrove House 3202 Curtis Street, Loma Portal Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17284	1137284	Moomjian, Scott A.	2016	Historical Resource Research Report for the William T. Straw House 1306 Torrance Street, San Diego, California 92103	Scott A. Moomjian Attorney at Law		X
SD-17285	1137285	Moomjian, Scott A.	2017	Historical Resource Research Report for the 4025 Eagle Street Residence, San Diego, California 92103	Scott A. Moomjian Attorney at Law		X
SD-17290	1137290	Hazard, Allen, and Janet O'dea	2017	the Robert J. Kelly Duplex 1708 W. Montecito Way and 4154 Stephens Street	Allen Hazard & Janet O'dea		X
SD-17293	1137293	Macdonald, Jennifer, Paul W. Johnson, and Sarai Johnson	2017	the Edward Molloy, Frank Hope Jr., House Historic Nomination Research and Report	Johnson & Johnson Architecture		X
SD-17296	1137296	May, Ronald V., and Kiley Wallace	2017	Historical Nomination of the Adelphi Security Company Speculation House 4125 Hermosa Way, Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17299	1137299	Moomjian, Scott A.	2017	Historical Resource Research Report for the Dr. David & Margaret Higbee House 3705 Pringle Street, San Diego, California 92103	Scott A. Moomjian Attorney at Law		X
SD-17314	1137314	Foglia, Alberto B.	2018	Archaeological Survey for SDG&E Tl676 Mission to Mesa Reconductor Project Proposed Staging Yard, San Diego, San Diego County, California (SDG&E ETS# 29956, Pangis Project #1402.07)	Pangis		X
SD-17379	1137379	Zepeda-Herman, Carmen	2018	Historical Resources Survey for Maple Canyon Storm Drain Repair Project, San Diego, California	Recon		X
SD-17392	1137392	Garcia-Herbst, Arleen	2017	Archaeology 100% Design Constraints Analysis for the Tecolote Canyon Trunk Sewer Improvement Project, City of San Diego, County of San Diego, California	Spindrift Archaeological Consulting, LLC		X
SD-17397	1137397	Garcia-Herbst, Arleen	2017	Cultural Resources Inventory Report for the Riverwalk Project, City of San Diego, County of San Diego, California	Spindrift Archaeological Consulting, LLC		X
SD-17445	1137445	May, Ronald V., and Kiley Wallace	2018	Historic Nomination of the Dr. Charles and Nancy Rees / William Wahrenberger House 4496 Trias Street, Mission Hills Neighborhood, San Diego, California	Legacy 106, Inc.		X
SD-17455	1137455	Heritage Architecture & Planning	2018	Pasquale Antonicelli Residence, 4030-4034 Randolph Street, San Diego, Ca 92103	Heritage Architecture & Planning		X
SD-17459	1137459	Macdonald, Jennifer, Paul Johnson, and Sarai Johnson	2017	the Philip Monrie Klauber, Mead & Requa House Historic Nomination Research and Report	Johnson & Johnson Architecture		X
SD-17498	1137498	Cox, Nara	2017	Letter Report: Ets 31118 - Cultural Resources Monitoring of Pole Z279913 Replacement, City of San Diego, San Diego County, California - Io 7074264	ICF		X
SD-17539	1137539	Smith, Brian F.	2018	Cultural Resources Monitoring Report for the Williams Residence Project, Rancho Santa Fe, San Diego County, California (Pds2017-LDGRMN-20140)	Brian F. Smith and Associates, Inc.		X

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SD-17561	1137561	Smith, Brian F. and J.R.K. Stropes	2018	Historical Resource Technical Report for 2136 Kettner Boulevard, San Diego, California (Project No. 595931)	Brian F. Smith and Associates, Inc.		X
SD-17581	1137581	Stropes, Jennifer, R.K. and Brian F. Smith	2018	Historic Resources Study for the Proposed Airport Development Plan Project at the San Diego International Airport, City of San Diego, California	Brian F. Smith and Associates, Inc.		X
SD-17588	1137588	Pigniolo, andrew and Carol Serr	2017	Cultural Resource Survey for the Maple Canyon Stream Rehabilitation and Restoration Project Bankers Hill, City of San Diego, California	James & Briggs Archaeological Services		X
SD-17599	1137599	Pigniolo, Andrew, and Carol Serr	2018	Cultural Resource Monitoring for the Cox Trenching Project to Service 2521 San Diego Avenue, Old Town, City of San Diego, California (PTS 537238)	Laguna Mountain Environmental, Inc.		X
SD-17602	1137602	Roberts, Ted	2018	Results of the Cultural Resources Monitoring for Z234837, Cal Trans District 11 Parking Lot: Sunset St. Old Town San Diego CMP TL604 Pole Replacement, San Diego, CA	Chambers Group, Inc.		X
SD-17605		Hahnlen, Jillian L., and Brian F. Smith	2018	Cultural Resource Monitoring Report for the Sewer and Water Group 701 Project, City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-17650	1137650	Foglia, Alberto B.	2018	Archaeological Monitoring for Gas Leak Repair at 3999 Old Town Avenue, San Diego, San Diego County, California (SDG&E ETS # 38971, Pangis Project # 1401.95)	Pangis		X
SD-17654		Williams, Brian, and Kent Manchen	2018	Archaeological Monitoring for the SDG&E – PIDS Clean Up, Circuit#139, 168, 362, 458, 1435, HL1, MT1, WY2 Project, Old Town San Diego, San Diego County, California	ASM Affiliates		X
SD-17661	1137661	Williams, Brian	2019	Archaeological Resources Monitoring Results for Construction of San Diego Gas & Electric's Vine Substation Project, San Diego County, California	ASM Affiliates, Inc.		X
SD-17681	1137681	Tennesen, Kristin	2018	Cultural Resources Monitoring and Test Excavation for SDG&E's ETS 34917, DIMP59055-Renew 200' of 1 1/4" Main & of 15' of 1"Pe Service at 2660 Calhoun St Project, San Diego County, California	HDR, Inc.		X
SD-17689	1137689	Tennesen, Kristin	2017	ETS #35554, Cultural Resources Survey for the Reloc Gas Riser, 4129 Mason Street Old Town Project, San Diego County, California	HDR, Inc.		X
SD-17722	1137722	Stropes, Jennifer, R.K. and Brian F. Smith	2019	Mitigation Monitoring Report for the Upper Voltaire Mixed Use Project, City of San Diego, Project No. 236207	Brian F. Smith and Associates, Inc.		X
SD-17737	1137737	Willhite, Brenton E.	2019	Archaeological Monitoring for MHPUUP - Morena Village, San Diego, San Diego County, (SDG&E ETS #38338.01, Pangis Project #1401.106)	Pangis		X
SD-17747	1137747	Hahnlen, Jillian L., and Brian F. Smith	2019	Cultural Resource Monitoring Report for the Water and Sewer Group 954 Project, San Diego, California Project No. 409189; Water WBS No. B-10187; Sewer WBS No. B-13203	Brian F. Smith and Associates, Inc.		X
SD-17755	1137755	Crawford, K.A.	2018	Del Prado Condominiums, 666 Upas Street, San Diego, California 92103	Office of Marie Burke Lia		X
SD-17760	1137760	Moomjian, Scott A.	2018	Historical Resource Research Report for the 3941 Albatross Street Residence, San Diego, California 92103 Project Number 574367	Scott A. Moomjian Attorney at Law		X
SD-17763		Heritage Architecture & Planning	2018	3404 Front Street, San Diego, California 92103	Heritage Architecture & Planning		X
SD-17765	1137765	Hazard, Allen, and Janet O'dea	2018	the George B. and Ethel M. Worthington Spec. House #1, 1770 Fort Stockton Drive	Allen Hazard and Janet O'dea		X
SD-17766	1137766	Hazard, Allen, and Janet O'dea	2018	The Harry L. Turner House 1808 Altamira Place	Allen Hazard and Janet O'dea		X
SD-17768	1137768	May, Ronald V. and Kiley Wallace	2019	Historic Nomination Report of the Ben and Ruth Rubin House 4480 Trias Street, Mission Hills Community, San Diego, California	Legacy 106, Inc.		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-17771	1137771	May, Ronald V. and Kiley Wallace	2018	Historic Nomination Report of the Ralph and Helene Benton / Ralph Hurlburt and Charles Tifal House, 3312 Elliott Street, Loma Portal Community, San Diego, California	Legacy 106, Inc.		X
SD-17774	1137774	Johnson, Paul, and Sarai Johnson	2018	The theodosia B. Conner Spec. House #1, Eugene Hoffman House, Nomination Report for Historic Designation	Johnson & Johnson Architecture		X
SD-17776	1137776	Moomjian, Scott A.	2018	Historical Resource Technical Report for the 1398 Lieta Street Property, San Diego, California 92110	Scott A. Moomjian Attorney at Law		X
SD-17779	1137779	May, Ronald V. and Kiley Wallace	2018	Historic Nomination Report of the Louis & Evelyn Robinson / Ralph Hurlburt and Charles Tifal House 2212 La Callecita, Mission Hills Community, San Diego, California	Legacy 106, Inc.		X
SD-17789	1137789	Wills, Carrie D. and Kathleen A, Crawford	2016	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06414a (Crowne Hotel) 2270 Hotel Circle N, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc.		X
SD-17792	1137792	Wills, Carrie D. and Kathleen A. Crawford	2017	Direct Ape Historic Architectural Assessment for T-Mobile West, LLC Candidate SD06784c (Double Tree Hotel), 1515 Hotel Circle South, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc.		X
SD-17796	1137796	Wills, Carrie D., and Bonnie Bruce	2017	Cultural Resource Records Search and Site Visit Results for Cellco Partnership and their Controlled Affiliates Doing Business as Verizon Wireless Candidate Tecolote Fields, 4675 Tecolote Road, San Diego, San Diego County, California	Helix Environmental Planning, Inc.		X
SD-17800	1137800	Williams, Brian	2019	Final Archaeological Resources Monitoring Results for Construction of San Diego Gas & Electric's Vine Substation Project, San Diego County, California	ASM Affiliates, Inc.		X
SD-17810	1137810	Bever, Michael R.	2019	Sefton Field Mitigation Project, City of San Diego, California Archaeological Resources Report	ESA		X
SD-17821	1137821	Stropes, Tracy A., andrew J. Garrison, and Brian F. Smith	2019	Cultural Resource Monitoring Report for the Mission Hills-Hillcrest Library Project, San Diego, California Project No. 98695	Brian F. Smith and Associates, Inc.		X
SD-17825	1137825	Cooley, Theodore G.	2018	Letter Report: ETS 37637 - Cultural Resources Monitoring Report for the PYD, Epi-007 MF180020 (the Courtyards HOA at Mission Valley) Project Location, in the City of San Diego, California - Io 7074264	AECOM		X
SD-17839	1137839	Warren, Calvin	2017	Re-Initiating Section 106 Consultation for Steam Heat System Replacement, 16 Buildings, Marine Corps Recruit Depot Historic District, San Diego	United States Marine Corps		X
SD-17840	1137840	Stalters, Dave	2017	Section 106 Consultation for Telescoping Structure Installation, Air Station San Diego	United States Coast Guard		X
SD-17845	1137845	Derrick, Suzanne B.	2017	Federal Communications Commission - Section VOII.C of the 2001 NPA (Amended Submission - Mobilitie Small Cell Sites - Resubmission - Single Municipality One (I) Node Located in Or Within 250 Feet of Historic District(S) 3484 Barnett Ave., San Diego, California	EBI Consulting		X
SD-17869	1137869	Beers, James D., and Carrie D. Wills	2018	Archaeological Sensitivity Assessment for SD90xsb57d, 3005 Midway Drive, San Diego, San Diego County, California 92110 (EBI Project No. 6118002825)	Helix Environmental Planning, Inc.		X
SD-17897	1137897	Cordova, Isabel and Brian Williams	2012	Results of an Archaeological Monitoring Program Conducted for San Diego Gas & Electric's SL 49-20 Gas Pipe Relocation, Bachman Place, San Diego County, California	ASM Affiliates, Inc.		X

IC* File No.	NADB* No.	Authors	Year	Title	Affiliation	Within 1/2 Mile	Within 2 Miles
SD-17903	1137903	Burke Lia, Maria, Jennifer Ayala, and Dolores Mellon	2019	Historical Resources Technical Report for the Property Located at 2027-2045 India Street, San Diego Ca 92101	Office of Marie Burke Lia		X
SD-17904	1137904	Macdonald, Jennifer, Paul Johnson, and Sarai Johnson	2018	the James and Margaret Anderson, William W. Bird House Nomination Report for Historic Designation	Johnson & Johnson Architecture		X
SD-17905	1137905	Hazard, Allen, and Janet O'dea	2019	the Thomas W. Sharpe/ Joel L. Brown Spec. House, 1020 W. Montecito Way	Allen Hazard and Janet O'dea		X
SD-17906	1137906	Burke Lia, Maria, and Jennifer Ayala	2019	Historical Resources Technical Report for the Property Located at 2027-2045 India Street, San Diego Ca 92101	Office of Marie Burke Lia		X
SD-17963	1137963	Bruce, Bonnie, Carrie D. Wills, and Kathleen A. Crawford	2017	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate SD06680d (Vitro), 2305 Historic Decatur Road, San Diego, San Diego County, California	Environmental Assessment Specialists, Inc.		X
SD-18109	1138109	Stropes, J.R.K., and Brian F. Smith	2018	Mitigation Monitoring Report for the 1919 Pacific Highway Project, City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-18120	1138120	Smith, Brian F., and Jennifer R.K. Stropes	2019	Historical Resource Research Report for the 3131 Fourth Avenue Building, San Diego, California 92103	Brian F. Smith and Associates, Inc.		X
SD-18163	1138163	Smith, Brian F., and J.R.K. Stropes	2019	Historical Resource Research Report for the 3227 Browning Street Building, San Diego, California 92106	Brian F. Smith and Associates, Inc.		X
SD-18165	1138165	Knabb, Kyle	2019	ETS 41284: Cultural Resources Monitoring Report for the Renew Deep Well Anode, San Diego Project	Chambers Group		X
SD-18216	1138216	Stropes, Tracy A., and Brian F. Smith	2011	Results of the Mitigation Monitoring Program for the 3921 Ampudia Street Project, City of San Diego, California, APN 443-721-65 (Ldr. No. 41-0879)	Brian F. Smith and Associates, Inc.		X
SD-18292	1138292	Glenn, Brian K., and Joyce M. Clevenger	1996	Extended Phase I Historic Properties Inventory, Archaeological Survey and Assessment, Naval Training Center, San Diego, Ca	Ogden Environmental and Energy Services		X
SD-18321	1138321	Stropes, Jennifer, R.K. and Brian F. Smith	2019	Mitigation Monitoring Report for the 915 Grape Street Project, City of San Diego	Brian F. Smith and Associates, Inc.		X
SD-18419	1138419	Ports, Kyle	2020	Letter Report: ETS 43010 - Cultural Resources Monitoring Report for the CMP, Pole Replace, P248461, San Diego, San Diego County, California - IO 7074265	AECOM		X
SD-18437	1138437	Foglia, Alberto B.	2020	ETS 41640: Archaeological Monitoring for the Aladdin Airport Parking Priority Review Project	Pangis		X
SD-18439	1138439	Foglia, Alberto B.	2019	Archaeological Monitoring for the TI676 Mission to Mesa Reconductor Project, San Diego County, California (SDG&E ETS# 29956, Pangis Project #1402.07)	Pangis		X

Legend: NABD=National Archaeological Database Information.
Note: * IC=Information Center.

Attachment D

Native American Heritage Commission Correspondence

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NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 18, 2020

Holly Drake
ASM Affiliates

Via Email to: hdrake@asmaffiliates.com

Re: Naval Base Point Loma Old Town Campus Project, San Diego County

Dear Ms. Drake:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Viejas Band of Kumeyaay Indians on the attached list for more information. Please also contact the Kumeyaay Cultural Repatriation Committee via phone at (760) 803-5694. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Diego County
3/18/2020

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
wmicklin@leaningrock.net

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kwaaymii
Pine Valley, CA, 91962 — Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Naval Base Point Loma Old Town Campus Project, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
3/18/2020

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

San Pasqual Band of Diegueno Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Cody Martinez, Chairperson
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Sycuan Band of the Kumeyaay Nation
Kristie Orosco, Kumeyaay Resource Specialist
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 6917

Viejas Band of Kumeyaay Indians
John Christman, Chairperson
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337

Viejas Band of Kumeyaay Indians
Ernest Pingleton, Tribal Historic Officer, Resource Management
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 659 - 2314
epingleton@viejas-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Naval Base Point Loma Old Town Campus Project, San Diego County.

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Attachment E

Resumes

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Shannon Davis, M.A., RPH

Architectural Historian/Historian

Total Years of Experience: 22

Education:

M.A.	1998/Historic Preservation/George Washington University, Washington, D.C.
B.A.	1993/American History/University of Southern California, Los Angeles (Cum laude with honors)

Registrations

2011	Register of Professional Historians

Professional Profile:

Ms. Davis has more than 20 years of experience in the field of historic preservation. She has an MA in Historic Preservation/American Studies from George Washington University, where she wrote her master's thesis on the architectural history of drive-in theaters, and a B.A. in American History from the University of Southern California. As an Architectural Historian at ASM, Ms. Davis has documented and evaluated numerous cultural resources for compliance with local regulations, California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA) throughout California and the west. Experience includes local, state, and National Register of Historic Places (NRHP) evaluations and nominations, Historic American Building Surveys (HABS), Historic Structures Reports (HSRs), large and small-scale historic context statements, city-wide surveys, as well as treatment, maintenance, and interpretation plans. Recent projects include a comprehensive city-wide survey of Monrovia; successfully listing a property in the California Register of Historical Resources (CRHR); nominating the first, and subsequent properties to the LA County register, preparing NRHP nominations for a historic highway and a historic residential district; developing the historic context of Los Angeles military history for Survey LA, and evaluating a WWII “Rosie the Riveter” site.

Before joining ASM, Ms. Davis worked for the National Trust for Historic Preservation as their west-coast representative for heritage tourism. Much of Ms. Davis’s professional experience is with the cultural resources programs of the National Park Service (NPS). For eight years she worked for the NRHP as an Historian. She also worked as a Historic Preservation Specialist and Project Manager for three other NPS programs: American Battlefield Protection Program, NPS History Program and HABS/HAER/HALS/CRGIS. Ms. Davis has experience with the operational requirements of a historic site, through her position as Assistant Site Manager of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Additionally, Ms. Davis served for several years as Chair of a local preservation advocacy group, the Arlington Heritage Alliance, and was one of the founders of the national non-profit Recent Past Preservation Network.

Relevant Project Experience:

Edwards Air Force Base Architectural History Survey and Inventory, Kern County, CA
Project Manager/Architectural Historian
CLIENT: Redhorse Corporation
Directed and collaborated on architectural survey, inventory, and evaluation of historical buildings on Edwards Air Force Base in support of Section 110 of the National Historic Preservation Act (NHPA). In 2018, evaluated 30 individual historic resources constructed between 1943 and 1966 and an additional 25 contributors to potential historic districts. Peer reviewed comprehensive report prepared of all properties and historic districts inventoried and evaluated, including the appropriate CA DPR forms for each resource.

CRTR and HABS Roosevelt High School Historic District, Los Angeles, CA
Project Manager/Architectural Historian
CLIENT: Impact Sciences (original evaluation) and Los Angeles Unified School District (CRTR and HABS)
Directed and collaborated on evaluation memo and later full Cultural Resources Technical Report in support of an Environmental Impact Report (EIR) for a Comprehensive Modernization Project at Roosevelt High School, which involved demolition of multiple buildings within a previously identified historic district. Also prepared Historic American Building Survey (HABS)-like historic documentation in accordance with mitigation stipulated in the EIR. All work was done in accordance with the California Environmental Quality Act (CEQA).

Ontario International Airport Historic Context Statement and Survey, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: City of Ontario, California
Conducted an intensive-level survey and completed documentation for numerous buildings and structures within the Ontario International Airport. Prepared a historic context statement for the Ontario International Airport, informed by extensive background research and an intensive-level survey. Developed themes, contexts, registration requirements, and character-defining features for identification of a range of property types, from World War II aircraft hangars to Cold War-era administration buildings. Conducted interviews for oral histories with individuals associated with the airport and preparation of a short video reviewing the history, findings, and stories gathered for the project. Oversaw the production of a 10-minute video documentary.

Cultural Resource Studies, Muroc Joint Unified School District, Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District
Directed and collaborated on technical report to support CEQA and NHPA requirements for five schools within approximately 110 acres at Edwards Air Force Base. Consulted with SHPO on approach. Received SHPO concurrence.

Mt. San Antonio College Cultural Resources Evaluation Report, Walnut, Los Angeles County, CA,
Project Manager and Senior Architectural Historian
CLIENT: Mt. San Antonio College
On-call historic preservation consultant since 2015. Prepared multiple historic resource evaluation reports, specifically in cultural resources technical report for Supplemental EIRs for the 2015 Facilities Master Plan Update and Physical Education Projects, and 2020 Master Plan Update. The 2015 report evaluated more than 20 historic resources within the school's proposed project area, and to assess potential direct and indirect visual impacts to the Mt. SAC Historic District. Subsequent reports evaluated all resources more than 45 years old. Work included intensive pedestrian-level survey of potentially significant historic buildings on campus, as well as the Wildlife Sanctuary, and archival research. Report prepared in compliance with CEQA.

Inventory and NRHP Evaluation of 17 Potential Historic Resources, Fort Hunter Liggett, Jolon, Monterey County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Gulf South Research Corp.
Surveyed, documented, and evaluated a 17 built environment of early Fort Hunter Liggett. Resources included training facilities and cantonment and infrastructure features built between 1941 and 1951. Researched and developed appropriate historic context. Evaluated within the contexts of Military History (1942-1945) and WWII Army property types. Conducted in compliance with Section 106 and 110/NHPA.

Integrated Cultural Resource Management Plan (ICRMP) for Marine Corps Base Camp Pendleton, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Worked with Marine Corp to establish cultural resource and preservation goals and objectives. Synthesized previous studies to develop an update to the installation's comprehensive planning document.

Maintenance Plan for Naval Postgraduate Engineering Historic District, Monterey County, CA
Project Manager
CLIENT: NAVFAC Southwest
Facilitated and oversaw the condition assessment of five mid-century educational buildings and make prioritized recommendations for their on-going maintenance, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Developed in partnership with historic architects and structural engineers. Prepared in support of Section 106 and 110 of the National Historic Preservation Act (NHPA).

ICRMP for Marine Corps Mountain Warfare Training Center, Mono County, CA
Project Manager and Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Worked with Marine Corp to establish cultural resource and preservation goals and objectives. Synthesized previous studies to develop one comprehensive planning document for installation that had not heretofore had any preservation management plan.

Visual Impacts Assessment on the Marron-Hayes Adobes Historic District for the Quarry Creek Master Plan Environmental Impact Report, San Diego County, CA
Senior Architectural Historian
CLIENT: Corky McMillin Companies
Conducted a visual impacts assessment of the impacts of a housing development project on the Marron-Hayes Adobes Historic District, eligible for the NRHP. Recommended mitigation measures to address adverse indirect visual impact. Attended and testified at series of local planning commission and city council meetings. Conducted in compliance with CEQA and Section 106/NHPA.

Palomar Gateway District Specific Plan Cultural Resources Report, San Diego County, CA
Senior Architectural Historian
CLIENT: Atkins
Conducted constraints level analysis of Palomar Gateway project area in support of an EIR for a proposed Specific Plan. Identified 12 potential historic resources and provided constraint-level analysis of potential impacts on resources that were likely to be historically significant.

Historic American Engineering Record (HAER) Documentation for Jet Propulsion Lab (JPL) Facility, Kern County, CA
Project Manager and Senior Architectural Historian
CLIENT: Edwards Air Force Base
Documented mid-twentieth century aeronautics testing facility through field documentation, review of architectural plans, and archival research. Facilitated recommendations for documentation with west-coast NPS regional staff. Provided HAER Level II and Level III documentation for 40 buildings and structures, including archival photographic documentation, outline and short-form historical reports, and hand-drawn sketch plans or reproduction of architectural plans and drawings.

NRHP Nomination and Historic American Building Survey (HABS) Documentation for Berylwood Historic District, Ventura County, CA
Project Manager and Senior Architectural Historian
CLIENT: San Diego Military Family Housing
Documented, researched, and reevaluated the 10-acre Berylwood Historic District to prepare an amended NHRP nomination and new HABS documentation of the district that included the 1912 Myron Hunt designed mansion built for prominent local developer and U.S. Senator, Thomas Bard, a second home built 1910-1925 for son and local businessman Richard Bard, as well as supporting structures and the cultural landscape associated with the estate. Developed and presented keynote address for centennial celebration of the construction of the house.

Military Context for Survey Los Angeles, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Los Angeles Office of Historic Preservation
Prepared pro-bono historic context statement for military history of Los Angeles in support of ongoing citywide-survey, Survey LA.

ICRMP for Detachment Fallbrook, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Advised client on recommended content, synthesized sections, and prepared three iterations of the plan, incorporating comments from client.

Historic Structure Report (HSR) for Building 1133 (1st Marine Corps Division Headquarters), MCB Camp Pendleton, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA).

HSR for Building 51811 (San Onofre Beach Club), San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110.

Section 106 Review and Recommendations, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Military Family Housing
Annually review multiple undertakings within historic districts at California Naval and Marine Corp Bases. Prepare determinations of effect, in conformance with several Programmatic Agreements (PAs) between the military, CA SHPO, and Advisory Council on Historic Preservation, governing undertakings at the specific military installation as well as *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Conducted more than 100 reviews since 2010.

ICRMP for MCAS Miramar, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Addressed comments and finalized ICRMP for base facilities.

Cold War Historic Context for NAWS China Lake, San Bernardino County, CA
Architectural Historian
CLIENT: Epsilon Systems Solutions
Consulted on and edited historic context (1943-1989) prepared for updated inventory and evaluation of two historic districts listed in the NRHP. Context developed for one of the most significant World War II and Cold War research, development, testing, and evaluation facilities in the country.

Survey Eligibility and Update of NRHP Eligibility of 73 Buildings at Naval Weapons Station Seal Beach, Detachment Corona, Riverside County, CA
Field Director
CLIENT: NAVFAC Southwest
Surveyed 247 acre site to assess NRHP eligibility of 73 buildings, structures, and landscape features, within careful consideration of the site as a cultural landscape. Authored evaluation report, considering potential national, state, and local significance for three distinct periods of significance from 1927 to 1989.

Historic Building Maintenance Plan, Herrmann Hall (Building 220), Naval Postgraduate School, Monterey County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Assisted with preparation of maintenance plan for late nineteenth-century Spanish Mediterranean Revival-style former hotel building.

ICRMP for Naval Base San Diego, San Diego County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Prepared ICRMP for base facilities including Naval Station San Diego, Mission George Recreational Center, and Broadway Complex. Advised client on recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client.

ICRMP for Naval Base Coronado, San Diego County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Prepared ICRMP for base facilities including NAS North Island, Naval Amphibious Base Coronado, Naval Radio Receiving Facility, Outlying Landing Field Imperial Beach, and Special Warfare Mountain Training Center La Posta. Advised client on recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client.

ICRMP for Naval Base Ventura County, Ventura County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Assisted with preparation of final drafts of ICRMP for base facilities including NAS Point Mugu, CBC Port Hueneme, Laguna Peak, Catalina Heights housing area, and the Camarillo Airport. Prepared three iterations of the plan, incorporating comments from client.

City of Los Angeles On-Call Section 106 Historic Preservation Services Contract, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Los Angeles Housing and Community Investment Department
Under an on-call contract with the City of Los Angeles Department of Housing and Urban Development (HUD), provided Section 106 historic preservation services to advise and assist the HCIDLA in conducting research, preparing all federal and state required documentation on the extent, condition, and status of potential historically-significant properties, and coordinate with the SHPO, the U.S. HUD and the Advisory

Council, and prepare a work plan and a Programmatic Agreement to fulfill the purposes of the NHPA. Created a database to manage the work, track the status and findings of each project, and assist with the bi-annual reporting required under the PA. Completed Section 106 review for more than 50 projects throughout Los Angeles including an apartment complex set for demolition, the Old Junipero Serra Library, and the Algin Sutton Pool. Recommended revisions/changes to PA, as part of the City's consultation with SHPO on updating that document.

Due Diligence Letter, Nelson Sloan Quarry, San Diego County, California
CLIENT: Petra
Prepared memo confirming no built environment resources located within project area.

Ritz Theater HRER, Escondido, San Diego County, CA
Project Manager/Architectural Historian
CLIENT: Restoration Community Arts, LLC/New Vintage Church
Conducted a historic resource assessment report in compliance with City of Escondido requirements, and CEQA. Conducted site visit, and collaborated on evaluation of eligibility and preparation of report for two commercial buildings. Assessed whether the proposed addition/renovation of these buildings complied with the SOI Standards. Testified at City Preservation Commission hearing regarding our findings.

Mid-Century-Modern Circular Building Historic Context, Mitigation Report for the Bank of Hawaii Waialai-Kahala Branch Demolition Project, Honolulu, HI
Senior Architectural Historian
CLIENT: Bank of Hawaii
Directed and collaborated on historic context study for the Bank of Hawaii Waialae-Kahala branch bank building in the Waialae community. The study was requested by the State Historic Preservation Division of Hawaii as mitigation for the planned demolition of the Mid-Century-Modern circular building. The report includes a comprehensive history of the building and an introduction to the Modern movement in Hawaii. For purposes of mitigation, the study identifies 10 additional extant and demolished circular Modern buildings in Honolulu and provides a brief history of each, including information about the architect, the design concept, character-defining features, and materials and method of construction. Peer reviewed final report.

Historic Properties Inventory Survey for the Whitmore Agricultural Project, Waialua District, Island of Oahu, HI
Senior Architectural Historian
CLIENT: PBR Hawaii & Associates
Directed and collaborated on historic resources evaluation at the Hawaiian Pineapple Company Plantation at Whitmore Village, Oahu. The roughly 37-acre study area is former pineapple plantation land transferred from Dole Corporation to the Agribusiness Development Corporation of Hawaii for development as an agricultural project to benefit the local economy. At the time of survey and evaluation, the property served as a partially unused industrial facility that included warehouse, administrative, and maintenance buildings built over a period of several decades, from 1948 through the 1980s. Evaluation of the historical buildings included identification of historic districts within the project site. Peer reviewed final report.

Assessment Letter for Planned New Construction within the Marconi Telegraphy Historic District, Oahu, HI
Senior Architectural Historian
CLIENT: Department of Land and Natural Resources, State Historic Preservation Division, Hawaii
Directed and collaborated on report to assess conformance with the SOI's Standards for a proposed new residence to be constructed within the Marconi Telegraphy Historic District on the Island of Oahu. The report included a design review of architectural plans to determine whether the new construction would impact the significance of the NRHP-listed historic district. Peer reviewed final report.

Western Mojave Historic Trails Context Study and Historic Properties Treatment Plan, Kern and San Bernardino Counties, CA
Senior Architectural Historian
CLIENT: Bureau of Land Management
Collaborated and directed archival research and synthesis of previous reports, to prepared a historic context for historic-period roads and highways associated with historic trails in the Western Mojave Desert. Provided guidelines for resource specific evaluations within the context. Peer reviewed final report.

Mt. Laguna Cheroske Family Interpretative Signage, San Diego County, CA
Project Manager
CLIENT: Insignia Environmental
Collaborated on content for and peer reviewed set of three interpretive signs providing historical information, maps, photographs, and applicable logos installed by San Diego Gas & Electric Company on United States Forest Service land. The signs explain the history of remnants of a historic lodge, cabin, and the people associated with them.

BOMARC CQM10A/B Target Drone Launch Complex at Vandenberg Air Force Base, Santa Barbara County, CA
Project Manager/Architectural Historian
CLIENT: ManTech SRS Technologies, Inc.
for the BOMARC CQM10A/B Target Drone Launch Complex. Also developed an informational brochure including historic architectural and schematic drawings and photographs, as well as a timeline and specifications combined to explain the history and purpose of the complex.

Hollenbeck Park Lake Rehabilitation and Stormwater Management Project (Project)
The park was recommended as a historical resource/historic property as a result of a survey for the Adelante Eastside Redevelopment Project Area by the Community Redevelopment Agency. Hollenbeck Park was one of the first parks established in Los Angeles in 1892, and its design was influenced by the City Beautiful movement. It is named for one of the prominent local individuals who donated the land, John E. Hollenbeck (PCR 2007, 2008). The park was recommended eligible for the National Register of Historic Places, California Register of Historical Resources, and as a Los Angeles Historic-Cultural Monument for Criterion C/3/3 under the theme of Land Use and Site Development with a period of significance of 1890s through the 1920s (PCR 2007).

Phase 1 1920 North Whitley Avenue Historic Resource Evaluation Report and Impacts Assessment, Los Angeles, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: Private developer
Directed and collaborated on historic resource assessment report for multi-family residential in Hollywood. Complied with City's Phase 1 report requirements and CEQA, including NRHP evaluation. Provided final peer review. Recommended not eligible and approved by City. Provided an addendum that assessed impacts in compliance with CEQA.

Lugo-Victorville (LVRAS) 500k Transmission Line Special Protection Scheme, San Bernardino County, CA and Clark County, Nevada
Project Manager/Architectural Historian
CLIENT: Southern California Edison
Directed and collaborated on historic resource survey, evaluation, and analysis of effects for a fiber optic cable replacement project on a transmission line segment in the Mojave Desert between the SCE Pisgah substation near Newberry Springs, California, and Clark County, Nevada. Resources included transmission lines. Peer reviewed report.

Cabin Evaluations, Mojave National Preserve, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: Mojave National Preserve
Directed and collaborated on historic resources survey and NRHP evaluation for seven mining-related cabins in the Mojave National Preserve. Peer reviewed report.

City of Monrovia Historic Context Statement, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Prepared a historic context statement for the City of Monrovia, based on reconnaissance-level surveys of the city to identify and define potential historic districts within the City. Work included development of themes and identification of associated property types, character-defining features, and registration requirements for historic districts comprising late 19th-century to early 20th-century residential properties, commercial districts, ethnic enclaves, and institutional properties. Organized public outreach and meetings with City personnel.

University of Nevada, Reno, Historic Neighborhoods Historic Context Statement, Washoe County, NV
Architectural Historian
CLIENT: City of Reno
As part of a Certified Local Government (CLG) grant, the City of Reno retained ASM Affiliates, Inc., to prepare a historic context statement for the neighborhoods surrounding the University of Nevada, Reno (UNR). City of Reno staff and the City of Reno Historical Resources Commission were interested in obtaining knowledge of the historical context of the area surrounding UNR, particularly with respect to growth patterns of the surrounding neighborhoods, how that pattern impacted the current neighborhood structure, and how UNR's historic and continued growth has influenced the development of the surrounding neighborhoods. ASM conducted a reconnaissance survey of 1,759 parcels and identified four historic districts that could potentially be eligible to the NRHP. Responsible for all project management tasks, including coordination between City of Reno and Nevada SHPO, and preparing the historic context statement.

Loch Crane Historic Resources Survey, San Diego, San Diego County, CA
Project Manager
CLIENT: Helix and Caltrans
Directed and collaborated on Historic Resources Survey of the Works of Architect Loch Crane in the City of San Diego. Project included a reconnaissance-level survey of 34 buildings and prepared DPR forms for the evaluation of each property. Conducted as mitigation per consultation with SHPO for loss of one of Crane's building in San Diego: Sorrento Valley Industrial Park, where his firm's office was located.

Historic Resource Evaluation Report for Collins Street Elementary School, Woodland Hills, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: Impact Sciences
Directed and collaborated on evaluation report for a Los Angeles Unified School District elementary school in the San Fernando. The report was informed by archival research from LAUSD archives, the LAUSD historic context statement, newspaper databases, and primary sources and an intensive-level pedestrian survey.

Secretary of the Interior's Standards Review for Los Angeles Unified School District Campuses, Los Angeles County, CA
Project Manager
CLIENT: Parsons
Directed and collaborated on project-level reviews for proposed renovations to six LAUSD campuses in compliance with Americans with Disabilities Act (ADA). The campuses are known historical resources

pursuant to the California Environmental Quality Act (CEQA). Renovations were to comply with the *Los Angeles Unified School District Design Guidelines.* Campuses reviewed were Chatsworth High School, Madison Middle School, Marina Del Rey Middle School, Narbonne High School, 10th Street Elementary School, and Dodson Middle School.

HABS Documentation for Anacapa Island Light Station, Channel Islands National Park, Ventura County, CA
Project Manager /Architectural Historian
CLIENT: National Park Service
Directed and collaborated on HABS narrative history for Anacapa Island Light Station Historic District on East Anacapa Island. Project conducted through agreement with CA SHPO and NPS regional office prior to alterations to derrick system used to lift goods and personnel from sea level to the bluff where the light station is located. Conducted survey of all contributing resources to historic district and research in NPS Channel Islands archives.

HPSR, HRER, FNAE, and ASR for the Verde School Bridge Replacement Project, Imperial County, CA
Project Manager and Senior Architectural Historian
CLIENT: Panorama Environmental, Inc.
Managed an HPSR, HRER, FNAE, and ASR in advance of a project proposed by the Imperial County Public Works Department to replace the Verde School Road Bridge in compliance with Caltrans District 11 and the Federal Highway Administration responsibilities under CEQA, NEPA and the NHPA. The project included a 2.9 -acre project site and involved the demolition of the existing County Bridge No. 58C-0115 over the East Highline Canal and the construction of a replacement bridge.

Beckman Instruments Administration Building HABS documentation, Fullerton, Orange County, CA
Project Manager/Architectural Historian
CLIENT: BonTerra Psomas
Directed and collaborated on archival photography, research, and narrative history for NPS Historic American Building Survey (HABS) Level II documentation for rehabilitation of NRHP-eligible corporate headquarters. Peer reviewed final report.

El Camino Community College Administration Building HABS documentation, Torrance, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: El Camino Community College District
Directed and collaborated on archival photography, research, and narrative history for NPS Historic American Building Survey (HABS) Level II documentation prior to demolition of NRHP-eligible Administration Building.

San Pasqual Valley Road Project, San Diego County, CA
Project Manager
CLIENT: Lundstrom Engineering
Directed and collaborated on historical resource survey and technical historical report for the San Pasqual Valley Road Project.

Los Angeles County Landmark Evaluation Report: The Doumakes House, 4918 Angeles Vista Boulevard, View Park, Los Angeles County, California
Project Manager and Senior Architectural Historian
CLIENT: Los Angeles County Department of Regional Planning
Prepared landmark evaluation report for Doumakes House as the first Los Angeles County Register of Landmarks under the new County Historic Preservation Ordinance. Prepared under our on-call contact as the Planning Department's historic preservation consultants. The Doumakes House is single family

residence built in 1928, eligible because of its association with the Doumakes family and as a good example of a typical Spanish Colonial Revival single family residence.

HRER for 880 Stone Canyon, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: City of Los Angeles Office Historic Preservation
Surveyed, documented, and evaluated 1936 single-family residence built in the Hollywood Regency style by architect Douglas Honnold for screenwriter Stanley Rauh. Evaluated within the City of Los Angeles's Survey LA historic context statements for Residential Development and Suburbanization, 1850-1980 and Architecture and Engineering, 1850-1980, with the theme/subtheme of the Hollywood Regency, 1850-1980. Conducted in compliance with CEQA by request of the City of Los Angeles's Office of Historic Resources.

Historic Resources Evaluation Report for the Beckman Instruments Administration Building, Fullerton, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: BonTerra Psomas
Prepared evaluation and impact assessments report for development project with the potential to impact the Beckman Instruments Administration Building, a Mid-Century Modern building constructed as the headquarters for, a large scientific instrument research and manufacturing facility. Reviewed the pending National Register nomination, conducted site visit, and assessed direct and indirect impacts. Conducted in compliance with CEQA for the City of Fullerton as the Lead Agency.

Historic Resource Evaluation Report for Woodcrest Park, Fullerton, Orange County, CA
Project Manager
CLIENT: Parks and Recreation Department, City of Fullerton
Directed and collaborated on an evaluation of a city-owned and -operated park in compliance with Section 106 review in advance of renovation of the park. Concurrence from SHPO.

Impacts Assessment Report for Subdivision of Sepulveda Unitarian Universalist Society Sanctuary ("The Onion") Property, North Hills, Los Angeles County, 2016
Project Manager and Senior Architectural Historian
CLIENT: Jag Narayan
Prepared impacts assessment report for parcel subdivision of Sepulveda Unitarian Universalist Society Sanctuary (known as "The Onion") at 9550 N. Haskell, designated City of Los Angeles Historic Cultural Monument (#975). The report, which focused on viewshed impacts to and from the HCM, was prepared pursuant to CEQA at request of LA Office of Historic Resources.

California Department of General Services Weatherization Projects for Homes Statewide Project, State of California
Project Manager
CLIENT: ICF Jones & Stokes, Inc.
Provided on-call review services for proposed weatherization projects of historical buildings. Reviews were performed in accordance with methodologies defined by the SHPO for projects funded by the Low Income Energy Assistance Program and other Department of Energy programs. Conducted in conformance with PA and Section 106.

Mt. San Antonio College HABS documentation, Walnut, Los Angeles County, CA,
Project Manager and Senior Architectural Historian
CLIENT: Mt. San Antonio College
In two phases, prepared HABS level II documentation package for Mt. San Antonio College Historic District, including narrative history, archival prints and negatives, and architectural plans reproduced on Velum.

Historic Resource Assessment Report for the Rossmore Avenue Apartments, Los Angeles, Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: etco Homes, Inc.
Evaluated three 1948 French Revival-style apartment buildings at 535-553 N. Rossmore Avenue in the Hancock Park neighborhood of Los Angeles to determine their historic significance. The three buildings are located within the original boundaries of the Hancock Park Historic Preservation Overlay Zone (HPOZ), a City of Los Angeles-defined zoning district intended to preserve the historic nature of areas within the City. The evaluation included preparation of California DPR forms.

Historic Resource Evaluation Report for 427 Santa Clara Avenue, Los Angeles. Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: Huron Drive LLC
Managed and evaluated a 1912 bungalow located in the Venice area of Los Angeles for CEQA compliance of a proposed project. Conducted a site visit and background research. Prepared documentation for determination of historic significance under NRHP, CRHR, City of Los Angeles Historic Cultural Monument and under contexts and themes defined by SurveyLA. Work was done in compliance with CEQA at request of LA Office of Historic Resources.

HRER for James A. Foshay Learning Center, Los Angeles County, CA
Senior Architectural Historian
CLIENT: Impact Sciences and Los Angeles Unified School District
Completed an HRER for possible eligibility for the CRHR under eligibility criteria established by the LAUSD Historic Context Statement based on closely followed parallel criteria established for NRHP and CRHR significance. Conducted archival research for property information, including the architect, chain of title and history of the property as well as a records search at the local information center (IC). An intensive field survey was then undertaken including photographic documentation of the interior and exterior of the building to document the resources and its setting.

Historic Resource Evaluation Report for 420 Drake Circle, Sacramento, Sacramento County, CA
Project Manager
CLIENT: Kimley-Horn & Associates, Inc.
Completed a Historic Resource Evaluation Report (HRER) for a commercial building in Sacramento prior to proposed renovations. The purpose was to evaluate whether or not the proposed project would affect any identified historic properties within the APE and was completed per Section 106 of the NHPA. Evaluated the historical and architectural significance of the building for eligibility to the NRHP and the CRHR as well as a contributor to a potential early 20th century residential historic district.

Evaluation of Bakersfield High School Water Tower, Bakersfield, Kern County, California
Architectural Historian
CLIENT: Lozano Smith, Attorneys at Law
Project Manager for an intensive-level survey to document the water tower, and a reconnaissance-level survey of the high school to assess the 1933 water tower. Prepared a Historical Resources Evaluation and California Department of Parks and Recreation (DPR) 523 A and B forms to evaluate the structure's eligibility for listing in the CRHR. Recommended that Water Tower as individually eligible for CRHR under Criterion 1 as a visual landmark representing the history and development of Bakersfield High School

Historic Resources Evaluation Report, Department of Conservation Division of Oil and Gas Office, Coalinga, Fresno County, CA
Project Manager
CLIENT: Dudek/California Department of General Services
Directed and collaborated on evaluation of the regional office of the State Mining Bureau Division of Oil and Gas in the City of Coalinga, in advance of the proposed sales of the property. The 1918 building was evaluated for its eligibility as a historic resource in compliance with CEQA.

Historic Resources Evaluation Report, Department of Employment Office, Inglewood, Los Angeles County, CA
Project Manager/Senior Architectural Historian
CLIENT: Dudek/California Department of General Services
Conducted survey, archival research, and evaluation of the regional office of the State Department of Employment in the City of Inglewood, in advance of the renovation of the building. The 1955 building was evaluated for its eligibility as a historic resource in compliance with CEQA.

Cultural Resources Evaluation Report for Point Loma High School Whole Site Modernization, San Diego County, CA
Project Manager
CLIENT: HDR/San Diego Unified School District
Directed and collaborated on historic evaluation of 11 buildings on the Point Loma High School campus in advanced of modernization projects. The evaluation included preparation of California DPR forms. Conducted in compliance with CEQA.

Historic Resources Evaluation Report for Foshay Learning Center, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Surveyed and evaluated the Foshay Learning Center, a Los Angeles Unified School District Campus located in the South Los Angeles Community Plan Area. Core campus was constructed in the 1920s, one of the rare remaining pre-1933 Long Beach earthquake Los Angeles Unified School District (LAUSD) campuses, with buildings added in the 1960s. The evaluation was required in preparation for a project proposing the demolition of several campus buildings and construction of new buildings and landscaping. A historic district was identified and defined, and contributors were identified and recorded according to the LAUSD Historic Context Statement, 1870 to 1969, and LAUSD design guidelines. The project was evaluated for compliance with CEQA.

Lanterman Developmental Center, Pomona, Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: Petra Resource Management
Prepared Historic Resources Assessment Report (HRAR) for Lanterman Developmental Center—a state mental developmental center—to clarify NRHP and CRHR eligibility, develop historic context statement, period of significance, and contributing resources. On-site intensive pedestrian survey included photographic documentation of more than 100 buildings (exteriors and public interior spaces). Work included preparation of California DPR forms for historic district and individual eligibility. Prepared under PRC 5024 compliance for transfer of state property, for CA Dept. of General Services, with SHPO concurrence.

Historic Resources Evaluation Report for Academy Road Widening Project, Sanger, Fresno County, CA, 2016
Senior Architectural Historian
CLIENT: Petra Resource Management
Conducted a historic study to address road widening and reconstruction of Academy Avenue in Sanger. Performed intensive field survey and archival research to develop sufficient historic overview and site-specific histories. Made recommendations of eligibility for listing in the NRHP and CRHR for potentially

historic buildings in the APE. Evaluated in compliance with requirements of Section 106 of the National Historic Preservation Act (NHPA), CEQA, and Caltrans guidelines as specified in the agency's Standard Environmental Reference (SER), Volume 2, Cultural Resources.

Cultural Resources Evaluation Reports for the Panattoni Logistics Centers IV and V Project Area, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: Kimley-Horn and Associates
Directed and collaborated on cultural resources study as part of an addendum to the Renaissance Specific Plan. The study was conducted in advance of development of the parcels and included both historic and archaeological history surveys. The work was done in compliance with CEQA and included evaluation of two buildings for potential eligibility for listing in the CRHR.

Canyon Creek Resort Project, Norco, CA
Project Manager/Architectural Historian
CLIENT: Lansing Companies
Directed and collaborated on survey of historical resources within the proposed Canyon Creek Resort Project site in compliance with CEQA. Conducted site visit with client and City of Norco. The 430-acre site includes the former facilities of Wyle Laboratories, which operated beginning in 1957 as a commercial testing facility for a number of markets, including defense.

Cultural Resources Evaluation Report for the De Anza School Project, San Diego, CA
Project Manager/Architectural Historian
CLIENT: BRG Consulting
Directed and collaborated on evaluation of historical buildings on the campus of De Anza School. Methodology consisted of archival research and an intensive-level pedestrian survey of the campus.

Maintenance Manual for Milpitas Ranch House/Hacienda, Fort Hunter Liggett, Jolon, Monterey County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Gulf South Research Corp.
Updated maintenance manual for 1930 ranch house designed by noted architect Julia Morgan for newspaper tycoon William Randolph Hearst, concurrent with her design of nearby Hearst's Castle. Conducted site inspection with US Army Corps of Engineers Historic Architect. Prepared manual targeted at maintenance staff audience, included background history of the property, assessment of current conditions, and specific guidance on what needs attention, how to preserve the building, where to acquire replacement materials, and recommended future restoration projects. Manual included quick reference guide to maintenance do's and don'ts, annual checklist, and list of character-defining features with links to online Flicker photo gallery of all such features and inappropriate alterations. Plan developed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* in support of Section 106 and 110 of the National Historic Preservation Act (NHPA) for Army's Fort Hunter Liggett cultural resources staff, stewards of this NRHP listed-resource.

Peer Review of CRHR and NRHP Evaluation of Caltrans District 11 Headquarters, Old Town San Diego, San Diego County, CA, 2014
Senior Architectural Historian
CLIENT: California Department of State Parks
Reviewed prior evaluation for Caltrans district office complex (1947-1967) and concurred with determination of eligibility (as concurred on by SHPO) as a good example of a "Modernist" office building in the local San Diego area, and the best-designed Caltrans district office complex of that period. Preparing peer review letter, assessment of impacts, and proposing mitigation measures for proposed redevelopment of the property.

Bayshore Bikeway Project HPSR, ASR and FNAE, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Association of Governments
In accordance with Caltrans Section 106 PA and CEQA, prepared HPSR and FNAE for bikeway project with the potential to impact the Western Salt Company Salt Works (WSCSW) Historic District. ASM recommended a FNAE without Standard Conditions as none of the character defining features of historic district would be adversely affected as a result of the proposed project activities. Reports prepared following updated Caltrans SER, Volume 2, Cultural Resources.

Historic Resources Report for Two Buildings at Hoover High School, San Diego, San Diego County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: BRG Consulting for San Diego Unified School District
Surveyed, documented, and evaluated two mid-20th century buildings at Hoover High School: a Spanish Colonial Revival 1938-1942 classroom building and 1942-1970s Art Deco/Modern auditorium, built by master architects Kistner and Curtis. Evaluated within the local contexts of education, economics, social history, and architecture. Conducted in compliance with CEQA.

HRER for Vista/Highgrove Substation, Grand Terrace, San Bernardino County, CA, 2014
Senior Architectural Historian
CLIENT: Southern California Edison
Surveyed, documented, and evaluated a mid-20th century vernacular electrical substation complex constructed in 1945. Researched local historic context. Evaluated within the contexts of mid-twentieth century development of Grand Terrace or San Bernardino County and architecture. Conducted in compliance with CEQA.

Verizon St. Clair Wireless Telecommunications Tower FCC 620 Form, Los Angeles, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: Aarcher, Inc.
Surveyed urban project APE to assess direct and indirect impacts from construction of new wireless telecommunications tower. Completed FCC Form 620 in compliance with Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.* Prepared public notice, consulted with local government, tribes, and interested parties. Submitted 620 form electronically through FCC's website, and facilitated consultation on project with CA SHPO.

Verizon Wireless Telecommunications Tower Smart Forms, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: Aarcher, Inc.
Conducted records searches and initial assessment of age of resources that could require assessment of impacts for three Verizon wireless telecommunciaitons tower sites. Conducted in compliance with Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.*

HABS Documentation and Interpretive Signage, Marron-Hayes Adobes Historic District, Carlsbad, San Diego County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Corky McMillin Companies
Conducted official HABS Level II documentation for the Marron-Hayes Adobes Historic District, and coordinated submission with the HABS National Park Service headquarters office. Prepared outline history, large format photography, and sketch drawings. Developed content for interpretive signage including narrative text and historic photographs. Conducted in compliance with CEQA and Section 106 of the NHPA.

LARICS Communications Tower FCC 620 Form Compliance, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: UltraSystems Environmental
Surveyed 863 NRHP eligible historic resources to assess direct and indirect impacts from construction of new Los Angeles Regional Interoperable Communications System Authority (LARICS) communication towers at more than 150 locations in Los Angeles County over a period of 6 months. Completed portions of FCC Form 620 for each project and resource in compliance with the Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.*

HRER for Grove Street Bible Church, Pomona, Los Angeles County, CA
Project Manager and Senior Architectural Historian, 2014
CLIENT: Warmington Residential
Surveyed, documented, and evaluated a Mid-Century Modern church constructed in 1961. Researched and developed local historic context. Evaluated within the contexts of mid-twentieth century development of Pomona and architecture. Conducted in compliance with CEQA.

Historic Resources Evaluation Report (HRER) for Imperial Beach Library, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated a Mid-Century Modern library constructed in 1967. Evaluated the building within the contexts of community development, government services, and Modern architecture. Report to be prepared in accordance with CEQA.

Peer Review of Chula Vista Sears Evaluation, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Chula Vista
Reviewed evaluation and recommendation of ineligibility for 1966 commercial building that ASM had previously recommended eligible. Provided additional support for our original recommendation and testimony to the Chula Vista Historic Preservation Commission and City Council.

Impacts Assessment for Construction of Lemon St. Parking Garage, Orange County, CA
Project Manager and Senior Architectural Historian
CILENT: HDR Engineering, Inc.
Assessed and evaluated direct and indirect impacts on the construction of a parking garage on the Old Towne Orange and Plaza historic districts for three project alternatives in support of an Mitigated Negative Declaration. Participated in SHPO consultation process. Conducted in compliance with Section 106 of the NHPA, NEPA, CEQA, and Federal Highway Administration's (FHWA) Section 4(f) regulations.

Historic Resources Evaluation for Ecke Ranch Office Building, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Leichtag Foundation
Surveyed, documented, and evaluated former office building of the Ecke Ranch, Evaluated the building as a contributor to potential Ecke Ranch Historic District for its associations with development of Encinitas, the agricultural industry, and its association with significant individuals Paul Ecke, Sr. and Paul Ecke, Jr.

Cultural and Historical Resources Existing Conditions and Evaluation Report for the Pacific Surfliner Carlsbad Village Double-Track Project, San Diego County, CA
Senior Architectural Historian
CLIENT: BRG Consulting, Inc.
Conducted an intensive level survey and evaluation of more than 60 potential historic resources, including residential, commercial, and transportation property types. Considered direct and indirect impacts from railroad improvements on eligible historic resources and recommended mitigation for adverse impacts. Conducted in compliance with Section 106 of the NHPA and NEPA.

Historic Resources Technical Report (HRTR) for Hillside Receiving Home, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated a government residential facility for children, consisting of two Mid-Century Modern buildings constructed in 1955 and 1963. Evaluated within the contexts of San Diego County Public Welfare services and Modern architecture. Report prepared in accordance with CEQA.

Impacts Assessment for Renovation of AMK Ranch Historic District, Teton County, WY
Project Manager and Senior Architectural Historian
CLIENT: University of Wyoming and Walsh Environmental
Assessed and evaluated direct and indirect impacts on the historic AMK Ranch Historic District for three project alternatives for their renovation and expansion, in support of an Environmental Assessment (EA). Conducted on-site survey with National Park Service's Cultural Resources Specialist to identify potential areas of impact. Coordinating consultation with the Wyoming State Historic Preservation Office (SHPO).

Historic American Landscape Survey (HALS) Documentation for Arden, Helena Modjeska Historic House and Gardens, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: Orange County Parks and Recreation
Documented 14.4-acre gardens and residential complex of Madame Helena Modjeska, famous late 19th-century Shakespearean actresses. Arden was Modejeska's primary residence from 1888 until 1905. Field survey included detailed field notes and digital photography. Prepared HALS Short Form. Landscape features include gardens with exotic and native plant species, cobble flowerbed garden borders, a well, fountains, pool/plunge, rock monument, meadow of grasses and native wildflowers, Santiago Creek and its associated wetland, and surrounding oak woodlands.

Henderson Historic Preservation Plan, Clark County, NV
Project Manager and Senior Architectural Historian
CLIENT: City of Henderson
Conducted community outreach and codified the steps needed to develop a Historic Preservation Plan for the City of Henderson. Worked with City staff, public officials, and members of the public to discuss the city's historic and cultural resources and foster community engagement/interest in the historic preservation process. Conducted a citywide reconnaissance survey of all buildings constructed prior to 1970. Made recommendations for the next steps in the Historic Preservation Plan process, and then through a subsequent contract developed the Historic Preservation Plan for the City, which was adopted by the City Council. Identified prioritized areas in the city for future intensive survey to identify historic resources.

HRER for St. Martha's Episcopal Church, Dove Residence, and Day School, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Warmington Residential
Surveyed, documented, and evaluated a Mid-Century Modern church complex, school, and Ranch house constructed between 1954 and 1965. Researched and developed local historic context. Evaluated within the contexts of mid-twentieth century development of West Covina and architecture. Conducted in compliance with CEQA.

Eligibility Consultation, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: Sempra Utilities
Provided guidance to TRC and SDG&E on their consultation with the California State Historic Preservation Office (SHPO) regarding the eligibility of the Capistrano Utility Building. Helped draft a consultation letter to the SHPO, and recommended that the draft National Register of Historic Places (NRHP) nomination did not support an argument of eligibility.

HRER, Historical Resources Compliance Report (HRCR), and Treatment Plan for the Rancho Lilac Historic District, San Diego County, CA
Senior Architectural Historian
CLIENT: Caltrans
Evaluated the eligibility of 27 built environment resources for the NRHP and as California Historic Landmarks prior to transfer of ownership. Recommended an eligible historic district with three periods of significance: the pioneer homesteading period (1880s-1900), early community and ranching period (1900-1945), and Irving Salomon's association with the property (1945 to 1966). Also prepared Treatment Plan recommending protective easements and covenants to ensure preservation of the district after transfer of ownership. Recommended *Rehabilitation* as the appropriate treatment standard and adherence to the Secretary of the Interior's (SOI) *Standards for the Treatment of Historic Properties*. Project conducted to comply with Public Resources Code (PRC) 5024.

HRER for Garfield Reservoir, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Helix Environmental Planning, Inc.
Surveyed, documented, and evaluated public water storage reservoir constructed in 1924. Evaluated within the contexts of community planning and development and architecture. Conducted in compliance with CEQA and NHPA.

Cultural Resources Survey for the Metrolink CTO-31 Project, Los Angeles County, CA
Senior Architectural Historian
CLIENT: HDR Engineering
Conducted windshield survey to identify potential historic resources within the project area, to provide baseline data for preliminary assessment of adverse impacts in compliance with NHPA and NEPA.

Citywide Historic Resources Survey, San Diego County, CA
Senior Architectural Historian
CLIENT: City of Chula Vista
Conducted a reconnaissance survey of more than 12,000 parcels and intensive survey of more the 350 parcels, based on a historic context developed as part of the project for the City of Chula Vista. Solicited public input on and presented findings of the survey in a series of public meetings. Made recommendations of local, state, and national eligibility. In addition to a final survey report, prepared a comprehensive survey database as well as web-based interactive photograph and maps.

NRHP Nomination for U.S. Highway 80 in California, San Diego and Imperial counties, CA
Senior Architectural Historian
CLIENT: San Diego Gas & Electric
Evaluated the 186 –mile California segment of U.S. Highway 80, one of the earliest all-weather coast-to-coast highways in the United States. Developed NRHP nomination and supporting materials. Recommended an eligible historic district with contributing constructed during the period of significance (1926-1964) that include 42 bridges and culverts and 186 miles of the road from San Diego to Yuma (both current and abandoned segments of the road).

HABS, HRCR, and FAE for Sorrento Valley Industrial Park, San Diego County, CA
Senior Architectural Historian
CLIENT: Caltrans
Prepared Caltrans specific compliance for the proposed demolition of the Sorrento Valley Industrial Park Historic District. Summarized identification efforts and resources eligible for the NRHP, identified the effect of the project upon those resources, and prepared mitigation plan in compliance with CEQA and Public Resources Code (PRC) §5024. Prepared HABS Level II documentation (Caltrans Heritage documentation equivalent) as well as Finding of Adverse Effect (FAE) per Caltrans format.

Evaluation of Banning Mine, Riverside County, CA
Senior Architectural Historian
CLIENT: Southern California Edison Company
Researched, documented, and evaluated a 1940s mine. Evaluated within the contexts of community planning and development, industry, or engineering. Conducted in compliance with CEQA.

HRTR for Padre Trail Inn, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: HELIX Environmental
Surveyed, documented, and evaluated a 1965 motel. Evaluated within the contexts of the tourism industry in San Diego and architecture. Report prepared in accordance with CEQA.

HRER for Fenton Dairy Houses and Office, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated four workers' houses and one office constructed between 1940 and 1945. Evaluated within the contexts of settlement and agriculture/ranching. Conducted in compliance with CEQA.

Historic Resource Analysis for Five Buildings at Mount San Antonio College, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Mount San Antonio College
Surveyed, documented, and evaluated five recreational college buildings constructed between 1958 and 1972. Evaluated as contributors to a potential historic district within the contexts of education and architecture. Conducted in compliance with CEQA.

HRER for 8048-8050-8052 Comstock Avenue in Whittier, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Whittier
Surveyed, documented, and evaluated two residential buildings constructed between 1927 and 1929. Evaluated within the contexts of Community Planning and Development, Whittier Thrives in the Early Twentieth Century, Whittier in the 1920s, Oil Industry in Whittier, and architecture. Conducted in compliance with CEQA.

Impacts Assessment for the SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Sunrise Powerlink
Analyzed potential for adverse effects from proposed SDG&E East County Substation Project. Provided recommendations for NRHP and CRHR eligibility for an approximate 14-mile (mi.) segment of Old Highway 80 within the APE, determined in consultation with BLM. Conducted in compliance with NHPA and CEQA.

Highway 80 Interpretive Signage Recommendations for the SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Sunrise Powerlink
Surveyed historic Highway 80 to make recommendations for placement of interpretive signs. Recommendations for signs were made based on integrity of Highway 80 at specific locations, character of specific sections of the highway, and demarkation at regular intervals. a Conducted in compliance with NHPA and CEQA.

Advanced Summary Report for the Historical Resources Evaluation of Hamlet Parcel for the Sunrise Powerlink Phase I ESA, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Gas & Electric
Conducted an on-site survey and provided summary report of five buildings within project area that were 45 years old and older. Conducted in compliance with CEQA to be incorporated into the Environmental Site Assessment (ESA).

Inventory, Evaluation and Analysis of Effects on Historic Resources for the Campo Verde Solar Project, Imperial County, CA
Senior Architectural Historian
CLIENT: KP Environmental, LLC
Conducted intensive survey within a 1,990 acre project area for proposed solar field and transmission line in Imperial County. Documented and evaluated 20 potential historic resources and analyzed the effects of the project on those resources recommended as historically significant.

HABS Documentation for the Cienega Elementary School, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: PMC World
Documented 1923 elementary school, with features of the Classical Revival and Spanish Colonial Revival styles. Field survey included sketch plan, detailed field notes, and archival research. Documentation prepared to HABS Level II standards.

HRER for Collier Park, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Atkins
Surveyed, documented, and evaluated 7.7-acre park, portions of which were established in 1910. Report prepared in accordance with CEQA and Section 106 of NHPA prior to the park's redevelopment.

Built Environment Assessment for Gregory Canyon Landfill Project, San Diego County, CA
Senior Architectural Historian
CLIENT: PCR Services
Surveyed, documented, and evaluated two dairy complexes and associated buildings, of which one complex was recommended eligible. Report prepared in accordance with CEQA and Section 106 of the NHPA prior to the parcel's redevelopment.

Treatment Plan for 918 Discovery Street, San Diego County, CA
Senior Architectural Historian
CLIENT: City of San Marcos
Surveyed, documented, and evaluated residential building prior to its proposed relocation. Made recommendations for project preparation and execution, and future rehabilitation of the building with specific treatment recommendations for the building's character-defining features.

HRER for the California Valley Solar Ranch Project, San Luis Obispo County, CA
Senior Architectural Historian
CLIENT: Ecology and Environment
Consulted on and edited evaluation of a four-mi. segment of Highway 58, and two gypsum strip mines for a solar project in the California Valley for Sunpower.

HRER for 6940 Otay Mesa Road, Rabago Otay Technical Business Park, San Diego County, CA
Senior Architectural Historian
CLIENT: RBF Consulting
Documented and evaluated mid-20th-century farmstead including ranch house and barns for eligibility for NRHP, CRHR, San Diego County Local Register of Historical Resources, and the County of San Diego Resource Protection Ordinance (RPO) in accordance with CEQA.

Impacts Assessment for SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Insignia Environmental
Consulted on and edited an evaluation and visual impacts assessment of a 13-mi. segment of historic Old Highway 80. Insignia Environmental requested this assessment for their powerline project in east San Diego County.

Inventory, Evaluation, and Analysis of Effects on Historic Built-Environment Properties, Imperial County, CA
Senior Architectural Historian
CLIENT: LS Power Development
Evaluated 16 resources within a solar project area in Imperial County and assessed the effects of the project on those resources recommended as historically significant.

Inventory, Evaluation and Analysis of Effects on Historic Built Environment Properties for the Imperial Solar Energy Center West and South Projects, Imperial County, CA
Senior Architectural Historian
CLIENT: LightSource, LLC
Surveyed, documented, and evaluated resources within a solar project area in Imperial County and analyzed the effects of the project on those resources recommended as historically significant for CSolar Development, LLC.

Documenting the Colorado River Front Work and Levee System (CRFWLS): A Historic Context and Inventory, San Bernadino, Riverside, and Imperial counties, CA and Yuma, La Paz, and Mojave counties, AZ
Historical Consultant
Consulted on, reviewed, and edited, report providing context for and documenting the CRFWLS.

HSR, Maravilla Handball Court and Market, LA Conservancy, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: LA Conservancy
Surveyed, evaluated, researched, and prepared HSR and California Register of Historical Resources (CRHR) nomination for a 1928 handball court and associated commercial and residential building as a pro-bono project for Los Angeles Conservancy. Evaluated for eligibility for CRHR and NRHP. Property was successfully designated on CRHR in 2012. Report prepared to assist with preservation efforts for neighborhood recreation and community center.

Convair Lagoon Alternative Analysis of Historic Resources, San Diego County, CA
Senior Architectural Historian
CLIENT: Atkins
Consulted on, reviewed, and edited evaluation of seaplane ramp and pier located in a lagoon formerly owned by the now defunct aircraft manufacturer Convair in the San Diego Bay. Atkins requested a historic built environment study for the proposed demolition of both structures for future redevelopment project.

Historic Context and Eligibility Criteria for Puget Sound Dikes, Multiple Counties in Puget Sound, WA
Senior Architectural Historian
CLIENT: U.S. Fish and Wildlife Service
Assisted with research to develop historic context for late-nineteenth- and early-twentieth-century dikes that contributed to the agricultural development of the Puget Sound region of northwestern Washington. Developed NRHP eligibility criteria as a management tool for USFWS for future compliance with Section 106 of the NHPA.

HRER for Fort Yuma Healthcare Center, Imperial County, CA
Senior Architectural Historian
CLIENT: HKM Dowd
Surveyed, evaluated, and edited report for nine buildings on the 1.9 acres at Fort Yuma. Field survey included consultation with Quechan tribe. HSR prepared in support of an Environmental Assessment (EA) for potential demolition, including one contributing building to the Yuma Crossing National Historic Landmark (NHL) historic district.

Due Diligence Report for the Renovation of the Imperial Beach Library, San Diego County, CA
Architectural Historian
CLIENT: RBF Consulting
Evaluated the potential for historical significance of the subject property by conducting a constraints analysis to provide baseline information on the architect of record, date of construction, and potential eligibility to the CRHR.

Cultural Resources Survey for 203 E. Olive St., San Diego County, CA
Architectural Historian
CLIENT: The Planning Center
Evaluated and prepared survey report for one-acre parcel with three agricultural buildings, including 1898 farm house. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource.

HABS Documentation for the American Legion Hall, San Diego County, CA
Architectural Historian
CLIENT: City of Vista
Documented art deco American Legion Hall to HABS Level III standards. Field survey included photography, sketch plan, detailed field notes, and archival research. Edited survey report, including historical and architectural information prepared to HABS Level II standards.

HSR for Palomar College, San Diego County, CA
Architectural Historian
CLIENT: Palomar College
Consulted on and reviewed HSR for seven buildings at Palomar College. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource.

Tenth Avenue Marine Terminal Historical Assessment, San Diego County, CA
Architectural Historian
CLIENT: Atkins
Evaluated mid-twentieth century maritime industrial buildings that served as transit sheds and warehouses. Conducted research and fieldwork to determine the buildings' architectural significance and eligibility for the CRHR.

2345 S. Gaffey Historic Resources Report, 2345 Gaffey Avenue, Los Angeles County, CA
Architectural Historian
CLIENT: LLC/Netarq Design Group
Assisted with the preparation of a report to private property owner for CEQA compliance. Conducted research and prepared written report detailing the building's architectural significance and eligibility for the NRHP, CRHR, Los Angeles Historic-Cultural Monument, and a Historic Preservation Overlay Zone.

National Trust for Historic Preservation

Heritage Travel, National Trust for Historic Preservation, Los Angeles, California, 2008-2009. As Senior Account Executive, worked with west-coast communities and destinations to improve their marketing efforts to heritage and cultural travelers through new website, Gozaic.com. Working from Los Angeles office, participated in developing and executing marketing strategies both for the company and our clients. Represented company at professional conferences. Utilized Salesforce database to ensure timely communication with clients.

American Battlefield Protection Program, National Park Service
NPS Grants Administration, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, evaluated applications, monitored projects, coordinated reporting and organized workshops for grant recipients for $1.5 million annual grant program. Reviewed deliverables such as NRHP nominations, easements, cultural resource inventories and management plans.
Section 106 Review, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, reviewed projects potentially effecting historic battlefields for which the American Battlefield Protection party was a consulting party. Prepared comments to consultants evaluating projects and their potential effects on historic resources, and made recommendations for mitigation of projects adversely effecting historic battlefields.

Update of Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields, National Park Service Headquarters, 2007-2008. Conducted onsite evaluation and boundary determinations for Civil War battlefields in Charleston, South Carolina, and Leesburg, Virginia. Coordinated national survey of preservation activities at 384 Civil War battlefields for report to Congress. Indentified changes in condition and threats, as well as preservation opportunities.

National Park Service History Program and HABS/HAER/HALS/CRGIS

HABS/HAER/HALS/CRGIS Online Publications, National Park Service Headquarters, 2006-2007. As Project Manager, redesigned navigation, content and design of HABS/HAER/HALS/CRGIS website and NPS History Program website. Created online publications for NPS History including Abraham Lincoln web feature, Teaching with Historic Places Lesson Plan on lighthouses, and Maritime Resources of Massachusetts travel itinerary.

Maritime Heritage Program, National Park Service Headquarters, 2006-2007. As Historian, maintained national inventory of historic lighthouses and ships for Maritime Heritage Program. Reviewed applications for the transfer of federally-owned historic light stations, under the National Historic Lighthouse Preservation Act of 2000.

National Park Service Cultural Resources Web Team, 1999-2008. As Team Member, assessed popularity and usability of web materials, and established guidance to achieve increased visibility. Served on subcommittee for website redesign, participated in focus group and usability testing.

National Register of Historic Places, National Park Service

Consultation on Review of National Register of Historic Places and National Historic Landmark Nominations, 1998-2006. As Historian, contributed to peer review of multiple nominations. Edited NHL nomination for Ryman Auditorium, Nashville, Tennessee. Wrote comments for return of Spud Drive-in Theater nomination, Driggs, Idaho to SHPO. Developed presentation for national conference: "America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places."

Public Outreach for NRHP, 1998-2006. As Historian, contributed to publication of printed and online materials to increase awareness of and understanding of NRHP. Provided guidance on listing properties, benefits of listing, and pertinent laws and regulations. Assisted with development of public workshops, production of brochures, bulletins, power point presentations and exhibits. Assisted with the final editing and printing of two NRHP bulletins: "Telling the Stories Planning Effective Interpretive Programs for Properties Listed in the National Register of Historic Places" and "Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places." Helped monitor the reprinting of several other NR technical bulletins, which provide standards and guidelines for evaluating historic properties.

Discover our Shared Heritage Travel Itineraries, 1998-2006. As Historian and Team Leader, coordinated the production of 38 travel itineraries developed in partnership with state and local governments, and private organizations, Each travel itinerary was created to highlight historic sites listed in the NRHP, increase awareness of the diverse and representative historic places across the United States, encourage heritage tourism, and provide a valuable educational resource. Managed project development and supervised team members, evaluated new proposals, established work plans, coordinated launch and press releases, researched, wrote and edited historical descriptions, essays and program talking points, created graphics, web pages and PowerPoint presentations.

Development of Thematic Features, NRHP, National Park Service Headquarters, 1999-2006. As Historian, designed, researched and wrote content for periodic thematic features, highlighting the diversity of historic sites listed in the NRHP. Themes included African American History, Asian Pacific Heritage, Hispanic Heritage, Women's History, American Indian Heritage, Preservation Month, Veterans Day, National Park Week, and Family History Month.

Arlington Heritage Alliance

Chair and Board Member of Arlington Heritage Alliance, Arlington, Virginia, 2000-2008. As Chair, determined and guided the initiatives of local historic preservation non-profit organization. Developed projects and publications to broaden local preservation constituency
Developed and facilitated numerous small and large meetings of preservation constituents, including community-wide preservation planning committee. Represented organization at public meetings and in communication with local and national elected officials. Evaluated local development and preservation plans. Developed "My Historic House" program to encourage sensitive renovations and additions. Judged Arlington Historic Preservation Design Awards.

Recent Past Preservation Network

Founder, Recent Past Preservation Network, 2000-2006. As one of the founders, and inaugural Board Member, of a new national preservation non-profit, guided the organization's direction and initiatives, helped develop short- and long-term goals and objectives. Developed and facilitated annual membership meetings. Worked with legal council to file incorporation paperwork and secured 501(c)3 status with the IRS. As Treasurer, prepared and monitored five-year projected budget, filed annual reports, and analyzed fiscal feasibility of proposed projects.

Marietta Manor, Prince George's County, Maryland
Building Restoration, 1996. As Assistant Site Manager, contributed to final stages of restoration of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Developed and helped implement an interior paint plan based on paint analysis.

Museum Operations, 1996. As Assistant Site Manager, lead interpretative tours for school groups and the general public. Assisted with event planning for on-site programs and the County's Tri-centennial Celebration.

Publications:

2006 *"America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places,"* Preserve and Play: Preserving Historic Recreation and Entertainment Sites. Washington, District of Columbia: National Park Service.

2003 "*From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Constructing Image, Identity, and Place: Perspectives in Vernacular Architecture, Vol. IX.* Knoxville, TN: University of Tennessee Press.

Presentations:

2013 "Current Trends in Historic Resource Surveys for Preservation Planning," Session moderator and presenter of "Chula Vista Comprehensive Historic Resources Survey," American Planning Association California Chapter Annual Conference, Valencia, California.

2012 "Documentation & Evaluation of Berylwood Historic District," Keynote address for Friends of the Bard Mansion Centennial Celebration, Port Hueneme, California.

2005 "America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places," Preserve and Play National Conference, sponsored by National Park Service, Chicago, Illinois.

2000 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Arlington Heritage Alliance Annual Meeting, Arlington, Virginia.

1998 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Vernacular Architecture Forum Conference, Annapolis, Maryland.

1997 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant." Marriott International 70th Anniversary Celebration, Bethesda, Maryland.

1995 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant." Annual Conference on Washington, DC, Historical Studies, Washington, District of Columbia.

Mark S. Becker, Ph.D., RPA

Principal Investigator and Laboratory Manager

Total Years of Experience: 31

Education:

Ph.D.	1999/Anthropology/University of Colorado, Boulder
M.A.	1990/Anthropology/University of Illinois, Chicago
B.A.	1986/Anthropology/Ohio State University

Registrations:

1999	Register of Professional Archaeologists

Professional Profile:

Dr. Becker has over 30 years of professional and academic experience in archaeological fieldwork, research, and publication in the American Midwest, Mid-Atlantic, Upper South, Southeast, Plains, Rocky Mountains, Great Basin, southern CA, southwest Asia, and northern Africa. He earned his Ph.D. in Anthropology with and emphasis in archaeology, hunter-gatherers, methodology, and lithic analysis. His ongoing research focuses on prehistoric settlement systems and how mobility is reconstructed from the archaeological record through an examination of technology, function, and spatial analysis. Since 1989, Dr. Becker has specialized in lithic use-wear, refitting, and spatial analysis. In conjunction with other classes of data, such as features and faunal remains, he has used his skills in lithic analysis to reconstruct site function and prehistoric behavior.

Dr. Becker has directed or participated in archaeological artifact analysis, field survey, testing, and data recovery projects in Arizona, CA, Colorado, Illinois, Indiana, Kentucky, Nebraska, Nevada, North Carolina, Ohio, Pennsylvania, Utah, Washington, West Virginia, Wyoming, Sinai, the Egyptian Nile and Sahara, and Jordan. He also has expertise with the analysis of ceramics, ground stone, faunal remains, human osteology, and historic materials. Since joining ASM as Laboratory Director in 2002, Dr. Becker has processed and analyzed artifacts from the Great Basin and CA coastal and desert projects. He has also authored more than 100 project reports and specialized studies. Dr. Becker currently serves as ASM's Program Manager for ASM's Department of Defense contracts for cultural resource studies throughout the West, including Multiple Award Services Contracts for NAVFAC Southwest and NAVFAC Atlantic. In this role, he is responsible for oversight of technical studies, project budgets, and the preparation of deliverables per contract terms.

Relevant Project Experience:

Tule Wind Cultural Monitoring Support, San Diego County, CA
Lithic Analyst
CLIENT: Iberdrola Renewables
Examined materials derived from the monitoring and testing of multiple sites. The analysis focused on the analysis of lithic artifacts and identification of projectile point typologies.

Nimitz Golf Course Archaeological Study, Barrigada. Naval Base Guam
POSITION
CLIENT: Commanding Officer-NAVFAC Marianas
Contract Manager for data recovery investigations. Coordinated with Navy POC and KO.

Archaeological Data Recovery in Support of Construction for MILCON P-715 Live Fire Training Range Complex, Andersen Air Force Base, Yigo, Guam
POSITION
CLIENT: NAVFAC Pacific
Contract Manager for data recovery investigations. Coordinated with Navy POC and KO.

Carlsbad Phase III Recycled Water Project, Carlsbad, CA
Project Manager
CLIENT: Helix Environmental Planning, Inc.
Conducted a Class I cultural resource inventory for the proposed Phase III Recycled Water Project. The inventory included a literature and record search to help determine the location of previously recorded archaeological sites that intersect or are adjacent to the proposed area of potential effect. Co-author of a report that summarized the results of the cultural resource inventory.

2015 Archaeological Survey of 13,700 Acres and Site Condition Assessment for the Basilone Wildland Fire Complex, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of this post-burn survey for 13,700 acres on MCB Camp Pendleton that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Archaeological Monitoring for Geotechnical Boring in Support of the Ammunition Supply Point Upgrade Project Phase I, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of the geotechnical boring project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Archaeological Monitoring for MILCON P-1132 Communication Information Systems Facilities Project, MCB Camp Pendleton, San Diego County, CA
Project Manger
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Coronado Coastal Campus Monitoring, Silver Strand Training Complex, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of the preparation and implementation of an archaeological monitoring and discovery plan that includes participating in meetings, coordination with Base Archaeologist, assisting with monitoring, laboratory analysis, and assessment of discovery.

Archaeological Survey of the UXO Clearance Area for the Infantry Squad Battle Course Range Project (P-637), MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of the archaeological survey for the P-637 project including coordinating with Base Archaeologist, participating in meetings, conducting site visits, and assisting with the evaluation of results from the survey.

2,471 Acre Archaeological Survey Acre Archaeological Survey for Section 110 Compliance, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton

Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Sewer Treatment Plant 12 Demolition Project, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Las Flores Monitoring Well Project, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Archaeological Survey for Harmony Grove Meadows Project, San Diego County, CA
Project Manager
CLIENT: Helix Environmental Planning
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

ICRMP for Marine Corps Mountain Warfare Training Center, Bridgeport, CA
Project Manager
CLIENT: Helix Environmental Planning, Inc.
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Archaeological Survey and Evaluation Report for the Southview East Project within the Otay Mesa Community Planning, Area, San Diego County, CA
Project Manager and Co-Author
CLIENT: Cornerstone Communities Corporation
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination. Also, was primary author of the technical report that was prepared and submitted to the client.

Lake Jennings Market Place Project
Project Manager
CLIENT: South Coast Development
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Laboratory Analysis for Lake Jennings Market Place Project
Project Manager
CLIENT: South Coast Development
Overseeing all aspects of the laboratory analysis of the collections from survey and subsurface testing. This includes artifact and faunal analysis, coordination with Natural History Museum, and preparation of summary report.

Hallmark West Mitigation Site Project
Project Manager
CLIENT: ABC Construction Co., Inc.
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Marine Corps Base Camp Pendleton Ethnographic Study, San Diego County, CA
Project Manager
CLIENT: Potomac-Hudson Engineering
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, technical report, and client coordination.

Class III Cultural Resources Inventory of Approximately 14,000 Acres for the Proposed Land Expansion, Naval Air Station, Fallon, NV
Project Manager
CLIENT: Man Tech SRS Technologies, Inc.
ASM Project Manager for a project that includes a work plan, fieldwork, post-field report, data analysis, technical report, and client coordination.

Cultural Resources Survey for the LOSSAN Control Point San Onofre to Control Point Pulgas Double Track Project, San Diego County, CA
Project Manager
CLIENT: SANDAG
Managed the completion of an additional cultural resources survey for the construction of a second mainline track along a 2.9 km portion of the LOSSAN rail corridor. This project was completed in compliance with Section 106 of the NHPA and included an intensive cultural resources survey. Previously identified cultural resources were relocated excluding the Red Beach railroad bridge, which was previously recorded by ASM. Prepared a final report summarizing the results of the survey as well as provided recommendations for additional mitigation measures.

P-1310 Basilone Realignment Project, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

P-079 Potable Water Distribution Improvements Project, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: Cardno GS, Inc.
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

I-5 San Elijo Lagoon Bridge Replacement Project, TO#1, San Diego County, CA
Project Manger
CLIENT: Helix Environmental Planning, Inc.
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Rancho Rincon Del Diablo (Trinity Meadows) Project, San Diego County, CA
Project Manager
CLIENT: Ambient Communities
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Ecoplex Park Project, Cathedral City, CA
Project Manager
CLIENT: GHA Communities
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Archaeological Survey of a 38.81-Acre Parcel, Otay Mesa, CA
Project Manager and Co-Author
CLIENT: Alden Environmental, Inc.
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination. Also was co-author of the report that summarized results of the survey.

Seville 4 Solar Project, Imperial County, CA
Project Manager
CLIENT: Titan Solar II, LLC
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Willow Tree Charter School Project, Bonsall, CA
Project Manager
CLIENT: PlaceWorks
Overseeing all aspects of the project that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Cultural Resources Survey and Evaluation of Cultural Resources for the Bear Valley Parkway Development, Escondido, CA
Project Manager
CLIENT: Harris and Associates
Managed a Phase I cultural resources inventory and Phase II archaeological evaluation of the site SDI-21808 associated with a proposed residential development project located within the County of San Diego. This work was conducted to assist in compliance with the CEQA, Section 106 NHPA, and local regulations in the city of Escondido.

Cultural Resources Monitoring for the Old Ironsides County Park Playground and ADA Improvements, San Diego, CA
Project Manager
CLIENT: Helix Environmental
Managed cultural resources monitoring for the Old Ironsides Project for compliance with CEQA. This included the completion of daily monitoring logs and preparation of a final report detailing results of the project.

Archaeological Survey of 13,400 Acres, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of this post-burn survey for 13,400 acres on MCB Camp Pendleton that includes a work plan, fieldwork, post-field report, data analysis, site condition assessment, technical report, and client coordination.

Base-wide Archaeological Survey of 5,000 Acres, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a base-wide Section 110 survey for 5,000 acres on MCB Camp Pendleton that includes a work plan, fieldwork, data analysis, technical report, and client coordination. The project involves multiple small parcels that need to be completed for compliance.

Archaeological Survey and Evaluation for the El Dorado Property, San Diego County, CA
Project Manager
CLIENT: Helix Environmental
Worked with PDMWD to examine the significance of cultural resources located on the El Dorado Property for CEQA compliance. Oversaw the completion of fieldwork, artifact analysis, and technical report.

Archaeological Survey of 5,000 Acres, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of this Section 110 survey for 5,000 acres on MCB Camp Pendleton that includes a work plan, fieldwork, data analysis, technical report, and client coordination.

Archaeological Evaluation of Eight Sites, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Atlantic, MCB Camp Pendleton
Overseeing all aspects of the evaluation of eight prehistoric sites that includes preparation of a work plan, accident prevention plan, fieldwork, laboratory and data analysis, technical report, and client coordination.

Archaeological Evaluation of 25 Sites at NAWS China Lake, Ridgecrest, CA
Project Manager
CLIENT: NAVFAC Southwest, NAWS China Lake
Overseeing all aspects of a 25 site evaluation program on NAWS China Lake that includes a work plan, fieldwork, laboratory and data analysis, technical report, and client coordination.

Condition Assessment, Site Monitoring, and Effects Treatment Plan, Cycle 6, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a specialized archaeological monitoring program on the MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination. Specifically coordinated with the Base to devise a strategy for an annual monitoring assessment that would review all eligible sites within a three year cycle, with one third of the review completed yearly.

Condition Assessment, Site Monitoring, and Effects Treatment Plan, Cycle 7, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a specialized archaeological monitoring program on the MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Condition Assessment, Site Monitoring, and Effects Treatment Plan, Cycle 8, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a specialized archaeological monitoring program on the MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Condition Assessment, Site Monitoring, and Effects Treatment Plan for the Sierra TA, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a specialized archaeological monitoring program for highly sensitive cultural resources located near the San Mateo Archaeological District on the MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination. Specifically coordinated with the Base to devise a strategy to perform the monitoring program that includes pedestrian survey, Total Station mapping, and 3-D imagery/topographic mapping using a quad-helicopter drone.

Archaeological Monitoring for the P-1046 Base-wide Utility Infrastructure Improvements, MCB Camp Pendleton, San Diego County, CA
Project Manager

CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of a Base-wide archaeological monitoring program on MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Archaeological Monitoring for the P-1176 San Jacinto Road, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of an archaeological monitoring project associated with MILCON P-1176 on MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Archaeological Monitoring for the Las Pulgas 43 Area, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of an archaeological monitoring project associated with drainage repair in the 43 Area on MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Archaeological Monitoring for the Wilcox Range, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Overseeing all aspects of an archaeological monitoring project associated with drainage repair at the Wilcox Range Area on MCB Camp Pendleton that includes a work plan, fieldwork, technical report, and client coordination.

Selected Project Experience:

Archaeological Survey of 2,500 Acres, MCB Camp Pendleton, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of this post-burn survey for 2,500 acres on MCB Camp Pendleton that included a work plan, fieldwork, data analysis, technical report, and client coordination.

Archaeological Survey of 1,200 Acres, MCAS Miramar, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCAS Miramar
Oversaw all aspects of this survey for 1,200 acres on East Miramar that included fieldwork, data analysis, technical report, and client coordination.

Archaeological Monitoring for the Santa Margarita Ranch House, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of an archaeological monitoring program on the MCB Camp Pendleton that included a work plan, fieldwork, technical report, and client coordination.

Archaeological Monitoring for the Talega Crossing Bridge, 64 Area, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of an archaeological monitoring program on the MCB Camp Pendleton that included a work plan, fieldwork, technical report, and client coordination.

Archaeological Monitoring of the Santee Aquifer Test Wells, San Diego County, CA
Principal Investigator
CLIENT: Helix Environmental Planning, Inc.
Worked with PDMWD to monitor the boring of several wells for cultural resources. Oversaw the completion of fieldwork and technical report.

Padre Dam Municipal Water District Alternative Project, San Diego County, CA
Principal Investigator
CLIENT: Helix Environmental Planning, Inc.
Worked with PDMWD to review comments from the tribes and produce a template for a cultural resources treatment plan in compliance with CEQA.

Archaeological Survey and Evaluation for the El Dorado Property, San Diego County, CA
Principal Investigator
CLIENT: Helix Environmental Planning, Inc.
Worked with PDMWD to examine the significance of cultural resources located on the El Dorado Property for CEQA compliance. Oversaw the completion of fieldwork, artifact analysis, and technical report.

Testing for Padre Dam Secondary Connection - Alternative Site Location, San Diego County, CA
Principal Investigator
CLIENT: Helix Environmental Planning, Inc.
Worked with PDMWD to examine the significance of cultural resources located on an alternative site location for a pump station in compliance with CEQA. Oversaw the completion of fieldwork, artifact analysis, and technical report.

Moonlight State Beach Archaeological Monitoring Project, San Diego County, CA
Principal Investigator and Project Manager
CLIENT: City of Encinitas
Supervised archaeological monitoring within a known prehistoric site during replacement of a concession stand at Moonlight State Beach. Currently managing analysis of artifacts recovered during the project.

Archaeological Survey for a Pipeline Easement in the Mojave Preserve, San Bernardino County, CA
Project Manager
CLIENT: Southern CA Gas Company
Oversaw survey program that included fieldwork for a 44-mile-long existing pipeline easement, preparation of a technical report, and client coordination. 30 new cultural resources were identified and documented and documentation for 14 previously recorded resources was updated.

Cajon Pass Monitoring, San Bernardino County, CA
Project Manager
CLIENT: Southern CA Gas Company
Oversaw all aspects of an archaeological monitoring program near the Sayles Site that included fieldwork, a letter report, and client coordination.

Red Beach MOUT Monitoring, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of a monitoring program for the Red Beach training area that included the preparation of a complex work plan, fieldwork, technical report, and client coordination.

Silver Strand State Park Survey and Testing, San Diego County, CA
Project Manager
CLIENT: State of CA Department of Parks and Recreation
Oversaw fieldwork, data analysis, technical reports, and client coordination for improvements to the park.

Archaeological Survey of Deteriorated Poles, Riverside County, CA
Project Manager
CLIENT: Southern CA Edison
Oversaw all aspects of a survey program for six deteriorated transmission line poles that included an archaeological inventory, a letter report, and client coordination.

Archaeological Survey of the AFA-17 Training Area, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Oversaw all aspects of this survey for the AFA-17 Training Area that included preparation of a work plan, accident prevention plan, fieldwork, data analysis, technical report, and client coordination.

Archaeological Monitoring for the P-116 Project, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCAS Camp Pendleton
Oversaw all aspects of an archaeological monitoring program on the MCAS Camp Pendleton airfield that included a work plan, fieldwork, technical report, and client coordination.

Archaeological Survey for the Ysidora Basin Treatment Pond Maintenance Project, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCAS Camp Pendleton
Oversaw all aspects of this survey for treatment pond maintenance that included a work plan, accident prevention plan, fieldwork, data analysis, technical report, and client coordination.

Archaeological Survey of the P-214 KD Training Area, San Diego County, CA
Project Manager
CLIENT: Cardno TEC
Oversaw a full analysis and completion of archaeological survey for improvements to two training ranges on Camp Pendleton, and performed all client coordination.

MCB Camp Pendleton Bridges Survey, San Diego County, CA
Project Manager
CLIENT: Cardno TEC
Oversaw archaeological survey around eight bridges in need of maintenance on Camp Pendleton, and performed all client coordination.

Archaeological Survey of the Stuart Mesa Water Treatment Ponds, San Diego County, CA
Project Manager
CLIENT: Cardno TEC
Oversaw an archaeological survey around water treatment ponds on Camp Pendleton, and performed all client coordination.

Eldorado-Ivanpah Survey, San Bernardino County, CA
Principal Investigator and Field Director
CLIENT: Southern CA Edison
Conducted a survey of 245 acres for proposed spur roads, helicopter landing zones, and laydown areas. Wrote letter report, and conducted coordination with the BLM.

Data Recovery of Archaeological Site 45-WH-253, Ross Lake, Whatcom County, WA
Project Manager
CLIENT: North Cascades National Park Service Complex
Performed lithic microwear analyst for the artifact assemblage recovered during ASM's data recovery at Ross Lake. Conducted a pilot study to assess the feasibility of doing additional artifact analysis in the future. The results indicate that the chert materials found during excavation are suitable for additional studies while other lithic materials have a low potential for preserving microwear traces.

MCB Camp Pendleton Basewide Historic Context Study, San Diego County, CA
Project Manager
CLIENT: MCB Camp Pendleton
Oversaw completion of basewide revision to historic context study, and coordinated with installation cultural

resources personnel.

El Camino Real Evaluation, San Diego County, CA
Project Manager
CLIENT: MCB Camp Pendleton
Oversaw an archaeological survey of the portion of this historic route located on MCB Camp Pendleton, and coordinated with installation cultural resources personnel.

Archaeological Condition Assessment, Site Monitoring, and Effects Treatment Plan (CASMET), San Diego County, CA
Project Manager
CLIENT: MCB Camp Pendleton
Oversaw client coordination, completion of fieldwork, and preparation of a technical report.

SDI-12100 and SDI-19406 Additional Evaluations, San Diego County, CA
Project Manager
CLIENT: MCB Camp Pendleton
Oversaw all aspects of the project, including client coordination, preparation of a work plan, fieldwork, data analysis, and preparation of a technical report for two archaic period sites located on Camp Pendleton.

Limited Data Recovery at Archaeological Sites SDI-12100 and SDI-19406, San Diego County, CA
Project Manager
CLIENT: MCB Camp Pendleton
Oversaw all aspects of the project including client coordination, preparation of a work plan, fieldwork, data analysis, and preparation of a technical report for two Archaic period sites on Camp Pendleton.

Archaeological Evaluation of LaPozz No. 5 Load Claim, Kern County, CA
Project Manager
CLIENT: Enviroscientists
Oversaw archaeological evaluation of three prehistoric sites including a large lithic quarry for the BLM. Produced a work plan, conducted onsite lithic analysis for the quarry material, performed laboratory analysis on the artifacts, and produced a technical report.

Archaeological Survey for MCLB Barstow, San Bernardino County, CA
Project Manager
CLIENT: NAVFAC Southwest, Marine Corps Logistics Base Barstow
Oversaw all aspects of this station-wide survey, which included historical research, preparation of a work plan and an accident prevention plan, fieldwork, data analysis, technical report, and client coordination.

Archaeological Survey for the Camp De Luz Refurbishment Project, San Diego County, CA
Project Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Conducted a survey of the Camp De Luz training facility, produced proposal, work plan, supervised fieldwork, wrote technical report, and conducted all coordination with client.

Archaeological Survey for the P-214 Range Development Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Conducted a survey at the P-214 training facility, produced proposal, work plan, accident prevention plan/activity hazard analysis, conducted field effort, supervised technical report, and coordinated with client and Base Archaeologist.

Class I and Class III Archaeological Inventories for the Eagle Mountain MET Towers Project, Riverside County, CA
Project Manager

CLIENT: GH Energy Limited
Oversaw all aspects of Class I and III surveys of proposed MET tower locations in Palm Springs, CA. Coordinated with BLM and client.

Class I and Class III Archaeological Inventories for the Gold Basin MET Towers, Imperial County, CA
Project Manager
CLIENT: GH Energy Limited
Oversaw all aspects of the completion of Class I and III surveys of MET towers in El Centro, CA. Coordinated with BLM and client.

Class III Archaeological Inventories for the Sawtooth/Chariot Met Tower Installations, Imperial County, CA
Project Manager
CLIENT: Enviromine
Oversaw all aspects of survey for the proposed installation of meteorological towers in El Centro, CA. Coordinated with BLM and client.

Ground Penetrating Radar (GPR) Survey for Two Areas of Mission San Luis Rey, San Diego County, CA
GPR Specialist
CLIENT: Mission San Luis Rey
Oversaw a one-day GPR survey and the preparation of a technical report for the historic Mission San Luis Rey that identified potential buried archaeological features. Mapping produced from this project will help guide future archaeological investigations.

Archaeological Investigations for the GWOT Sierra Geomorphology Study, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Supervised geomorphological study of the site settings, geophysical study, and archaeological investigation around two NRHP-eligible sites located in the project area. Produced proposal and work plan, supervised field effort, prepared technical report, and coordinated with Base Archaeologist.

Archaeological Survey of the Breacher Facility, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Conducted a 5-acre archaeological survey, produced work plan, supervised field personnel, and coordinated with Base Archaeologist. Prepared technical report.

GPR Survey for the El Cajon Public Safety Center, San Diego County, CA
GPR Specialist
CLIENT: San Diego Natural History Museum
Conducted a one-day GPR survey for two historic residences located next to El Cajon City Hall. Also conducted data analysis and prepared a brief technical report.

Archaeological Survey for the Santa Margarita Conjunctive Use Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Conducted an archaeological survey of a proposed water pipeline running from the coast of Camp Pendleton to City of Fallbrook. Produced work plan, supervised field effort, literature search, and historical documentation, report author, and coordination with client and Base Archaeologist.

Archaeological Survey in the Juliett Burn Area, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCB Camp Pendleton

Oversaw a 2,000-acre survey for the 2008 wildfires on Camp Pendleton. Produced work plan, supervised field personnel, and coordinated with Base Archaeologist. Prepared technical report.

Archaeological Survey and Preparation of an Integrated Cultural Resources Management Plan (ICRMP), San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCAS Miramar
Conducted a 2,059-acre survey, produced work plan, supervised field personnel, and coordination with Base Archaeologist. Prepared technical report.

Archaeological Survey of LaPozz No. 5 Load Claim, Kern County, CA
Field Director
CLIENT: Enviroscientist Inc.
Conducted survey for area of potential effect for proposed mining on BLM lands. The survey included the identification of one large prehistoric lithic quarry with known rock hounding activities.

Archaeological Survey of SOTG Battle Course, Area 41, San Diego County, CA
Principal Investigator
CLIENT: Helix Environmental Planning
Conducted a 200-acre survey on Camp Pendleton, produced work plan, supervised field personnel, and coordination with Base Archaeologist.

GPR Survey of Los Angeles State Historic Park, Los Angeles County, CA
GPR Specialist
CLIENT: State of CA Department of Parks and Recreation
Conducted a two-phase GPR survey of a historic railroad depot.

Archaeological Evaluation of 27 Sites on MCB Camp Pendleton, San Diego County, CA
Principal Investigator and Laboratory Manager
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Managed Phase II testing of 27 prehistoric sites in the central portion of MCB Camp Pendleton. Coordinated the examination of artifacts and ecofacts to investigate site function and subsistence-settlement patterning along Las Flores, Las Pulgas, and Aliso creeks. Prepared a synthesis of this data within a regional context. Supervised field effort and coordinated with Base Archaeologist. Prepared technical report.

Archaeological Survey of the Horno/Ammo Burn Areas, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Managed a 3,500-acre survey for the 2007 wildfires on Camp Pendleton, produced work plan, supervised field personnel, and coordination with Base Archaeologist.

Class I and Class III Inventories for the Ocotillo MET Towers Project, San Diego County, CA
Project Manager
CLIENT: POWER Engineers
Oversaw all aspects of project, and coordination with BLM and client for a Class III Inventory for the Met Tower surveys.

Archaeological Testing for the P-159A Green Beach Access Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Managed an intensive testing at Interstate 5 and San Onofre Creek, produced proposal and work plan, supervised field effort, and coordination with client and Base Archaeologist.

Archaeological Evaluation of Four Sites Located in the San Mateo Agricultural Fields, San Diego County, CA

Principal Investigator
CLIENT: Helix Environmental Planning
Supervised the evaluation of four archaeological sites, a geomorphological study of the site settings, and a GPR investigation of two NRHP-eligible sites located in the project area. Produced proposal and work plan, supervised field effort, conducted GPR and geomorphology studies, and coordination with client and Base Archaeologist.

Archaeological Evaluation of 17 Sites at MCAS Miramar, San Diego County, CA
Principal Investigator
CLIENT: Marine Corps Air Station Miramar
Directed the evaluation of 17 archaeological sites (historic and prehistoric) located throughout MCAS Miramar. As Laboratory Director, supervised all artifacts analysis and curation at the San Diego Archaeological Center.

GPR Survey of Stonewall Historic Mine, San Diego County, CA
GPR Specialist
CLIENT: State of CA Department of Parks and Recreation
Conducted a two-day GPR survey of a historic mine.

GPR Survey at Naval Base Point Loma Quarters A, San Diego County, CA
GPR Specialist
CLIENT: Shaw Environmental
Conducted a two-day GPR survey of a potential historic site on Naval Base Point Loma.

GPR Survey for the Fallbrook LDS Project, San Diego County, CA
GPR Specialist
CLIENT: Robert F. Tuttle Architects
Conducted a GPR survey to investigate the possibility of a CA Indian cemetery.

GPR Survey for the NAWS Survivability Project, San Bernardino County, CA
GPR Specialist
CLIENT: Naval Air Weapons Station China Lake
Conducted the GPR survey, analysis, and reporting for two Paleoindian sites and one historic graveyard.

Archaeological Testing for the P-159 Red Beach Access Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Conducted an intensive testing at Interstate 5 and Las Flores Creek, produced proposal and work plan, supervised field effort, and coordination with client and Base Archaeologist.

Archaeological Survey for the P-110 Water Conveyance Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Conducted a linear survey of basewide construction, produced proposal and work plan, supervised field effort, and coordination with client and Base Archaeologist.

GPR Survey of the Yuma Pivot Point, Yuma County, AZ
GPR Specialist
CLIENT: Yuma Crossing National Heritage Area
Conducted a GPR survey to locate buried portions of a historic railroad bridge that once spanned the Colorado River.

Archaeological Survey of MET Towers Located on BLM Land, Imperial County, CA
Project Archaeologist
CLIENT: GH Energy Limited

Conducted survey of four proposed MET Tower locations and drafted report.

Archaeological Survey of the MARSOC Project, San Diego County, CA
Principal Investigator
CLIENT: Cardno TEC
Conducted a 72-acre survey of Range 108 Training Area and Area 41. Produced proposal and work plan, supervised field effort, and coordination with client and Base Archaeologist.

Archaeological Survey of the Lima Training Area, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Managed a 606-acre survey of Lima Training area, produced work plan, supervised field personnel, and coordination with Base Archaeologist.

Data Recovery of Archaeological Site SDI-10723, San Diego County, CA
Principal Investigator and Laboratory Director
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Managed data recovery at a multi-component prehistoric site dating between 8400-300 B.P. Supervised GPR survey, fieldwork, lab analysis, curation, and a technical report, and coordination with Base Archaeologists. The project relied on special methods to recover the Early Archaic material remains, and used innovative spatial analysis techniques to help interpret the data.

Archaeological Testing for the Viejas Northwest Grade Project, San Diego County, CA
Principal Investigator and Laboratory Director
CLIENT: BRG Consulting
Oversaw the testing, analysis, and evaluation of three prehistoric sites.

GPR Survey of Two Historic Sites for the Duncan Canyon Project, San Bernardino, CA
Principal Investigator
CLIENT: David Evans and Associates
Served as Principal Investigator for the examination of two historic sites. Conducted field investigation, post-field data processing, three dimensional mapping, and interpretation of data.

Archaeological Testing for the Tank Farm Evaluation, San Diego County, CA
Principal Investigator
CLIENT: Shaw Environmental
Coordinated with client, oversaw the testing, evaluation, and analysis of one prehistoric site exposed by erosion on Naval Base Point Loma.

Archaeological Testing at Border Field State Park, San Diego County, CA
Principal Investigator and Lab Director
CLIENT: California State Parks
Oversaw the testing, analysis, and evaluation of two prehistoric sites (CA-SDI-222 and CA-SDI-4281) located along the U.S./Mexico border in San Diego County. Efforts included the excavation four 1-x-1 m units at each site, and the recovery of 1,378 artifacts and 901.8 g of ecofacts at CA-SDI-222, and 149 artifacts and 21.4 g of ecofacts at CA-SDI-4281. A series of radiocarbon samples on shell produced dates ranging from 7680 to 2100 B.P., indicating occupation throughout the Archaic period. Also managed lithic analysis of collections from excavation.

Archaeological Evaluation of the MCAS Miramar Housing Area, San Diego County, CA
Principal Investigator
CLIENT: NAVFAC Southwest, Marine Corps Air Station Miramar
Directed survey, testing, analysis, and evaluation of three prehistoric sites. Supervised crew of two field archaeologists. Coordinated with UXO personnel. Conducted artifact analysis and prepared technical report.

Red Oak Archaeological Testing, San Diego County, CA
Principal Investigator
CLIENT: BRG Consulting, Inc.
Oversaw the testing, analysis, and evaluation of two prehistoric sites located on the Viejas Indian Reservation in San Diego County.

Archaeological Inventory of the Northwest Base Boundaries Edwards Air Force Base, Kern County, CA
Laboratory Director
CLIENT: Edwards Air Force Base
Oversaw the processing and analysis of artifact collections from 12 prehistoric and 10 historic sites located along the northwestern boundaries of Edwards Air Force Base. Directed laboratory crew of two assistant archaeologists. Oversaw lithic analysis, analysis of historic artifacts, submitted charcoal samples for C^{14} dating.

Las Pulgas Corridor Study, San Diego County, CA
Principal Investigator
CLIENT: MCB Camp Pendleton
Managed Phase II testing of 24 prehistoric sites in the central portion of MCB Camp Pendleton. Coordinated the examination of artifacts and ecofacts to investigate site function, subsistence-settlement patterning, and geomorphology along Las Flores, Las Pulgas, and Aliso creeks. Prepared a synthesis of this data within a regional context. Supervised field effort and coordinated with Base Archaeologist. Managed laboratory crew of five assistant archaeologists in preparing material remains for analysis and curation. Prepared technical report.

Spangler Hills Survey, San Bernardino County, CA
Project Archaeologist
CLIENT: Bureau of Land Management
Coordinated fieldwork and artifact analysis. The study entailed compilation of an artifact chronology and obsidian hydration analyses.

Coso Transmission Line, Inyo County, CA
Field Director and Report Author
CLIENT: UltraSystems Environmental
Supervised a survey through the Sugarloaf Archaeological District to determine potential impacts on cultural resources. Coordinated with the Bureau of Land Management and the Naval Air Weapons Station.

MCAS Miramar Evaluation, San Diego County, CA
Project Director and Report Author
CLIENT: Marine Corps Air Station Miramar
Directed a survey in the southeastern portion of MCAS Miramar and evaluation of 19 sites, with an emphasis on prehistoric site analysis. As Laboratory Director, prepared all artifacts for curation with the San Diego Archaeological Center.

Hardrock Hotel Archaeological Monitoring, San Diego County, CA
Laboratory Director
CLIENT: 5th Rock LLC
Tracked and directed the processing of a large sample of historic artifacts derived from testing of historic urban sites found during construction monitoring in downtown San Diego.

Papa Two and Papa Three Testing, San Diego County, CA
Laboratory Director and Lithic Analyst
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Examined collections derived from 10 prehistoric sites near the prehistoric Piedra del Lumbre lithic quarry.

Used an innovative method of core-biface ratios to examine and compare lithic technology of sites throughout San Diego County for report. Prepared all artifacts for curation with the San Diego Archaeological Center.

Little Lake Testing, Inyo County, CA
Laboratory Director and Lithic Analyst
CLIENT: Caltrans District 6
Examined collections derived from four prehistoric sites around Little Lake. The analysis entailed a technological study, artifact chronology, and an obsidian hydration analysis. The report examined the project data within a regional context. Prepared all artifacts for curation with University of CA, Davis.

Christmas Canyon Survey, San Bernardino County, CA
Principal Investigator
CLIENT: Naval Air Weapons Station China Lake
Oversaw the survey, analysis, and reporting of a 3,800-acre survey where 32 sites and 78 isolates were recorded for the northern portion of the base. The report examined the project data within an extra-regional context, produced a predictive model of the archaeological landscape, and evaluated concepts of Early Man in the Mojave Desert.

Salt Creek Data Recovery, San Diego County, CA
Principal Investigator
CLIENT: McMillin Companies
Oversaw the data recovery, analysis, and reporting of three prehistoric and two historic sites. The report compared the project data to extra-local sites to determine upland exploitation patterning. Later, assisted with the management of construction monitoring of the project area. Monitoring identified two archeological deposits later evaluated as not significant. Provided an analysis of lithic material collected during monitoring and assisted in preparation of monitoring report.

Coachella Canal Survey, Riverside County, CA
Field Director and Laboratory Director
CLIENT: Bureau of Reclamation and Coachella Valley Water District
Managed six crew members for a 33-mile survey along the Coachella Canal in support of the Coachella Canal Lining Project in Riverside County.

Cartago/Olancha Four-Lane Project, Inyo County, CA
Laboratory Director and Lithic Analyst
CLIENT: Caltrans District 6
Examined collections derived from evaluation of 15 prehistoric sites around southern Owens Lake. The analysis entailed a technological study, artifact chronology, and an obsidian hydration analysis. The report examined the project data within a regional context. Prepared all artifacts for curation with CA State University, Bakersfield. ASM Affiliates, Inc.

Interstate 5 Widening Test Excavations, San Diego County, CA
Laboratory Director and Lithic Analyst
CILENT: Caltrans District 11
Examined collections derived from testing of 12 prehistoric sites along the I-5 right-of-way in northern San Diego County. The analysis utilized a technological study. Prepared all artifacts for curation with the San Diego Archaeological Center. ASM Affiliates, Inc.

Boudreau Archaeological Testing, San Diego County, CA
Laboratory Director and Lithic Analyst
CLIENT: BRG Consulting, Inc.
Examined materials derived from the testing of a single, multi-locus site. Prepared all artifacts for curation with the San Diego Archaeological Center. ASM Affiliates, Inc.

Langford Well Data Recovery, Los Angeles County, CA
Lithic Analyst and Report Author
CLIENT: U.S. Army Corps of Engineers, Los Angeles District
Examined collections from five sites situated around Langford Well. The analysis entailed a technological, functional, and typological study, and used the innovative methods of lithic use-wear analysis, lithic refitting, lithic spatial analysis, and core-biface ratios. The report compared the project data to other data derived from Fort Irwin, and placed this within a regional framework. Science Applications International Corp.

Fort Bragg Survey, Cumberland County, NC
Co-Principal Investigator
CLIENT: U.S. Army Corps of Engineers, Fort Bragg
Oversaw the survey, analysis, and reporting of a 4,000-acre survey where over 60 sites were recorded for the base. The report examined the project data within a regional context, and produced a predictive model of the archaeological landscape. TRC-Garrow.

CA-SBA-1010, Barka Slough Site Lithic Analysis Project, Vandenberg Air Force Base, Santa Barbara County, CA
Lithic Analyst
CLIENT: Vandenberg Air Force Base
Conducted the lithic analysis study from a testing project at SBA-1010, the Barka Slough Site while at the University of Colorado, Boulder. Performed typological, technological, and high power microwear study of the recovered assemblage, and produced a report that was included in the final technical study. Science Applications International Corp.

Publications:

Becker, Mark S.
2003 Spatial Patterning in the Upper Palaeolithic: A perspective from the Abu Noshra Sites. In *More than Meets the Eye: Studies on Upper Palaeolithic Diversity in the Near East*, edited by Nigel Gorring-Morris and Anna Belfer-Cohen, pp. 134-150. Oxbow Books, Oxford.
1999 *Reconstructing Prehistoric Hunter-Gatherer Mobility Patterns and the Implications for the Shift to Sedentism: A Perspective from the Near East*. Unpublished Ph.D. dissertation, University of Colorado, Boulder, Department of Anthropology.

Becker, Mark, and Fred Wendorf
1993 A Microwear Study of a Late Pleistocene Qadan Assemblage from Southern Egypt. *Journal of Field Archaeology* 20:389-398.

Bamforth, Douglas B., and Mark Becker
2009 Microwear, Tools, and Handles: A Pilot Functional Investigation of the Chipped Stone Assemblage. In *Hell Gap: A Stratified Paleoindian Campsite at the Edge of the Rockies*, edited by Mary Lou Larson, Marcel Kornfield, and George C. Frison, pp. 285-299. University of Utah, Salt Lake City.

Bamforth, Douglas B., and Mark S. Becker
2007 Spatial Structure and Refitting of the Allen Site Lithic Assemblage. In *The Allen Site: A Paleoindian Camp in Southwestern Nebraska*, edited by Douglas B. Bamforth, pp. 123-147. University of New Mexico Press, Albuquerque.
2007 The Allen Site Lithic Assemblage. In *The Allen Site: A Paleoindian Camp in Southwestern Nebraska*, edited by Douglas B. Bamforth, pp. 148-183. University of New Mexico Press, Albuquerque.

Bamforth, Douglas B., Mark S. Becker, and Jean Hudson
2005 Intrasite Spatial Analysis, Ethnoarchaeology, and Paleoindian Land-use on the Great Plains: The Allen Site. *American Antiquity* 70:561-580.

Bamforth, Douglas B., and Mark S. Becker
2000 Core/Biface Ratios, Mobility, Refitting, and Artifact Use-Lives: A Paleoindian Example. *Plains Anthropologist* 45(173):273-290.

Gleichman, Peter J., and Mark S. Becker
2015 The Chautauqua Biface Cache, Boulder County, Colorado. Southwestern Lore 81(2/3):58-64.

Knell, Edward J. and Mark S. Becker
2018 The Late Paleoindian Cody complex component at Lamb Spring, Colorado. *Plains Anthropologist* 2018, 1-24.

Knell, Edward J. and Mark S. Becker
2017 Early Holocene San Dieguito Complex Lithic Technological Strategies at the C.W. Harris Site, San Diego County, California. *Journal of California and Great Basin Anthropology* 37(2): 183-201.

Presentations:

Becker, Mark S.
2018 What can Stone Tool Function tell us about North County's Prehistoric Chronology Problem. Annual Meeting for the Society of CA Archaeology, San Diego. Invited Symposium.
2016 Adaptive Strategies for the Coast, the Evidence from the Late Prehistoric Site of Ystagua. 50th Annual Meeting for the Society of CA Archaeology, Ontario.
2014 The Unrecognized Potential of San Diego County's Prehistoric Archaeology. Invited lecture presented at the Torrey Pines Docent Society.
2013 Does San Diego County have a Chronology Problem? And why can't we agree on a chronological division like everywhere else? Invited lecture presented at the San Diego County Archaeological Society, San Diego.

Becker, Mark S., and Danielle Page
2012 CA's Acorn Mythology? Some Suggestive Evidence from Protein Residue Analysis and Paleobotany Studies at MCB Camp Pendleton. 46th Annual Meeting for Society of CA Archaeology, San Diego.

Becker, Mark S.
2010 Identifying stone chisels through use-wear analysis at coastal sites in San Diego County. Symposium: Brief Adventures in Alta and Baja CA. 44th Annual Meeting for Society of CA Archaeology, Riverside.
2009 A Residue Analysis of Bedrock Milling Features at MCB Camp Pendleton and the Implications for Investigating Acorn Use. 43rd Annual Meeting for the Society for CA Archaeology, Modesto.
2008 An Early Archaic and Late Prehistoric Residential Site from the Coast of Camp Pendleton: a Perspective Through Spatial Analysis. Invited lecture presented at the San Diego County Archaeological Society, San Diego.

Becker, Mark S., and Steve Harvey
2007 Symposium Chairs: A Reexamination of Identified Temporal Trends in Prehistoric Coastal Southern CA. 41st Annual Meeting for the Society for CA Archaeology, San Jose.

Becker, Mark S.
2007 Myths in Southern CA Archaeology: Examining Technological Trends at Coastal Prehistoric Sites. Symposium: A Reexamination of Identified Temporal Trends in Prehistoric Coastal Southern CA. 41st Annual Meeting for the Society for CA Archaeology, San Jose.

Becker, Mark S., Susan Hector, and John R. Cook
2006 Research and Innovative Methods in Archaeology: Seeing Archaeological Landscapes through

Spatial Analysis. Poster Session. 40th Annual Meeting for the Society for CA Archaeology, Ventura.

Becker, Mark S., and David R. Iversen
2005 Lithic Toolkits from San Elijo Lagoon and Camp Pendleton in San Diego County, and the Implications for Understanding Subsistence-Settlement Patterning. Symposium: The Archaeology of Camp Pendleton in a Regional Context. 39th Annual Meeting for the Society for CA Archaeology, Sacramento.

Becker, Mark S.
2004 Reexamining Mobility Practices Around Owens Lake: A Look at Lithic Artifacts from the U.S. Route 395 Olancha/Cartago Project. In symposium: From Highstand to Desiccation: Lacustrine Adaptations in the Western Great Basin. 29th Great Basin Anthropological Conference, Sparks, Nevada.
2004 Do Standard Bifaces Really Make Good Cores? 69th Annual Meeting of the SAA, Montreal, Quebec, Canada.
2003 The Problem with Big Sites: Determining Single vs. Multiple Occupations Through Lithic Refitting and Spatial Analysis. 68th Annual Meeting of the SAA, Milwaukee, Wisconsin.
2002 Reconstructing Prehistoric Site Function using the Meer Approach (Lithic refitting, usewear, and spatial analysis). Invited lecture presented at Hebrew University, Mount Scopus, Jerusalem.
2002 Reconstructing Prehistoric Settlement Patterning for Levantine Sites. Invited lecture presented at the W.F. Albright Institute of Archaeological Research, Jerusalem.
2000 Exploring Spatial Patterning at Early Upper Palaeolithic Sites in the Levant and the Evidence for Early Modern Human Behavior. In symposium: The Upper Palaeolithic of the Levant: The Current State of Research. 65th Annual Meeting of the SAA, Philadelphia, Pennsylvania.
1999 Modeling Site Function for Prehistoric Hunter-Gatherers through Lithic Usewear Analysis. 64th Annual Meeting of the SAA, Chicago, Illinois.
1998 The Origins of Blade/bladelet Technology in the Levant: A Test of the Lithic Efficiency Hypothesis. Symposium: Refitting Studies in New and Old World Lithic Analyses. 63rd Annual Meeting of the SAA, Seattle, Washington.
1997 The Function of Microliths? A Perspective from the Early Epipalaeolithic of the Southern Levant. 62nd Annual Meeting of the SAA, Nashville, Tennessee.

Becker, Mark S., and Douglas B. Bamforth
1997 Preliminary Microwear Results from an Analysis of the Hell Gap Lithic Assemblage. 55th Annual Plains Anthropological Conference, Boulder, Colorado.

Bamforth, Douglas B., and Mark S. Becker
1997 Core/Biface Ratios, Mobility, Refitting, and Artifact Use-Lives: A Paleoindian Example. 62nd Annual Meeting of the SAA, Nashville, Tennessee.

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Marilyn Novell, M.S.

Architectural Historian

Total Years of Experience: 9

Education:

M.S.	2010/History of Architecture and Urbanism, University of California, Berkeley
B.A.	2008/American Studies, concentration in Cultural Landscapes, University of California, Berkeley

Professional Profile:

Ms. Novell has nine years of professional and academic experience in historic preservation, cultural resources documentation, and architectural history and meets the Secretary of the Interior's Professional Qualification Standards for Architectural History and History.

She has worked on historic and cultural resource assessments for projects throughout Los Angeles County and in Berkeley, Palm Springs, Sanger, Bakersfield, Coalinga, and the Klamath River basin in California. She contributed to the City of Los Angeles Historic Resources Survey project (SurveyLA), both in the City Office of Historic Resources and for consultant firms conducting the survey for the City. Ms. Novell has experience in developing historical and cultural resources reports and in evaluating properties under federal, state, and local criteria, including National Register of Historic Places (NRHP), Section 106, California Register of Historical Resources (CRHR), and California Environmental Quality Act (CEQA) compliance.

Ms. Novell's professional background includes management and contributions to projects concentrating on the evaluation of historic properties and districts. She served as project manager for open-end historic preservation services for the City of Long Beach and served as the assistant project manager for the historic context for the Los Angeles Unified School District, which received preservation awards from the California Preservation Foundation and the L.A. Conservancy. Her responsibilities included conducting background research, writing summary reports, conducting large-scale surveys, and compiling evaluations and significance statements for California Department of Parks and Recreation (DPR) historic resources forms.

Relevant Project Experience:

Ontario International Airport Historic Context Statement and Survey, San Bernardino County, CA
Architectural Historian
CLIENT: City of Ontario, California
Prepared a historic context statement for the Ontario International Airport, informed by extensive background research and an intensive-level survey. Developed themes, contexts, registration requirements, and character-defining features for identification of a range of property types, from World War II aircraft hangars to Cold War-era administration buildings. Assisted in conducting interviews for oral histories with individuals associated with the airport and preparation of a short video reviewing the history, findings, and stories gathered for the project.

Edwards Air Force Base Architectural History Survey and Inventory, Kern County, CA
Architectural Historian
CLIENT: Redhorse Corporation
After preparing a work plan, conducted an architectural survey and prepared an inventory of historical buildings on Edwards Air Force Base in support of Section 110 of the National Historic Preservation Act (NHPA). During the survey, multiple photographs and extensive notes were taken of each historical resource, and archival research was performed at the base History Office and Real Property Office. The evaluation process included an intensive-level survey of 30 individual historic resources constructed between 1943 and 1966. An additional 25 properties were inventoried and considered as elements or

contributors to potential historic districts. A comprehensive report was prepared of all properties and historic districts inventoried and evaluated, including the appropriate California Department of Parks and Recreation forms for each resource.

Roosevelt High School Historic District, Los Angeles County, CA
Architectural Historian and Photographer
CLIENT: Los Angeles Unified School District
Prepared a Cultural Resources Technical Report in support of an Environmental Impact Report (EIR) for a Comprehensive Modernization Project at Roosevelt High School, which involves demolition of multiple buildings within a previously identified historic district. Also prepared Historic American Building Survey (HABS)-like historic documentation in accordance with mitigation stipulated in the EIR. All work was done in accordance with the California Environmental Quality Act (CEQA).

Brochure for BOMARC CQM10A/B Target Drone Launch Complex at Vandenberg Air Force Base, Santa Barbara County, CA
Graphic Designer
CLIENT: ManTech SRS Technologies, Inc.
Designed a three-panel, two-sided informational brochure for the BOMARC CQM10A/B Target Drone Launch Complex. Elements included historic architectural and schematic drawings and photographs, as well as a timeline and specifications combined to explain the history and purpose of the complex.

Cultural Resource Studies, Muroc Joint Unified School District, Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District
Prepared a technical report to support CEQA requirements for five schools within approximately 110 acres at Edwards Air Force Base. Photographed interiors and exteriors of the five schools and conducted background research to place the schools and buildings within the appropriate local historic context.

Mt. San Antonio College Cultural Resources Evaluation Report, Los Angeles County, CA
Architectural Historian
CLIENT: Mt. San Antonio College
Assisted in the preparation of a cultural resources evaluation report as part of a Supplemental EIR for the 2015 Facilities Master Plan Update and Physical Education Projects. The report was prepared to record and assess historic resources within the school's proposed project area, and to assess potential direct and indirect visual impacts to the Mt. SAC Historic District. Work included intensive pedestrian-level survey of potentially significant historic buildings on campus, as well as the Wildlife Sanctuary. The report was prepared to ensure the proposed projects are in compliance with CEQA and Secretary of the Interior's Standards.

Review of Vibration Monitoring Plan for Los Angeles Metro construction at Walt Disney Concert Hall, Los Angeles County, CA
Architectural Historian
CLIENT: AECOM
Reviewed the Vibration Monitoring Plan for the Regional Connector Transit Corridor Project as a means of avoiding impacts to 12 historic structures, as well as the Walt Disney Concert Hall and REDCAT theater. Although the Walt Disney Concert Hall and REDCAT are not historic buildings, they were treated as such in the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) in acknowledgment of their significance and were included in the review.

City of Monrovia Historic Context Statement, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Prepared a historic context statement for the City of Monrovia, based on reconnaissance-level surveys of the city to identify and define potential historic districts within the City. Work included development of themes and identification of associated property types, character-defining features, and registration requirements for historic districts comprising late 19th-century to early 20th-century residential properties, commercial districts, ethnic enclaves, and institutional properties. Work included participation in public outreach and meetings with City personnel.

Historic Properties Inventory Survey for the Whitmore Agricultural Project, Waialua District, Island of Oahu, HI
Architectural Historian
CLIENT: PBR Hawaii & Associates
Surveyed and evaluated historic resources at the Hawaiian Pineapple Company Plantation at Whitmore Village, Oahu. The roughly 37-acre study area is former pineapple plantation land transferred from Dole Corporation to the Agribusiness Development Corporation of Hawaii for development as an agricultural project to benefit the local economy. At the time of survey and evaluation, the property served as a partially unused industrial facility that included warehouse, administrative, and maintenance buildings built over a period of several decades, from 1948 through the 1980s. Evaluation of the historical buildings included identification of historic districts within the project site.

Mitigation Report for the Bank of Hawaii Waialai-Kahala Branch Demolition Project, Honolulu, HI
Architectural Historian
CLIENT: Bank of Hawaii
Architectural Historian
Developed a historic context study for the Bank of Hawaii Waialae-Kahala branch bank building in the Waialae community. The study was requested by the State Historic Preservation Division of Hawaii as mitigation for the planned demolition of the Mid-Century-Modern circular building. The report includes a comprehensive history of the building and an introduction to the Modern movement in Hawaii. For purposes of mitigation, the study identifies 10 additional extant and demolished circular Modern buildings in Honolulu and provides a brief history of each, including information about the architect, the design concept, character-defining features, and materials and method of construction.

Assessment Letter for Planned New Construction within the Marconi Telegraphy Historic District, Oahu, HI
Architectural Historian
CLIENT: Department of Land and Natural Resources, State Historic Preservation Division, Hawaii
Prepared a report to assess conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties regarding a proposed new residence to be constructed within the Marconi Telegraphy Historic District on the Island of Oahu. The report included a design review of architectural plans to determine whether the new construction would impact the significance of the National Register-listed historic district.

YWCA Glendale Historical Resource Assessment Report, Los Angeles County, CA
Architectural Historian
CLIENT: Glendale YWCA
Surveyed and documented the Mediterranean-Revival-style YWCA facilities, consisting of three distinct phases constructed in 1938/1939, 1948/1949, and 1955/1956. Prepared a report detailing and evaluating the building, including impacts analysis for proposed project. Evaluation included research at the YWCA archives and consideration of the role of the national and local YWCA in advocacy for women's education, spirituality, and recreation, and the ways in which the Y's mission evolved over time.

Calico Early Man Site Documentation, San Bernardino County, CA
Architectural Historian
CLIENT: Bureau of Land Management
Surveyed and documented built-environment resources at Calico Early Man Site in the Mojave Desert. The site is notable for the participation of renown archaeologist and paleoanthropologist Dr. Louis Leakey, whose work was important in investigating the presence of early man in Africa. The project included evaluation of significance for buildings and structures associated with the site.

Peer Review of Historical Resources Evaluation Report and Preparation of Landmark Nomination for Chester Washington Golf Course, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Reviewed evaluation of the Chester Washington Golf Course in South Los Angeles and presented the landmark nomination to the Los Angeles County Historical Landmarks and Records Commission. As the first golf course integrated in Los Angeles, the property was recommended eligible for landmark status for its association with African-American social history in Los Angeles.

Mills Act Reviews of Los Angeles County Properties, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Considered work items for properties under the California Mills Act property tax relief program. Items were reviewed for compliance with the Secretary of the Interior's Standards, and specific recommendations were accordingly made to property owners.

Historical Resources Evaluation Report for Sears Auto Center, San Diego County, CA
Architectural Historian
CLIENT: DLR Group
Surveyed and documented the Sears Auto Center, constructed in 1968/1969. Evaluated the property for significance and prepared a Historical Resources Evaluation Report.

Mt. Laguna Cheroske Family Interpretative Signage, San Diego County, CA
Graphic Designer
CLIENT: Insignia Environmental
Designed a set of three interpretive signs providing historical information, maps, photographs, and applicable logos installed by San Diego Gas & Electric Company on United States Forest Service land. The signs explain the history of remnants of a historic lodge, cabin, and the people associated with them.

Technical Reports for the Evaluation of Historic Properties, Mojave National Preserve, San Bernardino County, CA
Architectural Historian
CLIENT: Mojave National Preserve
Conducted intensive-level surveys and prepared Determinations of Eligibility for seven historic properties in Mojave National Preserve. Most of these properties are remote abandoned mining-associated cabins accessed only from ungraded roads in rugged environments that have never been assessed. Methodology included archival research, interviews with persons associated with the properties, and intensive-level pedestrian surveys.

Historic Trails Context Study, West Mojave Route Management Plan, Historic Properties Treatment Plan, Kern and San Bernardino counties, CA
Architectural Historian
CLIENT: United States Bureau of Land Management
Based on archival research and previous historic contexts and reports, prepared a historic context for historic-period roads and highways associated with historic trails in the Western Mojave Desert. Work

included literature review, review of historic maps and images, and guidelines for using the study for future evaluations.

Section 106 Evaluations, Los Angeles County, CA
Architectural Historian
CLIENT: City of Los Angeles
On-call historic resources services for the City of Los Angeles, primarily related to historic properties affected by use of community development block grants, including programs to provide housing and shelter for homeless populations. Projects included the assessment of potential development along the South Vermont Avenue commercial corridor and the Hollywood Boulevard Commercial and Entertainment Historic District.

Loch Crane Survey, San Diego County, CA
Architectural Historian
CLIENT: Helix Caltrans
Participated in preparation of a Historic Resources Survey of the Works of Architect Loch Crane in the City of San Diego. Conducted a reconnaissance-level survey of 34 buildings and prepared DPR forms for the evaluation of each property.

Section 106 Reviews for FCC Projects Within the State of Hawaii, HI
Architectural Historian
CLIENT: EnviroWest
Reviewed potential impacts of proposed FCC antenna installations on historical buildings. Evaluated the proposed sites for significance under both National Register of Historic Places and Hawaii Register of Historic Places criteria.

Supplemental Historic Resources Evaluation Report for Roosevelt Senior High School, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Reviewed previous evaluations of the Roosevelt Senior High School campus and prepared a Supplemental HRER addressing Criteria A/1 and B/2 for its association with the Chicano Civil Rights Movement in 1968 and Sal Castro, a teacher who was a leader in the movement. Defined a historic district comprising all the extant buildings on campus at the time of student protests that spread through schools in East L.A.

Historic Resource Evaluation Report for Collins Street Elementary School, Woodland Hills, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Prepared an evaluation report for a Los Angeles Unified School District elementary school in the San Fernando. The report was informed by archival research from LAUSD archives, the LAUSD historic context statement, newspaper databases, and primary sources and an intensive-level pedestrian survey.

Secretary of the Interior's Standards Review for Los Angeles Unified School District Campuses, Los Angeles County, CA
Architectural Historian
CLIENT: Parsons
Project-level reviews for proposed renovations to six LAUSD campuses in compliance with Americans with Disabilities Act (ADA). The campuses are known historical resources pursuant to the California Environmental Quality Act (CEQA). Renovations were to comply with the *Los Angeles Unified School District Design Guidelines.* Campuses reviewed were Chatsworth High School, Madison Middle School, Marina Del Rey Middle School, Narbonne High School, 10th Street Elementary School, and Dodson Middle School.

HABS Documentation for Anacapa Island Light Station, Channel Islands National Park, Ventura County, CA
Architectural Historian
CLIENT: National Park Service
Surveyed the Anacapa Island Light Station Historic District on East Anacapa Island to record the derrick system that is used to lift goods and personnel from sea level to the bluff where the light station is located. Documentation was prepared in advance of replacement of the derrick system, parts of which are contributors to the existing historic district.

Historic Resources Evaluation Report for the Beckman Instruments Administration Building, Los Angeles County, CA
Architectural Historian
CLIENT: BonTerra Psomas
Reviewed previous evaluations including a National Register nomination and prepared an evaluation report of the building at 4300 North Harbor Boulevard, a Mid-Century Modern building constructed as the headquarters for Beckman Instruments, a large scientific instrument research and manufacturing facility. Character-defining features were identified, and direct and indirect impacts were addressed in advance of development of the adjacent land on the parcel.

Historic Resource Evaluation Report for Woodcrest Park, Orange County, CA
Architectural Historian
CLIENT: Parks and Recreation Department, City of Fullerton
Prepared an evaluation of a city-owned and -operated park in compliance with Section 106 review in advance of renovation of the park.

Impacts Assessment Report for Subdivision of Sepulveda Unitarian Universalist Society Sanctuary ("The Onion") Property, Los Angeles County, CA
Architectural Historian
CLIENT: Jag Narayan
Prepared an impacts assessment report of a proposed project to subdivide the parcel occupied the Sepulveda Unitarian Universalist Society Sanctuary (known as "The Onion") at 9550 N. Haskell, which is a designated City of Los Angeles Historic Cultural Monument (#975). The report, which focused on impacts to the viewshed to and from the HCM, was prepared pursuant to CEQA prior to the City's permitting process for the proposed project.

California Department of General Services Weatherization Projects for Homes Statewide Project, CA
Architectural Historian
CLIENT: ICF Jones & Stokes, Inc.
Provided on-call review services for proposed weatherization projects of historical buildings. Reviews were performed in accordance with methodologies defined by the State Historic Preservation Officer for projects funded by the Low Income Energy Assistance Program and other Department of Energy programs.

Historic Resource Assessment Report for the Rossmore Avenue Apartments, Los Angeles County, CA
Architectural Historian
CLIENT: etco Homes, Inc.
Evaluated three 1948 French Revival-style apartment buildings at 535-553 N. Rossmore Avenue in the Hancock Park neighborhood of Los Angeles to determine their historic significance. The three buildings are located within the original boundaries of the Hancock Park Historic Preservation Overlay Zone (HPOZ), a City of Los Angeles-defined zoning district intended to preserve the historic nature of areas within the City. The evaluation included preparation of California DPR forms.

Historic Resource Evaluation Report for 427 Santa Clara Avenue, Los Angeles. Los Angeles County, CA
Architectural Historian
CLIENT: Huron Drive LLC
Evaluated a 1912 bungalow located in the Venice area of Los Angeles for CEQA compliance of a proposed project. Conducted a site visit and background research. Prepared documentation for determination of historic significance under NRHP, CRHR, City of Los Angeles Historic Cultural Monument and under contexts and themes defined by SurveyLA.

Los Angeles County Landmark Evaluation Report: The Doumakes House, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Prepared a historic evaluation report of a house at 4918 Angeles Vista Boulevard for submission to the County of Los Angeles as part of the County's first application for landmark status. The evaluation considered NRHP, CRHR, and local criteria for significance of a 1928 Spanish Colonial Revival house in the View Park neighborhood of Los Angeles County. Conducted a site visit and background research and prepared the evaluation report, finding the house significant under Criteria A and C.

Historic Resource Evaluation Memo for the Bakersfield High School Water Tower, Kern County, CA
Architectural Historian
CLIENT: Kern High School District
Evaluated a 1933 water tower on the campus of Bakersfield High School in advance of planned relocation of the tower to an off-site location. The tower was evaluated for its eligibility for listing as an individual resource in the CRHR and as a potential contributor to a historic district comprising the campus.

Historic Resources Evaluation Report, Department of Conservation Division of Oil and Gas Office, Fresno County, CA
Architectural Historian
CLIENT: California Department of General Services
Evaluated the regional office of the State Mining Bureau Division of Oil and Gas in the City of Coalinga, in advance of the proposed sales of the property. The 1918 building was evaluated for its eligibility as a historic resource in compliance with CEQA. Conducted a site visit and background research, and prepared documentation summarizing findings.

Cultural Resources Evaluation Report for Point Loma High School Whole Site Modernization, San Diego County, CA
Architectural Historian
CLIENT: San Diego Unified School District
Prepared a historic evaluation report for eleven buildings on the Point Loma High School campus in advanced of modernization projects. Efforts included a site visit, photographic documentation of the buildings, and archival research. The evaluation included preparation of California DPR forms.

Historic Resources Evaluation Report for Foshay Learning Center, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Surveyed, researched, documented, and evaluated Foshay Learning Center, a Los Angeles Unified School District Campus located in the South Los Angeles Community Plan Area. Core campus was constructed in the 1920s, one of the rare remaining pre-1933 Long Beach earthquake Los Angeles Unified School District (LAUSD) campuses, with buildings added in the 1960s. The evaluation was required in preparation for a project proposing the demolition of several campus buildings and construction of new buildings and landscaping. A historic district was identified and defined, and contributors were identified and recorded according to the LAUSD Historic Context Statement, 1870 to 1969, and LAUSD design guidelines. The project was evaluated for compliance with CEQA.

HRER for the Verde School Bridge Replacement Project, Imperial County, CA
Architectural Historian
CLIENT: Panorama Environmental, Inc.
In order to comply with Caltrans responsibilities under CEQA, CRHR and the NHPA, ASM completed an HRER in advance of a project proposed by the Imperial County Public Works Department to replace the Verde School Road Bridge. Conducted archival research to identify resources potentially eligible for the NRHP and CRHR. A final report was prepared following Caltrans guidelines as specified in the agency's SER, Volume 2, Cultural Resources.

Historic Resources Evaluation Report for Academy Road Widening Project, Fresno County, CA
Architectural Historian
CLIENT: Petra Resource Management
Surveyed, researched, documented, and evaluated properties adjacent to Academy Avenue, located in Sanger, California, in the County of Fresno, in preparation for a Caltrans road widening project. Services involved completing a cultural resources inventory of the project area. Evaluated in compliance with requirements of Section 106 of the National Historic Preservation Act (NHPA) and Caltrans guidelines as specified in the agency's Standard Environmental Reference (SER), Volume 2, Cultural Resources.

Lanterman Developmental Center, Los Angeles County, CA
Architectural Historian
CLIENT: Petra Resource Management
Surveyed and contributed to preparation of a revised Historic Resources Assessment Report (HRAR), based on a prior report prepared by Heritage Architecture. On-site intensive pedestrian survey included photographic documentation of more than 100 buildings (exteriors and public interior spaces) and taking detailed field notes. Work included preparation of California DPR forms for historic district and individual eligibility.

Historic Resources Evaluation for Pedestrian Safety Improvement Project for Colorado Boulevard and Fair Oaks Intersection, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Reviewed historic resources adjacent to a proposed Caltrans project in the Old Pasadena Historic District to improve pedestrian safety at the intersection of Colorado and Fair Oaks by creating curb bulb-outs and relocating street lights. Prepared documentation in the form of a Historic Resources Standards Evaluation Report and presented the project to the City of Pasadena Design Commission to ensure compliance with Secretary of the Interior's Standards and Section 106 for a project involving federal funds.

Cultural Resources Evaluation Reports for the Panattoni Logistics Centers IV and V Project Area, San Bernardino County, CA
Architectural Historian
CLIENT: Kimley-Horn and Associates
Prepared a cultural resources study as part of an addendum to the Renaissance Specific Plan. The study was conducted in advance of development of the parcels and included both historic and archaeological history surveys. The work was done in compliance with CEQA and included evaluation of two buildings for potential eligibility for listing in the CRHR.

Mountain Meadows Golf Course Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Los Angeles County-owned Mountain Meadows Golf Course for CEQA compliance of a project to improve the Club House and Pro Shop. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Wilshire Country Club Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Wilshire Country Club located in Hancock Park, in the City of Los Angeles, for CEQA compliance of a project by the County of Los Angeles to improve drainage through the privately owned country club property. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Knollwood Country Club and Golf Course, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Los Angeles County-owned Knollwood Country Club for CEQA compliance of a project to replace the golf cart barn, which had been destroyed by fire. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Historic Structures Report and Design Reviews, Sierra Madre, Los Angeles County, CA
Architectural Historian
CLIENT: Cett Corporation
Prepared a Historic Structures Report for two nineteenth-century agricultural buildings at the Stonegate residential development. Work consisted of intensive pedestrian survey and on-site photographic documentation of the Carter Barn and the Macomber Cabin, properties that were constructed by pioneer settlers to the San Gabriel Valley. Proposed residential development for each of 21 parcels of the subdivision were reviewed for compliance with Secretary of the Interior's Standards.

Canyon Creek Resort Project, Norco, CA
Architectural Historian
CLIENT: Lansing Companies
Conducted an intensive pedestrian-level survey of historical resources within the proposed Canyon Creek Resort Project site in compliance with CEQA. The 430-acre site includes the former facilities of Wyle Laboratories, which operated beginning in 1957 as a commercial testing facility for a number of markets, including defense.

Cultural Resources Evaluation Report for the De Anza School Project, San Diego, CA
Architectural Historian
CLIENT: BRG Consulting
Surveyed and evaluated historical buildings on the campus of De Anza School. Methodology consisted of archival research and an intensive-level pedestrian survey of the campus.

177 Colorado Boulevard Fountain Historic Resource Assessment, Los Angeles County, CA
Architectural Historian
CLIENT: Arroyo Colorado LLC
Prepared a historic resource evaluation of a fountain designed as an integral element of the Pacific Bell Telephone complex at 177 E. Colorado Boulevard constructed 1971-1974. The complex is made up of a corporate office tower, parking structure, and landscaping including two plazas, requiring that the fountain be evaluated in the context of the complex and not as an individual element. The evaluation was conducted in advance of a project to demolish the Howard E. Troller-designed fountain in order to develop the plaza in compliance with CEQA. Conducted background research and site reconnaissance, and prepared an evaluation report and DPR forms.

Palm Springs Spa Hotel Historic Properties Inventory Report, Riverside County, CA
Architectural Historian
CLIENT: Agua Caliente Band of Cahuilla Indians
Documented and evaluated the Palm Springs Spa Hotel, a mid-century modern spa and hotel complex built on the site of the original Palm Springs hot mineral spring on lands owned by the Agua Caliente Band of

Cahuilla Indians. The evaluation included development of a site-specific historic context statement, in-depth research and documentation of the property, and HABS-like photographic recordation.

Los Angeles Unified School District Historic Context Statement and Survey, Los Angeles County, CA
Architectural Historian
CLIENT: LAUSD Office of Environmental Health and Safety
Served as assistant project manager for the historic context for the Los Angeles Unified School District, which recently received preservation awards from the California Preservation Foundation and the L.A. Conservancy. Responsibilities included conducting background research, writing summary reports, contributing to intensive-level surveys of 56 post-war LAUSD campuses, and compiling evaluations and significance statements for California DPR forms for CEQA compliance.

Highlander Elementary School Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: LAUSD Office of Environmental Health and Safety
Conducted an intensive-level survey and prepared a historic resources evaluation for Highlander Elementary School, a postwar LAUSD campus located in the San Fernando Valley, in advance of demolition of the campus.

Historic Designed Gardens of Pasadena Historic Context, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Researched and wrote portions of historic context and contributed to the creation of National Register Multiple Property Documentation for Historic Designed Gardens in Pasadena, 1873-1975. Contexts developed include Gardens of Health and Pleasure: Early Resorts and Estate Gardens in Pasadena, 1873-1929; Bring the Outside Inside and the Inside Outside: Residential Garden Design in Pasadena,1905-1968; Non-Residential Gardens in Pasadena, 1913-1989; and Municipal Parks and Recreational Facilities in Pasadena, 1902-1975. The historic context statement includes biographies of landscape architects known to have worked in the City of Pasadena during the periods of significance and documentation of both residential and non-residential properties.

SurveyLA, Los Angeles County, CA
Preservation Intern
CLIENT: City of Los Angeles
Contributed to writing the Historic Context Statement, significance statements, and survey reports for the Los Angeles Historic Resource Survey Project (SurveyLA), a citywide, multi-year initiative partially funded by the J.Paul Getty Trust with guidance from the Getty Conservation Institute, to survey more than 800,000 parcels in the City of Los Angeles. Conducted field surveys of two Community Plan Areas (CPA) within the City of Los Angeles: the West Los Angeles CPA and the South Los Angeles CPA.

Application for Landmark Status for the University Young Women's Christian Association, Alameda County, CA
Architectural Historian
CLIENT: Berkeley Architectural Heritage Association
Prepared a successful application for presentation to the City of Berkeley Landmarks Preservation Commission for landmark status of the University YWCA building. Designed by master architect Joseph Esherick, the building is a merging of two Bay Area architectural traditions: Arts and Crafts that thrived in the late nineteenth and early twentieth centuries, and Bay Area Modern, a form of Mid-Century Modernism particular to the region.

Laura Taylor Kung, M.A.

Architectural Historian

Total Years of Experience: 11

Education:

M.F.A.	2011/Fiction and Literature/Bennington College
M.A.	1998/Historic Preservation Planning/Cornell University
B.A.	1993/Art History/DePaul University

Professional Profile:

Ms. Kung has 11 years of experience in historic preservation and planning, including the completion of local and state building surveys, Historic Building Inventory and Evaluation documents, National Register nominations, Historic American Building Survey (HABS) submissions, Historic Structure Reports and Cultural Resources management plans.

Relevant Project Experience:

Architectural History Technical Report for Muroc Joint United School District Facilities at Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District (MJUSD)
Prepared a technical report as part of a cultural resources study of five MJUSD campuses located on Edwards Air Force Base, based on an intensive-level pedestrian survey of the five schools and archival research. Included in the work effect was preparation of Department of Parks and Recreation (DPR) district and primary forms. The report was prepared in compliance with Section 106 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA).

Historic American Building Survey, Kelly Air Force Base, Bexar County, TX
Architectural Historian
CLIENT: U.S. Air Force
Conducted field research and completed HABS Level II documentaries for four buildings scheduled for re-use.

Historic Building Inventory and Evaluation for 18 Radar Sites, AK
Historian
CLIENT: U.S. Air Force
Evaluated findings from field research to determine Cold War significance of buildings and structures. Prepared report outlining findings and provided descriptions of both contributing and non-contributing buildings.

Cultural Resources Management Plan, Lajes Air Force Base, Azores, Portugal
Historian
CLIENT: U.S. Air Force
Prepared cultural resources plan to assist in management decision of the Portuguese-owned, United States-operated Air Force Base.

Historic Context Statement for the City of Monrovia, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Assisted in the development a citywide historic context statement for Monrovia, including recommendations for historic districts. Contexts and themes were identified and defined based on a windshield survey of the city, archival research using primary and secondary resources, and review of previous evaluations.

Historic Resources Survey of the Works of Architect Loch Crane, San Diego County, CA
Architectural Historian
CLIENT: HELIX Environmental Planning
Researched and surveyed the work of San Diego architect Loch Crane. Developed a context based on survey findings, archival research of reviews of previous evaluations. The report included Department of Parks and Recreation (DPR) primary forms for 30 identified properties.

Cultural Resources Evaluation Report Clairemont High School Whole Site Modernization, San Diego County, CA
Architectural Historian
CLIENT: BRG Consulting
Prepared a historic evaluation report for eight buildings on the Clairemont High School campus in advance of modernization projects. Efforts included a site visit, photographic documentation of the buildings, and archival research. The evaluation included preparation of California DPR forms

Historic Resource Evaluation Memo for 110 and 132 East Crowther Avenue, Orange County, CA
Architectural Historian
CLIENT: HELIX Environmental Planning
Prepared an evaluation for two industrial properties located in the City of Placentia. Reviewed previous surveys, assessor's building records, and chain of ownership for the properties. Conducted an intensive pedestrian survey of the properties and a reconnaissance survey of the neighborhood to consider a potential historic district. The evaluation was conducted to consider the eligibility of the properties under NRHP, CRHR, and City of Placentia eligibility criteria and in compliance with CEQA.

Historic Resource Evaluation Memo for 1019 North Orange Grove Avenue, Los Angeles County, CA
Architectural Historian
CLIENT: 1019 North Orange Grove, LLC
Prepared an evaluation for a property located in the City of West Hollywood. Reviewed previous surveys, assessor's building records, and chain of ownership for the properties. Conducted an intensive pedestrian survey of the property and a reconnaissance survey of the neighborhood to consider a potential historic district. The evaluation was conducted to consider the eligibility of the properties under NRHP, CRHR, and City of West Hollywood eligibility criteria and in compliance with CEQA

On-Call Preservation Services for County of Los Angeles, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Currently working with the County under its new Preservation Ordinance to review of proposed projects at specific residential sites. Work is performed to ensure compliance with the Secretary of the Interior's Standards for property owners to determine eligibility for Mills Act tax credits. Several of the properties reviewed are in the County's first designated historic district, the View Park Historic District.

Historic Context Report, San Bernardino County, CA
Historian
CLIENT: BNSF Railway Company
At a previous firm, wrote detailed history and significance of railroad construction.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
At a previous firm, wrote building descriptions for 150 domestic and commercial buildings.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of South Pasadena
At a previous firm, conducted field research, took photographs and wrote descriptions for 300 properties.

Historic American Building Survey, Los Angeles County, CA
Architectural Historian
CLIENT: Walt Disney Company
Research and wrote descriptive section of submission for Grand Central Terminal building.

State Inventory and Evaluation Forms, Riverside County, CA
Architectural Historian
CLIENT: City of Riverside
Wrote building descriptions and significance for over 1,500 domestic and commercial buildings.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Conducted field research and wrote building descriptions for 175 domestic and commercial buildings. Researched history and significance of 100 buildings.

National Register Nomination, Lexington Blue Grass Army Depot, Madison County, KY
Architectural Historian
CLIENT: U.S. Army
Prepared ten individual forms to accompany multiple property nomination.

Historic Building Inventory and Evaluation, Air Force Plant 42, Los Angeles County, CA
Historian
CLIENT: U.S. Air Force
Conducted an evaluation of World War II and Cold War facilities.

New York State Historic Building Inventory, Madison County, NY
Architectural Historian
CLIENT: City of Morrisville
Conducted historic research of ten Main Street buildings. Prepared inventory forms for submission to state historic preservation office.

National Register Nomination, Lincoln Park, Cook County, IL
Intern
CLIENT: Chicago Park District
Research history of major city park. Organized data gathered from volunteer surveys to determine possible significance. Wrote description section of nomination as part of multiple property nomination.

Historic Preservation Teaching Assistance, Tompkins County, NY
Teaching Assistant
CLIENT: Cornell University
Provided lecture assistance and reviewed student work for Building Materials Conservation and Twentieth Century Building Materials courses. Conducted lectures and provided student assistance for Preservation Workshop.

Historic American Building Survey, Ontario County, NY
Architectural Historian
CLIENT: Cornell University
Conducted historic research and completed measured drawing of one evaluation of a deteriorated Italianate Style house. Completed drawings were submitted to HABS.

Historic Structures Report for Heacock House, Mahoning County, OH
Architectural Historian
CLIENT: Cornell University
Responsible for researching the complete history and physical evaluation of a structure. Provided recommendations and cost estimates for three possible restoration plans.

Attachments F and G

Shapefile Data and Assessment of Effect Photographs (DVDs)

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Appendix I

Historical Evaluation Report

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Final Historical Evaluation Report for Navy Old Town Campus San Diego, San Diego County, California

Prepared for:

Cardno GS, Inc.
2496 Old Ivy Road, Suite 300
Charlottesville, Virginia 22903

For delivery to:

Naval Facilities Engineering Command Southwest
1220 Pacific Highway
San Diego, California 92132

Prepared by:

Sarah Stringer-Bowsher, M.A.
Senior Historian

Marilyn Novell, M.S.
Senior Architectural Historian

Shannon Davis, M.A.
Director, Architectural History

ASM Affiliates, Inc.
2034 Corte del Nogal
Carlsbad, California 92011

PN 33490
October 2020

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Table of Contents

Attachments

List of Figures

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National Archaeological Database Information

Authors:	Sarah Stringer-Bowsher, Marilyn Novell, Shannon Davis
Firm:	ASM Affiliates, Inc.
Client/Project Proponent:	NAVFAC Southwest
Report Date:	September 2020
Report Title:	Evaluation Report for Navy Old Town Campus
Type of Study:	Historic Property Evaluation
New Sites:	Consolidated Aircraft Plant 2 Historic District
Updated Sites:	USAF Plant 19 (P-37-028238), Building 34 (P-37-035551)
USGS Quad:	Point Loma and La Jolla 7.5-minute
Acreage:	70.5
Keywords:	Point Loma and La Jolla 7.5-minute USGS quads, Consolidated Aircraft Plant 2 Historic District, Convair, Plant 19, World War II, Cold War, Navy, Air Force, Eligible for National Register of Historic Places, Eligible for California Register of Historical Resources, Eligible for Local Register

List of Acronyms

AFB	Air Force Base
APL	Applied Physics Laboratory
ASM	ASM Affiliates
BRAC	Base Closure and Realignment Commission
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
DON	Department of Navy
DPC	Defense Plant Corporation
DPR	Department of Parks and Recreation
FLTSATCOM	Fleet Satellite Communications System
GDSSD	General Dynamics Space Systems Division
GIS	Geographic Information System
GLCM	Ground Launched Cruise Missile
GPS	Global Positioning System
GSA	General Services Administration
ICBM	intercontinental ballistic missile
INF	Intermediate-Range Nuclear Forces
iNFADS	internet Navy Facilities Asset Data Store
IRBM	Intermediate-Range Ballistic Missile
LCC	launch-control-center
Local Register	San Diego Register of Historical Resources
MCRD	Marine Corps Recruit Depot
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization
NAVELEX	Naval Electronic Systems Command
NAVSEAACT	Naval Shore Electronics Engineering Activity
NAVSEEAPAC	Naval Shore Electronics Engineering Activity, Pacific
Navy	United States Navy
NBPL	Navy Base Point Loma
NEEACT PAC	Naval Shore Electronics Engineering Activity, Pacific
NCCOSC	Naval Command, Control and Ocean Surveillance Center
NISE	NCCOSC In-Service Engineering
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRaD	Common name for NCCOSC's RDT&E Division (the acronym does not directly translate)

NRHP	National Register of Historic Places
OTC	Old Town Campus
R&D	Research and Development
RDT&E	Research, Development, Technology, and Education
SALT	Strategic Arms Limitation Talks
SANDAG	San Diego Association of Governments
SDASM	San Diego Air and Space Museum
Standards	Secretary of the Interior's *Standards for the Treatment of Historic Properties*
SCIC	South Coastal Information Center
SCORE	Signal Communications by Orbiting Relay Equipment
SHPO	State Historic Preservation Officer
SLV	standardized launch vehicle
SOI	Secretary of the Interior
SPAWAR	Naval Warfare Systems Center
TEL	Transporter Erector-Launcher
TSC	Taylor Street Complex
U.S.	United States
USAF	United States Air Force
WAA	War Assets Administration
WWI	World War I
WWII	World War II

Executive Summary

ASM Affiliates (ASM) has prepared this report to evaluate the Naval Base Point Loma (NBPL) Old Town Campus (OTC) in San Diego County, California, for eligibility for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and San Diego Register of Historical Resources (Local Register). The United States Navy (Navy) requested the evaluation of the OTC and Taylor Street Complex (TSC) prior to the redevelopment of the property (Project) in compliance with the National Historic Preservation Act (NHPA), implementing regulations 36 Code of Federal Regulations (CFR) 800, and the National Environmental Protection Act (NEPA). The report has also been prepared in compliance with the California Environmental Quality Act (CEQA). Navy is the lead agency for NHPA/NEPA and San Diego Association of Governments (SANDAG) is the lead agency for CEQA.

Nineteen buildings and structures within the Project area were surveyed and evaluated: OTC Site 1 Buildings 1, 2, 3, 4, 7, 8, 27, 28, 30, 32, 37, 63, 73, and the pedestrian bridge (Facility 69); TSC Buildings 1, 2, 3, and 4; and OTC Site 2 Navy Salvage Yard Building 34. The architectural survey and evaluation assessed the potential historical significance of the buildings within the Project area for the World War II (WWII) period (1939–1945) and the Cold War period (1946–1991). For the purposes of this project, Navy established the end date for the Cold War Period as 1991; therefore, any building constructed later than 1991 was not considered. The buildings were surveyed and evaluated in compliance with federal, state, and local regulations.

As a result of intensive-level survey and archival research, ASM recommends that there is an NRHP-eligible historic district within the Project area. The Consolidated Aircraft Plant 2 Historic District is eligible for listing on the NRHP under Criteria A, B, and C for its association with WWII and the Cold War within a local San Diego area context/level of significance. The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69). These contributing resources were all interrelated components of a manufacturing/assembly plant during WWII and the Cold War and retain integrity to both periods of significance. None of the buildings evaluated in this study are individually eligible under any NRHP criteria.

Under the theme of WWII and subthemes of Aircraft Manufacturing and Homefront/Labor, the district's period of significance is 1941–1945, starting with the completion of the plant in October of 1941, led by Reuben H. Fleet, and ending in 1945 when production of WWII-era aircraft ended at Plant 2. Under the theme of Architecture, with a sub-theme of Aircraft Manufacturing and Assembly Plants, the period of significance is 1941, the year of construction for the plant with major buildings designed by architects Taylor and Taylor. Under the theme of the Cold War and sub-theme of Manufacturing, the period of significance is 1950–1988, beginning with the first significant Cold War-era manufacturing and ending in 1988 when Cold War-era production ceased at the facility. The Consolidated Aircraft Plant 2 Historic District meets the qualifications as a historic property pursuant to Section 106 (36 CFR 800) of the NHPA and as a historical resource pursuant to CEQA.

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1.0 Introduction

ASM Affiliates (ASM) has prepared this report to evaluate the Naval Base Point Loma (NBPL) Old Town Campus (OTC) in San Diego County, California, for eligibility for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and San Diego Register of Historical Resources (Local Register). The United States (U.S.) Navy (Navy) requested the evaluation of the OTC and Taylor Street Complex (TSC) (Project) in compliance with the National Historic Preservation Act (NHPA), implementing regulations 36 Code of Federal Regulations (CFR) 800, and the National Environmental Protection Act (NEPA). The report has also been prepared in compliance with the California Environmental Quality Act (CEQA). Navy is the lead agency for NHPA/NEPA and San Diego Association of Governments (SANDAG) is the lead agency for CEQA.

The NHPA's implementing regulations (36 CFR 800) define a historic property as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior (SOI). This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria.

Section 21084.1 of CEQA defines a historical resource as any resource listed in, or eligible for listing in, the CRHR.

Nineteen buildings and structures within the Project area were surveyed and evaluated: OTC Site 1 Buildings 1, 2, 3, 4, 7, 8, 27, 28, 30, 32, 37, 63, 73, and the pedestrian bridge (Facility 69); TSC Buildings 1, 2, 3, and 4; and OTC Site 2 Navy Salvage Yard Building 34. Currently, OTC is not listed in the NRHP or the CRHR; it is not a National Monument or California Point of Historical Interest; it is not a National Historic Landmark or a California State Historical Landmark; and it is not listed in the San Diego Register of Historical Resources.

This section of the report provides a project description, key personnel, and summary of the applicable regulations. Chapter 2 addresses previous investigations. Attachments A and B contain prior correspondence and site records. Survey and research methods are discussed in Chapter 3. Chapter 4 is dedicated to the historical context and evaluation framework for significant themes. Chapter 5 contains the architectural descriptions of the resources. Federal, state, and local significance criteria is outlined in Chapter 6, and then applied to the evaluation of significance in Chapter 7. Department of Parks and Recreation (DPR) 523 site record forms are provided in Attachment C. Resumes of key personnel are found in Attachment D. Current and historic photographs are provided electronically on DVD as Attachments E and F.

1.1 Project Description

The Commander Navy Installations Command, as represented by NBPL, requested the evaluation of any buildings built prior to 1992 at OTC and the nearby TSC, located in San Diego, California (Project). The Project area includes OTC Site 1, OTC Site 2, and the TSC as shown on Figures 1.1-1 and 1.1-2.

The architectural survey and evaluation assessed the potential historical significance of the buildings within the Project area identified in Figure 1.1-1 for the World War II (WWII) period (1939–1945) and the Cold War period (1946–1991). For the purposes of this project, Navy established the end date for the Cold War Period as 1991; therefore, any buildings constructed in 1992 and after were not considered as part of this project. The buildings were surveyed and evaluated in compliance with federal, state, and local regulations.

1.2 Project Location and Setting

OTC (4297 Pacific Highway, San Diego, California) comprises OTC Site 1 (48.7 acres) and OTC Site 2 (21.8 acres) for a total of 70.5 acres. OTC Site 1 is bordered by Pacific Highway to the west, Interstate 5 to the north and east, a railroad right-of-way to the east, and Barnett Avenue and Witherby Street to the south. OTC Site 1 includes three former WWII-era aircraft assembly plants (Buildings 1, 2, and 3) (approximately 310,000 square feet each) that are now used as administrative offices, laboratory, and warehouse spaces. Smaller buildings (including Buildings 4, 7, 8, 27, 28, and 34) are also located at OTC Site 1. Paved access roads interweave between the buildings. Paved vehicle parking and materials storage areas are located throughout the remainder of the campus.

OTC Site 2 is located west of OTC Site 1 and is bordered by Midway Drive to the west, Rosecrans Street to the north, Pacific Highway and Sports Arena Boulevard to the east, and Enterprise Street to the south. OTC Site 2 is dominated by one operational supply building (approximately 100,000 square feet). The remainder of the site is made up of surface parking and a few small outbuildings, including Navy Salvage Yard Building 34. The Project area also includes the TSC, which consists of four buildings north of OTC Site 1 built during the WWII-era (Figure 1.1-3).

Interstate 5 is located directly north of OTC Site 1 and the Interstate 5/Interstate 8 interchange is located northwest of both OTC Site 1 and TSC. Pacific Highway borders the entire west and southwestern edge of OTC Site 1 and a variety of commercial and industrial properties are located west of (across) Pacific Highway. The Burlington Northern and Santa Fe railroad right-of-way parallels the entire eastern border of OTC Site 1 and is currently used for passenger and commercial rail service as well as local commuter trolley operations. East of Interstate 5 is the Old Town area of San Diego, which consists of light commercial and residential land uses. The Old Town Trolley Station is located north of the facility. Marine Corps Recruit Depot (MCRD) and San Diego International Airport are located to the south-southeast. Downtown San Diego is approximately 2 miles south and Liberty Station and Pechanga Arena (formerly known as the San Diego Sports Arena) are located near the project site.

OTC Site 1 and OTC Site 2 are located within the City of San Diego “Midway-Pacific Highway” Community Planning Area. The planning area is an urbanized neighborhood situated north of Downtown San Diego, between the Old Town and Point Loma communities. Midway-Pacific Highway encompasses approximately 800 acres of mostly flat land and comprises the central Midway area, the Pacific Highway corridor, and MCRD. The Midway area has a commercial core containing numerous shopping centers, institutional facilities, multifamily residential developments, visitor-oriented uses, and older industrial areas. The area is characterized by wide streets, flat topography, and a varied mixture of auto-oriented large and small commercial developments. The Pacific Highway corridor, located between Interstate 5 on the east and MCRD and San Diego International Airport on the west, contains commercial and industrial uses, multifamily residential developments, and airport-related commercial uses. TSC is located on the western edge of the Old Town Community Plan Area. The planning area is home to the Old Town San Diego State Park, the Birthplace of California. The community is 230 acres in size and is located south of Interstate 8 and Mission Valley, east of Interstate 5 and the Midway-Pacific Highway community, and west of the Mission Hills neighborhood of the Uptown community (City of San Diego, 2020).

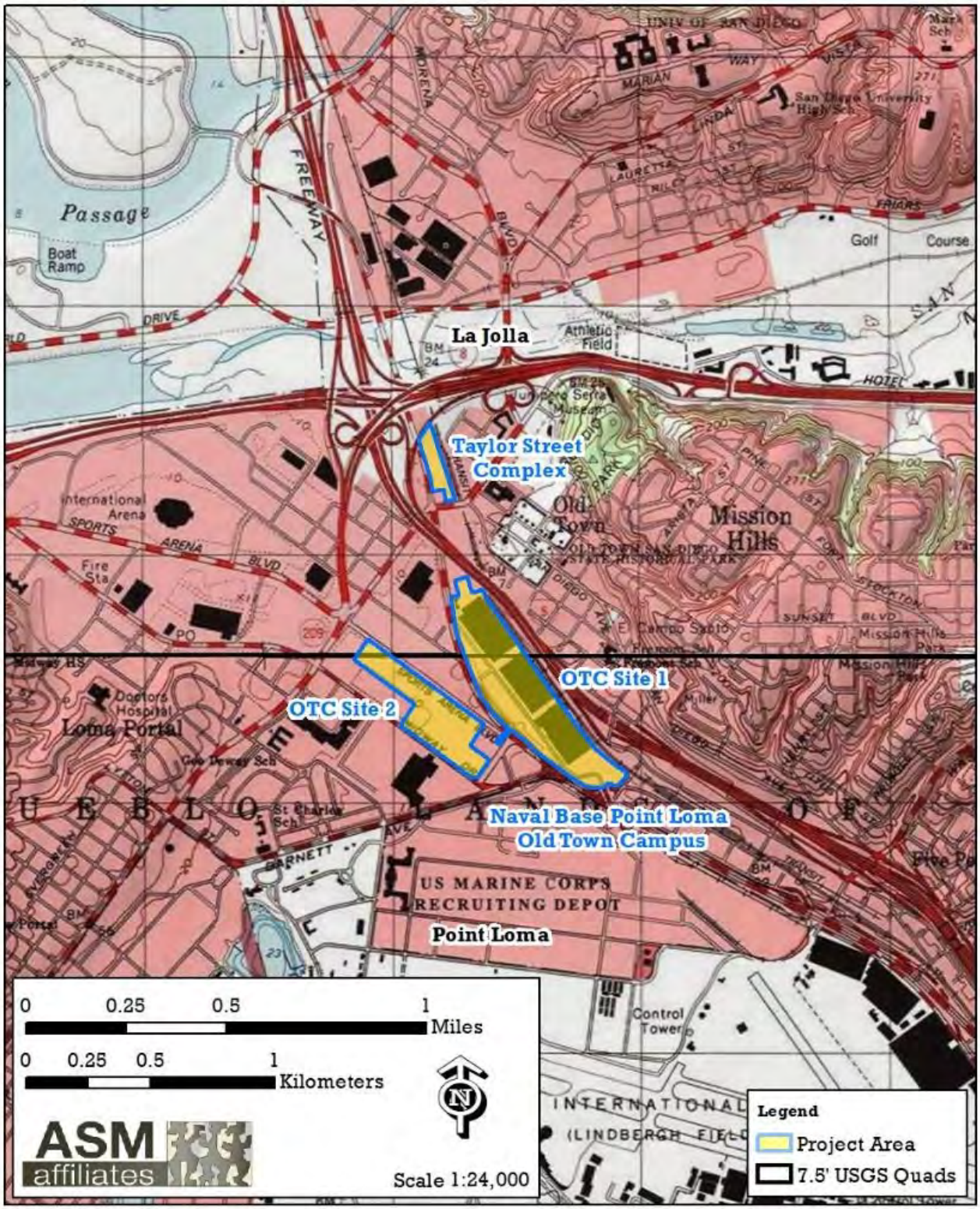

Figure 1.1-1 Project Location Map

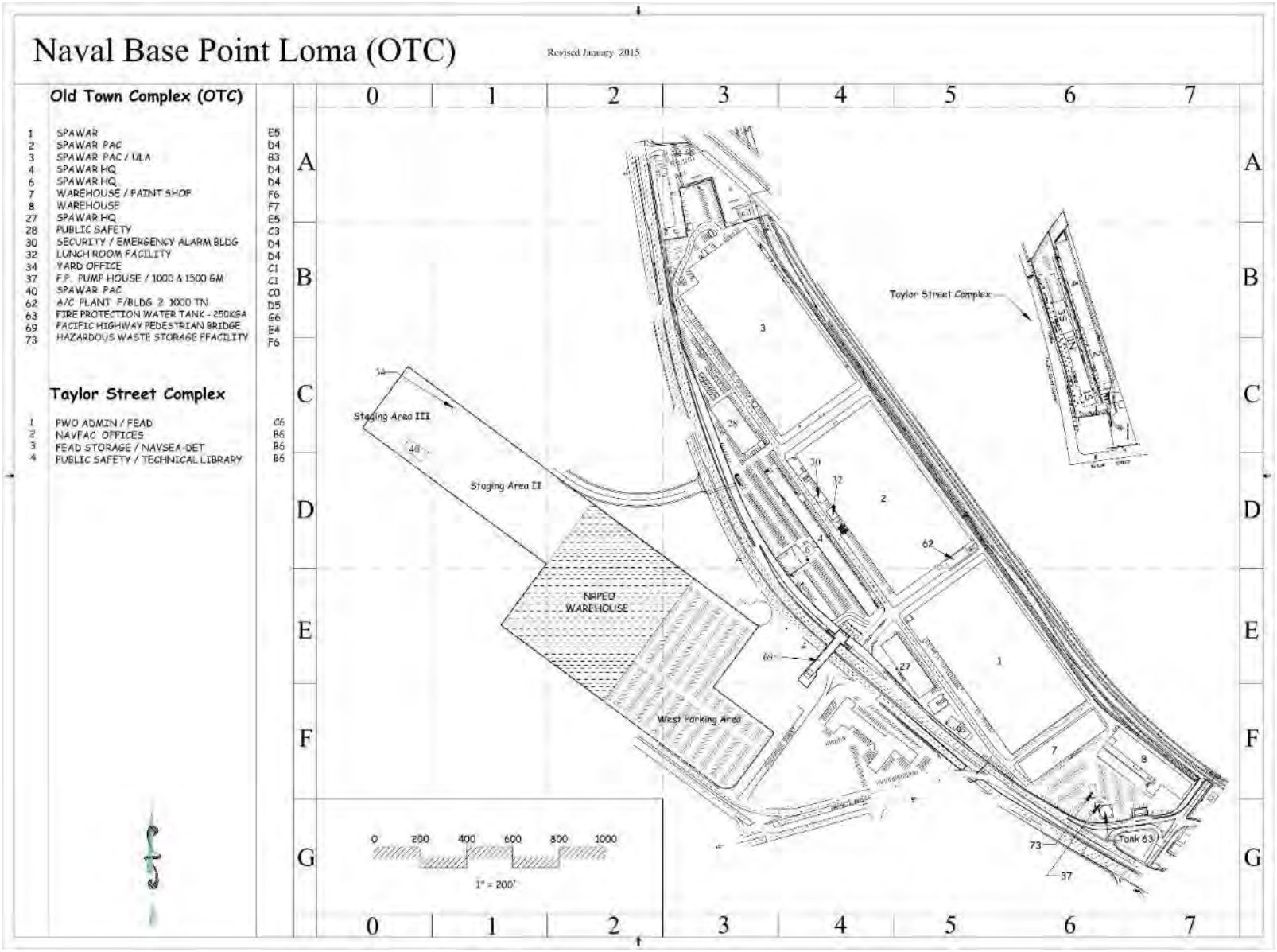

Figure 1.1-2 Site Plan of OTC Site 1, OTC Site 2, and TSC

Figure 1.1-3 Project Area Map Noting Location of Buildings Surveyed

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1.3 Personnel

Shannon Davis, ASM Director of Architectural History (M.A., Historic Preservation, George Washington University, Washington, D.C.) meets the *SOI's Professional Qualification Standards* (36 CFR 61) for Architectural Historian and Historian and served as Project Manager. Ms. Davis directed the documentation and evaluation of the OTC resources and reviewed all sections of the report.

Sarah Stringer-Bowsher, ASM Senior Historian (M.A., Public History, Arizona State University, Tempe, Arizona), meets the SOI's *Professional Qualification Standards* for Historian and served as the Senior Historian. Ms. Stringer-Bowsher assisted with documenting the buildings, directed and conducted WWII and Cold War research, wrote portions of the historic context, and contributed to the evaluation of the resources.

Marilyn Novell, ASM Senior Architectural Historian (M.S., History of Architecture and Urbanism, University of California, Berkeley) meets the SOI's *Professional Qualification Standards* for Architectural Historian and Historian and served as Senior Architectural Historian. Ms. Novell documented the buildings, conducted research, wrote portions of the historic context, wrote the building descriptions, and contributed to the evaluation of the resources.

Project personnel resumes are provided in Attachment D.

1.4 Regulatory Framework

1.4.1 National Historic Preservation Act Significance Criteria

NHPA establishes responsibility for federal agencies to provide leadership in the identification, planning, and preservation of historic properties. Under the law, federal agencies must approach historic properties in the spirit of stewardship and must appropriately involve the public. The two portions of the law most often applied to projects on Department of Defense (DoD) properties are: Section 110, which mandates proactive identification and management of cultural resources actions; and Section 106, which requires agencies to consider the effects of their actions on historic properties, defined as resources listed in or eligible for listing in the NRHP (see Chapter 6 for NRHP criteria).

1.4.2 California Environmental Quality Act Significance Criteria

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are defined as "any object, building, structure, site, area, or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California," as cited in Division I, Public Resources Code, Section 5021.

The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA (see Chapter 6 for CRHR criteria). The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be a "historical resource" if it:

1) Is listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, § 5024.1, Title 14 CCR, Section 4850 et seq.).
2) Is included in a local register of historical resources or is identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code.
3) Is a building or structure determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

2.0 Previous Investigations

Records search results from the California Historical Resources Information System are detailed in Appendix H, Section 3.1 of *Cultural Resources Technical Report for Navy Old Town Campus, San Diego, San Diego County, California (CRTR)* (Davis et al. 2020). Results of the Native American Heritage Commission records search are detailed in Section 3.2 of the CRTR.

2.1 Prior Studies of OTC

In 1993, an evaluation of OTC was conducted, known as *Architectural and Historical Evaluation of the Air Force Plant 19 Complex and Taylor Street Annex, San Diego*, prepared by Hatheway and Associates, Crestline, California, 1993. ASM was not able to obtain a copy of this report although we contacted several entities to request it, including SCIC, the San Diego Air and Space Museum (SDASM), and the San Diego History Center. We also contacted the author and associated consulting firm (Chambers Group) of the report.

The Chambers Group 1994 report found that OTC Site 1 (referred to therein as Air Force Plant 19) and TSC were ineligible for listing in the NRHP under Criteria A, B, and C (Mason and Paulson, 1994). The Navy requested concurrence from the State Historic Preservation Officer (SHPO) on their determination of ineligibility in December 1995 and on February 27, 1996, SHPO concurred (Attachment A). ASM was able to obtain the DPR 523 forms prepared by Hatheway and Associates for the 20 buildings surveyed and evaluated (OTC Site 1 Buildings 1, 2, 3, 4, 5, 6, 7, 8, 27, 28, 33, 34, 36, 69, and TSC Buildings 1, 2, 3, 4, 5, 6).

This current evaluation was requested and warranted following SHPO guidance as the prior evaluation was conducted more than 10 years ago and the individual who conducted the evaluation did not meet the SOI's *Professional Qualification Standards* (36 CFR 61) for Architectural Historian or Historian.

In 1995 and 1996, KEA Environmental (KEA) produced reports that discussed the history of Lindbergh Field Plant 1 and Plant 2 (OTC Site 1) and identified Plant 1 as a historic district (Plant 2 was not evaluated) (KEA, 1996). Plant 1 was recommended as an eligible historic district (KEA, 1996). Plant 1 was eligible under CRHR Criterion 1 on both the local and national levels for the role it played in the expansion of the national defense industry prior to and during WWII. The historic district was also recommended eligible under CRHR Criterion 2 for its association with Fleet. Under Criterion 3, Plant 1 was recommended eligible because the buildings represent a distinctive type of typical WWII-era industrial architecture. As mitigation for demolition of buildings within the Plant 1 historic district, a Historic American Engineering Record was produced. It contains information on Plants 1 and 2 as the plants were constructed to collectively support each other for the mission of producing B24 "Liberator" bomber and Patrol Bomber Y (PBY) *Catalina* fliers (KEA, 1996, Appendix B).

In 2007, a citizen submitted a request to the San Diego Historical Resources Board for Historical Site Designation for Air Force Plant 19 (Unknown Author, 2007). It is currently not listed as a historical site with the Historical Resources Board (City of San Diego, 2019). In 2013, Garcia and Associates and ICF International conducted a study that included the Project area and concurred with the 1994 Chambers Group/1996 SHPO concurrence of eligibility; however, it does not appear that a reevaluation was conducted at that time (SANDAG, 2013).

Most recently, the Project area was within the boundaries of the *Midway-Pacific Highway Community Plan Area Update, Historic Resources Survey Report* (Galvin Preservation Associates, 2017). The report identified significant themes for the Midway-Pacific community and registration requirements for properties therein. The report recommendation (based on reconnaissance-level survey) is that OTC is

potentially eligible for local designation within the contexts of Military, Aerospace, and Related Industrial Development and Post-war Commercial and Residential Development (Galvin Preservation Associates, 2017, p. 36).

3.0 Methodology

3.1 Field Survey

Prior to the field survey, Geographic Information System (GIS) maps of the Project area were developed and uploaded to tablets for use in the field. The field survey was conducted by Marilyn Novell, Senior Architectural Historian, Sarah Stringer-Bowsher, Senior Historian, and Shannon Davis, Director of Architectural History, over the course of several days: November 21 and 22, 2019, and December 10 through 12, 2019. The intensive-level survey was conducted to document and record buildings and structures within the Project area built prior to 1992, including any late Cold War-era buildings.

Nineteen buildings and structures within the Project area were surveyed: OTC Site 1 Buildings 1, 2, 3, 4, 7, 8, 27, 28, 30, 32, 37, 63, 73, and the pedestrian bridge (Facility 69); TSC Buildings 1, 2, 3, and 4; and Navy Salvage Yard Building 34. These resources include several property types: large assembly plants, warehouses, offices, sheds, a bridge, and a water reservoir. Digital photographs of the exterior and interior of each evaluated building/structure were taken with tablets, along with limited field notes, that tied to the GIS data in survey programs *Solocator* and *Survey 123*. In addition to recording the individual buildings, ASM noted the spatial and physical relationship of all the buildings within the Project area. ASM also noted changes and alterations to each resource to support assessments of integrity.

Archival research determined that three buildings in the Project area were constructed after 1991 and were therefore omitted from the survey: Building 6 (built in 1997), Building 62 (built in 1994), and Building 2555 (built in 1998). Sources used to determine the age of those buildings included historic aerial photographs and Navy Real Property records.

3.2 Archival Research

Ms. Stringer-Bowsher and Ms. Novell conducted property-specific and historic context archival research using primary and secondary sources. Primary sources are listed below; secondary sources included newspaper articles, scholarly journals, scholarly articles, and unpublished or published master's theses and dissertations. Research was conducted between November 11, 2019, and January 10, 2020. Historic context research was limited to developing/augmenting the extant WWII and Cold War-era contexts for OTC Site 1 and TSC, which were part of a larger plant system that included Consolidated Aircraft Plant 1 (Lindbergh Field Plant) and Seaplane Facility (Figure 3.2-1). The only property (Building 34) evaluated at OTC Site 2 is also related to the WWII-era context. A timeline of key dates associated with OTC Site 1 and TSC was identified to frame the research (Figures 3.2-2 and 3.2-3). Key archival facilities visited or consulted are listed below:

- SDASM Archives
- NBPL, Public Works Office (Technical Library, TSC)
- Naval Facilities Engineering Command, (NAVFAC) Southwest
- Air Force Historical Research Agency, Maxwell Air Force Base (AFB), Alabama
- National Archives Records Administration, Perris, California
- National Archives Records Administration, College Park, Maryland
- Raytheon, Archives Department, Tucson, Arizona, San Diego State University Library
- City of San Diego Public Library
- Robert Johnston, Consolidated Vultee/Convair (1952–1993)

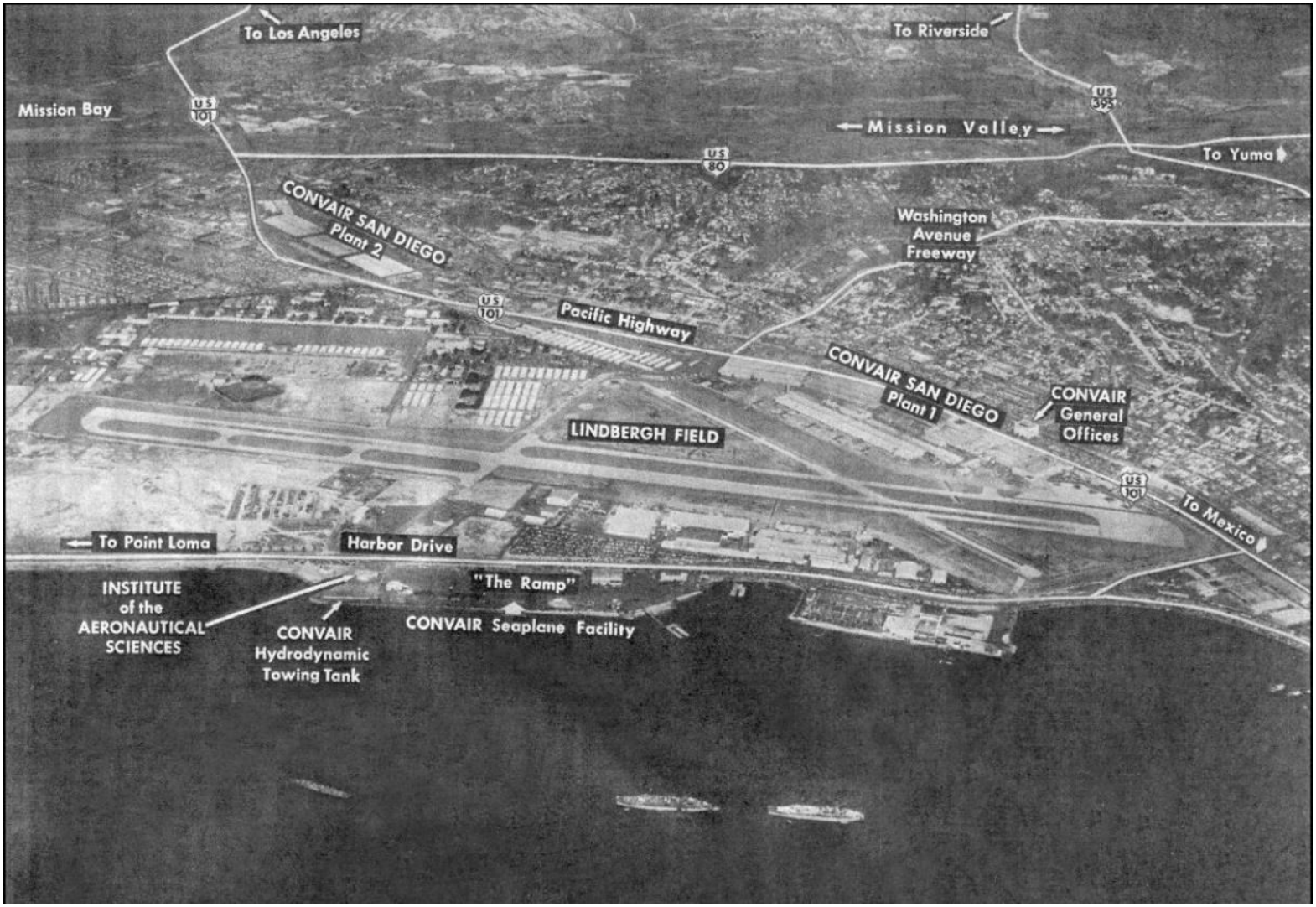

Figure 3.2-1 Aerial Orientation of the Convair Division of General Dynamics as it was in 1956

The aerial does not show the Sycamore Canyon Test Site and Kearny Mesa Plant (1958). Plant 1, Plant 2, and the Harbor Drive Test Site (Convair Seaplane Facility) were facilities that operated during WWII and continued into the Cold War period.

WORLD WAR II
1939–1945

1941, October Dedication of Consolidated Aircraft Plant 2. Later that year, more than 33,000 employees worked at Plants 1 and 2.

Convair B-24 Liberator Bomber, undated photo.

The last Liberator B-24, undated photo.

1945 Consolidated manufactured 2,395 Patrol Bomber Y Catalina flying boats and more than 33,000 B-24s in San Diego.

1942 1,500 aircraft workers and their families arrived in San Diego weekly.

1945, September 2 World War II ended. Production ceased at Plant 2.

San Diego celebrates the end of the war.

Convair B-24 Liberator Bomber, undated photo.

Catalina PBY "Flying Boat," 1943.

Reuben Fleet on cover of *Time Magazine,* Nov. 17, 1941.

1943 Consolidated San Diego's employment peaked at 45,000. 1 in 7 San Diegans worked at the plants. Women comprised 40% of the workforce and became known as "Rosie the Riveters."

1939 1940 1941 1942 1943 1944 1945

Figure 3.2-2 Timeline of WWII, Specific to the OTC

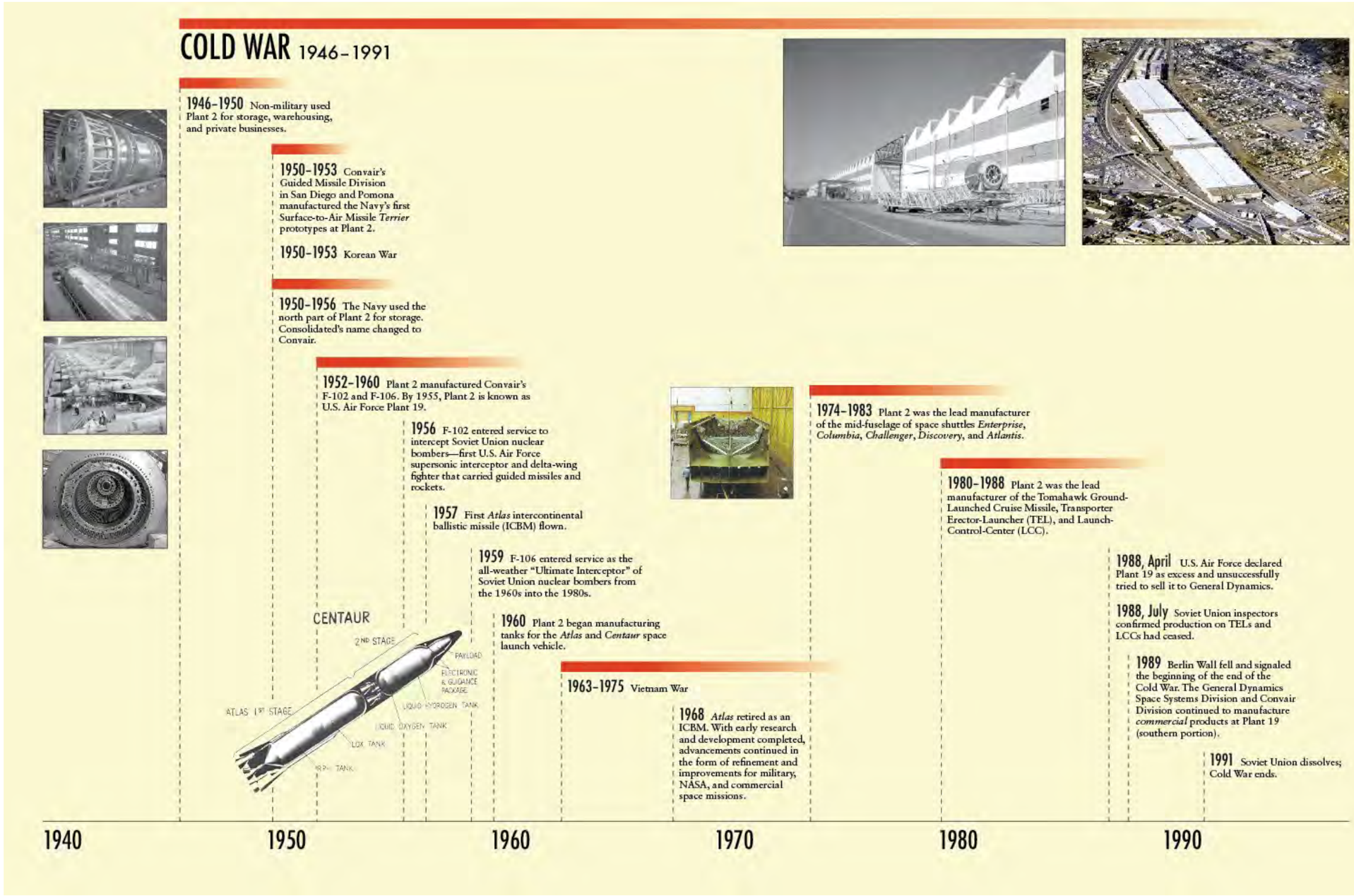

Figure 3.2-3 Timeline of Cold War, Specific to the OTC

Research focused on military and civilian uses for OTC during the war. Sources included drawings, plot plans, historic photographs, eyewitness accounts, real property records, annual reports, contemporary magazine articles, contemporary newspaper articles, scholarly articles regarding Consolidated Aircraft/Consolidated Vultee/Convair/General Dynamics, and other similar sources.

3.2.1 Cold War

Due to the vast number of Cold War activities taking place at OTC, research focused on identifying any programs associated with Plant 2 that had the potential to be historically significant for the Cold War period. ASM worked closely with the National Archives and Records Administration (NARA) in Perris, California, as well as the NARA in College Park, Maryland, to identify and procure declassified information. The Air Force Historical Research Agency provided declassified information. The breadth and depth of work done at OTC was identified in professional publications, oral histories, and especially through the corporate records from Consolidated Aircraft/Consolidated Vultee/Convair/General Dynamics.

3.2.2 Relevant Historic Context Studies

In addition to the prior studies and reports that directly addressed OTC (identified in Section 2.3), ASM collected and reviewed several broader historic context studies relevant to the architectural history resources that required evaluation. Those studies informed the evaluation framework established to evaluate OTC in this report. Notable studies include:

- *California Historic Military Buildings and Structures Inventory* (Vols. I, II, and III), JRP Historical Consulting Services (2000a, 2000b, and 2000c)
- *World War II and the American Home Front: A National Historic Landmarks Theme Study,* National Historic Landmarks Program (2007)
- *Historic Context for Department of Defense Facilities World War II Permanent Construction*, Goodwin, R. Christopher, and Associates (1997)
- *Historic Context for Department of Defense Facilities World War II Permanent Construction*, KEA Environmental, Inc. (1996)
- *Protecting America: Cold War Defensive Sites, A National Historic Landmark Theme Study*, NPS (2011)
- *To Defend and Deter: The Legacy of the United States Cold War Missile Program*, Lonnquest and Winkler (1996)
- *Guidelines for Evaluating and Documenting Historic Aviation Properties* (National Register Bulletin #43), NPS (1998)
- *SurveyLA Los Angeles Citywide Historic Context Statement: Industrial Development, 1850–1980* (2011)

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4.0 Historic Context

4.1 World War II (1939–1945)

World War II changed the U.S. and many nations around the world. At the Homefront, government-sponsored mobilization efforts aided the end of the Great Depression, manufacturing work pulled women out of the house and into industrial settings, and some minorities received more work opportunities as Japanese-Americans were interned. Fighting centered in Africa, Asia, Europe, and the open ocean. Around the world, people participated as leaders and soldiers, manufacturers and food producers, citizens who rationed and purchased war bonds, as well ethnic persecutors and victims. After 6 years, Allied forces with overpowering weaponry overtook the Axis powers on September 2, 1945 (Mintz and McNeil, 2018).

In 1939, the private aviation industry, under contract to the Army Air Corps, began production of the first American aircraft capable of exceeding 400 miles per hour. Fewer than 100 B-17 heavy bombers were flying. Within 5 years, the American aviation industry produced sufficient numbers of aircraft to fight a two-ocean, multi-front war and to assist Allied countries.

During WWII, Consolidated Aircraft's San Diego plant became the core of the company's production machine (Nakamura, 2012, p. 242). California journalist Alistair Cooke, a reporter for the British Broadcasting Corporation (BBC), described the scene on the coast, where women were an integral part of the workforce:

> I came into San Diego, and fronting the ocean was the low, vast plant of Consolidated Aircraft, the ominous flat roofs stretching a mile or more down to the sea, with only a dull glow coming from the blackened windows and at the fence gates high, hooded sodium lights. Tramping in the semi-darkness all around were groups of men and women in overalls, banging the frame-doors of diners and lunch-counters. From inside the buildings and mingling with the gentle wash of the waves was a low sort of roar. It was an actual effort to recall the day's ride, the mountain background to this throbbing industrialism (Cooke, 2006, p. 128).

The massive production effort enabled the Eighth Air Force to grow enormously despite its combat losses. Government-Owned Corporate-Operated (GOCO)-produced aircraft were used in the European, Mediterranean, and Pacific Theaters.

4.1.1 Aeronautical Development and Mobilization

Southern California was an aviation center long before WWII, hosting air shows at the beginning of the twentieth century that drew hobbyists as well as entrepreneurs. Among the stellar aviation pioneers drawn to the West Coast in those early years were William E. Boeing, Glenn Martin, Lawrence Bell, the Loughead (Lockheed) brothers, Donald Douglas, and T. Claude Ryan (Graff and DeVine, 2016, p. 7). Consolidated Aircraft was just one of many aircraft companies that moved to California in the 1930s and 1940s, including Lockheed, North American, Douglas, Northrop, and Vultee, joining Ryan and Solar, which were already firmly established (Yenne, 1995, p. 19). Ideal weather, cheap land, a growing population, and a technical labor pool turned out by universities, and open-shop labor rules, as well as civic boosterism, were among the attractions. Even before Pearl Harbor, Consolidated and other American aircraft factories were busy filling European orders.

During WWII, aircraft manufacturing was the largest industry in the world, and it centered around southern California. Manufacturers in San Diego and Los Angeles produced 81,596 planes between

January 1940 and August 1945, amounting to 27 percent of America's total. Adding southern California-designed aircraft built at satellite plants elsewhere in the U.S., the total is a remarkable 41 percent of all U.S. military aircraft produced during WWII (Graff and DeVine, 2016, pp. 8–10). American aircraft supplemented the flying stock of Allied air forces under lend lease programs and contributed to the Allied victory. With the surrender of Japan in August 1945, the United States no longer required an aviation industry mobilized for total war. The major aircraft manufacturing companies made the transition to the civilian market.

Long-term success of Consolidated Aircraft is the direct result of Reuben Hollis Fleet's ingenuity and early entrance into both military and commercial aircraft. Fleet founded Consolidated Aircraft in 1923 in Warwick, Rhode Island, at the Gallaudet plant. His company manufactured aircraft based on designs he "consolidated" from General Motors at the Dayton-Wright factory as well as the recently defunct Gallaudet Aircraft (Yenne, 1995, pp. 9, 12, 14).

In 1924, Fleet moved Consolidated from Rhode Island to the Curtiss-Wright plant (also known as the Curtiss plant) on Elmwood Avenue in Buffalo, New York. Manufacturing started on Consolidated's first Navy seaplane at the Curtiss plant. Naval aircraft required the ability to land on water so Consolidated modified the design of the extant PT-1/*Trusty*, NY-1, and NY-2 with wheels that could be replaced with pontoons; the new aircraft was known as the *Husky*. Success of the *Husky* led to improved versions.

Increased interest in civilian flight prompted Fleet to enter commercial manufacturing with the *Fleet*, a civilian version of the *Husky* (Yenne, 1995, pp. 12, 14). Many flying schools utilized the aircraft which led to the development of the Model 17 *Fleetster*. The *Fleetster* was the first plane to utilize a monocoque fuselage that relied on the external shell and not the internal structure as the main stress-bearing structure. In the Cold War, that concept was applied to the company's *Atlas* fuselage design. The company continued to innovate and acquired new capabilities when it acquired Thomas-Morse Airplane Company, an important producer of the U.S. Army's aircraft following World War I (WWI).

Fleet continued expanding his business by developing the Navy's NY trainers. In 1928, Consolidated constructed the first Navy flying boat, XPY-1, or *Admiral*, that was designed to fly from San Diego to Hawaii, a flight of 2,600 miles (Figure 4.1-1). Although Consolidated was outbid for manufacturing its winning design, the XPY-1 laid the groundwork for later developing the PBY *Catalina* and prompted Fleet to develop the civilian version of the *Admiral* or *Commodore* (Figure 4.1-2) (Yenne, 1995, pp. 12, 14). While the company did not get the manufacturing contract for the XPY-1, its overall success solicited interest from the Navy to design and manufacture a Navy flying boat, the P2Y or *Ranger*, that began in 1933 (Yenne, 1995, p. 17).

Since the lake near the Curtiss plant froze during the winter, it became difficult to continue to develop and test the flying boats in New York. Fleet considered relocating to the south and to California, either Long Beach or San Diego. San Diego's consistent weather and proximity to a Navy base at North Island made it a prime location and Lindbergh Field an ideal spot (Yenne, 1995, p. 17). In 1935, Fleet returned to San Diego where he had been an airman at Rockwell Field and brought Consolidated Aircraft with him (Yenne, 1995, pp. 9, 17–19).

Figure 4.1-1 Model 9 *Admiral* of XPY-1
Courtesy of The Catalina Society, David Legg Collection.

Figure 4.1-2 Richard Archibold Flew Consolidated Aircraft Corporation's XPY-1
Shown landing on the San Diego Bay with the San Diego County Administration Building behind it. Archibold's flight accomplished many "firsts." December 1937. Courtesy of San Diego Air and Space Museum.

As the company was relocating, Consolidated received a new contract from the Navy for the development and production of an advanced P2Y Ranger dubbed the *Catalina* by the British on the outset of WWII. Curious San Diegans came to the company's dedication celebration in October 1935 at Building 1 at Lindbergh Field. Nearly 874 people were already working at the plant, almost evenly split between relocated New Yorkers and local San Diegans (Yenne, 1995, p. 22). They manufactured the first of the new flying boats under the name XP3Y-1 that stood for Experimental, Patrol, Third, Consolidated. The first flight of the XP3Y-1 took place in March 1935 (Figure 4.1-3) (Yenne, 1995, p. 22).

The Navy ordered the prototypes, renamed PBY, for construction at Lindbergh Field. The first flight of the production-stage PBY was October 5, 1936. The Navy issued another contract for more PBYs, the sum of the two orders totaling 110 (Yenne, 1995, pp. 22–23). The XPB2Y-1 flew on December 17, 1937. Production levels in the continuous-flow, 247,000-square-foot factory outpaced the space requiring the company to expand to 543,000 square feet. Final assembly took place outside in the sunshine (Yenne, 1995, pp. 22–23).

Consolidated Aircraft began work on a flying boat slightly larger than the PBY—the PB2Y-1. The PB2Y, later known as the *Coronado*, was launched on December 17, 1937, and it was immediately clear that the plane had serious problems with directional stability, especially in the power-off condition. Although the PB2Y had four engines and was significantly heavier, it was physically only about 10 percent larger than the PBY (Figure 4.1-4). In an immediate fix, the tail was completely redesigned. Production of the *Coronado* did not start until March 1939 because of the engineering problems and the priority of the PBY (Bradley, 2010, p. 27).

As Consolidated's workload expanded and employment increased, San Diegans increasingly became directly or indirectly familiar with the company. As identified in the *Midway-Pacific Highway Community Plan Area Historic Resources Survey Report*, "The greatest impact to San Diego's aerospace industry was the arrival of Consolidated Aircraft" (Galvin Preservation Associates, 2017, p. H-10).

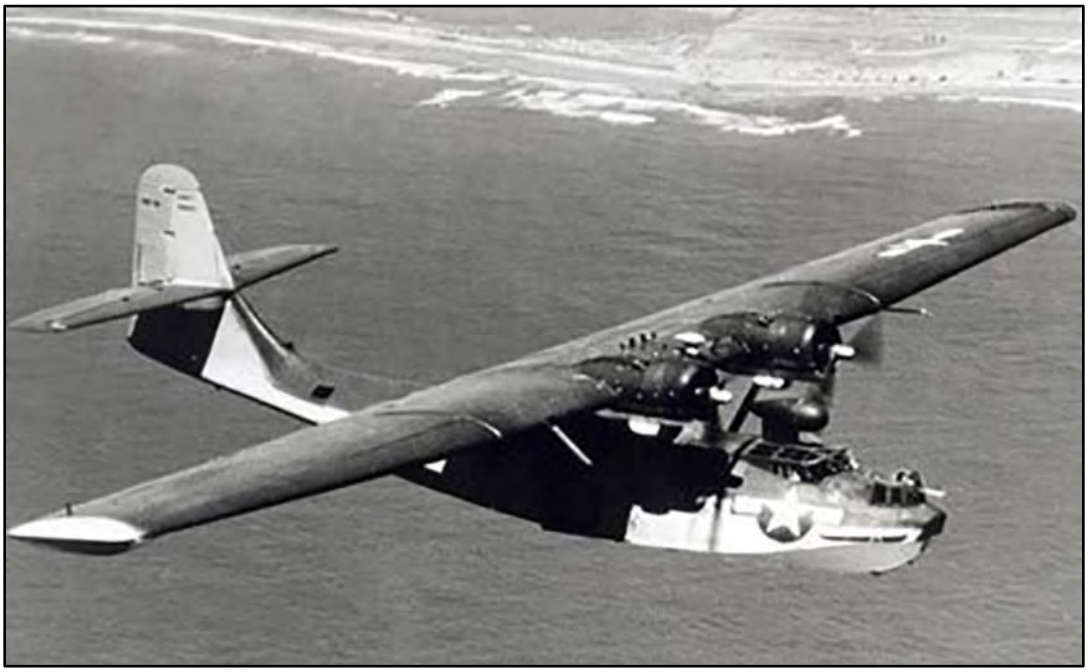

Figure 4.1-3 The PBY-6A was Equipped with Search Radar
Courtesy of The Catalina Preservation Society.

Figure 4.1-4 Final Production Version of PB2Y-3, an Improved Version of the P2Y-1, (known as Coronado, March 28, 1935)
Courtesy of San Diego Air and Space Museum.

4.1.2 Consolidated Aircraft/Consolidated Vultee Aircraft/Convair

The demand for aircraft exploded when Hitler invaded Poland on September 1, 1939. Orders for PBYs poured in from France and Britain. The Navy ordered 200 PBYs in December for $20 million, which Consolidated argued was "the largest contract for airplanes yet awarded by the U.S. government" (Yenne, 1995, p. 23). To keep up with manufacturing, the Lindbergh Field plant (Plant 1) was expanded in the spring of 1940 (see Figure 3.2-1). Buildings 2 and 3 added 645,900 square feet and were used as final assembly and parts assembly. The company was already excessively backlogged in August, orders for Ryan and Solar aircraft also significantly increased from just 1 year prior. Increased contracts at the aircraft plants ensured a "steady flow of paychecks into the pockets of an increasing number of workmen. This is being reflected in all lines of business in San Diego" (*Times-Advocate*, 1939, p. 1).

Two weeks after dedicating the expansion of Plant 1 at Lindbergh Field, Consolidated announced plans for further development (*San Diego Union*, September 19, 1940, p. 1). With this demand for increased capacity, and the sometimes unreliable performance of outside parts suppliers, the advantages of establishing a parts plant in San Diego became apparent (Wagner, 1976, p. 219). Consolidated negotiated with the Navy to obtain more than $17.5 million in financing from the Defense Plant Corporation (DPC) to expand the company's San Diego manufacturing capabilities. More than $14.5 million of that was allocated for the construction of Plant 2.

On November 16, 1940, Consolidated and the Reconstruction Finance Corporation entered into an agreement for a land lease for a parcel to the northeast of Plant 1 for a 10-year period due to expire April 30, 1951 (Pruitt, et al., 1944). Plant 2 was dedicated on October 20, 1941 and added 1,593,000 square feet with three massive buildings each 750 feet long and 450 feet wide (Figure 4.1-5) (Yenne, 1995, p. 25; SDASM, 1941, n.d.). A large dedication ceremony was held with military dignitaries such as

Rear Admiral Towers and Hollywood movie stars such as Edward G. Robinson (*Consolidator*, 1941, p. 15).

In early 1940, Consolidated employed 24,000; by the end of the year, after the dedication of Plant 2, it employed 33,000. By the summer of 1942, there were 45,000 employed at the two plants (*Convairiety*, 2020, p. 5). January 1944 was the peak output with 74 PBY *Catalinas* and 253 B-24 *Liberators* just in that month, essentially more than eight planes each day (Yenne, 1995, p. 33).

The largest Consolidated Aircraft plant was the Fort Worth Division, but it was still outpaced by the San Diego Division (Figures 4.1-7 through 4.1-15). The U.S. Army Air Force built the Fort Worth plant, which opened April 17, 1942. The plant was tasked with producing 600 B-24 *Liberator* bombers, which grew to 3,034, along with 118 B-32 *Dominators*. The New Orleans plant also manufactured PBYs. The Stinson Division in Wayne, Michigan, and the Nashville Division in Nashville, Tennessee, built other Stinson and Vultee aircraft. A variety of other plants opened serving as part supply or part modification. Various parts and feeder shops served both the original Vultee plant in Downey, California, and Plants 1 and 2 in San Diego by rail. San Diego relied on 11 feeder plants in California that employed 1,700, which were nearly all women (Yenne, 1995, pp. 33, 35).

4.1.2.1 *PBY Catalina*

Consolidated built 2,395 PBY *Catalina* flying boats from 1935 to 1945. The PBY *Catalinas* were immediately placed into combat when the U.S. entered WWII. PBY stood for Patrol, Bomber, Consolidated. The planes were first constructed at Plant 1, Building 1 before the construction of Plant 2. The *Catalinas* were said to be a favorite of Allied airmen (*General Dynamics World*, 1982, p. 4). The *Catalinas* played a "pivotal" role and held a "remarkable record" (Yenne, 1995, p. 24).

For the duration of the war, the PBY missions were anti-submarine warfare and rescues. The PBYs patrolled the seas in search of German U-boats, the effort of which climaxed in 1942-1943 (Yenne, 1995, p. 25). The *Catalina* gave the United States advance knowledge of the Japanese battle fleet at the 1942 Battle of Midway. Four PBYs began a torpedo attack and after the attack picked up downed pilots. The PBY became the "rescue craft" of the war. Specialized *Catalinas* dubbed "Dumbo" played an important role in rescuing aviators from hostile waters and were credited with saving 160 airmen and crew in just the first 18 months. Many more were saved over the course of the war (Yenne, 1995, p. 25). Following the war, the *Catalinas* served navies, airlines, and private owners (Yenne, 1995, p. 25).

4.1.2.2 *B-24s*

Consolidated was the lead manufacturer of B-24 *Liberator* bombers for the U.S. Army Air Force, producing 33,000 aircraft during WWII (Figures 4.1-6). In September 1940, an $85 million order for B-24 bombers was added to Consolidated's defense workload (*San Diego Union*, 1940, p. 1). The B-24 played a critical role in the war effort and became the natural choice for the war in the Pacific because of its extremely long-range. It was used for reconnaissance, submarine patrol, and air sea rescue (Aviation History Online Museum, 2020).

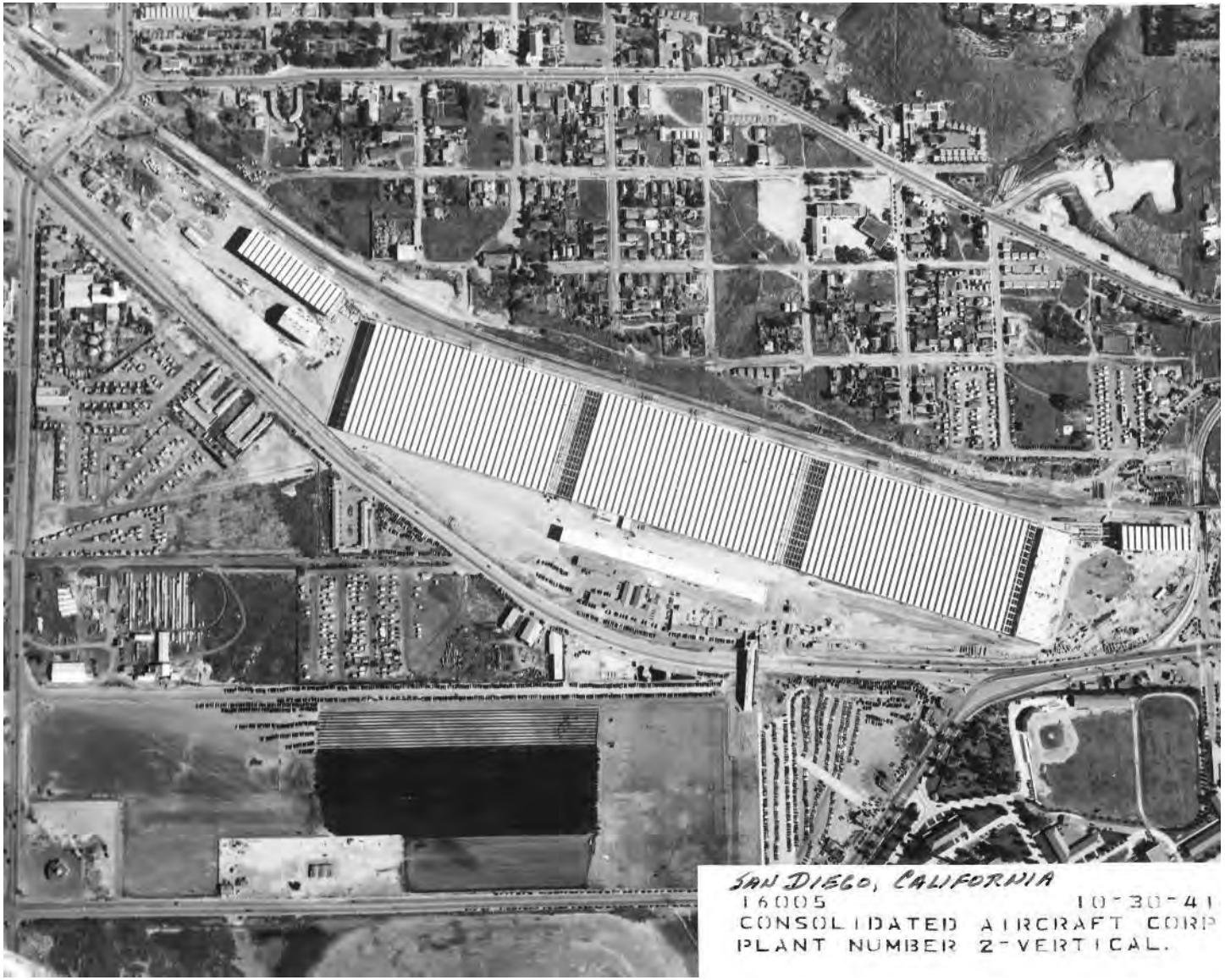

Figure 4.1-5 Aerial of Plant 2 (October 30, 1941)

Figure 4.1-6 B-24 *Liberator*
Courtesy of the Air Force Historical Research Agency.

Figure 4.1-7 B-24 Wing Assembly at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

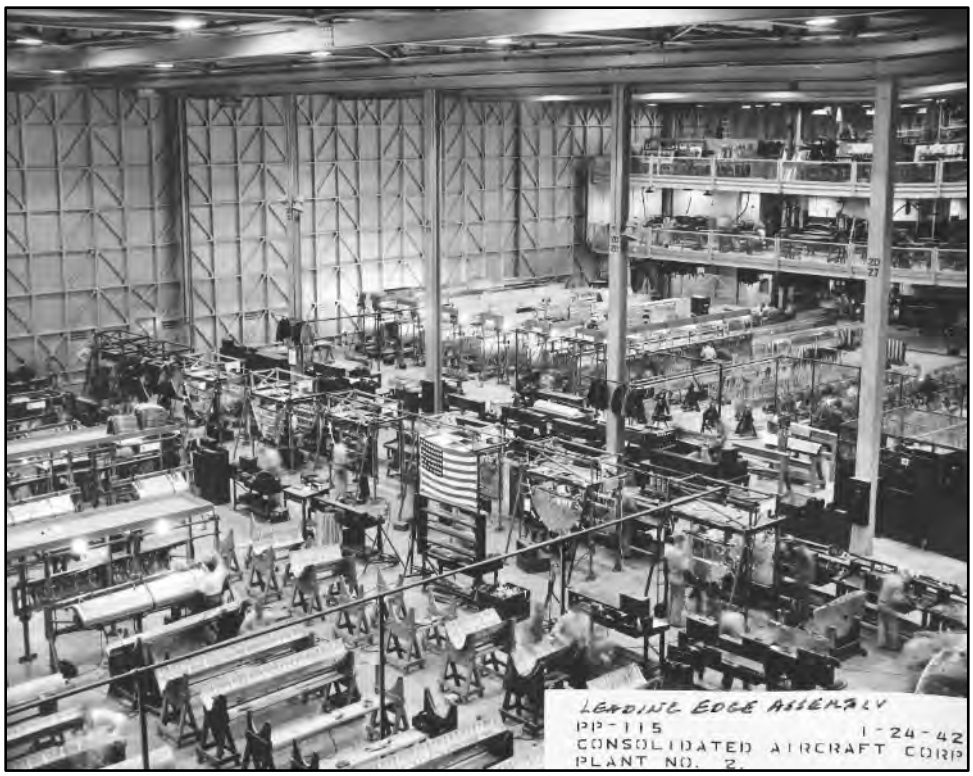

Figure 4.1-8 B-24 Leading Edge Assembly at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

Figure 4.1-9 B-24 Fuselage Assembly at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

Figure 4.1-10 B-24 Nose Section Assembly at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

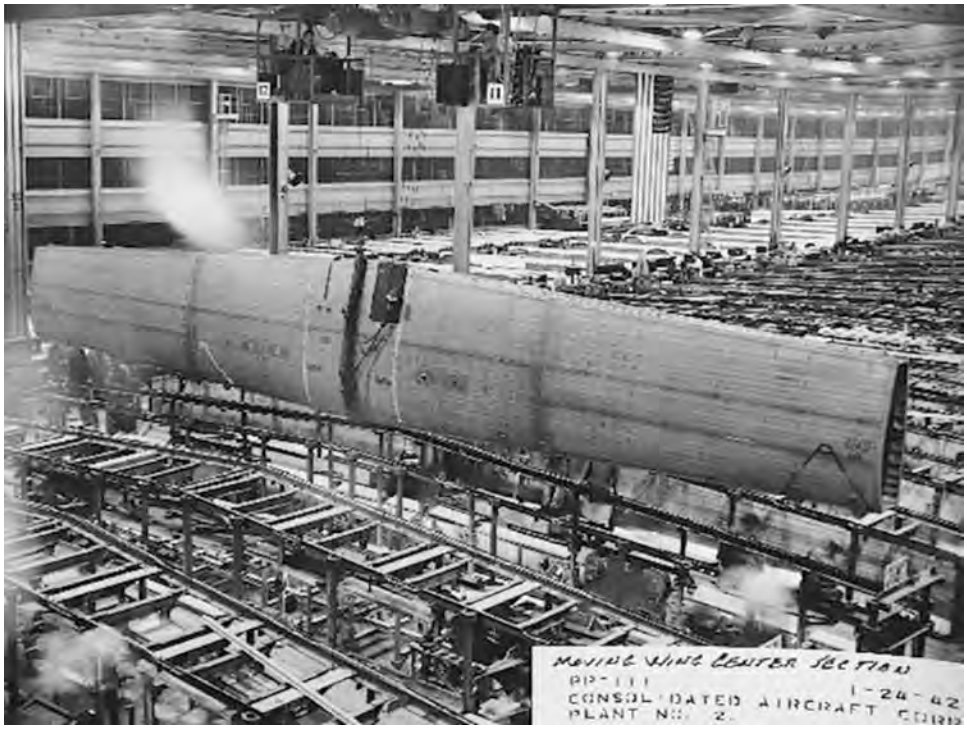

Figure 4.1-11 B-24 Moving Wing Center Section by Crane at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

Figure 4.1-12 Machine Shop at Plant 2 (January 24, 1942)
Courtesy of San Diego Air and Space Museum.

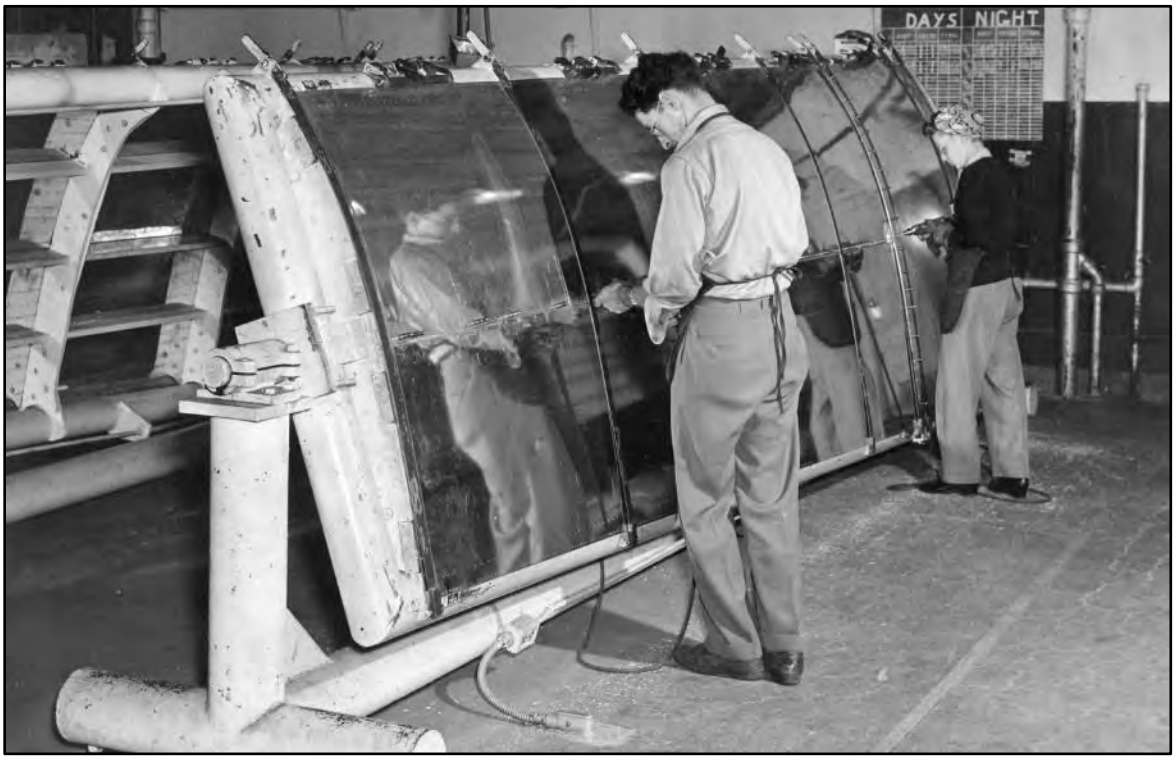

Figure 4.1-13 Men and Women Worked on the Massive B-24s During WWII
Courtesy of San Diego Air and Space Museum.

Figure 4.1-14 B-24 Workers Cheer as They Pose with the Last B-24 Produced by San Diego
Courtesy of San Diego Air and Space Museum.

Figure 4.1-15 Under a Shroud of WWII Camouflage Netting (above), the Public Viewed Manufactured Aircraft
Courtesy of San Diego Air and Space Museum.

4.1.3 Reuben H. Fleet

Reuben Hollis Fleet was born in 1887 in Montesano, Washington, and graduated in 1906 from the Culver Military Academy in Culver, Indiana. He taught at Washington State College before serving in WWI as a major in the Army Signal Corps. He opened Mather Field in Sacramento in 1918 to train military pilots (*Los Angeles Times*, 1975). That same year, he was given the responsibility of organizing the nation's first Air Mail service (Figure 4.1-16) (Fleet Science Center, 2012).

Figure 4.1-16 Reuben Hollis Fleet in Front of a Curtiss JN46H on the Inaugural Day of Airmail Service (May 15, 1918)
Courtesy of the Library of Congress hosted by Davis-Monthan Aviation Field Register.

Fleet founded Consolidated Aircraft in 1923 where it operated at Gallaudet factory in Rhode Island. The following year he moved his company to the Curtiss plant in Buffalo, New York, before making the company's final move to San Diego in 1935 (Fleet Science Center, 2012; Wagner, 1976, pp. 17–18). In San Diego, Consolidated became the world leader in manufacturing B-24 *Liberator* bombers for the U.S. Army Air Force and PBY *Catalinas* for the Navy during WWII.

Fleet continued to advocate for Consolidated Aircraft even after it was sold to Vultee Aircraft in 1941 (Wagner, 1976, p. ix). A June 1944 company directory lists Reuben H. Fleet as a consultant with an office at Plant 2 (Consolidated Vultee, 1944; Wagner, 1976, p. 278). In May 1945, Fleet said, "I stayed on as a consultant at the insistence of the Army and Navy. But my obligation is over now, and I want to become a free agent once more." He ended his role as consultant even though his contract had a year and a half left. He remained an aviation consultant through 1945 to President Roosevelt from his home office (Wagner, 1976, pp. 276–280). Fleet was a member of the International Air & Space Hall of Fame and the National Aviation Hall of Fame. He died in San Diego on October 29, 1975.

During his career with Consolidated Aircraft in San Diego, Fleet and his family—wife Dorothy, son Preston, and daughter Dorothy—lived at 560 San Gorgonio in San Diego (U.S. Federal Census, 1940, p. 9A). By 1943, Reuben was the only one living at the residence (San Diego Directory Company, 1943, p. 363). Dorothy filed for divorce in May 1944, but Fleet remained at that residence until at least 1945 (California State Library, 1944, p. 362; Wagner 1975, p. 283). The house currently located at 560 San Gorgonio was constructed in 1954 and designed by Sim Bruce Richards. It is assumed the house Fleet lived in at that address was demolished for the construction of the mid-century house (Historicaerials.com, 1953, 1964; Trulia.com, 2020).

It is unclear where Fleet lived from 1945-1954. He is listed in the 1945 and 1948 La Jolla City directories at 2000 Sprindrift Drive, although that has been the location of The Marine Room restaurant since 1941 (Mackin-Solomon, 2016; San Diego Directory Company, 1945, p. 1914; San Diego Directory Company, 1948, p. 2051). Today, the restaurant is part of The Beach and Tennis Club and La Jolla Shores Hotel consortium (Mackin-Solomon, 2016).

On May 20, 1947, Fleet married Eva May Denburgh Wiseman in Point Loma. By 1954, they lived at 565 Gage Lane in San Diego which was his primary residence in San Diego until his death in 1975 (Polk, 1954, p. 327; Polk, 1976, p. 372; *Redlands Daily Fact,* 1975, p. 5). In 1959 they built a second home in Escondido and at some point, they acquired a home in Palm Springs that they used from October through May (Weir Brothers Custom Homes, 2020; Wagner, 1976, p. x).

Manufacturing sites with known direct associations with Reuben H. Fleet were the Curtiss plant on Elmwood Avenue in Buffalo, New York; Consolidated Aircraft Plant 1; and Consolidated Aircraft Plant 2. Consolidated Aircraft Plant 1 was demolished in 1996/1997. The Curtiss plant was demolished in March 2019 (Epstein, 2018; Buffalo Rising, 2019). As such, Consolidated Aircraft Plant 2 is the last known site associated with Reuben H. Fleet during the productive years of his life (Figure 4.1-17).

4.1.4 Rosie the Riveter: Women Workers

The story of women in the workforce provides insight into the impact of the war on the home front. The image of "Rosie the Riveter" came to symbolize the wartime experience and the understanding that, in bringing far more women into the ranks in an increasingly broad array of jobs, the war established the foundations for dramatic change in American women's roles and for post-war feminism (National Historic Landmarks Program, 2007, p. 39).

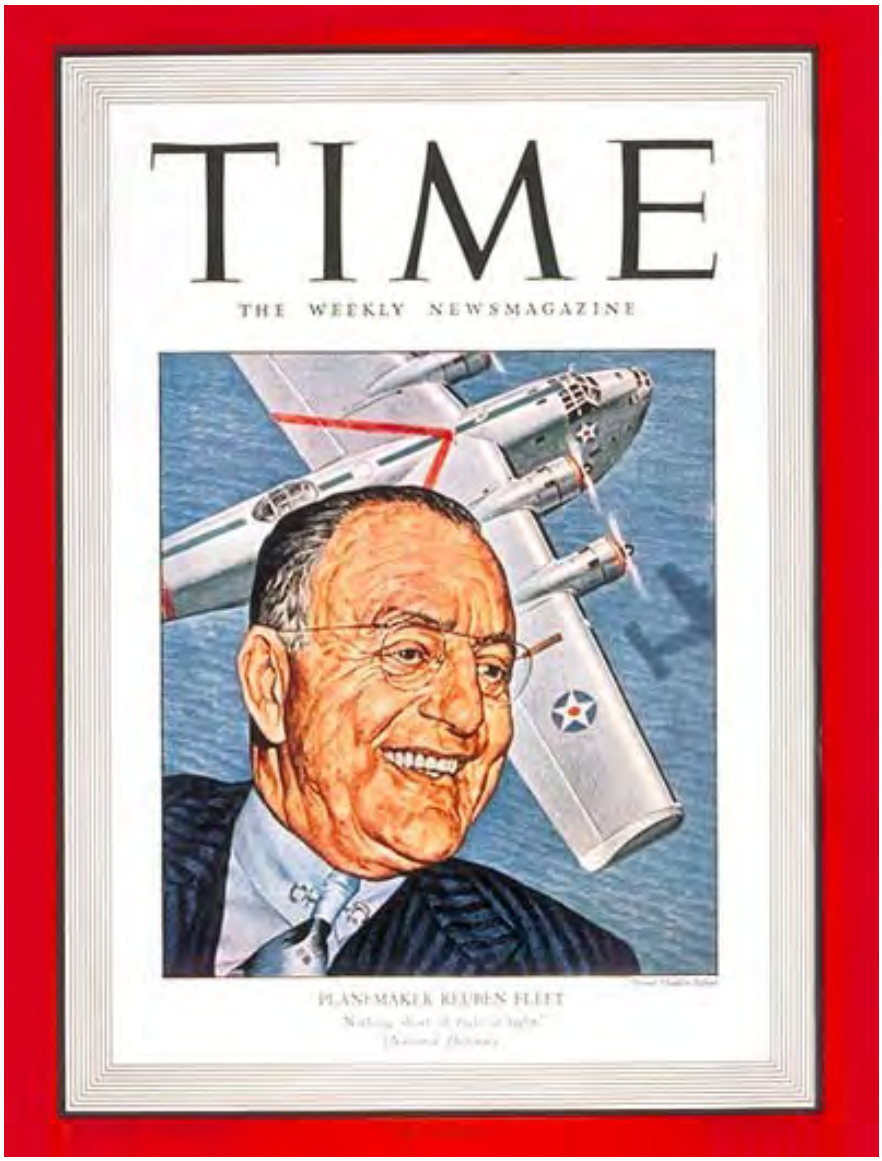

Figure 4.1-17 "Planemaker Reuben Fleet," as Featured on the Cover of Time Magazine (November 17, 1941)
Artist: Ernest Hamlin Baker.

In the desperate search for bodies to fill the production ranks, the urgency of bringing more women and minorities into the workforce intensified as the war progressed. President Franklin Roosevelt's Executive Order 8802 banned hiring discrimination in June 1941, opening the door for women and minorities to contribute to the war effort (Nakamura, 2012, pp. 232–233). Within a month, women began to trickle in, later flooding the ranks until they reached 42 percent of the workforce at Consolidated by May 1944 (Nakamura, 2012, p. 230). One worker described the tentative reception of women at Consolidated:

> After the building of the first PBY and its first flight, we went into production, and that's when they started to hire women. That was really something. It took us a long time to get used to having women around. We just weren't accustomed to it then (Mike Alianelli, in Yenne, 1995, p. 33).

As the war continued, the need to develop a larger workforce for increased aircraft production became clear. As an experiment, Consolidated began training women to assemble aircraft. Giving preference to wives and relatives of men already employed at Consolidated, in September 1941, the company hired 40 women to help construct B-24s in San Diego (Pescador and Aldrich, 2008, p. 59). Women often started in the upholstering department, where they used sewing machines to create the bomber interiors. By 1942, some women moved to the factory floors, working heavy equipment such as the massive drop hammers and driving rivets into the B-24 fuselages (Figures 4.1-18 through 4.1-20) (Pescador and Aldrich, 2008, pp. 60, 74). Employment of women grew exponentially from 36,848 in 1940 to 474,198 in 1945 (Sato, 2000, p. 150). At the height of production in June 1943, Consolidated was one of five airframe manufacturing plants in southern California, which together hired 10,000 women. It was the only airframe San Diego plant that participated in that hiring surge (Sato, 2000, p. 150).

Figure 4.1-18 Women Assembling an Airframe, One with a Rivet Gun
Courtesy of San Diego Air and Space Museum.

Figure 4.1-19 Woman Working at a Press
Courtesy of San Diego Air and Space Museum.

Figure 4.1-20 Women Manufacturers Standing in Front of the B-24 they Helped Assemble
Courtesy of San Diego Air and Space Museum.

Serious manpower shortages continued well into 1944. James L. Kelley, division manager, attributed the problem to war weariness, young men joining the military, and other workers retiring with their earnings. Kelley stated, "Today we have fewer people in the division than at any time since Pearl Harbor." The Industrial Relations Department reported in early 1944 that the prior month saw 72,554 workdays lost to absenteeism. Women led men in absenteeism for reasons such as illness or injury, family and personal issues, medical services, and seeing their military spouses (*Consolidated News*, 1944a, as cited in Nakamura, 2012, p. 231).

A first-hand account written by Constance Bowman [later Reid] and Clara Marie Allen, two high school teachers who spent the summer of 1943 at the Consolidated Plant in San Diego, alludes to the startling changes WWII created with women entering the industrial workplace. Like many schoolteachers during the war, the two decided to contribute to the war effort by spending their summer vacations "Keeping 'Em Flying" (Reid and Allen, 1999, Preface). When they started work, they had no experience and "knew nothing about airplanes except that they had wings and they flew." Regardless, they were offered jobs with minimum question on the B-24 production line, with their choice of the swing shift at the Main Plant (Plant 1) from 4:30 to 1:00 or at the Parts Plant (Plant 2) from 2:30 to 11:00. Reid and Allen described the activities on the production line they were about to join:

> There they were—the *big bombers!* But they weren't so big as we had thought they would be … The effect of their size was broken by the paraphernalia around them. There was a platform about 6 feet high under the wings and another about a foot high under the belly. In the back was a ladder leading up into an opening in the underside of the tail and in the front was one going up into the nose. People were all over the bombers, popping in and out of the nose, walking along the top of the fuselage, working on the high platforms under the wings, sticking their heads out the side windows, sliding flat under the belly, climbing up and down the ladder into the tail, ducking in and out from underneath … (Reid and Allen, 1999, p. 19).

The young women described their first impression of the aircraft manufacturing plant, as they walked across the tracks between rows of bombers, which were set at an angle in something like a flight formation so the tail of one almost touched the wing of the other. At first, all of the bombers looked alike to them, until they realized that they were in different stages of completion. The ones to their left, which were coming down from the beginning of the line, were closer together than those to their right, which were heading toward the end of the line, because they were still without the spreading wing tips and tail assemblies. "The bombers seemed to become more terrifying as they moved down the line," they wrote, "adding shiny gun turrets, huge motors, and yellow-tipped propellors [*sic*]. … Every so often we had to scurry to one side of the aisle to avoid a bicycle or a small truck. Once we almost walked into a large red hook just let down by the overhead crane which rolled back and forth across the ceiling. We stopped and watched with respect while the hook gently lifted a gun turret from the floor and up into the top of a plane" (Reid and Allen, 1999, pp. 20–22).

In the course of their induction at Consolidated, Reid and Allen were taken aside for a talk by the Women's Counselor, "an exotic creature all in black with a long bob that curled under at the ends." Reflecting society's view of women as in need of protection, the counselor warned them not to try to do a full day's work at home before they came to work and described a special exercise to relieve cramps (Reid and Allen, 1999, p. 16). Difficult work in stressful times required company-led support, especially for women workers who shouldered the burdens of the home front. Female counselors catered to the women of all departments in all divisions, including workers at the feeder shops and vocational schools (*Consolidated News*, 1944b, as cited in Nakamura, 2012, pp. 232–233).

Both during and after the war, more significant employment gains were made by women in white-collar secretarial, clerical, and sales jobs than in factory work, as the traditional bar against married women in

white-collar jobs began to decline rapidly during the war. By 1945, married women and women older than 35 made up a majority of the female labor force for the first time. Both employers and women themselves often assumed that women were holding jobs only "for the duration." Younger married women with children were much less likely to enter the labor force. Once the war was over, most younger women left the labor force, preferring to focus instead on marriage and motherhood. By 1947, the percentage of women in the national labor force had dropped back to about 30 percent, roughly in line with the long-term trend (National Historic Landmarks Program, 2007, p. 39).

The influx of 1,500 workers per week overwhelmed the housing market. Certain groups of people, including women, found it particularly hard to find housing. The federal government reported that between 75 and 80 percent of rentable houses would not accept children occupants, even though fines discouraged such discrimination. The City responded with temporary fixes, such as the Farm Security Administration renting of trailers for $7 a week (Hall, 1993, p. 262). Single women also found it difficult to rent a private room and, as a result, often had to share space with other women workers (Killory, 1993, p. 41).

Some women led the lives of service personnel in transit, sleeping in hotel lobbies, on park benches, in cars, and in theaters that allowed customers to stay after the late show (Hall, 1993, pp. 264–265). Most women who had factory jobs also assumed responsibilities for housework, laundry, and shopping. There were no child-care facilities available. A single community child-care center would have freed up more defense workers than several hundred defense houses, but awareness of women's needs developed very slowly. Partly as a result, the high rate of employee turnover at the aircraft plants was even higher among women (Killory, 1993).

The origins of the Rosie the Riveter image with the motto "We Can Do It!" is debatable, but her role in popular culture is undeniable. Before the iconic image came a song, "Rosie the Riveter," getting heavy play on the radio in 1943. Intended as a tribute to women working in defense and to boost their morale, the lyrics said that Rosie was still "a little frail" (a 1940s term for a women) doing a man's job to protect her boyfriend. Another popular tune, Perry Alexander's "Pluggin' Jane," made it clear that women would be expected to return to their prewar roles at the end of the war:

> Now when this war is over
> And the boys come marching home
> She won't delay to make a way
> Her job will be his own (Smith, 2003, pp. 109–110).

Among many other WWII songs acknowledging women's presence on the line in aircraft production were "The Lady at Lockheed" and "We're the Janes Who Make the Planes." "On the Swing Shift," by Johnny Mercer and Harold Arlen, hinted at potential romance among the mixed-gender workers (Smith, 2003, p. 47).

The popular "Rosie the Riveter" song was arguably the inspiration for a Norman Rockwell painting titled "Rosie the Riveter" that ran on the cover of the *Saturday Evening Post* in 1943 (Figure 4.1-21). The image depicted a clearly exhausted but apparently satisfied worker reposed in front of an American flag backdrop, with a greasy riveting machine across her lap and a sandwich in her hand. In 1942–1943, the U.S. Office for Emergency Management commissioned a series of posters to promote the war effort. One of these was the familiar image of a woman, defiant and proud, with the slogan "We Can Do It!" (Garber, 2015) (Figure 4.1-22).

Figure 4.1-21 Norman Rockwell's "Rosie the Riveter"
Depiction on the cover of the Saturday Evening Post on May 29, 1943.

Figure 4.1-22 Image of Woman Working in Manufacturing during WWII
This became the iconic image of women in manufacturing at the time. Artist: J. Howard Miller (ca. 1942–43). Courtesy of the National Museum of American History.

Rachel Wray, an aircraft worker said, "I loved working at Convair. I loved the challenge of getting dirty and getting into the work. I did one special riveting job, hand riveting that could not be done by machine. … Convair was the first time in my life that I had the chance to prove that I could do something, and I did. … During the war I think the values of many women changed. They became more independent and self-sufficient. When I was growing up my mother was always home with children and my father came home when he got ready. He did what he wanted to do; my mother didn't. In my mind I said then, that's not the life for me" (Harris et al., as cited in Sammis, 2000, p. 17).

As another woman put it, "For me, defense work was the beginning of my emancipation as a woman. For the first time in my life I found that I could do something with my hands besides bake a pie" (Harris et al., as cited in Sammis, 2000, p. 17). The wartime experience certainly contributed to gender changes in post-war America and Consolidated in San Diego played a major role in the employment of women for wartime work, employing more women than any other company in San Diego (Robbins, 2011; Sato, 2000).

4.2 Cold War (1946–1991)

By the end of WWII, tensions had developed between democratic and communist governments spurring sponsorship of technological advancements for safeguarding national interests and demonstrating ingenuity. Partnerships were strengthened and lines drawn during post-war rebuilding efforts when the United States aligned itself with Europe and therefore against Joseph Stalin's Soviet Union (U.S. Army, 2009; Kuranda et al., 1995, pp. 15–18; Levering, 2005, pp. 25–29).

Initially, the U.S. held the strategic advantage with nuclear power already demonstrated during WWII. However, the Soviet Union quickly became a formidable enemy. Following a successful test of the Soviet Union's first atomic bomb in 1949, the United States suddenly realized a vulnerability to a massive attack (Lonnquest and Winkler, 1996). This newly demonstrated nuclear capacity and the Soviet Union and China's ability to raise a combined army of half a billion troops solidified a growing and threatening communist presence and added to the anxiety of the United States.

President Harry S. Truman (1945–1953) increasingly favored Research and Development (R&D) for strategic weaponry over conventional troops. He responded to the 1949 demonstration by authorizing the Atomic Energy Agency Commission to develop the hydrogen bomb and created a task force to review the U.S. National Security policy. The resultant NSC-68 study in 1949–1950 determined that the United States needed to invest more money in weaponry to deter the Soviet Union. It estimated that the Soviet Union would have long-range bombers and atomic weapons to attack the United States by 1954. In response to the report, the administration dramatically increased the DoD budget by 300 percent for Fiscal Year 1952. Amidst the Korean War (1950-1953) and growing Soviet Union tensions, the United States successfully tested its hydrogen bomb in 1952. The Soviet Union followed closely behind in 1953 (Lonnquest and Winkler, 1996, p. 29; JRP, 2000b, p. 8–7; Kuranda et al., 1995, pp. 15–18.).

In the mid-1950s, President Dwight D. Eisenhower (1953–1961) developed the "New Look" defense policy. This policy intended to decrease the defense budget by reducing expenditures on conventional forces and placing a greater emphasis on retaliation against communist attacks with atomic strikes. Development of strategic missiles became an escalated priority after the assertion that the Soviet Union had an intercontinental ballistic missile (ICBM) in the summer of 1957 and the launching of *Sputnik I* in October. Both events supplied evidence that a "missile gap" existed between the United States and the Soviet Union.

In 1961, the John F. Kennedy administration (1961–1963) advocated a "Flexible Response" solution that promoted the use of conventional and nuclear weapons against aggression. It was during the early

1960s that the U.S. missile program, primarily led by the United States Air Force (USAF), reached its pinnacle. By the mid-1960s, the defensive missile force was on the decline. New and improved ICBMs were still added to the stockpile providing increasingly more powerful and more accurate strategic weapons (Lonnquest and Winkler, 1996, pp. 2–5, 17, 20, 66).

Other important technological advances centered on the Space Race and radar development in the late 1950s and 1960s. The U.S. responded to *Sputnik I* by sending *Explorer I* to space on January 31, 1958. A new agency created in 1958, the National Aeronautics and Space Administration (NASA), furthered the pursuit of space exploration for R&D, an endeavor deemed nationally important (Patterson, 1996, pp. 418, 422; JRP, 2000b, pp. 8–14). An increased need for intelligence gathering prompted advancements in radio wave technologies and satellite development (Stringer-Bowsher, 2010).

Cold War relations entered periods of heightened tensions and diplomatic efforts. A series of incidents in the early 1960s intensified Cold War animosities: the Soviet Union's attack on a United States spy plane (1960), the Bay of Pigs Invasion (1961), the Cuban Missile Crisis (1962), and the Gulf of Tonkin incident (1964). By 1963, the Vietnam War (1963–1975) had begun (JRP, 2000b, pp. 8–14). While the United States fought a difficult war in Southeast Asia, the United States and the Soviet Union entered a period of détente in the late 1960s until 1979. Increased cooperation existed for a time between the two countries, two Strategic Arms Limitation Talks (SALT) treaties were signed, and United States President Richard Nixon (1969–1974) reopened diplomatic relations with China. The Soviet Union's invasion of Afghanistan ended détente in 1979 (Kuranda et al., 1995, p. 23; The Louis Berger Group, Inc., 2009, pp. 8–9).

President Ronald Regan (1981–1989) reinvigorated the military after 1980 with increased spending and a hard line against the Soviet Union that included a new program, the Strategic Defense Initiative. The Soviet Union objected to the new program, which hindered Strategic Arms Reduction Talks (START), and tensions continued. With the election of Soviet leader Mikhail Gorbachev in 1985, the United States/Soviet Union relations gradually improved. Gorbachev's initiation of *perestroika* (economic restructuring) and *glasnost* (openness) aided in the gradual relaxation of tensions. During the late 1980s and early 1990s, Poland, Hungary, Czechoslovakia, Romania, and East Germany overthrew communist governments (Kuranda et al., 1995, p. 26; The Louis Berger Group, Inc., 2009, pp. 8–9). The fall of the Berlin Wall in 1989 is thought of symbolically as signaling the end of the Cold War; the dissolution of the Soviet Union in 1991 is recognized as the end of the Cold War.

4.2.1 Interim Non-military Use (May 1946–August 1951)

At the close of WWII, Plant 2 was no longer needed for government production of aircraft. The Reconstruction Finance Corporation terminated the 1940 lease and transferred responsibility of Plant 2 to the War Assets Administration (WAA) and its Office of Real Property Disposal (WAA, 1946). Consolidated Aircraft had the option to lease the facilities for commercial endeavors on a month-to-month lease or purchase the property (Hobson, 1945).

In August 1945, Fleet requested use of a portion of the facilities for commercial aircraft production, but the extent of the company's needs was not yet known. Fleet confirmed with the Federal Government that the company could exercise the option to lease or purchase the facilities at a later date (Haight, 1945). In November 1945, both Solar Aircraft and Convair (formerly Consolidated) were interested in leasing part of Plant 2 but neither did (Hickey, 1945). On May 31, 1946, the property was declared surplus and slated for disposal through sales and leases (Los Angeles Regional Office Staff of WAA and Babcock, 1947). The Federal Government divided up the property for sale. While a variety of companies were interested, bids to purchase portions of Plant 2 were inadequate (WAA, 1947).

4.2.1.1 *Use of Plant 2 Buildings*

In the immediate post-WWII period, Building 1 was utilized by the WAA that occupied two-thirds of the building for sales and warehousing and the other third was a private occupant since at least July 11, 1946 (WAA, July 9–10, 1946). Charles W. Carlstrom (through the Greater San Diego Development Company) acquired most of Plant 2 through a down payment made on December 29, 1947 (GSA, 1952). He owned Buildings 1, 2, 3, 4, 5, 7, 8, 25, 27, and 28 (WAA, 1949). The Federal Government sold buildings at the north end of the plant (Buildings 6, 9–16, and 23) to the County of San Diego on October 16, 1946 (Small, 1951; WAA, 1947a; Moran and Kelley, n.d.). The Vet Co-Operative Service Stores, Inc. acquired a quitclaim deed for Building 26 in January 1947 with an installment payment that would be paid in full in 5 years (WAA, 1947b).

Beginning June 7, 1948, Lyon Van and Storage Company leased a portion of Building 1 from Carlstrom (Nelson, 1948a). In August 1948, Carlstrom sold Building 8 to Gregory Electric Company (Nelson, 1948b). On October 1, 1948, Carlstrom, the WAA, and the City of San Diego agreed to the ownership of the north pedestrian overpass (Facility 69) and south pedestrian/vehicular overpass (no longer extant) to the City of San Diego (Title Insurance and Trust, 1979; Moran and Kelley, n.d.). By at least January 1949, the parking lot known as the Employees' Parking Area (now the West Parking Area, NRPEO warehouse, and Buildings 34 and 40) was sold to the San Diego Baseball Club (GSA, 1950).

Buildings 17, 18, 19, 20, and 21 (now known as TSC Buildings 1-4) became known as the Rosecrans Warehouses (Office of the Chief of Engineers, 1966). On July 2, 1946, they were utilized by Bobbi-Car Company, Hubbell Bakeries, and Western Heat and Vent. They were then officially leased as part of a 5-year lease beginning in August 1946. Between 1946 and 1951, the buildings were utilized, at minimum, by Superior Heating and Ventilating Company and then Ace Van and Storage Company (Building 18) and Salem Sales Commodities or Guthrie Biscuit Company (Buildings 17, 19, 20, and 21), who subleased to Mrs. Hubbell's Bakeries (Evans, 1948; GSA 1952). The 5-year lease to private companies for use of the TSC buildings was terminated as of August 24, 1951. The General Services Administration (GSA) permitted use of the TSC buildings (57,000 square feet) to the Navy for use by the Naval Supply Depot (Small, 1951; Peyton, 1951).

4.2.2 Cold War Technologies and Developments

4.2.2.1 *National Research, Development, Testing, and Evaluation*

Technological advancement during the Cold War signifies an important historical transition from functional war technologies developed quickly during WWII to competitive technological warfare from 1946 to 1989 (JRP, 2000b, p. 8-1). According to Kuranda et al., 1948 to 1960 were critical years in "shaping the Navy's part in the Cold War and the Navy's guided missile programs" (1995, p. 38). Surface-to-Air and Air-to-Air Missiles rapidly developed between the late 1950s and early 1960s but waned during the Vietnam War into the late 1970s; this was partially attributable to a reduced and reallocated DoD budget.

Through R&D, the United States and the Soviet Union competed for technological advancement beyond physically destructive weapons between the 1940s and 1980s. The United States took a decisive lead over the Soviet Union by the late 1970s and early 1980s with microelectronics and computers. These advancements were the direct result of a national shift toward the acceptance of federally sponsored scientific research during WWII. The type of federally sponsored R&D expanded at the close of WWII and into the end of the 1950s as a necessity for U.S. security that included space exploration. Propelled by the *Sputnik I* launch and fears of "technological inferiority," creation of NASA expanded the research complex (Friedberg, 1996, p. 114). By the early 1960s, NASA was one of the largest federally funded programs (Friedberg, 1996, pp. 107–114).

4.2.2.2 *From Bombers to Supersonic Jets*

Jet engines developed in the 1940s significantly advanced in the 1950s, largely due to breakthrough technologies and funding made available to combat the threat of nuclear and long-range weaponry. President Eisenhower's emphasis on "massive retaliation" funded advancements in strategic and nuclear weaponry for both offensive and defensive actions. The USAF sought bombers and fighter jets to support their air support directive. Bombers served as an important delivery platform for strategic nuclear weapons. Fighter jet R&D focused on developing aircraft that were faster than the speed of sound with nuclear payloads that could penetrate hostile environments for an increased amount of time (Lorell and Levaux, 1998, p. 51).

Developing supersonic jets in the early 1950s was largely due to advancement in "jet turbine engine power and efficiency, the advent of the afterburner, and resolution of the basic aerodynamic design problems posed by very-high-speed flight led to an explosion in aircraft speed and altitude capabilities. Compared to first-generation jets, second- and third generation fighters and bombers became ever faster, higher-flying, heavier, and larger" (Lorell and Levaux, 1998, pp. 51–52). For example, a first-generation fighter jet was the Lockheed F-80[1] and it was slightly more than 100 miles per hour faster than existing fighters. The F-102A tested at Mach 1[2] and its successor, F-106A, tested at nearly Mach 2. By the end of the 1950s, the USAF was funding R&D for interceptors with speeds up to Mach 3 (Lorell and Levaux, 1998, pp. 51–52).

Technological demands for supersonic flight and weapon system development prompted McDonnell and Convair to enter into and lead in fighter development. North America, Republic, and Lockheed had been the leaders in USAF fighter development during WWII. Grumman remained a leader for Navy fighters but McDonnell moved into prominence (Lorell and Levaux, 1998, pp. 54, 57). Convair became a "new leader, but its predecessors—Consolidated and Vultee—played important roles during WWII in bomber and fighter development" (Lorell and Levaux, 1998, p. 78). Convair beat out all the USAF fighter contractors to secure the contract for the "ultimate" supersonic fighter. It first developed as the interim F-102 and then completed the contract as an advanced "ultimate" F-106 (Figures 4.2-1 and 4.2-2) (Lorell and Levaux, 1998, pp. 54, 57).

The F-102 program was the first USAF program that included integrated weapons systems and it was the first that relied on guided missiles (USAF Association, 1997, p. 53). Convair first flight tested the aircraft on October 24, 1953, at Edwards AFB and the Air Defense Command assigned them to squadrons in 1956. The highest deployment was the late 1950s when the aircraft served 25 Air Defense Command squadrons. The F-102 *Delta Dagger* or "Deuce" was "the world's first supersonic all-weather jet interceptor and the USAF's first operational delta-wing aircraft" (National Museum of the USAF, 2015).

[1] The "F" designation stands for "fighter."

[2] Mach 1 is equal to the speed of sound in air.

Figure 4.2-1 F-102 Delta Dagger
Courtesy of the 456th Fighter Interceptor Squadron.

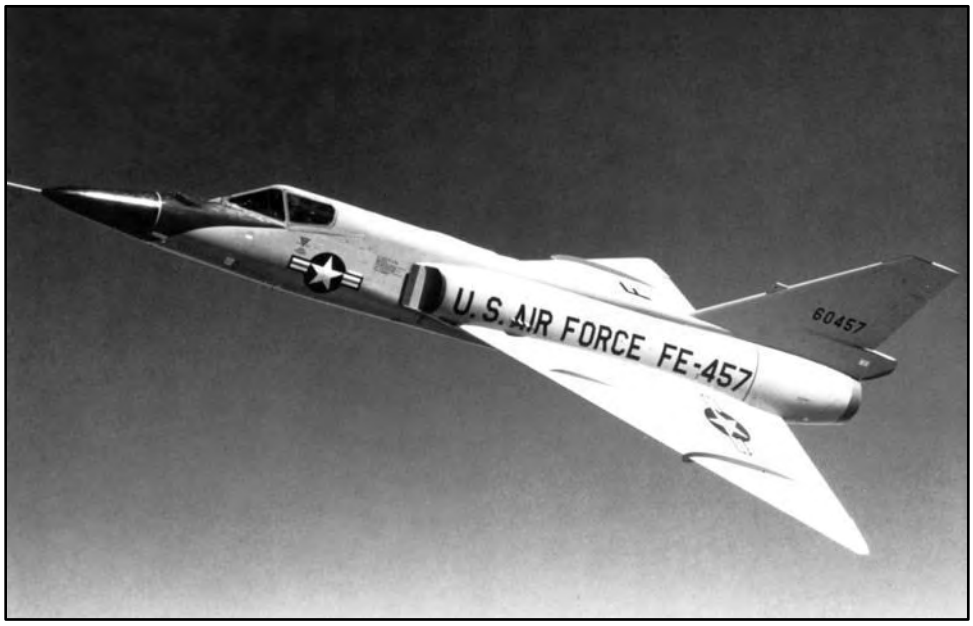

Figure 4.2-2 F-106 Delta Dart
Courtesy of San Diego Air and Space Museum.

Convair won two delta-wing contracts, one for the Navy and one for the USAF, based on earlier R&D completed at Convair's Lindbergh Field. The Navy awarded the contract to Convair for two seaborne delta-wing fighter prototypes (XF2Y) in January 1951. Convair won the F-102 contract in July 1951 beating out entrenched USAF contractors as well as Navy contractors, Vought, and Douglas (Lorell and Levaux, 1998, pp. 59–62). Convair had "firm-specific capabilities in supersonic flight that other contractors did not possess. Thus, a company with relevant firm-specific capabilities could have an advantage over another company with as much system-specific experience in the old technologies" (Lorell and Levaux, 1998, p. 54).

Advancing the interceptor to USAF specification proved difficult. Langley researcher Richard T. Whitcomb recommended fuselage reduction in the shape of a "Coke bottle" that fixed some of the developmental delays (Bilstein, 1989). Convair produced the prototype in 117 days (USAF Association, 1997, p. 53). The USAF accepted 889 F-102As into service and 111 as trainers (Strategic Air Command and Aerospace Museum, 2020). Developmental problems and delays in meeting the USAF's high-level requirement stage of "ultimate interceptor" meant the F-102B program became a new R&D effort for a significantly more modified version of the F-102. The redesigned new fighter became the "ultimate interceptor," Convair F-106 *Delta Dart* (Lorell and Levaux, 1998, p. 62).

Convair's first F-106 flight test was December 26, 1956, and it entered service in July 1959. The last was delivered in 1961. It carried four guided and one unguided air-to-air missiles and could be computer flown for most of its flight using the Semi-Automatic Ground Environment defense system. During the 1960s, 1970s, and into the 1980s, the F-106 served as the primary alert interceptor for potential Soviet bombers. The F-16 eventually replaced it (McGee, 2020).

By the late 1950s, many saw North American as the USAF's leading contractor for both bombers and fighters. Yet by the end of the decade Convair was recognized for both its supersonic fighters (F-102/F-106 manufactured at Plant 2) and bomber (B-58 manufactured at Fort Worth), outpacing Lockheed (Lorell and Levaux, 1998, pp. 54–55). The delta-wing design of the F-102 and F-106 was an important technological innovation and paramount in the USAF. Although Convair experienced developmental difficulties, experts Mark A. Lorell and High P. Levaux recognized the importance of the aircraft:

> Convair's F-102 and F-106 were procured in large numbers and served as the backbone of the USAF interceptor force. They represented the first attempt to develop a fully integrated and automated fighter interceptor weapon system (Lorell and Levaux, 1998, p. 83).

During the 1960s and 1970s, McDonnell emerged as the leader of the U.S. military for fighter development (Lorell and Levaux, 1998, p. 57). While some military contractors also developed commercial aircraft, only prime contractors Convair, Lockheed, and Douglas became major producers of large commercial aircraft. Of those,

> only Convair could be considered a first-rank fighter supplier by the late 1950s. Yet Convair's major airliner programs—the 880 and 990 transports—proved to be commercial failures. Douglas had essentially withdrawn from fighter R&D at the time the DC-8 was proving to be a successful commercial jet airliner program. Boeing, building on its experience with subsonic jet bomber and military transport development (B-47, B-52, C-135), began emerging as the leading developer of the new generation of commercial jet transports (Lorell and Levaux, 1998, p. 83).

The last F-102s were used in the U.S. Air National Guard and those were phased out in 1976. The F-16s largely replaced the F-106s in 1988 (USAF Association, 1997, p. 53). Supersonic aircraft secured Convair's position in advanced technology development during the Cold War-era and well-positioned the company for development opportunities in space travel for manned flights, military R&D, and satellites.

4.2.2.3 *ICBM to Space Launch Vehicles: Atlas, Centaur, and Space Shuttles*

Atlas

Developed as the first U.S. ICBM, the *Atlas* was the first ICBM put on full combat alert (1959) and served as an important deterrent during the Cold War (Figure 4.2-3) (Powell, 2009). Its success as an ICBM was limited as it was never fired at formidable targets.

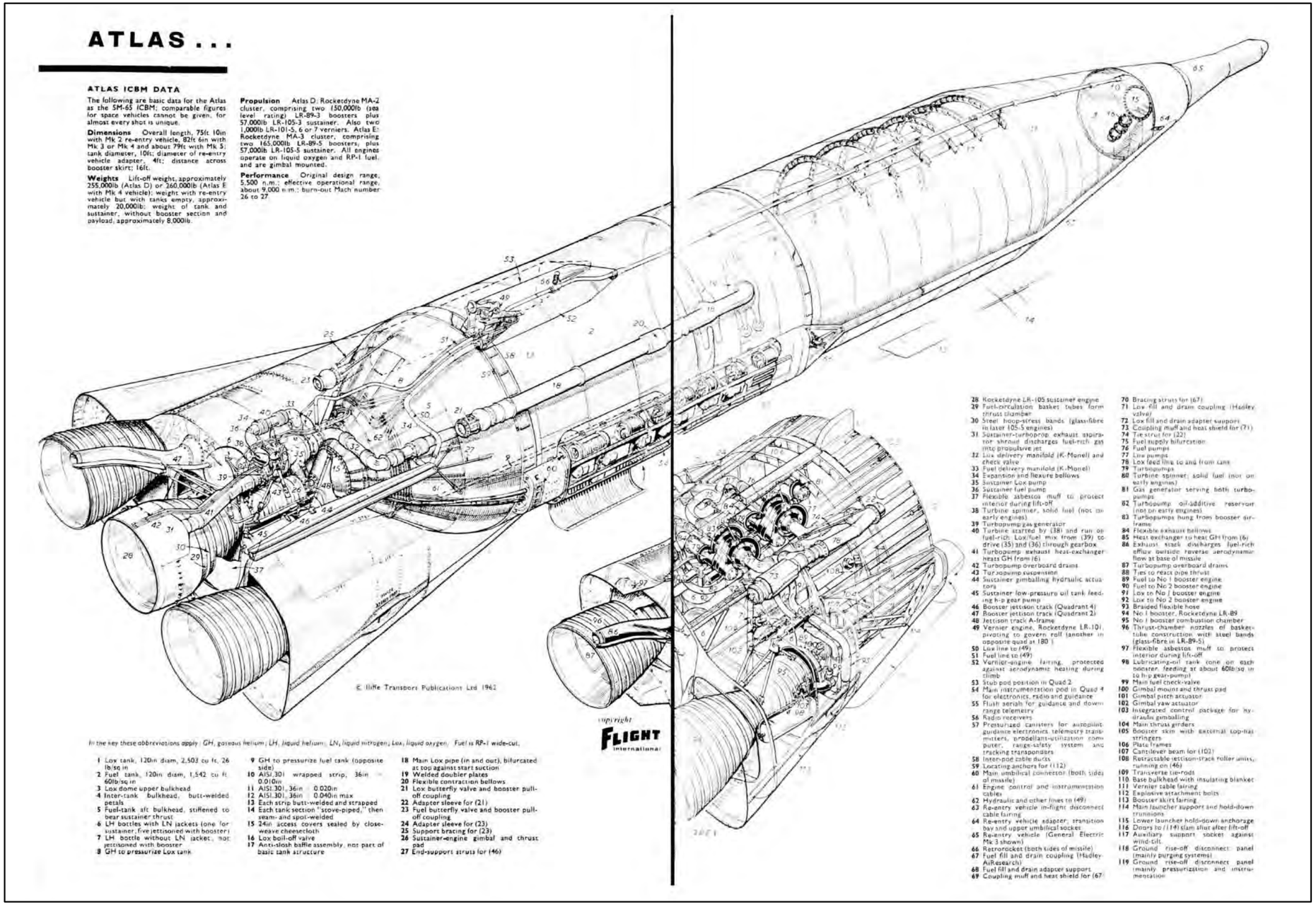

Figure 4.2-3 Diagram of the SM-65 Atlas ICBM. 1962
***Courtesy of* Flight International.**

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They were positioned for launch between 1959 and 1965 before being phased out by other advancing technology (*Titan* and *Minuteman*) (Powell, 2009; Gainor, 2018). Aerospace engineer Dennis R. Jenkins argued that, "ballistic missiles would become the largest and most important defense project of the cold war [*sic*] and eventually led to successful space launch vehicles" (Jenkins, 2002, p. 72).

The technological significance of the *Atlas* lies in its application to rocket systems that spanned from *Titan* to *Saturn* with its foundation for launch vehicles being paramount. Consolidated Vultee Aircraft Corporation (Consolidated Vultee), later known as Convair, developed and manufactured the *Atlas.*

Consolidated Vultee's Belgian-born Karel J. "Charlie" Bossart proposed the development of a subsonic turbojet-powered winged cruise missile and a ballistic missile in January 1946 (Jenkins, 2002, p. 72). Bossart also worked with the engine manufacturer, Reaction Motors, for a new technique in U.S. rocketry that was the precursor for the gimbaled engine that was used for the *Atlas* and other missiles. Work on the ballistic missile at Consolidated Vultee began in June 1947 while Northrop and Martin worked on the subsonic jet-powered design.

Originally the MX-774B (named according to a letter and number system) was intended to be an improved version of the German V-2 rocket but Bossart's "balloon" propellant tank construction made it significantly advanced. One of the important innovations was the pressure-stabilized, single-wall construction of the propellant tanks that comprised most of the airframe. The tanks were "so thin that they could not support their own weight unless they were pressurized, but the construction technique promised to greatly rescue the empty weight of the airframe, thereby maximizing the missiles payload capacity" (Jenkins, 2002, p. 72). These tanks had to be pressurized with propellants (for those in operation) or inert gases (for storage) because they could not support themselves. The flawless first launch was July 14, 1948, which provided Consolidated Vultee a great deal of information it would use later. However, budget constraints prompted reassignment of the project as low priority (Jenkins, 2002, pp. 72–73).

Funding significantly increased in the wake of the first Soviet Union atomic weapon detonation (1949) and the Korean War (1950–1953). The USAF, which had become its own branch of the military in 1947, focused on developing ICBMs that could deliver an atomic warhead many thousands of miles away. Consolidated Vultee won the contract for MX-1593 in January 1951 and began developing the ballistic version of the missile as XB-65/XB-65A/XSM-65A, named *Model 7* within Convair as an *Atlas* Series A (Jenkins, 2002, pp. 74–75, 77).

In response to the Soviet Union's test of a hydrogen bomb in August 1953, the USAF gave the *Atlas* its highest priority. Consolidated Vultee was renamed Convair Division of General Dynamics and became the prime contractor for design and manufacturing of the airframe and basic vehicle (Jenkins, 2002, pp. 75–76). Rocketdyne Division of North American Aviation manufactured the propulsion system, General Electric manufactured the airborne and ground portions of the guidance system, and Burroughs Corporation provided the A-1 Computer for inflight guidance in conjunction with the General Electric system (Williams et al., 1963). For the General Dynamics part of the *Atlas* task, the Astronautics division utilized resources from "more than 3,000 subcontractors and suppliers in 41 states" (General Dynamics, 1963).

Unsure of the use of the viability of the pressurized tank for an ICBM, work on the *Titan* began at Martin. The unique tanks had transitioned from aluminum alloy to stainless steel, which would remain an essential component for reducing weight in the manufacturing process and later aiding space launch vehicles (Jenkins, 2002, pp. 75–76). The USAF authorized full-scale development of Weapon System WS107A-1 as missile B-65. Testing at Cape Canaveral in Florida began in June 1956. The first non-flight-rated *Atlas* A had been manufactured in August 1956 and was tested at the Sycamore Canyon site in San

Diego for static ground tests. The *Atlas* A left San Diego on October 1, 1956, for the test range at Cape Canaveral. The first flight-rated *Atlas* A arrived at Cape Canaveral in December 1956 and launched June 11, 1957. The pressure-stabilized propellant tanks performed flawlessly but much of the rest of the system did not (Jenkins, 2002, p. 77).

Sputnik I's orbit on October 5, 1957, further accelerated the ICBM program with the expectation that both the *Atlas* and *Titan* would support four squadrons by December 1962. However, neither ICBM had a completely successful flight (Jenkins, 2002, p. 78). After the deployment of *Sputnik 3*, President Eisenhower authorized the launch of the U.S. Army's Signal Communications by Orbiting Relay Equipment (SCORE) aboard the Atlas B (10B). SCORE was the largest orbited manmade object and the *Atlas* 10B was the first orbital delivery by an *Atlas*. SCORE broadcasted President Eisenhower's Christmas message of goodwill on December 18, 1958 (Jenkins, 2002, pp. 78–79). This *Atlas* B was manufactured at General Dynamics Convair Division San Diego. As *Atlas* work grew, the Convair Division specifically constructed the Kearny Mesa plant for engineering and manufacturing the *Atlas* ICBM weapons. The *Atlas* C was never used as an ICBM or for space launches (Jenkins, 2002, p. 79). *Atlas* D series were the first operational *Atlas* ICBMs, known as SM-65D, with a squadron at Cooke AFB (now Vandenberg AFB) on July 1, 1957 (see Figure 4.2-3) (Jenkins, 2002, p. 80).

On January 1, 1962, the USAF contracts with General Dynamics were converted to NASA contracts with a program office in Huntsville, Alabama (Dawson, 2002, p. 343). General Dynamics saw its *Atlas* as:

> the free world's first extensively tested ICBM, and the first to launch itself into orbit (Missile 10-B), *Atlas* is a workhorse of the early space age. Missions accomplished or underway include: Project Mercury, the United States' man in space program. The manned spacecraft was developed by McDonnell Aircraft Corporation and boosted into orbit by *Atlas*. On 12 February 1962, an *Atlas* successfully launched Astronaut John Glenn on the free world's first earth orbital flight. Glenn made three complete trips around the earth. On 24 May 1962, an *Atlas* placed Astronaut M. Scott Carpenter into orbit, duplicating Glenn's achievement. Astronaut Walter Schirra was *Atlas*-boosted on 3 October 1962, completing six earth orbits. Project Mercury was concluded with a 22-orbit journey by Astronaut L. Gordon Cooper, whose spacecraft was placed into orbital path by an *Atlas* on 15 May 1963 (Jenkins, 1963).

The *Atlas* E was deployed from 1961 to 1965 distinctive from the *Atlas* D for its guidance system. The *Atlas* F was an improved version of the guidance system in the *Atlas* D, and it was deployed between 1962 and 1965. The *Atlas* ICBM retirement began in 1965, replaced by the USAF's ICBM *Minuteman*. Thereafter, they were stored at Norton AFB in California or used as targets for other developing weapons systems (Jenkins, 2002a, pp. 81–82; Jenkins 2002b, p. 84). In January 1967, General Dynamics began converting retired *Atlas* D and E missiles into launch vehicles (Jenkins, 2002, p. 86).

NASA largely used *Atlas* Ds as space launch vehicles. Initially, ICBM *Atlas* Ds were modified on the assembly line by the General Dynamics Astronautics Division (designated LV-3) for specific space launch missions (Figure 4.2-4). That expensive and complex process was replaced with a 1962 USAF contract to the Convair Division San Diego to develop the standardized launch vehicle (SLV-3) that was based on the *Atlas* D such as *Atlas-Able*, *Atlas-Vega*, *LV-3A-Agena A*, *LV-3A Atlas-Agena*, *SLV-3A Atlas-Agena D*, *LV-3C Atlas-Centaur* (the first version of the *Atlas* with a *Centaur* upper stage), *SLV-3 Atlas*, *SLV-3 Atlas-Agena B*, *SLV-3 Atlas-Aegna D*, *SLV-3A Atlas-Agena*, *SLV-3C Atlas-Centaur*, *SLV-3D Atlas-Centaur*, and *Atlases G* and *H* (SLV-3D) (Figure 4.2-5) (Jenkins, 2002b, pp. 86–88).

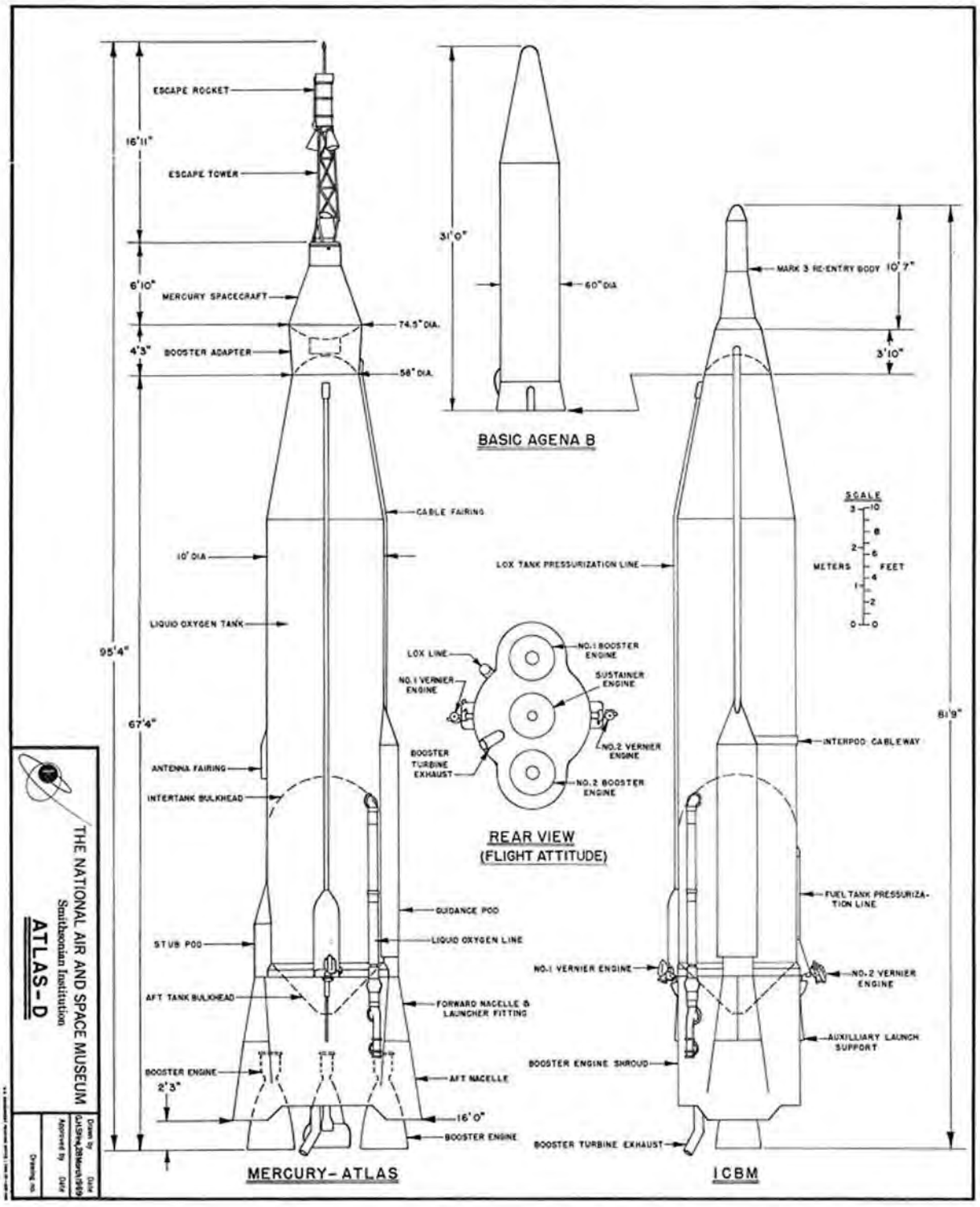

Figure 4.2-4 Drawings Show Differences between the Atlas D Used for Project Mercury and the Atlas D as an ICBM

Courtesy of the National Air and Space Museum.

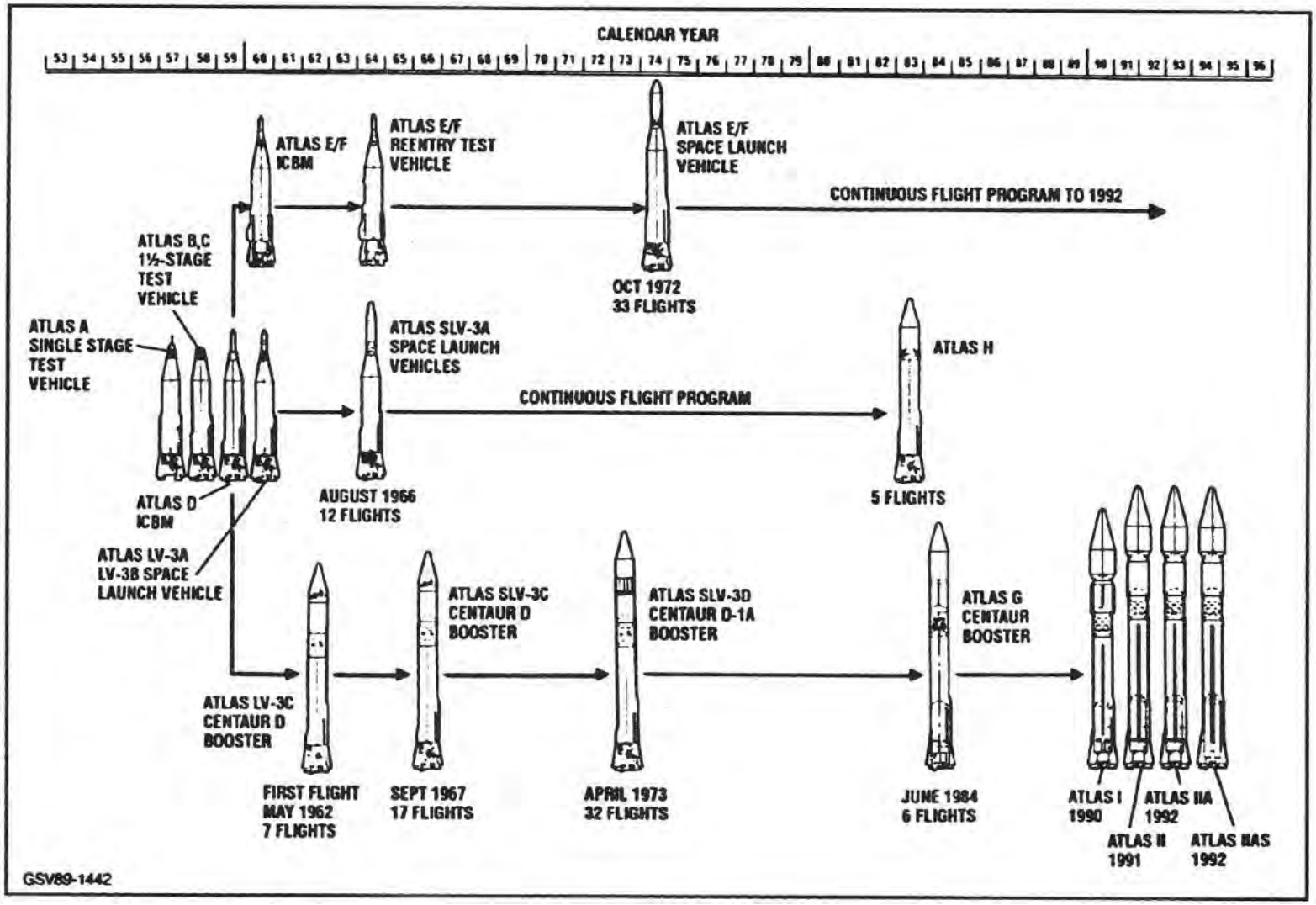

Figure 4.2-5 Atlas Development Over the Years

Courtesy of NASA in Dennis J. Jenkins,* To Reach the Higher Frontier: A History of U.S. Space Launch Vehicles*, p. 76.

Atlas successfully launched satellites and spacecrafts for programs such as: Samos, Midas, Ranger, Mariner, Pioneer, Intelsat, the Fleet Satellite Communications System, the Defense Meteorological Satellite Program, and the Navstar Global Positioning System (Hundley, 2008, p. 83). According to Dennis Jenkins, "Surprisingly, given the spotty success record they [*Atlases*] had experienced as [tested] ICBMs, they performed nearly flawlessly as space launch vehicles" (Jenkins, 2002a, p. 82). Chief Historian of NASA's Dryden Flight Research Center praised the *Atlas* as a "versatile launch vehicle" that could be mated with a variety of upper stages with attributable success to Bossart's balloon tank design that made both the *Atlas* and the *Centaur* "adaptable and effective" (Hundley, 2008, p. 125).

General Dynamics remained the primary contractor for *Atlas* manufacturing. The nature of the work began to transition when General Dynamics won a contract with the USAF for a commercial expendable launch vehicles program. The program included *Atlas I-V* though General Dynamics only developed *Atlas I/II/IIA/IIAS* (Jenkins, 2002b, p. 92). *Atlas V* was not an advancement of the original, but a new version of *Atlas* and its primary manufacturing was Lockheed Martin Astronautics in Denver, Colorado. However, the San Diego Division of General Dynamics continued to manufacture the tanks, but they were no longer pressure-stabilized tanks (Jenkins, 2002b, pp. 98–99). The Aerospace Division was later purchased by Martin Marietta in 1994 who later merged with Lockheed Martin.

Centaur

According to Aerospace Historian J. D. Hundley, the upper stage space launch *Centaur*, and partially the *Agena*, made the greatest contributions to major space missions, especially launching spacecraft (Hundley, 2008, pp. 125–126). As the first space launch vehicle to use liquid hydrogen and liquid oxygen as fuel, the *Centaur* was mated with the *Atlas* (first stage) and together they were expected to place a four-and-a-half ton payload into orbit or a half-ton payload to Venus or Mars (Figure 4.2-6).

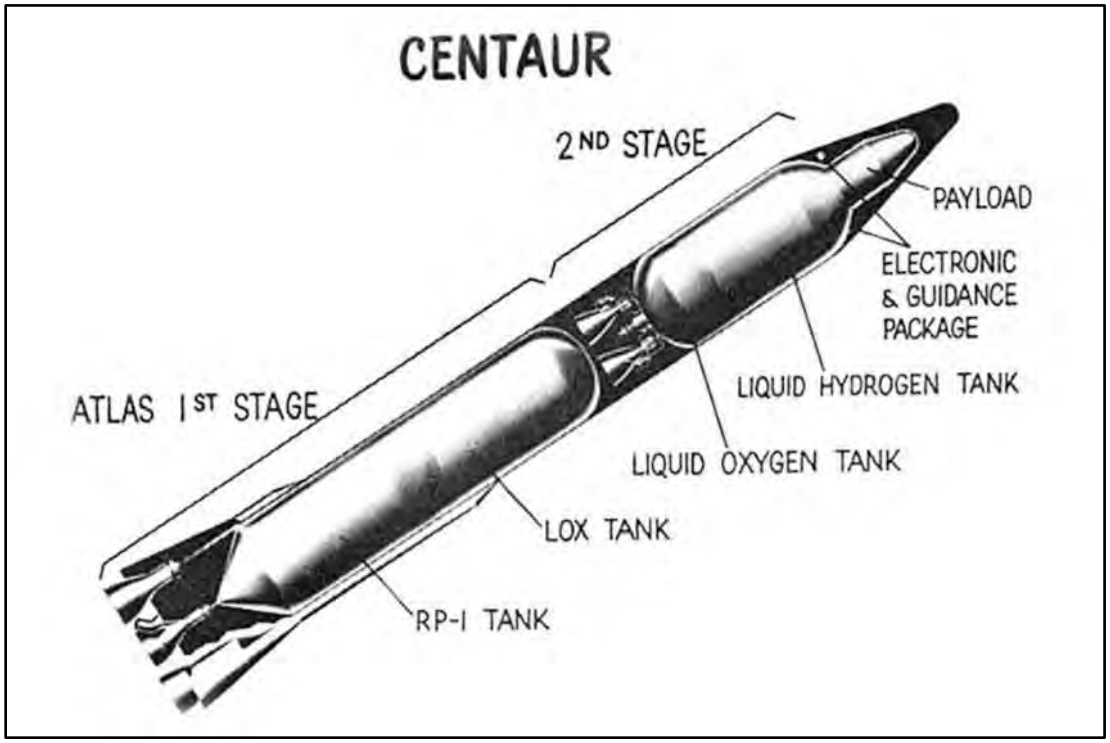

Figure 4.2-6 Cutaway Shows the First Stage, *Atlas,* and Second Stage, *Centaur*
Courtesy of Convairiety, San Diego Edition. April 27, 1960, p. 8.

The *Centaur* had the unique capability to operate intermittently and wait in space until the vehicle was in the best position and could restart its engines when needed to head to its final target (*Convairiety*, 1960, p. 1). In November 1963, the launch of the *Atlas-Centaur* was the first in flight ignition of a LO2/LH2 engine. In 1965, it launched the *Surveyor* spacecraft as the first "human artifact to land upon the lunar surface." In the 1970s success included *Viking* missions to Mars, *Mariner* trips to Venus and Mercury, the *Helios* solar probe, *Pioneer* flybys of Jupiter and Saturn, and *Voyager* flights into the solar system and beyond. The *Centaur* showed its wide capability for exploration and satellite launches (Bowles, 2002, pp. 415–416).

Centaur launched communication satellites into orbit 22,000 miles above the Earth. In the late 1960s, *Atlas-Centaurs* made possible the launching of the Application Technology Satellites. In the 1970s and 1980s, other communications systems followed such as Spain's Instituto Nacional de Tecnica Aerospacial Satélite, Comstar, and Fleet Satellite Communications System (FLTSATCOM), which became "key links in the world's communication network" (NASA, 2017). On September 25, 1989, an *Atlas* G-*Centaur* launched the Navy's 5,100-pound FLTSATCOM F-8 satellite into orbit. It completed the worldwide communications system for the DoD (Hundley, 2007, p. 67).

The *Centaur*, like the *Atlas*, utilized Bossart's pressure-stabilized tank. Despite initial skepticism, it had 42 consecutive successful launches between 1971 and 1984. According to Hundley, "The *Centaur* had led to the use of liquid hydrogen technology on both upper stages of the *Saturn* launch vehicle and in the space shuttle main engines. It had thus made major contributions to the U.S. launch vehicle technology" (Hundley, 2007, p. 67). Beginning in the 1970s, expendable space launch vehicles became increasingly less desirable with the advancements of the space shuttles and declining funding for space. To revamp the *Centaur*, deemed by some as the "world's most powerful upper stage rocket," General Dynamics and the NASA Lewis Research Center attempted to redesign it for launch from the space shuttle (*Centaur*-in-shuttle project) during the 1980s. Ultimately that program proved unsuccessful and NASA canceled it in 1986 (Bowles, 2002, pp. 416, 418–420).

Space Shuttles

To reduce costs, the Convair Division of General Dynamics began studying reusable *Atlases* as part of the USAF SR-89774 study (1957–1965). Boeing (*Saturn*) and Martin Marietta (*Titan*) also conducted similar studies. No reusable *Atlases, Saturns*, or *Titans* were built but the study outcomes showed reusable boosters could reduce costs (Hundley, 2007, p. 92). In the midst of funding shortages, R&D efforts shifted away from using those vehicles toward reusable space shuttles or orbiters that became the main vehicle for NASA's Space Transportation System (Figure 4.2-7). They were approximately the size and weight of a DC-9 plane with pressurized crew compartments, a cargo bay, and three main engines. The forward fuselage contained the cockpit, living quarters, and experiment operator's station (NASA, 2020a).

On January 5, 1972, President Nixon announced NASA's endeavor to construct the space shuttle as part of the Space Transportation System (NASA, 2020b). NASA's first orbiter was the prototype *Enterprise* (OV-101) (NRHP, 2020; NASA, 2020c, 2020d; Jenkins, 2002c, p. 377). Five reusable space shuttles were built for NASA by contractors between 1974 and 1990 that included: *Enterprise* (OV-101), *Columbia* (OV-102), *Challenger* (OV-99), *Discovery* (OV-103), *Atlantis* (OV-104), and *Endeavor* (OV-105) (NRHP, 2020; NASA, 2020c, 2020d; Space.com, 2020). The primary contract for manufacturing the orbiters was awarded to North American Rockwell Corporation in Downey, California, on July 26, 1972 (NASA, 2020b). The five orbiters each had to be capable of 100 missions (Jenkins, 2002c, p. 377).

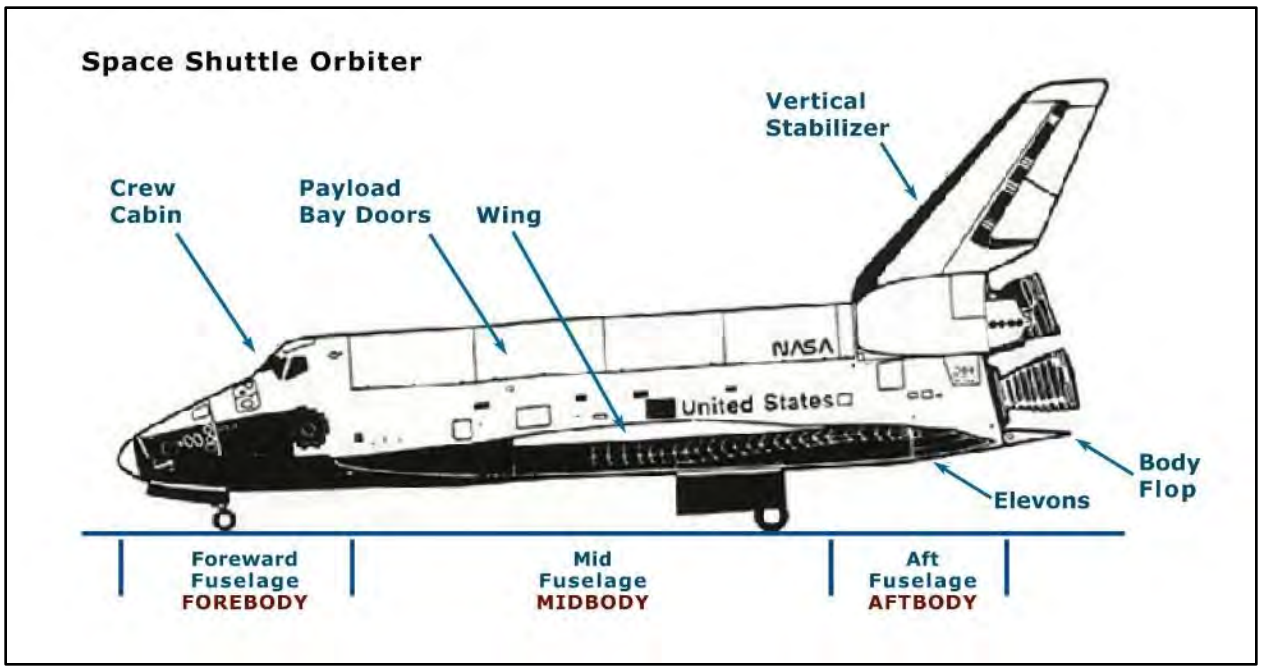

Figure 4.2-7 NASA Diagram Showing the Major Body Parts of the Space Shuttle Orbiter
Courtesy of NASA.

On March 29, 1973, the four major subcontracts were let to Fairchild Republic Division of Fairchild Industries, Inc. for the vertical tail unit; Grumman for the double delta wings; Convair Aerospace Division of General Dynamics for the Mid-Fuselage, and McDonnell Douglas for the orbital maneuvering system (NASA, 2020e). Manufacture of components at Rockwell's Downey plant began June 4, 1974 (NASA, 2020b). Construction of the mid-fuselage took place at USAF Plant 19.

In March 1975, two important milestones for the Space Shuttle Program were the completion of the Integrated Subsystem Test Bed engine and the first mid-fuselage for the *Enterprise* that was sent to the Rockwell assembly plant in Palmdale, California (NASA, 1975, p. 10). In August 1975, the final assembly and mating of the *Enterprise* (OV-101), had begun (Subcommittee on Space Science and Applications, 1983, p. 738). Originally named *Constitution*, a national naming campaign convinced NASA to rename it the *Enterprise* after the space-traveling vehicle in the popular *Star Trek* television series (NASA, 2020b). Assembly of the *Enterprise* was completed on March 12, 1976. On June 18, 1977, the first manned captive active flight occurred for 59 minutes (Subcommittee on Space Science and Applications, 1983, p. 738). The *Enterprise* was carried on a modified Boeing 747 Shuttle Carrier Aircraft. The test proved that the orbiter could fly in the atmosphere and land like a glider through approach and landing tests (Memi, 2006; NRHP, 2020; NASA, 2020c, 2020d; Jenkins, 2002c, p. 377). The *Enterprise* was listed in the NRHP in 2013, and was located on the flight deck to the former USS *Intrepid* moored at Pier 86 in Manhattan, New York (Memi, 2006).

The *Enterprise* tests led to the design of the *Columbia* (Memi, 2006; NRHP, 2020; NASA, 2020c, 2020d; Jenkins, 2002a, p. 77). According to Tom Moser, Deputy at NASA headquarters at that time, "Columbia and the whole orbiter evolved like any aircraft program or spacecraft program does; as you design it and develop it, you learn more about it" (Subcommittee on Space Science and Applications, 1983, p. 738). On March 3, 1978, *Columbia* (OV-102) was completed (NASA, 2020e). It became the first orbiting space shuttle on April 12, 1981 (Memi, 2006; NRHP, 2020; NASA, 2020c, 2020d; Jenkins, 2002a, p. 77).

Contractors largely remained the same for all five space shuttles. General Dynamics' USAF Plant 19 manufactured the Mid-fuselage for the *Enterprise* (OV-101), *Challenger* (OV-99), *Columbia* (OV-102), *Discovery* (OV-103), *Atlantis* (OV-104), and the *Endeavor* (OV-105). The *Columbia*'s primary mission was to carry cargo into space, which was the primary purpose of the mid-fuselage as it housed the cargo. It held the Spacelab (a reusable laboratory), experiments, and a large telescope, and it was hoped that someday it would release the *Centaur* as a payload to explore deep space as part of the unsuccessful Centaur-in-shuttle project. It also supported the payload bay doors, hinges, support fittings for payload, forward wing glove, and orbiter subsystem components (*New York Times*, 1986, p. A-19).

4.2.3 Consolidated Vultee Aircraft Corporation/Convair/General Dynamics (1950–1994)

Consolidated Aircraft Corporation merged with Vultee Aircraft on March 17, 1943 and became Consolidated Vultee Aircraft Corporation. Many referred to the company as Convair (Consolidated Vultee Aircraft) even though it was not officially known as such until April 29, 1954, when it became the Convair Division of the General Dynamics Corporation. The company was often referenced as CVAC or CONVAIR. Convair was one of the most significant Cold War R&D companies in the U.S.

4.2.3.1 *Convair's Guided Missile Division and the Terrier (1950–1953)*

Convair's Guided Missile Division played an important role within the company as the primary R&D division that produced missile weaponry for the Navy (Kuranda et al., 1995, p. 38; Friedman, 1984). The *Terrier* was one of Convair's most significant early R&D and manufacturing achievements (Kelley, n.d., pp. 18–26). *Terrier* was the first guided sea-going anti-aircraft missile. By late 1949, the missile was in "production prototype stage" and the Navy contracted with Convair to build 50 prototypes. The first experimental *Terrier* missiles were tested in early 1950 at the Naval Ordnance Test Station in China Lake. In May 1950, the Navy issued requirements for an advanced design, *Terrier II*. The Navy's *Terrier* and *Sparrow* missile programs were accelerated in response to the Korean War (1950), and *Terriers* were installed on two WWII heavy cruisers (Kelley, n.d., pp. 18–26).

From 1950 to 1953, R&D for the *Terrier* prototype was conducted at Plant 2 (Kelley, n.d., pp. 18–26). By the Fall of 1950, part of Building 3 was used for *Terrier* manufacturing and R&D (*Convairiety*, 1951a, 1951b; Consolidated Vultee Aircraft Corporation, 1953). Convair's Guided Missile Division conducted that work and also trained Navy personnel at Building 3 (Deputy Chief of Naval Operations and Commander, Naval Air Systems Command, 1981, p. 192). By early 1951, the Navy selected Convair to operate a new *Terrier* facility in Pomona (Kelley, n.d., pp. 18–26). Prior to that point, Convair's employees in Pomona had solely worked on R&D, not manufacturing (Odlum, 1953).

Ground broke on the Convair-owned Pomona site on August 6, 1951, and the engineering building was ready for preliminary use on July 31, 1952 (Odlum, 1953). It was constructed under the Naval Bureau of Ordnance as the "first fully integrated missile production center in the U.S." (*General Dynamics News*, 1962a). The Pomona plant was fully operational by March 1953 and became the new home for Convair's Guided Missile Division so that Plant 2 could be dedicated to F-102 manufacturing (*Convairiety,* 1952a; Odlum, 1953).

4.2.3.2 *Convair/General Dynamics at Plant 2/USAF Plant 19 (Fall 1950–1994)*

1950s

In the early 1950s, Plant 2 transitioned from non-military functions to military manufacturing. Charles Carlstrom (through the Greater San Diego Development Company) still owned most of Plant 2, having acquired it after WWII. Building 24 was Carlstrom's office, and he also utilized Building 26. Carlstrom leased portions of the plant to a variety of businesses that included automobile manufacturing, van and storage, and flooring (GSA, 1952). Building 27 (old cafeteria) was a retail furniture store. Building 28 was

a donut shop and storage. Other entities, like the Church of God, may have utilized parts of Buildings 2, 3, and 4 (GSA, 1950, 1954).

Carlstrom leased Buildings 2, 3, and 4 to Convair by at least January 16, 1952 (GSA, 1952). Convair did not utilize the TSC buildings for warehousing as the Navy still held it under permit (*Convairiety,* 1952d). Convair's San Diego Division supplied employment for one-sixth of the employed population in the City of San Diego, while largely working on high-priority military projects (*Rivet Convair,* 1950). Women continued working in manufacturing into the post-WWII period with women like Tess Lawson and Mickey Wheatley who worked at Plant 2 (*Convairiety,* 1951c).

In 1951, manufacturing began at Plant 2 for several programs in addition to the *Terrier* missile, specifically T-29s, Navy Flying Boats, and the B-36 modernization program for the Fort Worth plant (*Convairiety,* 1951e, 1951f). Component assembly for the B-36 program was likely conducted in Building 3. Operations at Building 3 also included major and sub-assembly work on wing and fuselage assembly of T-29 aircraft (*Convairiety,* 1951f). By at least October 1951, Convair was also using Building 4 at Plant 2 (*Convairiety,* 1951c). Plant 1 was used for commercial production with the first 340 *Convair-Liner* aircraft produced for United Airlines (*Convairiety,* 1951d).

In the summer of 1952, Plant 2 was once again used for parts fabrication as it had been used during WWII, but this time for the T-29B program. In Building 1, fabrication machinery was installed, and sheet metal work was underway. A bench department, machine shop, and welding section were slated for addition. In Building 7, processing, and painting were planned. Parts were built at Plant 1 soon after the end of WWII but beginning in the early 1950s that responsibility was shared with Plant 2 (*Convairiety,* 1952c). That summer, 3,000 workers were divided evenly between B-36 component work and on some spares for Boeing (B-50) and T-29B component assembly (fuselage, empennage, wings, and control surfaces) (*Convairiety,* 1952b, 1952c). In late 1952, the B-36 modernization program shifted from San Diego to Fort Worth in preparation for incoming work on the F-102 (*Convairiety,* 1952d).

As previously mentioned, Convair was awarded a major USAF contract in 1952 for production of the F-102 supersonic jet interceptor, the first of its kind (see Figure 4.2-1) (Odlum, 1953). The F-102A was produced as an interim aircraft during 1948–1956 while Convair furthered R&D for the aircraft F-102B (renamed the F-106A) (USAF, 1955).

Plant 2 was reestablished as an assembly line manufacturing plant as the primary contractor for the assembly and sub-assembly of the F-102 and later the F-106. It was organized as a semi-parallel organization to Plant 1 (Figures 4.2-8 and 4.2-9) (*Convairiety,* 1952e). While manufacturing development, tooling, manufacturing, and engineering took place at Plant 1, Plant 2 was utilized for production and tooling (Convair, 1954). Convair Fort Worth was responsible for manufacturing forward fuselage sections and many other components (*Convairiety,* 1961) Major and sub-assemblies for the F-102 began at Plant 2 in 1953 (*Convairiety,* 1952a).

The USAF had possession of Plant 2 under a lease agreement as part of condemnation proceedings by May 1953 (*Los Angeles Times*, 1953, p. 42). Under court order, the private companies operating there were required to vacate for the reuse as a manufacture plant for the F-102 (*Weekly Times-Advocate*, 1953, p. 5). Lyon Van and Storage Company and the National Transfer and Storage were the only remaining non-Convair tenants (McNamara, 1954; GSA, 1950; *Convairiety,* 1954a).

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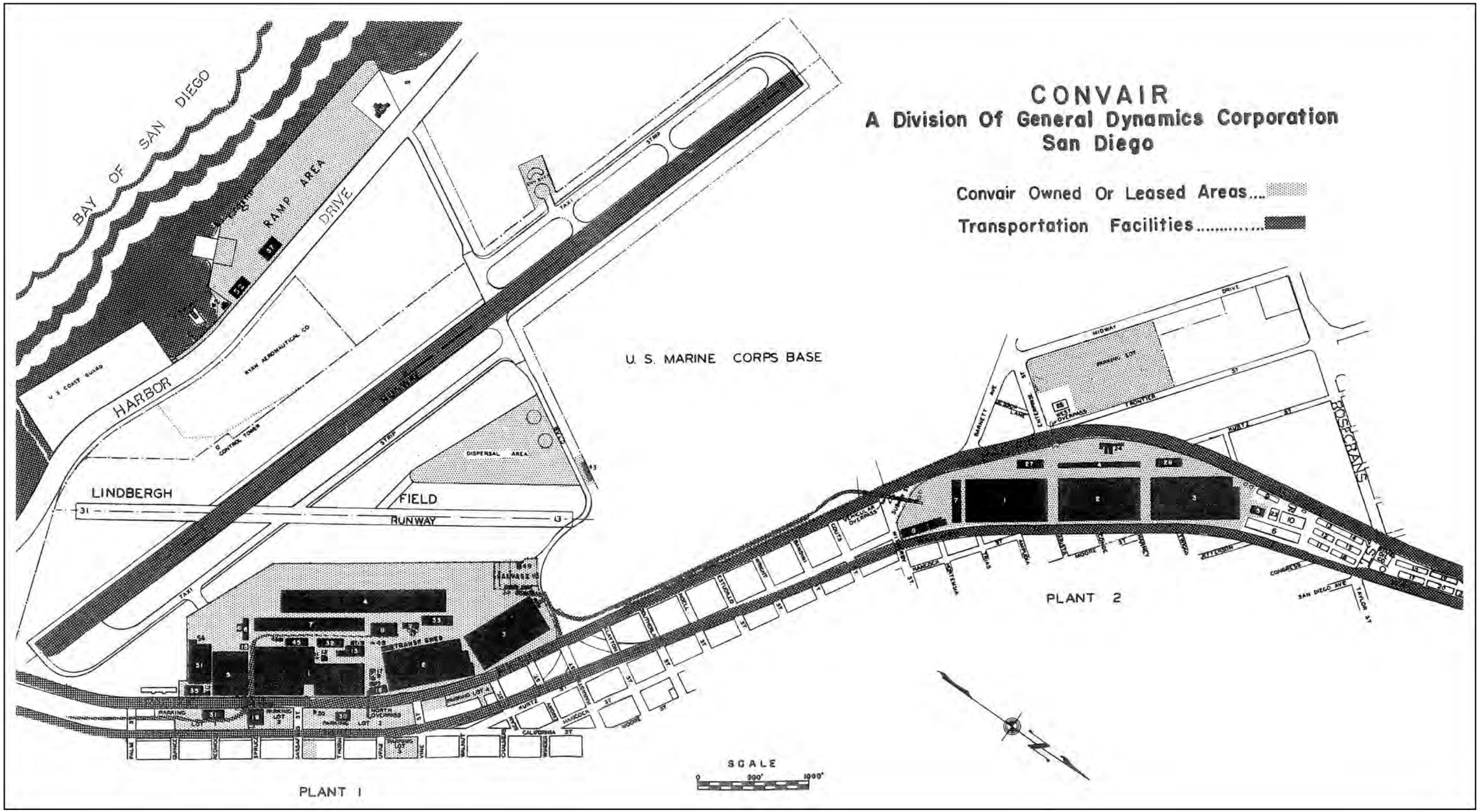

Figure 4.2-8 Map Showing Convair Facilities at Plant 1, Plant, 2, and at the San Diego Bay Harbor
Courtesy of San Diego Air and Space Museum.

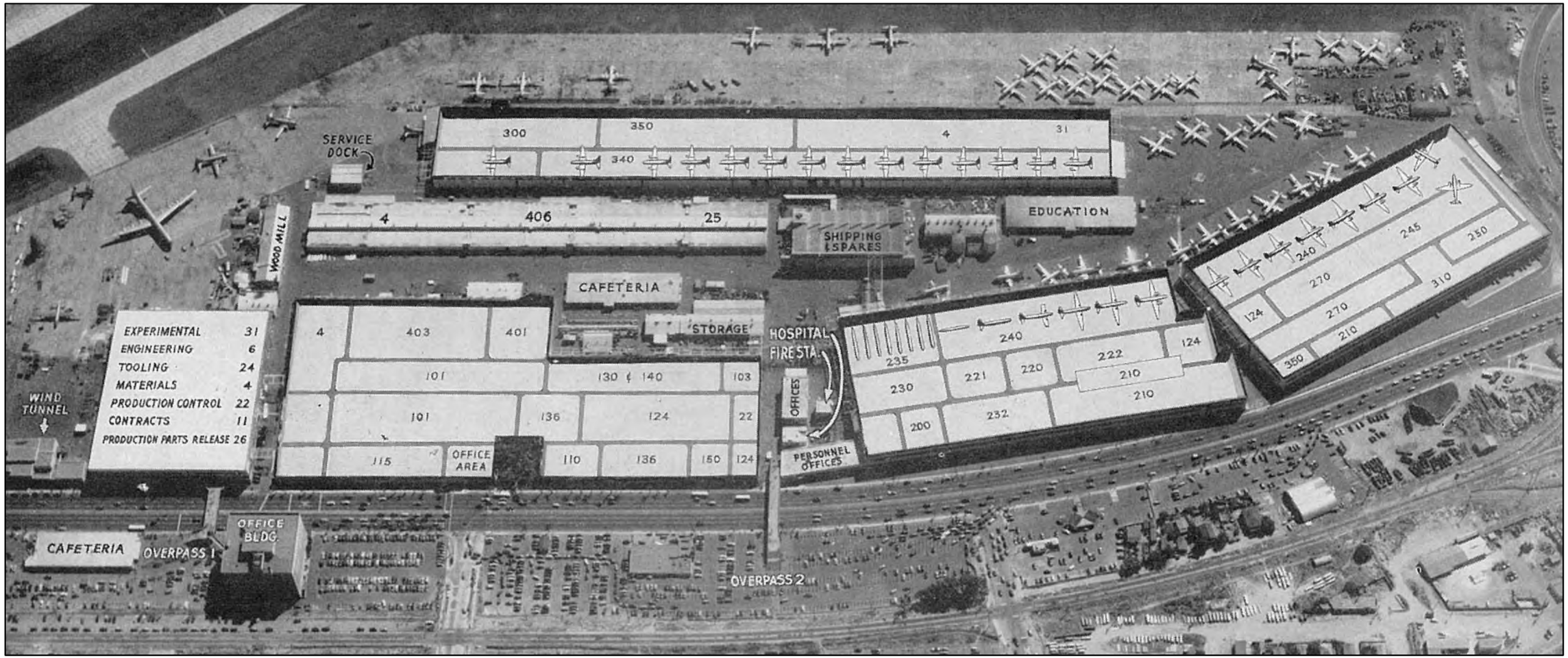

Figure 4.2-9 Layout of Plant 1 that Delineates Divisions within the Buildings for the Departments
Plant 2 was similarly organized. Courtesy of* Convairiety *1948.

By January 1954, nearly all of Plant 2 was utilized with 6,600 employees working on various assemblies of the F-102, T-29C, T-29D, and C-131s. The last of the C-131As (air evacuation transport) and the T-29s were produced in June 1955 (*Convairiety,* 1954b, 1955a). Building 3 specialized in T-29s, Building 7 comprised automatic conveyors and moving belts, and Building 8 was utilized to form metal with large new pieces of equipment (*Convairiety,* 1954b).

R&D on the F-102 had advanced to flight tests at Edwards AFB in the Fall of 1953 (*Convairiety,* 1954c). In 1954, F-102 prototypes were flying. Plant 2 or "experimental factory" had manufactured an improved F-102A, built in 117 days, that had an extended fuselage and redesigned canopy for increased pilot visibility. The USAF accepted the F-102A in June 1955. Thereafter, finishing touches and testing was done at Convair Palmdale (*Convairiety,* 1954d, 1955b).

Since Convair's Plant 2 was reestablished primarily as a contractor for the USAF it became known as USAF Plant 19, and Plant 1 by its alternate name Lindbergh Field (Office of the Los Angeles District Engineer, 1955). Production of the F-102 continued at USAF Plant 19 and included TF-102A for training pilots (*Convairiety,* 1955c). The first TF-102A training plane was manufactured at USAF Plant 19 in October 1955 (*Convairiety,* 1955d). On May 10, 1956, GSA transferred the five TSC buildings to the Corps of Engineers for use by the USAF in conjunction with USAF Plant 19 as storage for the production operations of the F-102 (GSA, 1956a, 1956b).

The first F-106A (previously known as F-102B) accepted by the USAF was manufactured at USAF Plant 19 with assistance from Convair Division at Edwards AFB in final assembly. It departed San Diego on December 14, 1956, on its journey to Edwards AFB (*Convairiety,* 1957a, 1960a).

In 1957, General Dynamics invested $2.5 million for an interior rehabilitation program at USAF Plant 19 to improve changes in production for the F-102, F-106, and *Atlas* (*Convairiety*, 1957b). F-102 production peaked at USAF Plant 19 in 1957 (Figures 4.2-10 through 4.2-13). The F-102 program was replaced with the F-106 (Figures 4.2-14 through 4.2-15). San Diego delivered the first F-106B to Convair Palmdale where electronics were installed and testing completed prior to engineering flights at Edwards AFB (*Convairiety,* 1958a, 1958b).

Also, in 1957, a new subdivision of Convair called Astronautics was established to further develop the *Atlas* missile; Astronautics later became its own division of General Dynamics in 1961. USAF Plant 19 manufactured the unique balloon tanks that set the *Atlas* apart and ultimately made it ideal for space launch vehicles. Growth in the F-106 and *Atlas* missile test program led to hiring more employees, so that more than 6,000 were working at USAF Plant 19 (*Convairiety,* 1958c) (Figure 4.2-16). On July 12, 1958, Astronautics officially opened its Kearny Mesa plant with a dedication ceremony (Figure 4.2-17). Many Astronautics factory personnel transferred to the new plant from Lindbergh Field (Plant 1) (*Convairiety,* 1958d).

Figure 4.2-10 F-102 Assembly Line Showing Delta Wings
Courtesy of San Diego Air and Space Museum.

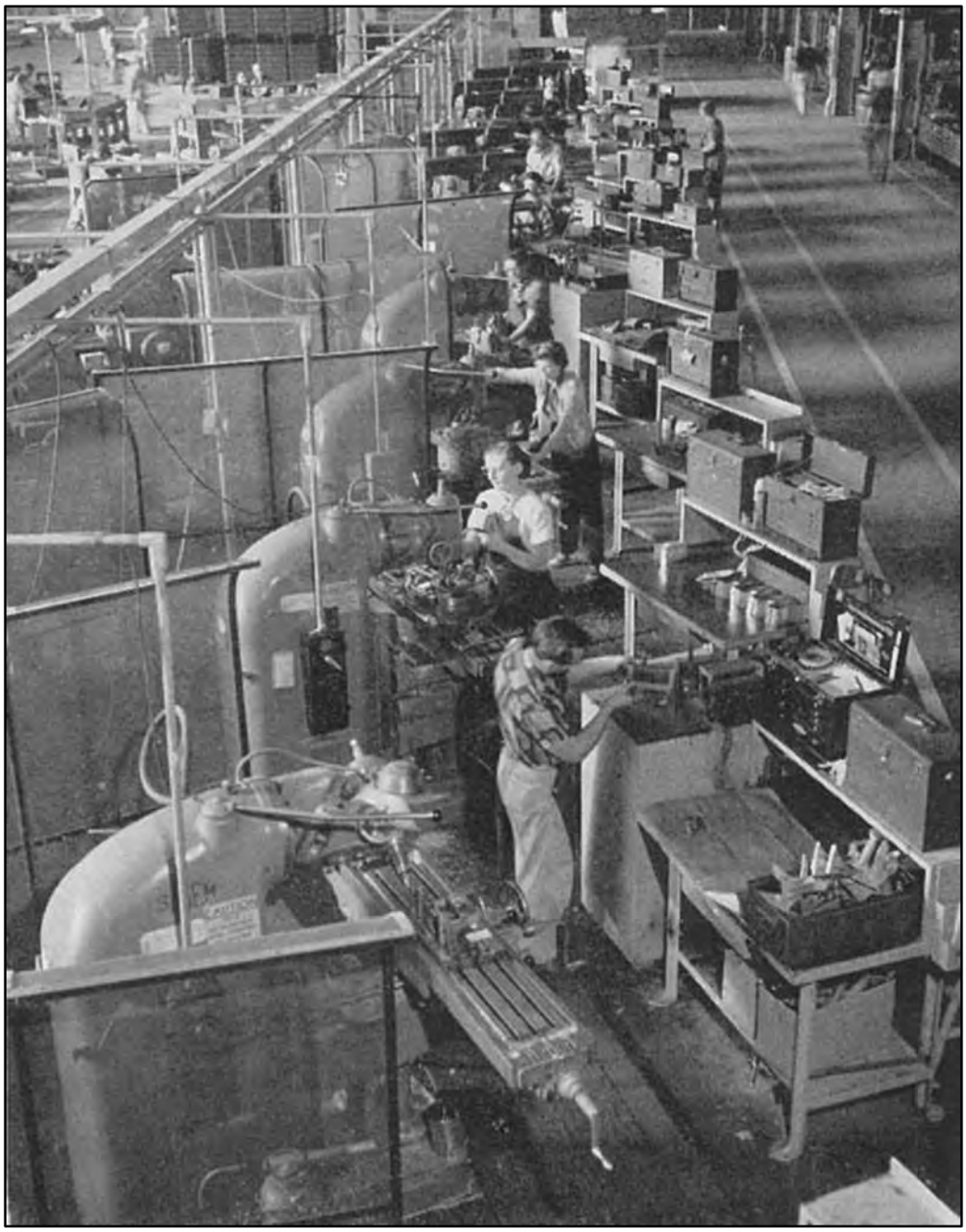

Figure 4.2-11 Tooling for the F-102 Assembly Line
Courtesy of* Convairiety *1954.

Figure 4.2-12 F-102 Assembly Line
Courtesy of San Diego Air and Space Museum.

Figure 4.2-13 F-102 Coming Off the Production Line being Taxied to Lindbergh Field
Courtesy of San Diego Air and Space Museum.

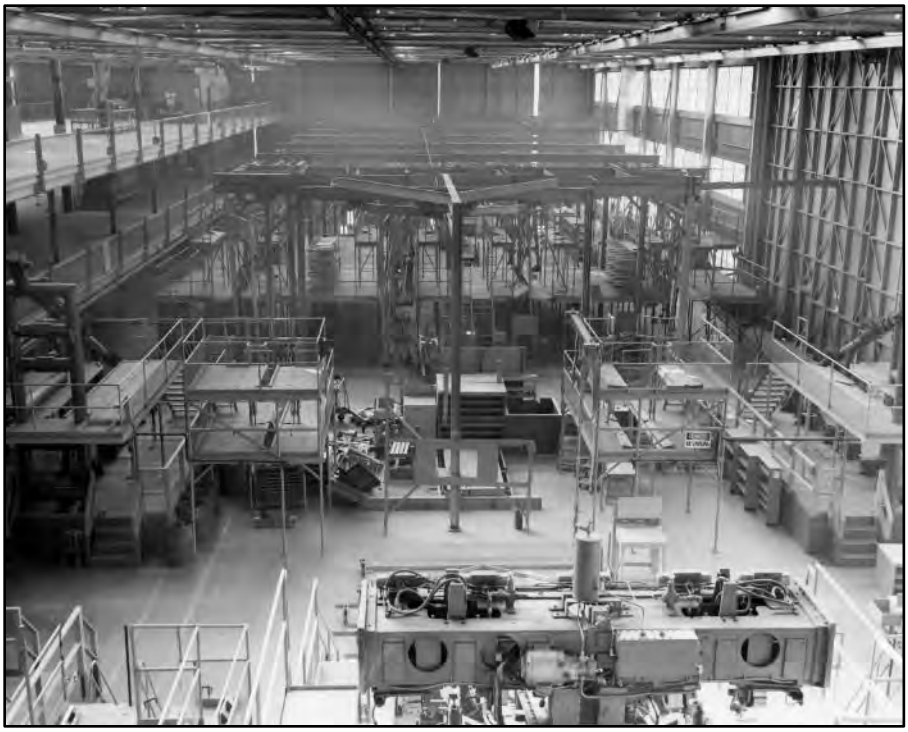

Figure 4.2-14 F-106 Production Line at the End of the Workday
Courtesy of San Diego Air and Space Museum.

Figure 4.2-15 F-106 Assembly Line
Courtesy of San Diego Air and Space Museum.

Figure 4.2-16 A Rush of Employees Leaving for the Day
Courtesy of* Convairiety *1954.

Figure 4.2-17 By July 1958, There were Five Major Facilities Operating as Part of the Convair Division San Diego
1982 Pamphlet. Courtesy of San Diego Air and Space Museum.

Astronautics personnel began transferring from Lindbergh Field to USAF Plant 19 in November 1959 (*Convairiety,* 1960b). Program operations at USAF Plant 19 had centered in Building 3 but expanded into Building 4 beginning in December 1959. Seven hundred people were slated to move from Lindbergh Field to USAF Plant 19 by February 1960 (*Convairiety,* 1960c). Since F-106 production was nearly complete and *Atlas* manufacturing continued growing, the F-106 assembly line was transitioning from Building 3 to Building 2 (*Convairiety,* 1959a). The F-106 assembly line in Building 3 was in an east to west orientation, and in Building 2 it was a north-to-south orientation. This new orientation allowed "planes coming out of final assembly to go into the weather shed, located outside the southwest corner of Building 3, for fuselage spray tests" (*Convairiety,* 1960d). The only function that remained in Building 3 was the electric bench on the C mezzanine (Department 216). Astronautics began moving into the north end of the ground floor of Building 4. Building 4 housed industrial relations (Department 3), accounting (Department 93), and the USAF Office. The master planning group of Department 5 and public relations (Department 2-1) moved to Plant 1 (*Convairiety,* 1960d).

In October 1960, the last of the F-106s were in production at USAF Plant 19, Building 2. The final F-106s were delivered to the USAF in January 1961. The first F-106s to undergo "test to tactical" modifications were on the assembly line at the southern end of Building 2 (Figure 4.2-18). They had the same combat capability but had been previously used for a variety of test programs. Those 35 F-106As and F-106Bs were scheduled for delivery to the USAF between January and June 1961 (*Convairiety,* 1960a, 1960e).

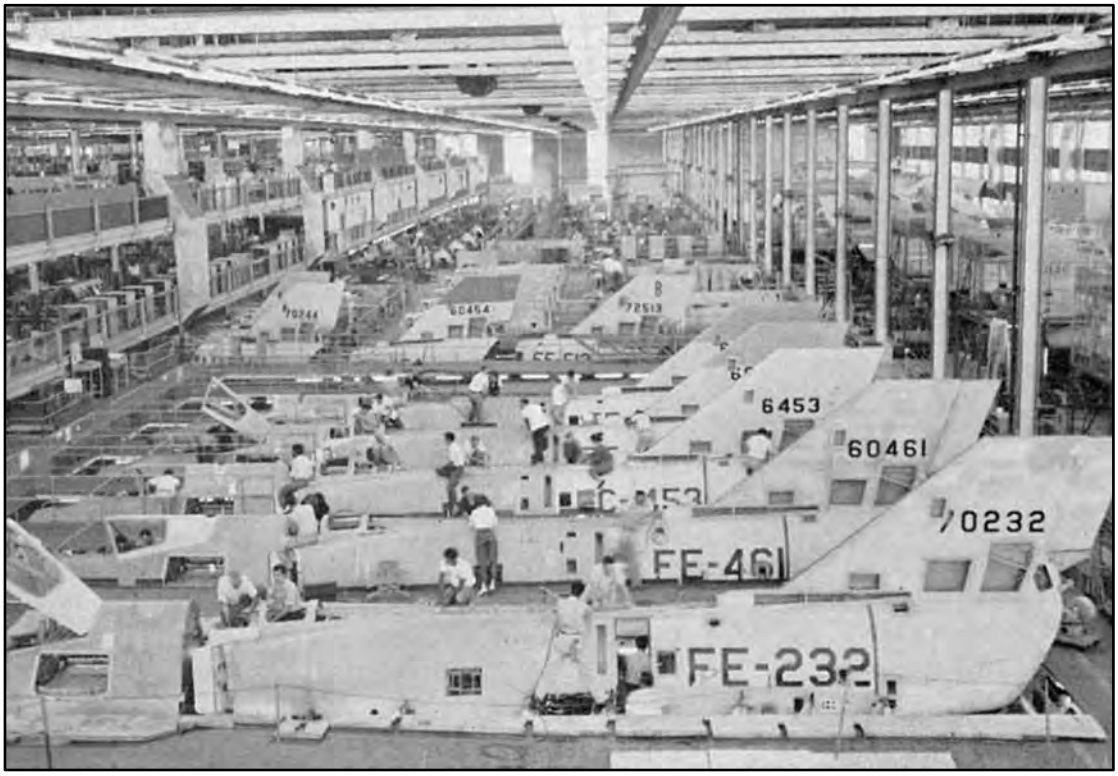

Figure 4.2-18 F-106 "Test to Tactical" Aircraft Assembly Line
Courtesy of* Convairiety, *San Diego Edition 1960.

Other work done at USAF Plant 19 in the 1950s included a variety of supportive tooling and sub-assembly work for Plant 1 and the Kearny Mesa plant.

1960s

During the 1960s and beyond, USAF Plant 19 played an essential role in manufacturing the *Atlas* and *Centaur* tanks for the Convair Division Astronautics and also played a manufacturing and assembly role for the Convair Division programs (Figure 4.2-19). USAF Plant 19 constructed the tanks for the Project Mercury space launch vehicles and other significant programs (see Section 4.2.2.3).

Astronautics manufactured the *Atlas* and *Centaur* out of the main plant, Kearny Mesa, which completed the final assembly of the *Atlas* missile. Lindbergh Field performed final assembly for the *Atlas* prior to completion of Kearny Mesa and for a short time afterward (*General Dynamics News,* 1962b). For example, in March 1960, final assembly was completed at Lindbergh Field, and assembly and fabrication of the *Atlases* D and E were done at USAF Plant 19 (*Convairiety,* 1960f). USAF Plant 19 fell under the jurisdiction of the Convair Division of General Dynamics though Astronautics staff worked at USAF Plant 19 (*General Dynamics News,* 1962b). By April 1960, tank manufacturing was transitioning from Building 5 at Kearny Mesa to USAF Plant 19, Building 3 (*Convairiety,* 1959a; *General Dynamics News,* 1962c). *Atlas* welding facilities (Department 758) in USAF Plant 19, Building 3 were creating *Centaur* parts on *Atlas* manufacturing machines. Fort Worth was working on nose cones for experimental *Centaur* launches (*Convairiety,* 1960g).

The main USAF Plant 19 manufacturing Buildings 1–3 was segmented and used for manufacturing, assembly, and storage of *Atlas* and *Centaur* tanks. According to General Dynamics, "the *Atlas* tank structure is a constant 10-foot diameter and is made of thin, lightweight stainless steel. The tanks maintain their shape through pressurization from helium or nitrogen gas pressure; there is no stiffening by internal framework" (General Dynamics, 1963). Therefore, manufacturing and assembly required precision as shown in Figures 4.2-20 through Figure 4.2-36. Both the *Atlas* and *Centaur* tanks were light weight thin-gauge stainless steel that required pressurization or bracing during fabrication. Only in final assembly at the Kearny Mesa plant and checkout did the *Centaur* become "independent from regular *Atlas* production facilities" (Figures 4.2-37 through 4.2-43) (*Convairiety,* 1960g). Examples of other manufacturing included the Gemini Tank for a Gemini-Agena target vehicle and final assembly of an Expendable Launch Vehicle (Figures 4.2-44 and 4.2-45).

Every flight consumed a missile as it was not reusable. Exhaustive testing was necessary for each component, sub-assembly, and each complete system as well as static testing and monitoring of missiles in flight. Testing pressure, thermal shock, mass-weight ratios, and extreme temperatures had to be considered and tested for every component (*General Dynamics,* 1957). Convair and Astronautics in San Diego utilized five sites (see Figure 4.2-17). Static fire testing was done at Sycamore Canyon and other tests were conducted at Kearny Mesa. *Atlas* and *Centaur* flight tests were often done at Edwards AFB or Cape Canaveral. Some functional tests, such as pressure tests, were done at USAF Plant 19 (Figure 4.2-46).

Figure 4.2-19 Aerial of Plant 2 (January 19, 1960)
Courtesy of San Diego Air and Space Museum.

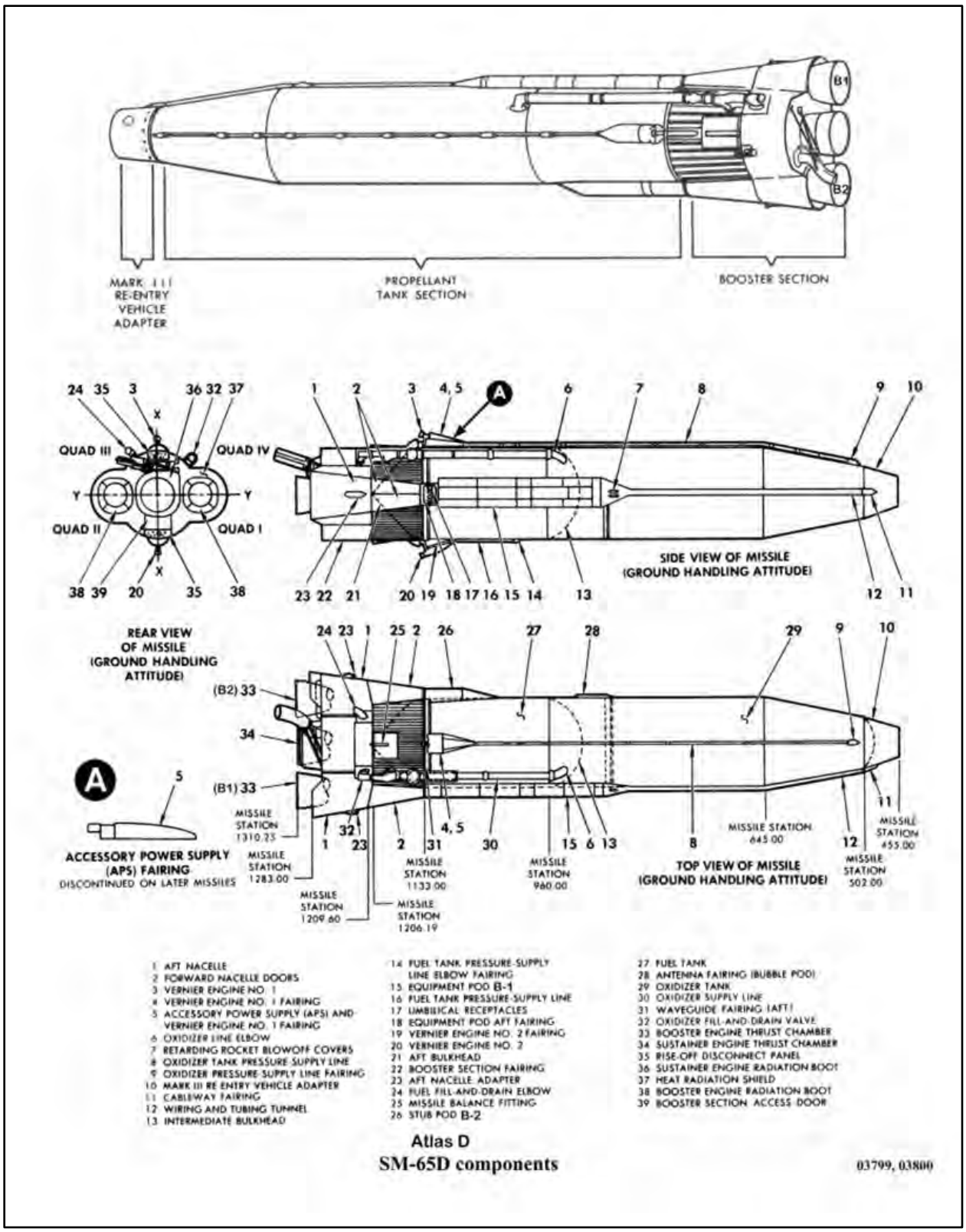

Figure 4.2-20 Atlas D (SM-65D) Components
Courtesy of San Diego Air and Space Museum.

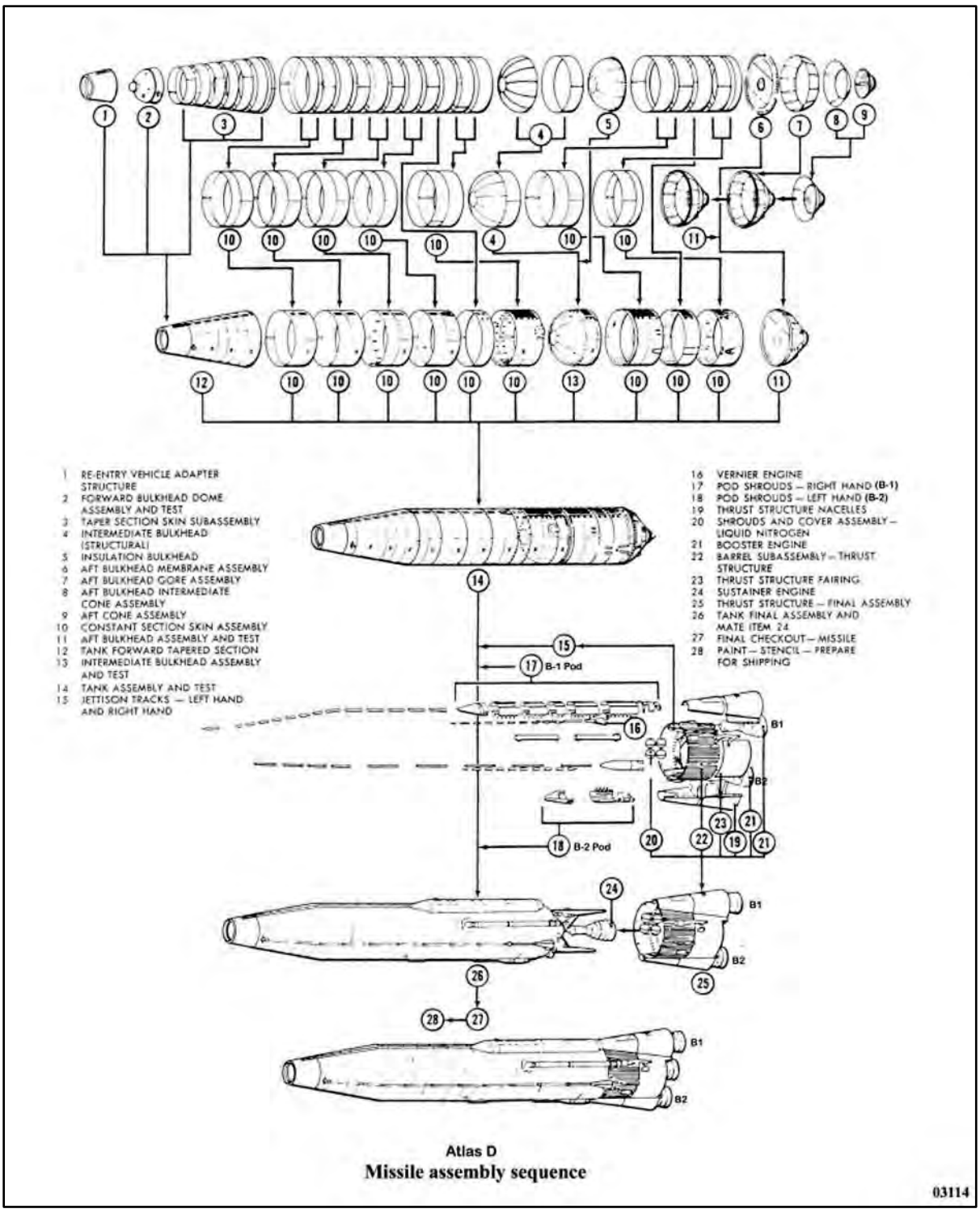

Figure 4.2-21 Atlas D (SM-65D) Assembly Sequence
Courtesy of San Diego Air and Space Museum.

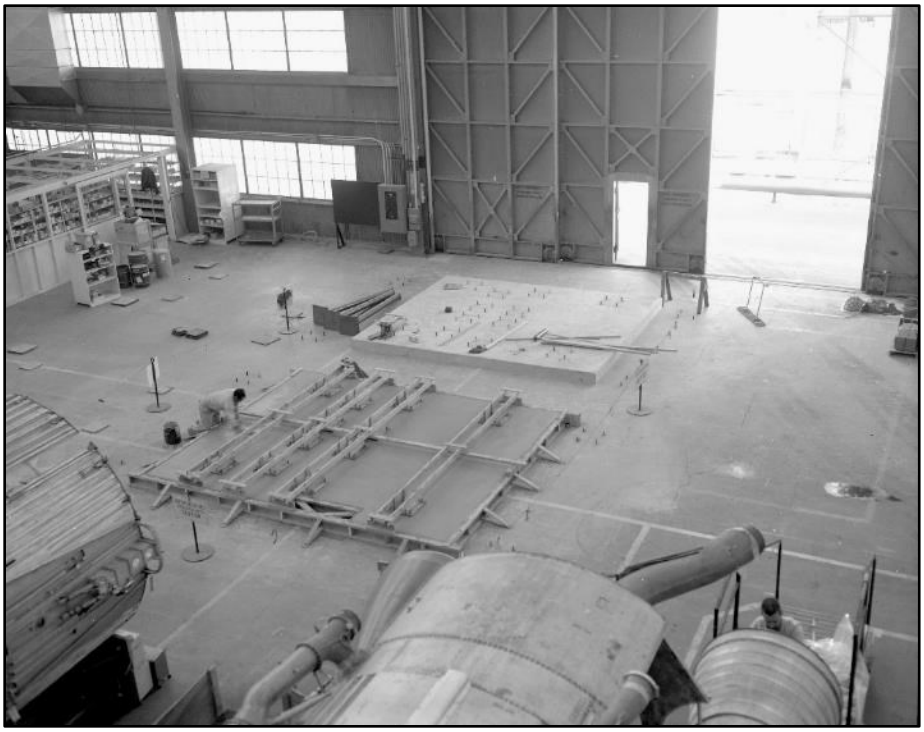

Figure 4.2-22 Aft Foundations Docks 1 and 2, Building 3 (March 22, 1961)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-23 New Docks from Mezzanine Level, Building 3 (April 12, 1961)
Courtesy of San Diego Air and Space Museum.

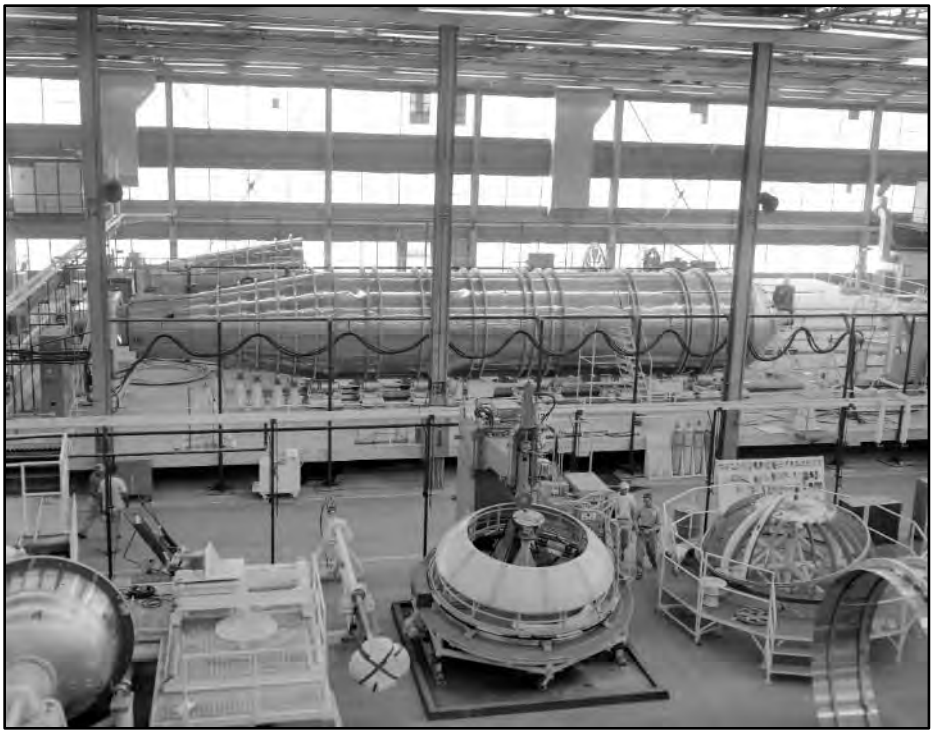

Figure 4.2-24 First Tank Section Production from Plant 2, Atlas 106D (October 18, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-25 Atlas Assembly Area, Building 3 (September 22, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-26 Major Tank Assembly (February 16, 1961)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-27 First Tapered Section Delivered to Building 3 from Plant 71 on Major Assembly Welder
September 23, 1960. Courtesy of San Diego Air and Space Museum.

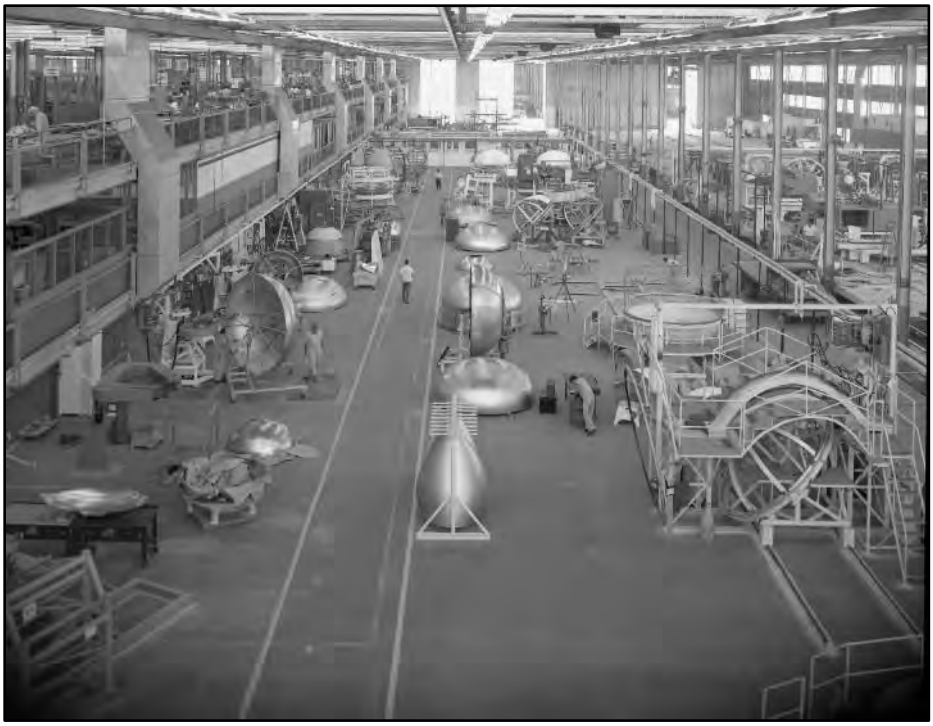

Figure 4.2-28 Assembly Area, Building 3 (September 22, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-29 Moving Bulkhead by Crane, Building 3 (September 16, 1960)
Courtesy of San Diego Air and Space Museum.

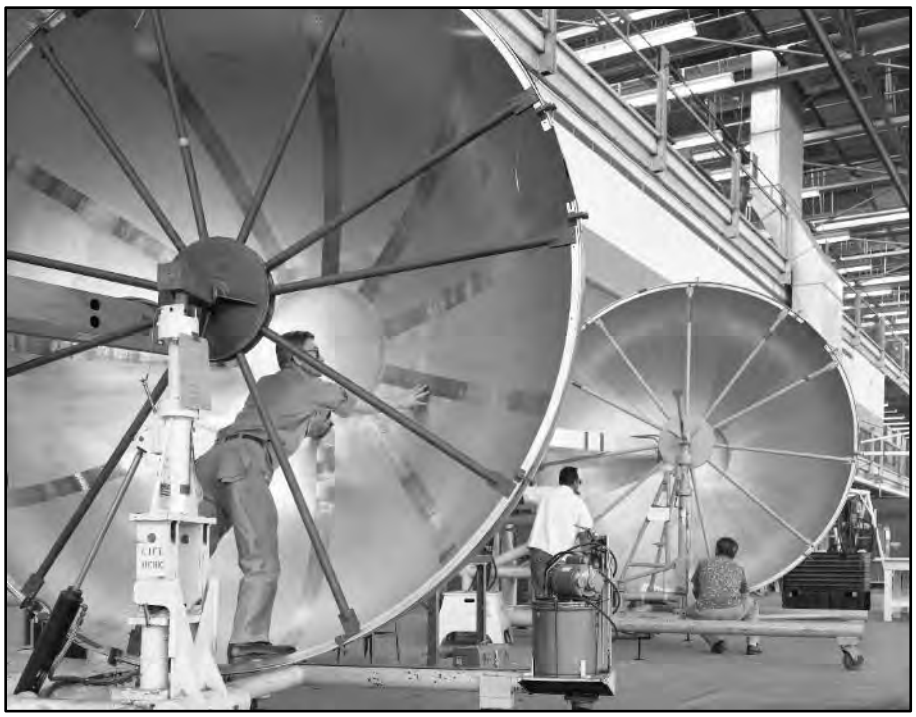

Figure 4.2-30 R. Feener Checking Bulkhead Seams, Building 3 (September 16, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-31 Cutting Skin, Building 3 (September 22, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-32 Interior View of Building 2, Looking South (July 7, 1961)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-33 Interior Showing Factory Area, Building 3 (January 7, 1960)
Courtesy of San Diego Air and Space Museum.

Figure 4.2-34 T. B. Naslund Cutting Steel Skin
July 20, 1961. Courtesy of San Diego Air and Space Museum.

Figure 4.2-35 New Docks at Building 3 with Atlas in Foreground, Looking North
March 29, 1961. Courtesy of San Diego Air and Space Museum.

Figure 4.2-36 Missile Storage Area, Building 3 (June 3, 1965)
Courtesy of San Diego Air and Space Museum.

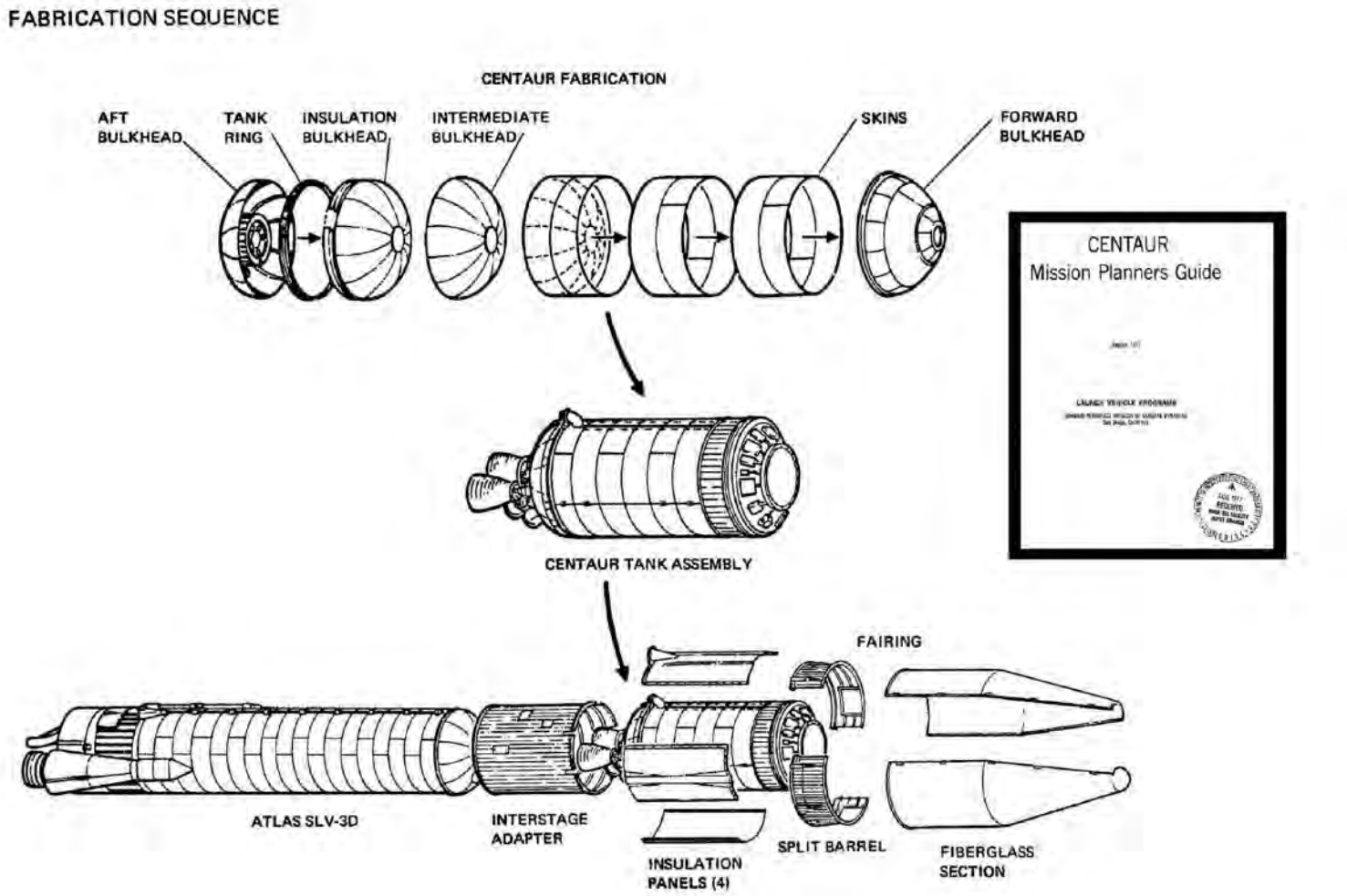

Figure 4.2-37 Centaur Fabrication Sequence
From Convair Aerospace Division General Dynamics,* Centaur Mission Planners Guide*, August 1971.

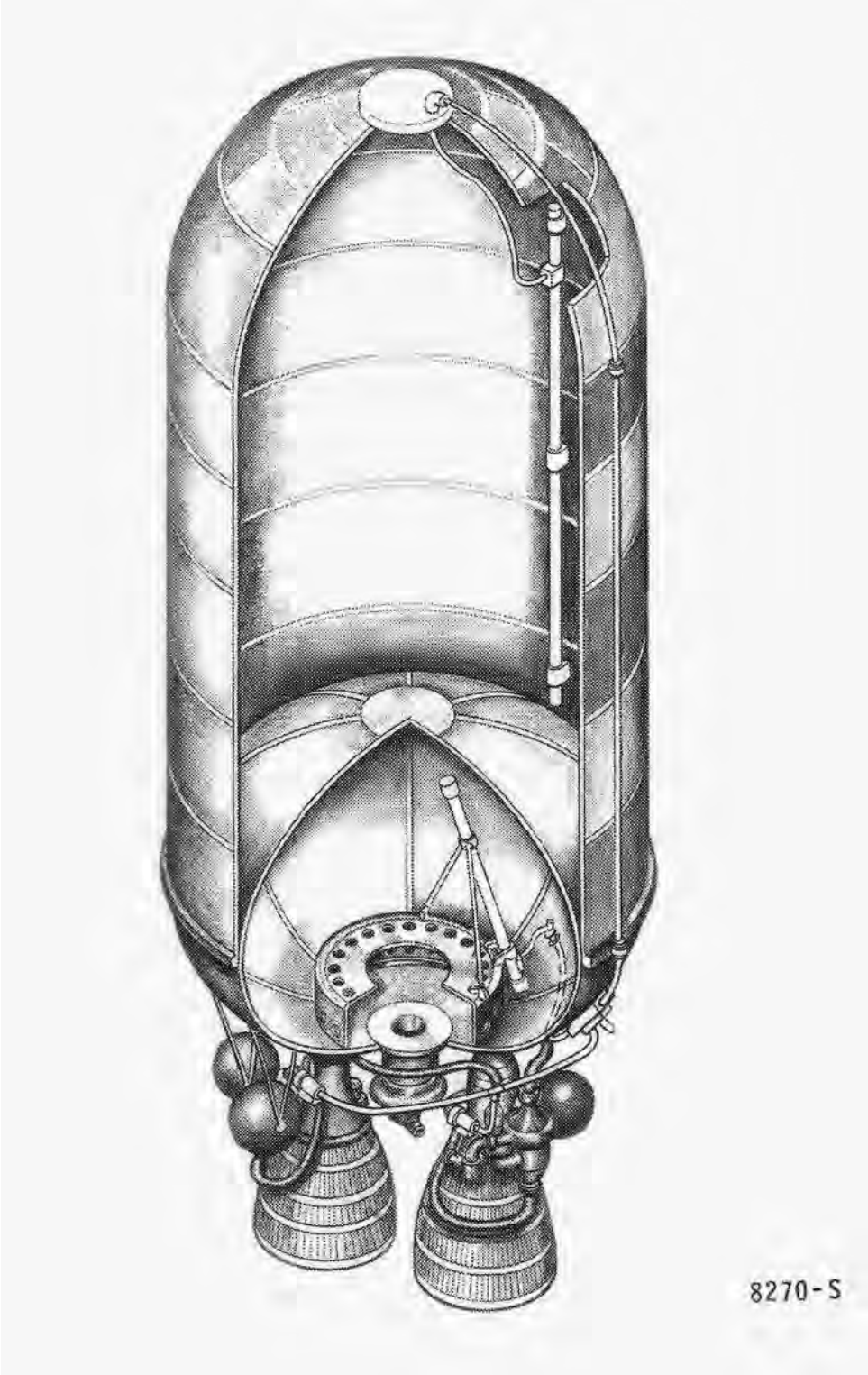

Figure 4.2-38 Diagram of the Centaur Tank
Ray A. Williamson,* To Reach the Higher Frontier: A History of U.S. Space Launch Vehicles*, p. 341.

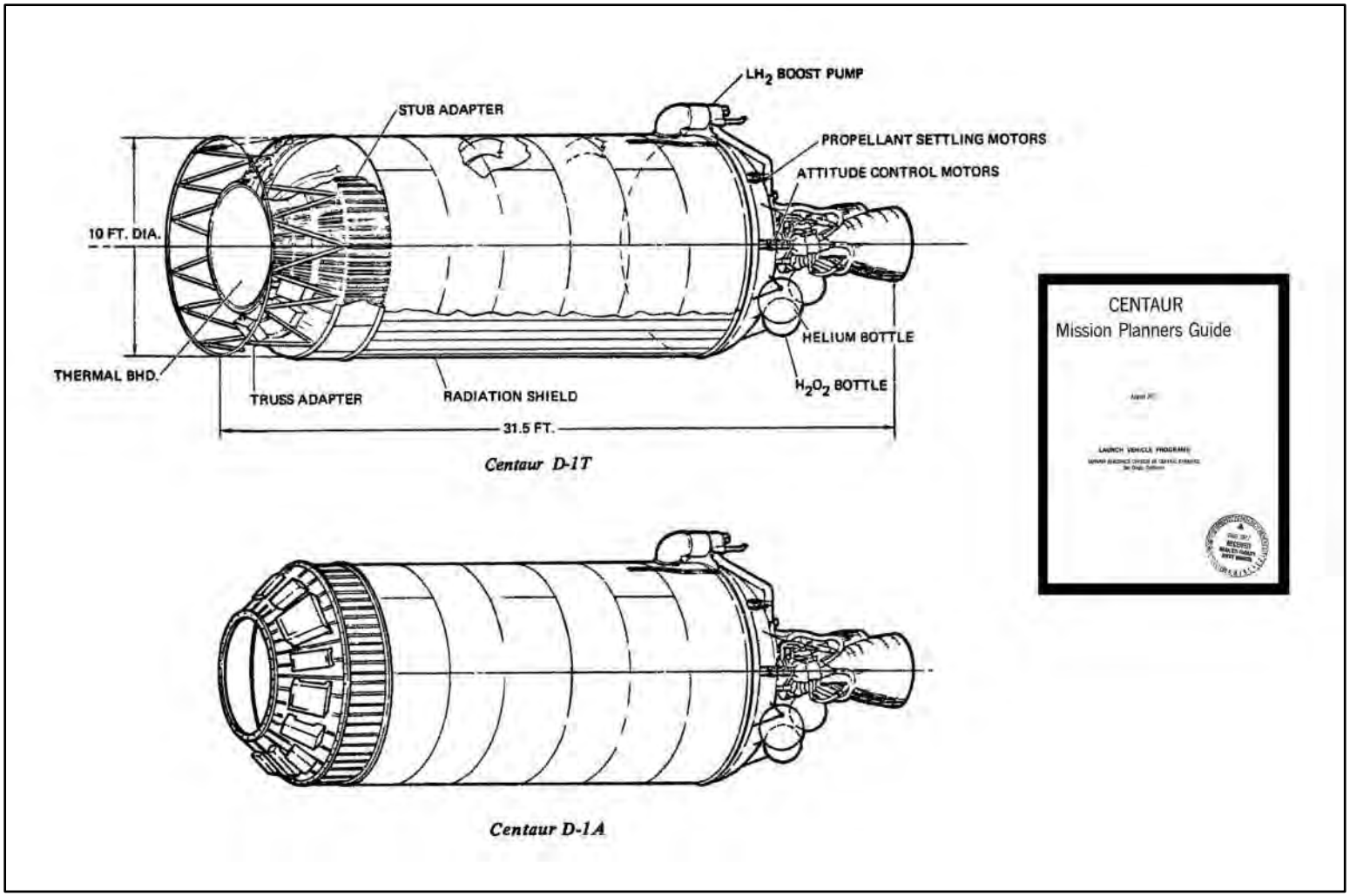

Figure 4.2-39 Diagrams of the Centaur Tank and Casing of a Centaur D-1T and a Centaur D-1A
From Convair Aerospace Division General Dynamics,* Centaur Mission Planners Guide, *August 1971.

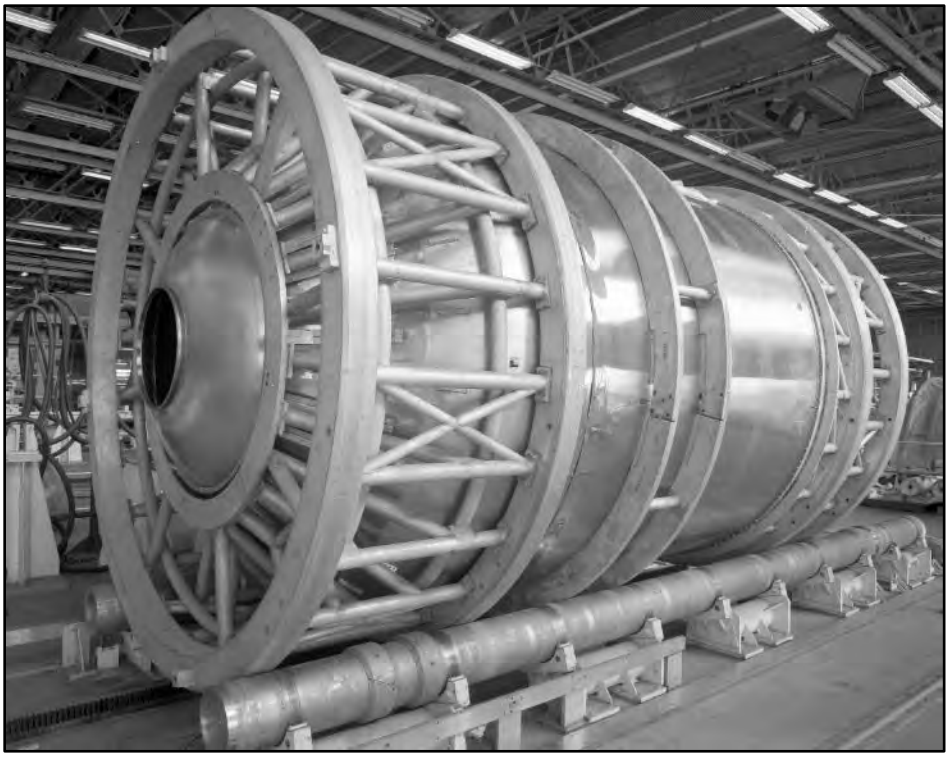

Figure 4.2-40 Mating Bulkhead to Tank (December 22, 1966)
Courtesy of San Diego Air and Space Museum.

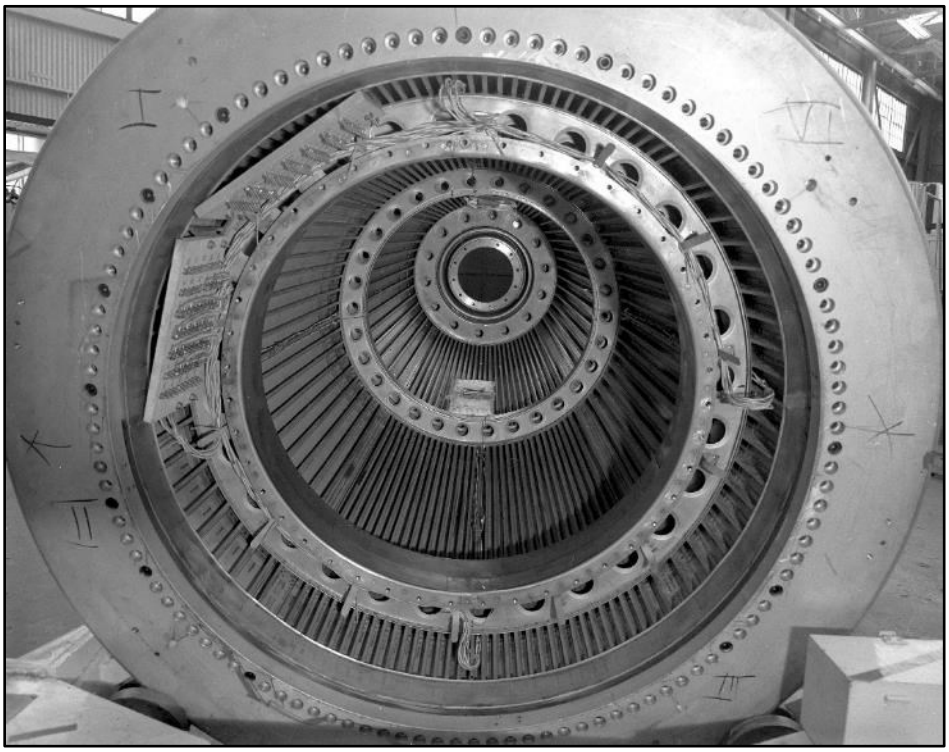

Figure 4.2-41 LH2 Tank Assembly (June 11, 1965)
Courtesy of San Diego Air and Space Museum.

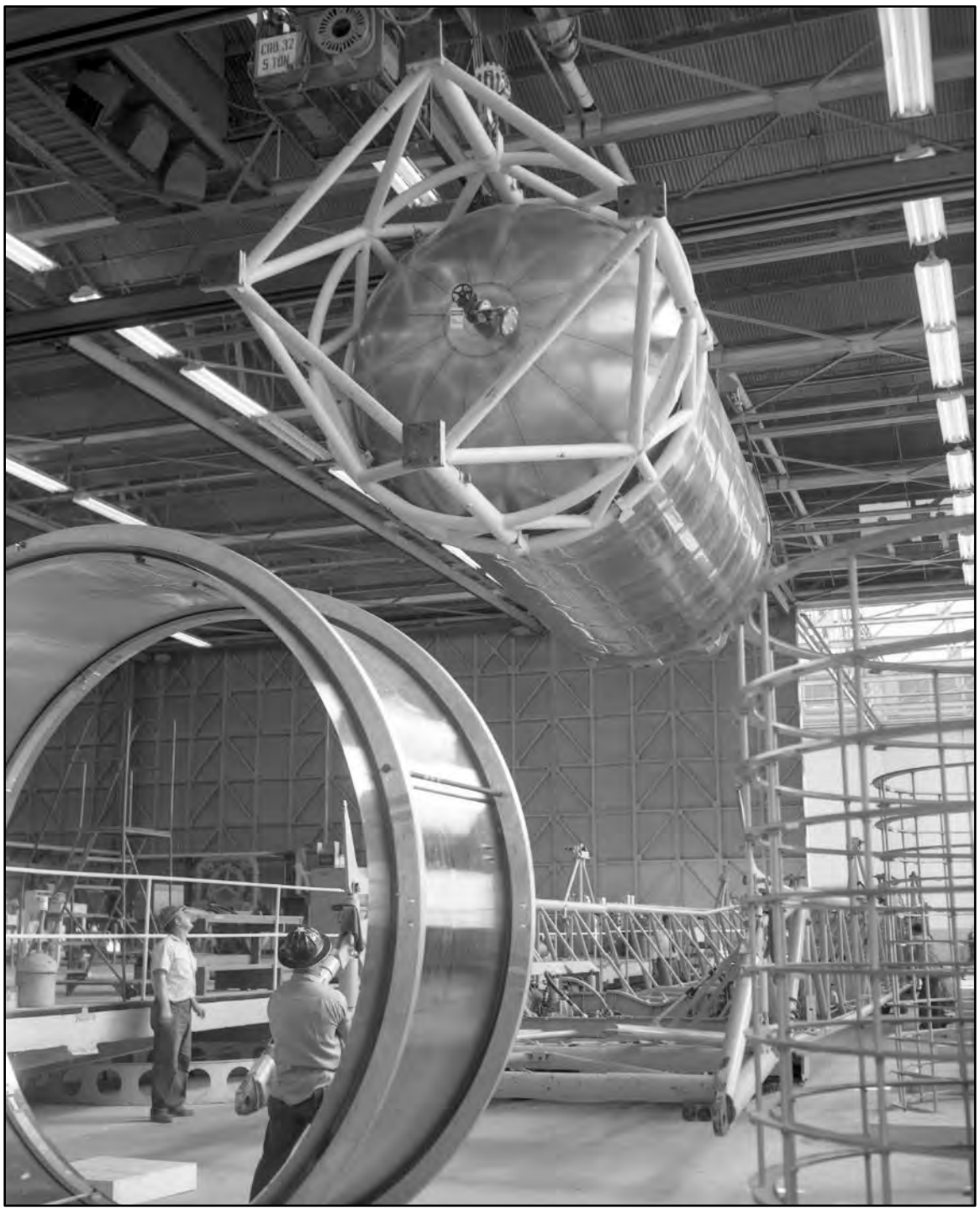

Figure 4.2-42 Centaur Tank move from Fabrication Area for Transport to Plant 71
December 27, 1960. Courtesy of San Diego Air and Space Museum.

Figure 4.2-43 First SLV-C for Surveyor 5 at Kearny Mesa Plant
General Dynamics News. ***May 3, 1967. Courtesy of San Diego Air and Space Museum.***

Figure 4.2-44 Gemini Tank 1600-27 for a Gemini-Agena Target Vehicle Leaving Plant 19
June 29, 1965. Courtesy of San Diego Air and Space Museum.

Figure 4.2-45 Management Team Stand in Front of an Expendable Launch Vehicle at Plant 2 Final Assembly, 1961
Courtesy of San Diego Air and Space Museum.

Figure 4.2-46 Positive Pressure Room, Building 3 (March 15, 1961)
Courtesy of San Diego Air and Space Museum.

Increased tank manufacturing on both the *Atlas* and *Centaur* program was expected in early 1961 (*Convairiety,* 1960h). In preparation, the Astronautics Division began installing $500,000 of equipment at USAF Plant 19, Building 3 in June 1960 for the complete relocation of all *Atlas* tank manufacturing operations from the main *Atlas* plant in Kearny Mesa to Building 3 later in the year (*Convairiety,* 1960i). The F-106 assembly line had already transitioned to Building 2 (*Convairiety,* 1959a). Astronautics utilized all of Building 3 except for a small mezzanine with the eastern side serving as the support center for the department and the western half as the tank manufacturing section (*Convairiety,* 1960h). All needed equipment had been installed by August 1960 (*Convairiety,* 1961).

The tank manufacturing department (Department 758) at USAF Plant 19 included welding and assembly of tank bulkheads, constant, skins, taper skins, and tank assembly. A new department was created (Department 759) at the main plant at Kearny Mesa for tank detail fabrication, sub-assembly manufacture, hydro-pneumatic testing of completed tanks, and tank cleaning. The first completed tank at USAF Plant 19 was slated for delivery to Kearny Mesa for final assembly in October 1960. All forward, intermediate, and aft *Atlas* bulkhead facilities had been moved to USAF Plant 19, and major fixtures were slated to move with an expected completion date of December 1960. Personnel continued to transfer from manufacturing control, inspection, and maintenance and process control at Kearny Mesa (*Convairiety,* 1960j). In 1961, Astronautics became the Astronautics Division and by February, the tank manufacturing move from Kearny Mesa to USAF Plant 19 was nearly complete. Manufactured tanks were trucked to the main plant at Kearny Mesa for final assembly (*Convairiety,* 1961).

The Astronautics and Convair divisions utilized Building 4 largely as office space with most of the Astronautics Division on the second floor. Astronautics was expected to assume all of Building 4 minus a small ground floor area at the south of the building (*Convairiety,* 1959a). Transitioning of the facilities from aircraft to missile production required cleaning up and refurbishing primarily in Buildings 1, 2, 7, and 8 where "interiors are undergoing extensive reconditioning and exteriors are being 'policed' as needed" (*General Dynamics News*, 1963a). Work on the face lift was expected to continue into early 1964 (*General Dynamics News*, 1963a).

Inside Building 3 was the Astronautics support center—a factory within a factory—that had been created as part of the refurbishment efforts. The first installation was a special part cleaning room (30 feet by 40 feet) installed on one side in Building 3. It served as the final checkpoint to ensure that *Atlas* parts destined for the factory, missile supply points, and test and operation sites were incredibly clean. A "single particle of foreign material could cause a violent explosion on contact with the missile's liquid oxygen. A tiny metallic particle or dirt fragment could cause malfunction of the missile system" (*Convairiety,* 1960k). Employees wore smocks, tight-fitting caps, and white gloves that were all lint-free and plastic boots over their shoes (see Figure 4.2-29). The room was scrubbed thoroughly according to quality standards.

An expansion of the "clean room" was underway in February 1962 with the addition of a 30-foot-by-110-foot building (3,300 square feet) along the east wall of the northern end of Building 3. The clean room was used for modification, repair, cleaning, reassembly, and functional testing of most weapon system components. It was divided into seven areas and was used by support operations (Department 344-4) for repair and modification of liquid oxygen, hydraulic, and pneumatics parts returned from *Atlas* ICBM bases (*General Dynamics News* 1962d). The support center "factory" worked on outgoing *Atlas* missiles as well as missile modifications (Department 344-3). *Atlas* missiles were repaired, refurbished, or modified to be used by the Strategic Air Command. Those who worked in the group were skilled mechanics, electricians, welders, painters, and mechanical and electronic system operators. The machine and sheet metal shops manufactured and repaired missile parts. The factory also tested *Atlas* D airborne electronic components. Most modification work had been focused on D missiles, which NASA primarily used, but work was also done on E and F series *Atlases* (*General Dynamics News,* 1962e).

Other manufacturing work was also being conducted at USAF Plant 19 such as trainers for *Atlas* personnel. High-ranking Naval officials toured Lindbergh Field and USAF Plant 19 for their interest in programs of the General Dynamics Electronics Division: "newly-developed research and engineering projects as Aircraft Station Keeper Radar, Short Pulse Radar, Terrain Following Radar systems at Lindbergh Field and data products, and their Naval applications, at USAF Plant 19" (*General Dynamics News*, 1963b). USAF Plant 19 assisted Kearny Mesa with the OV-1 USAF Aerospace Research Satellites that rode on *Atlases* to perform space missions (Figures 4.2-47 through 4.2-49) (*General Dynamics News,* 1965a). General Dynamics Convair Division built the satellites and propulsion systems and was the liaison with the Research Agency of the USAF, Office of Aerospace Research. These satellites were launched specifically for DoD experiments (Office of Aerospace Research, 1969, p. 23). Special projects had been supported at USAF Plant 19 since at least September 1958 when the plant worked on a "sputnik" satellite (*Convairiety,* 1958g).

The maturity of the *Atlas* missile and increasing importance of manned spacecraft prompted the reconsolidation of the Convair and Astronautics divisions on February 15, 1965. The newly combined division employed 16,000 people with an average of 12 years work experience (*General Dynamics News*, 1965b).

1970s

Atlas and *Centaur* space boosters continued to provide steady revenue for General Dynamics, and USAF Plant 19 continued to manufacture their tanks for a variety of military and NASA space missions (*General Dynamics World*, 1973). By 1972, USAF Plant 19 housed the fuel tank and pylon assembly (Department 20), grinding room, X-ray room (Department 141-4), liaison engineering for interactions with Lindbergh Field and Kearny Mesa, maintenance service and repair, machine shop, medical services (Building 4), missile storage (Department 832), sealant crib, salvage yard, reliability control, sheet metal, electronic bay, tank manufacturing (Department 759), test equipment crib, tool liaison (Building 2), tool stores, training and educational services, dispatcher, support for F-111 including electronic bay, fixed-cowl station, inlet duct, pylons, and fabrication (*General Dynamics*, 1972). USAF Plant 19 had assembled F-111s (Department 027) and completed and shipped the last of the 501 F-111 electronics bay and 341 fixed-cowl ship sets for the Fort Worth Operation. Thereafter, many of those who worked on the F-111 assemblies transferred to Lindbergh Field for DC-10 fabrication (*General Dynamics World*, 1971). The Convair Division continued production on DC-10 fuselages, largely done at Lindbergh Field as part of a subcontract with McDonnell Douglas (*General Dynamics World*, 1973).

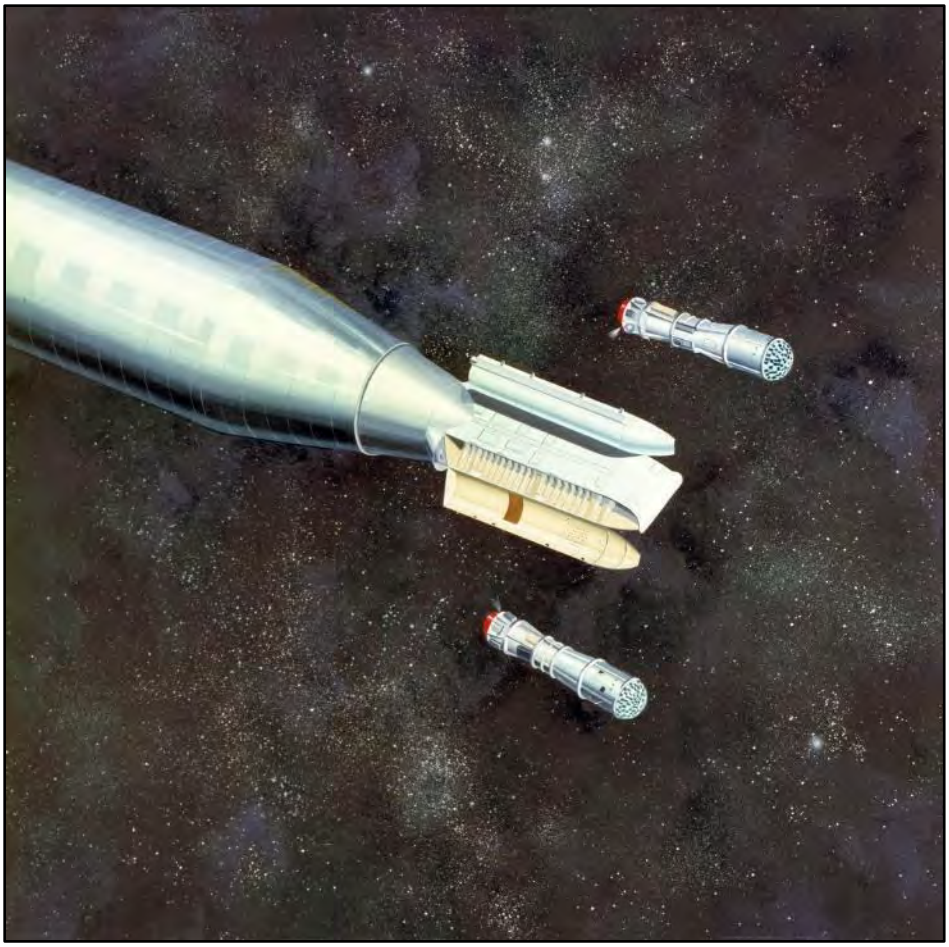

Figure 4.2-47 Art Cover Depicting the Launch of Two OV-1 Satellites in Space
Courtesy of San Diego Air and Space Museum.

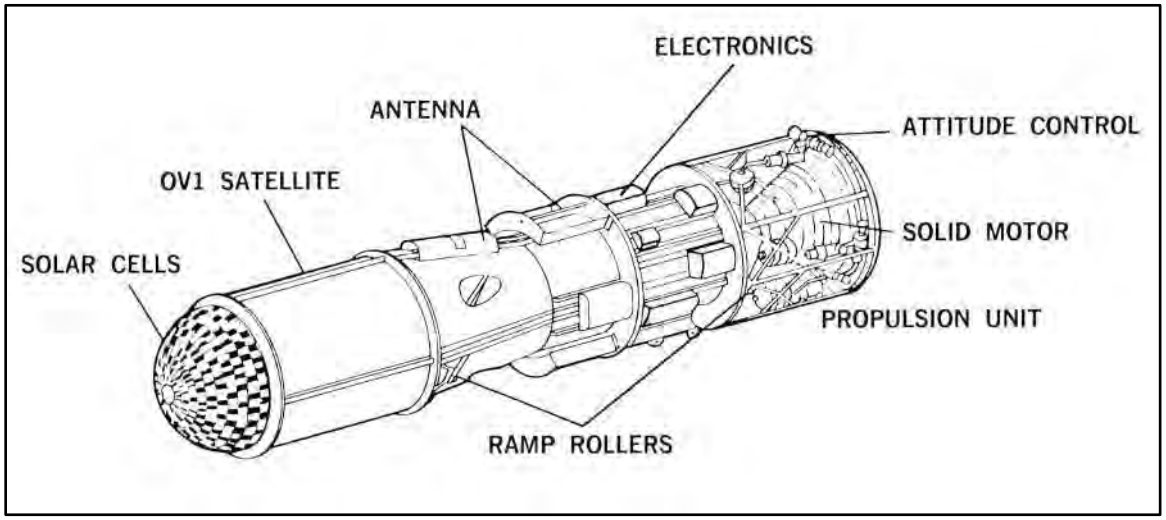

Figure 4.2-48 Diagram of the OV-1 Satellite
Courtesy of San Diego Air and Space Museum.

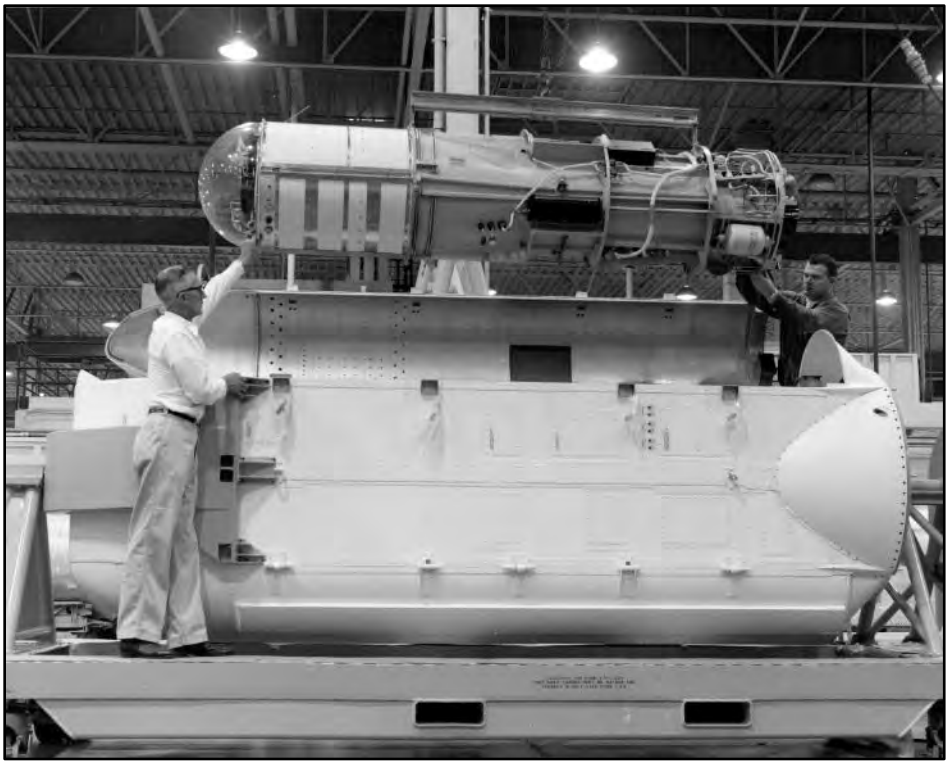

Figure 4.2-49 Placing OV-1 in Satellite in Dual Ejection Pod
Courtesy of San Diego Air and Space Museum.

The Convair Division of General Dynamics won a contract in April 1973 to design and build a large superconducting magnet for the U.S. Energy Research and Development Administration as part of the national fusion energy program. Kearny Mesa conducted the engineering and USAF Plant 19 produced the large magnets (*General Dynamics*, 1977). By January 1974, Convair Aerospace Division's San Diego Operation received $41.9 million for a 2-year follow-on to the *Centaur* management and engineering support contract from NASA's Lewis Research Center. It funded support services for the *Atlas-Centaur* and *Titan-Centaur* launch vehicles (*General Dynamics*, 1974). By October 1979, USAF Plant 19 worked on: *Atlas* and *Centaur* tank assembly, *Orbiter* Mid-Fuselage assembly, *Atlas* Launcher assembly,[3] and KC-10 assembly[4] as well as provided fabrication and assembly in the machine shop and warehousing.

4.2.3.3 *Manufacture of the Mid-Fuselages for Orbiters: Enterprise (prototype), Columbia, Challenger, Discovery, Atlantis, and Endeavor (1974–1987)*

As previously mentioned, General Dynamics won one of five major contracts for building the new space launch vehicles called orbiters, more commonly known as space shuttles. North American Rockwell Corporation assembled the orbiters and the other four companies built the main components: Fairchild Republic Division of Fairchild Industries, Inc. (vertical tail unit), Grumman (double delta wings), Convair

[3] See SDASM photo that shows the Launcher Atlas Series E, Mockup https://www.flickr.com/photos/sdasmarchives/27329201045/in/photolist-FjYJg3-FX354v-BGAhbp-ThKXux-T6izZH-Sf2kK5-CVKJD4-FvWMRS-F6EVrb-HDmo68-SLhXHU-F2vDcJ-FnxZ2s-BziheT-SLeNSd-Sf2jyY-SLePhG-J5Xx3X-DufwDZ-zur2ZY-FNfM7u-AVh4HR-CVFZ49-EAmtNG-LoifzZ-J5XSmg-F6Laqy-DoSi2N-EApPLb-HCZikt-FRbciM-EApK2S-EApGuh-FpVLHx-zGT2wG-HatPE7-HuM2oh-FRbbTP-DmZ888-CxDaDV-DmZ58v-FwQxSQ-J5Y1s6-DjFpsw-B9kqSD-EAELLx-GHkEXE-CwS5q8-FthUz9-HGHt2L.

[4] The KC-10 (1981-present) is the USAF version of the DC-10 for aerial fueling as well as cargo and personnel transport. USAF, "KC-10 Extender," available at https://www.af.mil/About-Us/Fact-Sheets/Display/Article/104520/kc-10-extender/, accessed March 12, 2020.

Aerospace Division of General Dynamics (mid-Fuselage), and McDonnell Douglas (orbital maneuvering system) (NASA, 2020e) (see Figure 4.2-12).

NASA's flexible design of the mid-fuselage accommodated opening and closing its payload bay doors in space for a variety of payloads. According to Tom Moser at NASA headquarters,

> The mid-fuselage had to accommodate the quantity, size, weight, location, stiffness, and limitations of known and unknown payloads. An innovative design approach needed to provide a statically determinant attachment system between the payloads and mid-fuselage. This would decouple the bending, twisting, and shear loads between the two structures, thus enabling engineers to design both without knowing the stiffness characteristic of each ... To balance the functional and strength requirements, engineers designed the doors to be flexible. The flexibility and zipper-like closing ensured that the doors would close in orbit even if distorted thermally or by changes in the gravity environment (from Earth gravity to microgravity). If the latches did not fully engage, the doors could not be relied on to provide strength during re-entry for fuselage bending, torsion, and aerodynamic pressure. Thus, the classical design approach for ascent was not possible for re-entry. The bulkheads at each end of the payload section and the longerons on each side required additional strength. To reduce weight and thermal distortion, engineers designed the doors using graphite epoxy. This was the largest composite structure on any aircraft or spacecraft at the time (NASA, 2010, p. 272).

At USAF Plant 19, manufacturing the 60-foot-long, 17-foot-wide, and 13-foot-high 13,500-pound mid-fuselage as the structural backbone of the space shuttles required the expertise of several hundred people who worked on the design, manufacturing, assembly, and delivery of the first few space shuttles, *Enterprise*, *Columbia*, and *Challenger*. General Dynamics manufactured those three space shuttles as part of one contract with Rockwell International and worked on the *Discovery* and *Atlantis* as part of another contract with deliveries in January 1982 and 1983. Most of the workers came from Lindbergh Field and USAF Plant 19. The same team supported the *Centaur*-in-shuttle project with orbital design data, design support, and personnel (Convair, 1981a). Rockwell won another contract in April 1983 for the *Endeavor* (*New York Times*, 1986, p. A-19).

The mid-fuselages consisted of "12 main, vertical, frame assemblies each with special weight-saving boron/aluminum trusses for strength with reinforced skin and longerons. The two top edges of the mid-fuselage are especially strong. In addition to supporting the sill for the payload bay doors, they also take bending loads for the entire space shuttle and it is from these and the longerons that the payloads are 'hung'. Unique at the time the orbiters were first manufactured, skins for the mid-fuselage were machined integrally by numerical control" (Figures 4.2-50 through 4.2-54) (Baker, 2011, p. 62). The mid-fuselage payload bay or cargo bay could hold equipment up to 60 feet long and 15 feet diameter with two doors, one on each side of the centerline. Each door was 60 feet by 10 feet across the radius and had five sections connected with expansion joints. Special expansion hinges allowed for expansion and contraction in response to mechanical stresses and temperatures encountered in space (Figures 4.2-55 and 4.2-56) (Baker, 2011, p. 63). For each payload bay door, four interior radiator panels extended along the length of it and were composed of tubes connected with Freon coolant to control exterior temperatures (Baker, 2011, p. 64).

The longest parts ever machined at the Convair Division in San Diego were two longerons, each 60 feet long, that were machined on the Cincinnati Computer Numerically Controlled dual-gantry profile mill at USAF Plant 19 in June 1981. Personnel had to work in three shifts for 14 days to complete this part of the mid-fuselage. Lindbergh Field completed additional milling, and finishing was subcontracted (Convair, 1981b). In September 1981, the new three-axis triple gantry Computer Numerically Controlled

profiler was installed at USAF Plant 19, Building 1. It was 108 feet long, 13 feet wide, 3 gantries, and 11 spindles, making it the largest machine tool at Convair. It aided the Division in modernizing aerospace production capabilities (Figure 4.2-57) (Convair, 1981c).

1980s

The Experimental Department (Department 031) continued to operate out of Building 2, USAF Plant 19 (*General Dynamics*, 1981). Work on the *Atlas* and *Centaur* tanks continued, as did mid-fuselage assembly, launcher assembly, and KC-10 assembly.

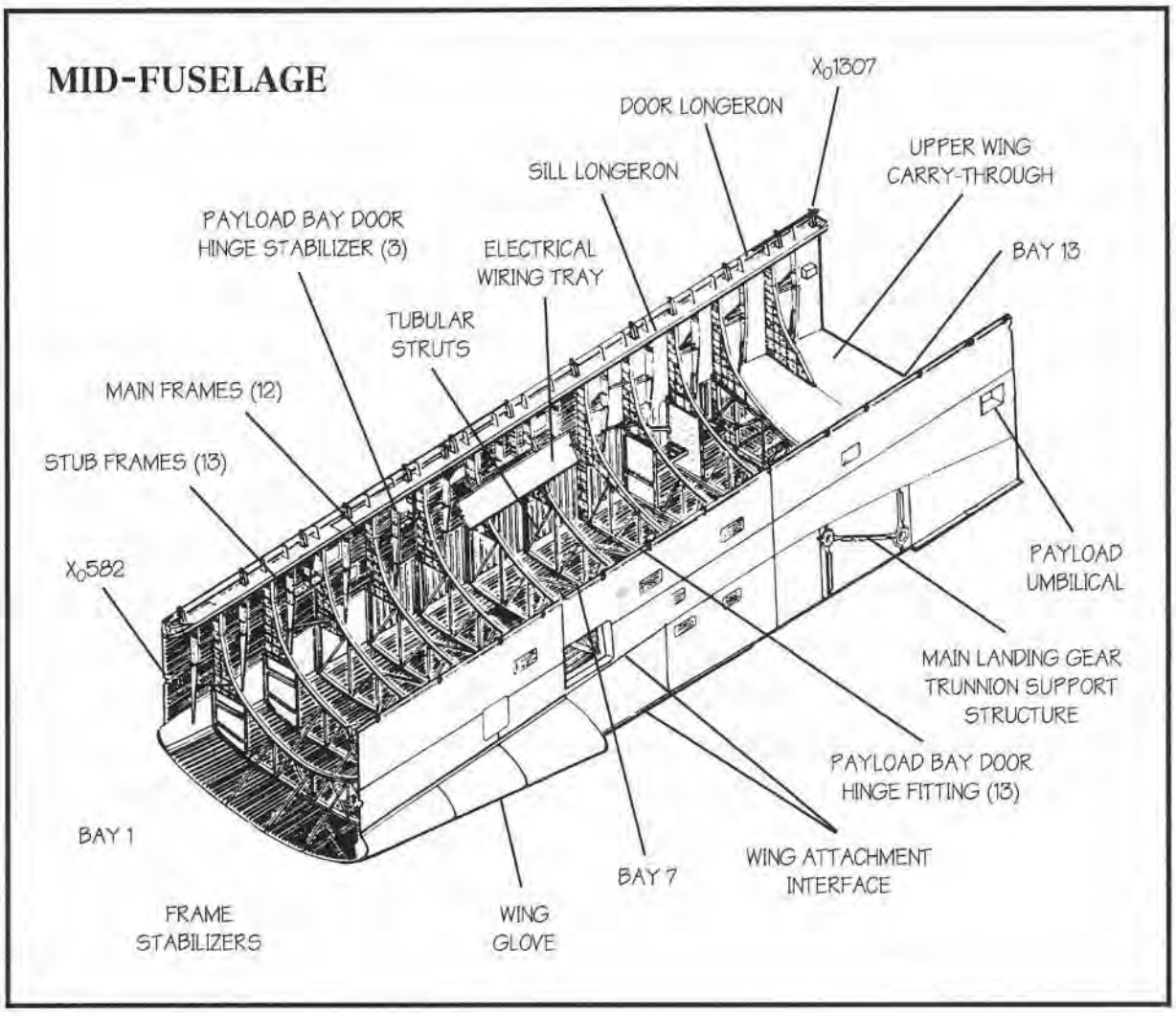

Figure 4.2-50 Diagram of a Mid-fuselage
Courtesy of Dennis R, Jenkins,* Space Shuttle: The History of the National Space Transportation System, *p. 382.

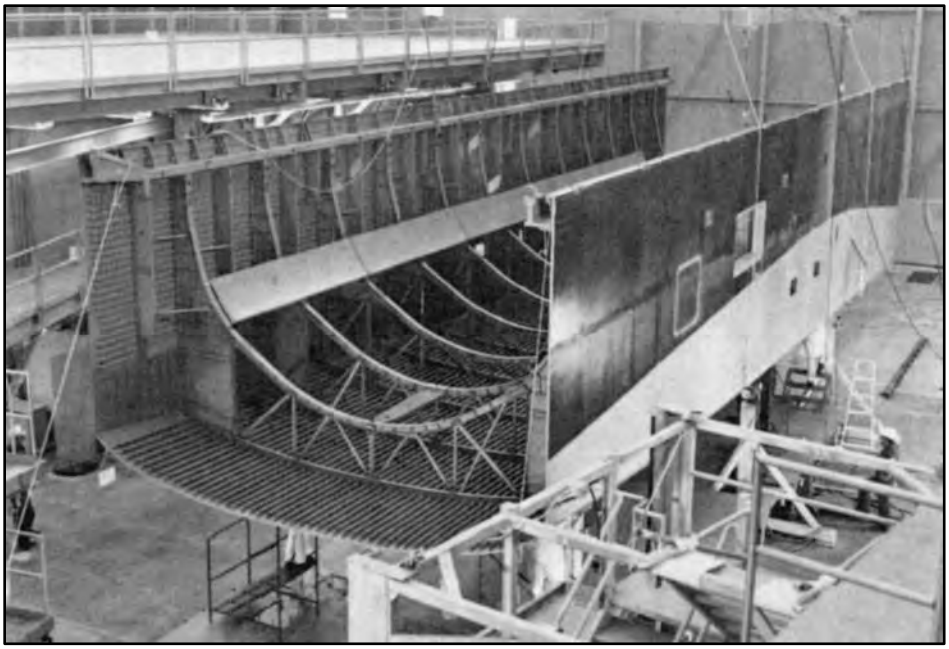

Figure 4.2-51 Mid-fuselage on the *Enterprise*
Courtesy of NASA.

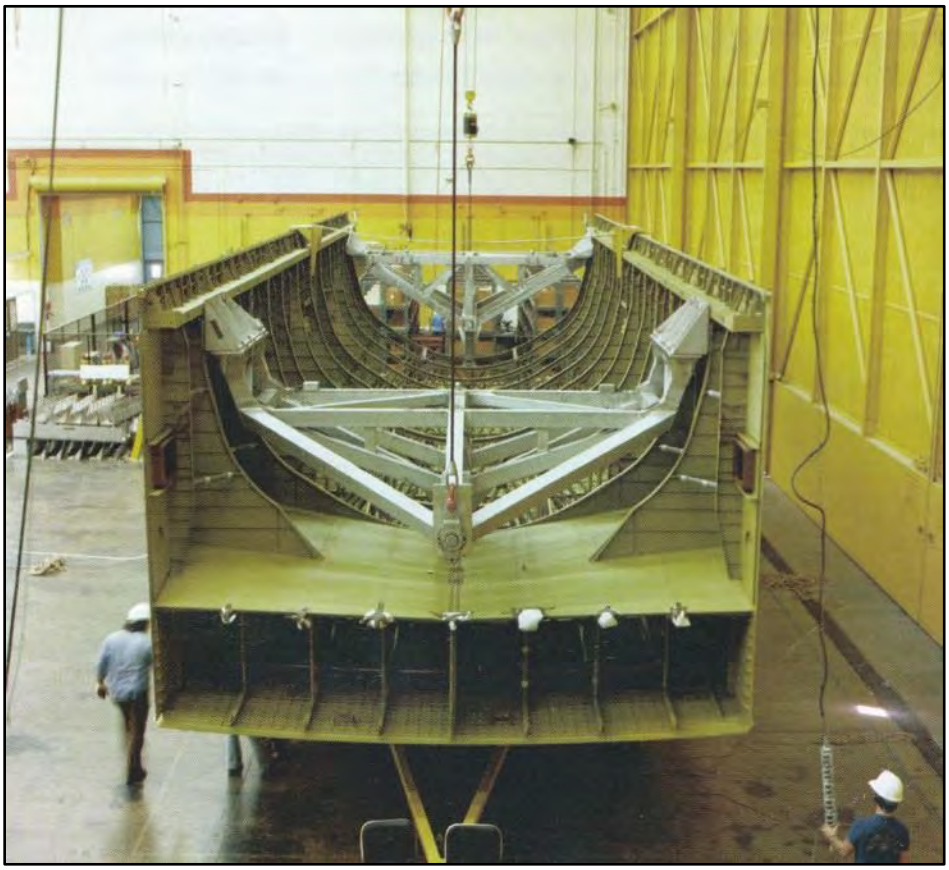

Figure 4.2-52 Mid-fuselage Mid-section
Courtesy of David Baker,* NASA Space Shuttle: Owners' Workshop Manual, *p. 62.

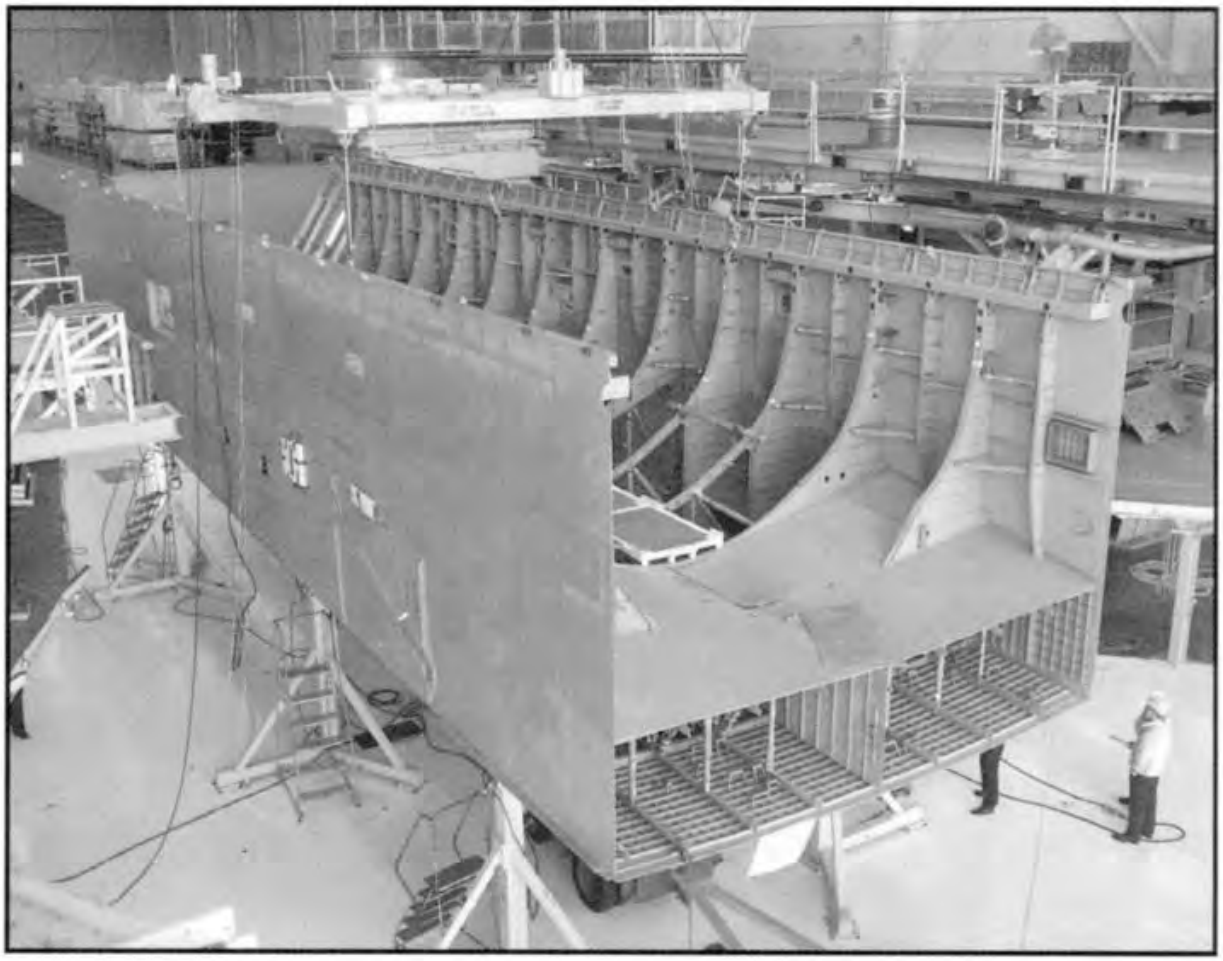

Figure 4.2-53 Mid-fuselage for the *Endeavor* (October 15, 1987)
Courtesy of Rockwell International in Dennis R, Jenkins, Space Shuttle: The History of the National Space Transportation System, p. 382.

Figure 4.2-54 Mid-fuselage Payload or Cargo Bay
Courtesy of David Baker, NASA Space Shuttle: Owners' Workshop Manual, p. 63.

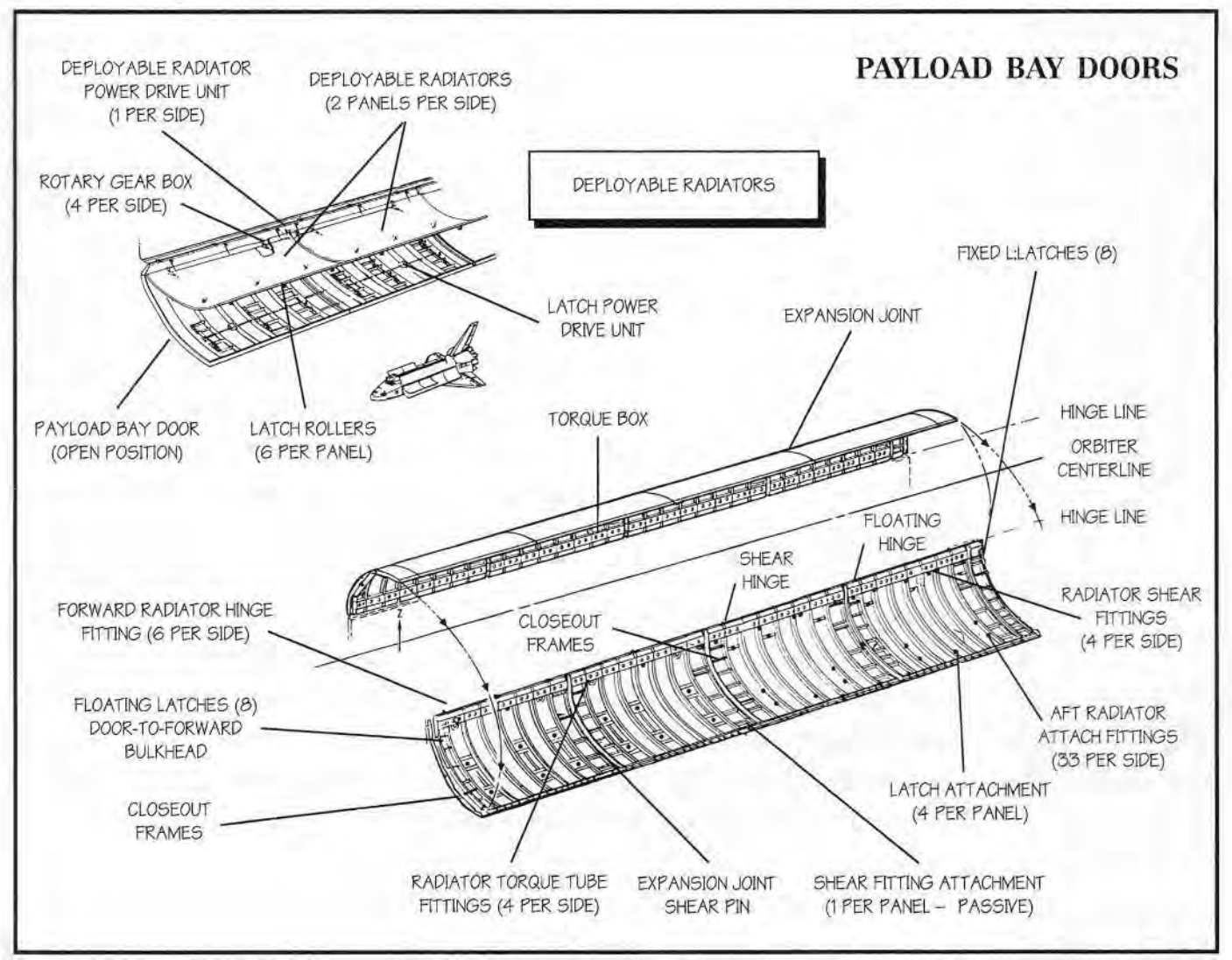

Figure 4.2-55 Diagram of the Mid-fuselage Payload Bay Doors

Dennis R, Jenkins, Space Shuttle: The History of the National Space Transportation System, p. 383.

Figure 4.2-56 The Right Aft Payload Bay Door Segment being Lowered into Place on the *Endeavor* at Palmdale in the late 1990s

The left door had already been installed. Courtesy of Rockwell International in Dennis R, Jenkins, Space Shuttle: The History of the National Space Transportation System, p. 383.

Figure 4.2-57 USAF Plant 19 as it was in October 1979
Courtesy of San Diego Air and Space Museum.

Atlas was also used to launch Earth orbital, geostationary, and interplanetary payloads. The *Atlas* in combination with the *Centaur* high-energy upper stage had launched a variety of scientific and commercial payloads. By June 1982, 13 *Atlas* vehicles were in production at USAF Plant 19 (*General Dynamics World*, 1982a). An Intelsat V telecommunications satellite was placed into orbit aboard the *Atlas-Centaur* in September 1982. It was the eighteenth consecutive successful launch of an *Atlas-Centaur* over a 5-year period. Four earlier Intelsat Vs were successfully launched atop *Atlas-Centaur* launch vehicles in December 1980, May 1981, December 1981, and March 1982 (*General Dynamics World*, 1982b). The fourth of five Intelsat V communications satellites was launched into orbit by an *Atlas-Centaur* space booster. It was the fifty-ninth *Atlas-Centaur* launch since 1962 (*General Dynamics World*, 1982c).

The Convair Division was split again in March 1985, this time to form the General Dynamics Space Systems Division (GDSSD) with nearly one-third of San Diego Convair workers or 12,300 employees assigned to that division. GDSSD continued the *Atlas* and *Atlas/Centaur* launch vehicle programs, and it was charged with coordinating commercial space operations, strategic systems, and secret USAF projects (Ritter, 1985). Alan M. Lovelace became the general manager of the new division. He had previously served as the Principal Deputy to the Assistant Secretary of the USAF for Research and Development and then left to be Deputy Administrator of NASA (NASA, 1981). Two weeks prior to the division split, the Convair Division had lost its bid as a contractor for preliminary work on the U.S. Space Station program. After the split, the Convair Division continued its work on cruise missiles and advanced cruise missiles and fuselages for the KC-10 (Ritter, 1985). As the prime contractor for the *Atlas*, the GDSSD operated the largest business sector of the company (General Dynamics, 1986). The Convair Division built its early reputation on manufacturing aircraft, but space-related projects in the GDSSD outpaced that work. General Dynamics sold its missile business to Hughes Aircraft Corporation in 1992 (Kraul, 1992).

Tomahawk Ground Launched Cruise Missile Transporter Erector-Launcher (TEL) and Launch-Control-Center (LCC) (1980–1987)

The Convair Division was the prime contractor for the Tomahawk-Sea Launched Cruise Missile for the Navy and the Tomahawk Ground Launched Cruise Missile (GLCM) for the USAF (*General Dynamics World*, 1981b). The United States decided on January 12, 1977, to develop the ground launched version of the Tomahawk-Sea Launched Cruise Missile primarily as a countermeasure to Soviet Union deployment of SS-22 Sabers intermediate-range ballistic missiles (IRBMs) that were strategically positioned to threaten North Atlantic Treaty Organization (NATO) countries (Polmar and Allen, 2016). Officially it was called the BGM-109G "Gryphon," named after a mythical beast with the body of a lion and the wings of an eagle, powerful on land and in the air, but it was commonly known as the GLCM, pronounced "Glick-Em" or "Glick-Um." It required 74 people to operate it (commander and assistant commander, 8 launch control officers, 19 enlisted maintenance personnel, 1 medic, and 44 security police). In December 1979, NATO agreed to the plan to construct 464 GLCMs for the NATO allies (Yenne, 2018, pp. 142–144).

In February 1980, the launcher box of the TEL test unit was delivered to USAF Plant 19 from Kearny Mesa. The Experimental Department (Department 031) manufactured the TEL at USAF Plant 19, Building 2. It was designed and built by Convair as a trailer-mounted launcher box with armored sides and aft end. The actuator of the TEL raised the launcher, and the monitor and control electronics of the LCC facilitated its operation (Figures 4.2-58 through 4.2-61) (General Dynamics, 1980a; General Dynamics, 1980b). One GLCM unit was made up of four TELs and two LCCs (*General Dynamics World*, 1981a).

Initial manufacturing and assembly of the TEL and LCC was completed at USAF Plant 19 and then sent to Kearny Mesa for electrical and electronic equipment installation, and for testing. Painting was completed at Lindbergh Field (*General Dynamics World*, 1983). In July 1981, the first Tomahawk GLCM TEL had been constructed at the Kearny Mesa plant at the GLCM Systems Integration Lab, and the LCC was under construction (*General Dynamics World*, 1981a). The first USAF/Convair Tomahawk cruise missile had been successfully launched on a test flight on February 25, 1982, from a TEL while under the command and control of its LCC at the Utah Test and Training Range (*General Dynamics World*, 1982d).

By the end of 1983, USAF Plant 19 was expected to perform all assembly and final testing prompting the move of all office and design engineering personnel from Kearny Mesa to Plant 19. By mid-September 1983, 16 TELS and 7 LCCs had been delivered to the USAF as well as trainers, simulators, and GLCM-unique test equipment (General Dynamics, 1983). The GLCMs achieved operational capability in Western Europe in 1983 and had a range of 2,500 kilometers as counterforce to the Soviet SS-20 missiles deployed throughout Eastern Europe. A GLCM unit comprised 16 Tomahawk cruise missiles, 4 TELS, and 2 LCCs (one primary and the other back up). All 16 Tomahawks had the capability of being launched simultaneously at 16 different targets. The TEL and LCC were pulled by a V-10 diesel tractor manufactured by M.A.N. of West Germany. It used a terrain-counter-matching guidance system for accuracy (USAF and General Dynamics, n.d.). The GLCMs were located at six locations in Europe: 38th Tactical Missile Wing, Wueschheim Air Base Germany; 303rd Tactical Missile Wing, Royal USAF Molesworth, United Kingdom; 485th Tactical Missile Wing, Florennes Air Base, Belgium; 486th Tactical Missile Wing, Woensdrecht Air Base, Netherlands; 487th Tactical Missile Wing, Comiso Air Base, Italy; and 501st Tactical Missile Wing, Royal USAF Greenham Common, United Kingdom. The 868th Tactical Missile Training Squadron operated at Davis-Monthan AFB (USAF Police Alumni Association, 2015). The Davis-Monthan AFB was the first GLCM Squadron activated in the U.S. with a ceremony on July 1, 1981 (Convair, 1981b).

The Soviet Union recognized the effective counter measures of the GLCMs against their SS-20 IRBM operations and employed anti-nuclear weapons movement propaganda and other activities to subvert nuclear weapon development and deployment amongst NATO nations (Yenne, 2018, pp. 147–151). On December 7, 1987, the Intermediate-Range Nuclear Forces (INF) Treaty between the United States and the Soviet Union halted use of the 288 GLCMs that had been deployed to the squadrons. The 176 GLCMs still in production were not shipped overseas (Yenne, 2018, p. 146). The INF Treaty also halted use of the U.S. Army's Pershing II and the Soviet IRBMs. The GLCMs were destroyed following removal from service (1988-1991) (Polmar and Allen, 2016).

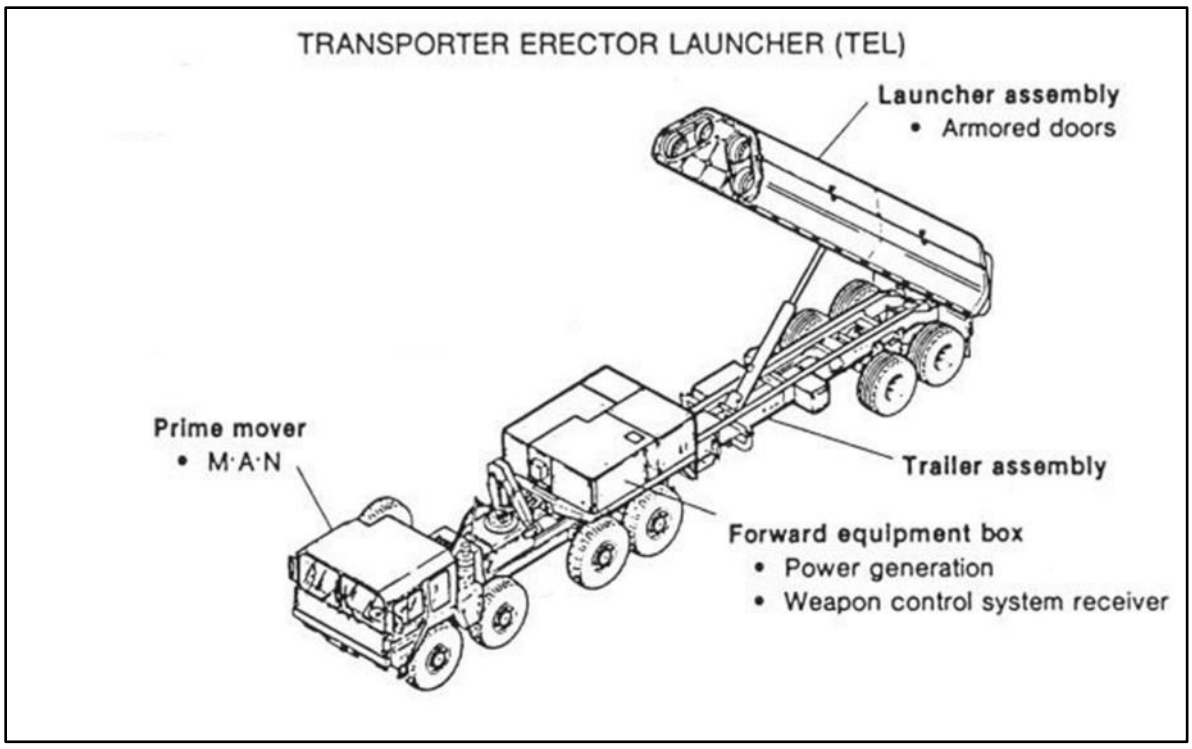

Figure 4.2-58 Diagram of the TEL

Figure 4.2-59 TEL in Position at Florennes AB, Belgium (no date)

Figure 4.2-60 General Dynamics Brochure Showing Tomahawk Missile Launch from the TEL (no date)

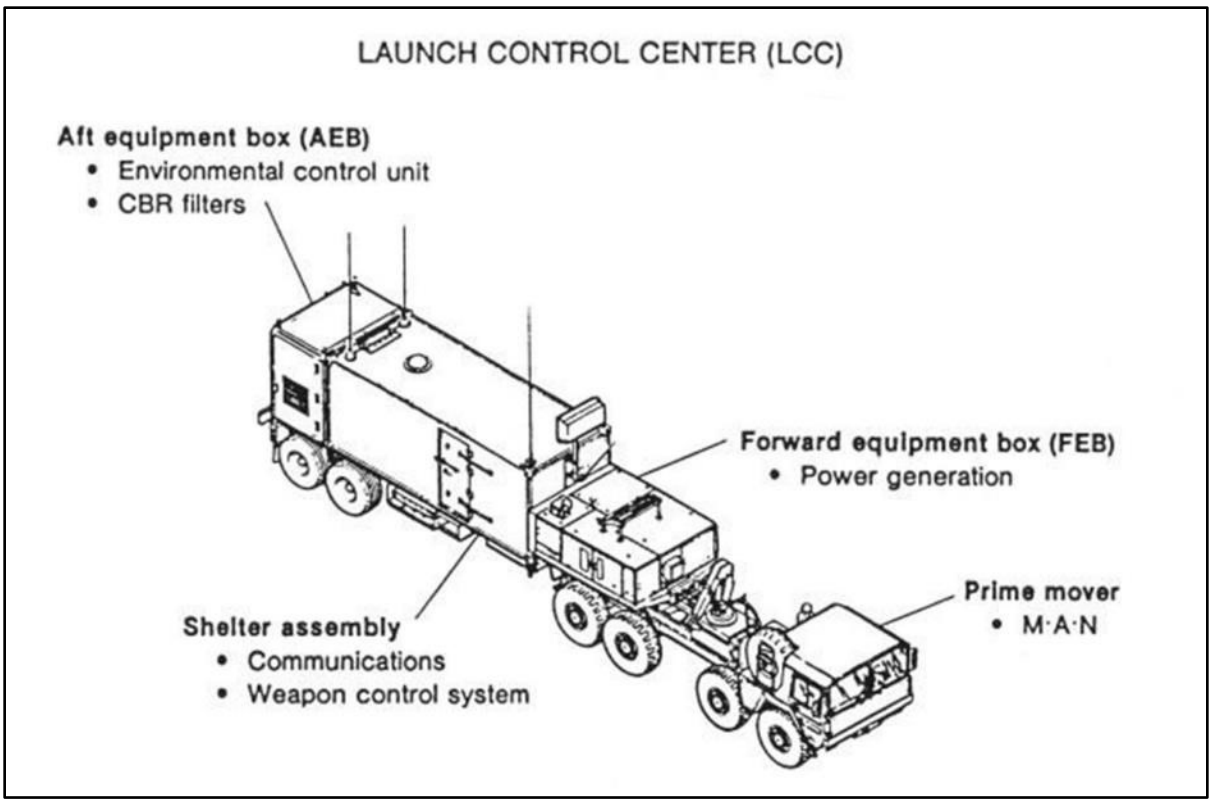

Figure 4.2-61 Diagram of the LCC

As part of the INF Treaty, the Soviet Union could inspect any sites (Yenne, 2018, p. 152). On July 1, 1988, 50 inspectors from the Soviet Union arrived at Travis AFB, California, to conduct inspections at: the former GLCM production facility at USAF Plant 19; the GLCM training site at Davis-Monthan AFB in Tucson, Arizona; the GLCM training site at Fort Huachuca, Arizona; the Missile Storage Depot at Dugway Proving Ground, Utah; and the Pueblo Army Depot, Colorado (GlobalSecurity.org, 2020). In early 1988, the USAF declared USAF Plant 19 as "excess of USAF ownership" and sought to sell the site to General Dynamics or another entity (*Times-Advocate*, 1988, p. A7).

4.2.4 Navy Tenancy at USAF Plant 19 (1966–1994)

Although the USAF owned USAF Plant 19, the Navy began using it again in 1966 through a lease. The lease allowed the U.S. Naval Shore Electronics Department (Naval Shore Electronics Engineering Activity, Pacific or NAVSEEAPAC) occupancy of the second floor of the north wing of Building 4 for 5 years with the option of revocation and later reuse of the Convair Division of General Dynamics. NAVSEEAPAC also began using the five TSC buildings that had been used for storing materials for F-102 production from 1956 to 1966 (Office of the Chief of Engineers,1966). By February 8, 1968, ownership of the TSC buildings had been officially transferred to the Naval Facilities Engineering Command (Office of the Chief of Engineers, 1968a, 1968b).

NAVSEEAPAC was established in May 1966 as part of the Naval Electronic Systems Command (later renamed NAVELEX), which was headquartered in Washington, D.C. NAVELEX was one of five systems commands under Naval Material Command (Navy, 2020). Its mission was "to provide the Navy and Marine Corps operating forces with the best Command, Control and Communications electronic systems" (National Research Council of the National Academies, 2003, p. 188). By October 1972, it served as the primary liaison for the system commands.

Responsibilities for NAVELEX were electronics-based and included: engineering design, development, logistics planning, testing, technical evaluation, acquisition, procurement, contracting, production, manufacture, inspection, installation, maintenance, repair or overhaul, conversion, alteration or modification, and advance base outfitting. NAVSEEAPAC provided technical support to Naval Sea Systems Command operations in Japan, Philippines, and Guam (DON, 1972). When the Navy disestablished the Naval Material Command in May 1985, NAVELEX became Space and Naval Warfare Systems Command (SPAWAR), an Echelon II command under the Chief of Naval Operations (Navy, 2020). The name change meant that in addition to "meeting the fleet's Command, Control and Communications requirements, emphasis was placed on Undersea Surveillance and Space Systems programs. SPAWAR became the Navy's Battle Force Architect—a new concept aimed at designing total systems for the forces instead of individual platforms and weapons" (National Research Council of the National Academies, 2003, p. 188).

A 1991 Base Closure and Realignment Commission (BRAC) decision closed the Naval Electronic Systems Engineering Centers in San Diego and Vallejo, California. On October 1, 1992, the function of the two centers were combined into the new command Naval Command, Control and Ocean Surveillance Center (NCCOSC), In-Service Engineering, West Coast Division (NISE West). Complete transfer from the Vallejo center was expected by September 30, 1995. The 1991 BRAC decision also realigned NAVSEEAPAC (renamed NEEACT PAC) Pearl Harbor under NISE West as NISE West Activity, Pearl Harbor. Both NEEACT PAC Guam and NEEACT PAC Japan became subordinate activities of NISE West. Unique NISE West missions included Global Positioning System (GPS) at Imperial Beach for testing unique GPS equipment for Navy operations and Marine Air Traffic Control and Landing Systems support for test beds and systems (Naval Command, Control and Ocean Surveillance Center, 1995, pp. 1–7).

By March 1994, GDSSD operated USAF Plant 19 with tenants (Naval Command, Control and Ocean Surveillance Center, 1995, pp. 2-5, 2-7). Figure 4.2-62 identifies the buildings each of the tenants utilized at that time. The General Dynamics Convair Division was slated to cease making commercial MD-11 jetliner fuselages at USAF Plant 19 in preparation for the departure of General Dynamics (Kraul, 1994). Martin Marietta acquired the GDSSD and all *Atlas* and *Centaur* work on May 2, 1994 (GlobalSecurity.org, 2019). The USAF began transferring ownership of USAF Plant 19 to the Navy (Radian Corporation, 1994, pp. 2–11). In 1996/1997, the Lockheed Plants (Consolidated Plant 1 and Kearny Mesa Plant) were demolished after General Dynamics vacated the buildings (KEA, 1996, p. B-37; U.S. Department of Agriculture, 1996, 1997, 2002).

4.3 Navy Ownership at USAF Plant 19 (1994–2019)

According to the Navy, the buildings at OTC Site 1 and TSC were transferred to the Navy on August 26, 1994. NISE West had been a tenant of OTC Site 1 but took over OTC Site 1 and TSC as host when the property was transferred to the Navy. NISE West was the host of the facilities for its own use and other tenant activities. NISE West operated TSC without tenants. NCCOSC provided "worldwide tactical information management, technology, engineering, and development for the Navy and several joint systems." NCCOSC tasked NISE West with "merging the tactical and administrative information technology systems" (Naval Command, Control and Ocean Surveillance Center, 1995, p. 7). NISE West

absorbed many other programs throughout the county.[5] NISE West supported: SPAWAR; Chief of Naval Operations; Naval Sea Systems Command; Naval Air Systems Command; U.S. Marine Corps; Coast Guard; Naval Computer and Telecommunications Command; USAF; U.S. Marine Corps Spill Prevention Control and Countermeasures; and Commander in Chief Pacific Fleet (Naval Command, Control and Ocean Surveillance Center, 1995, p. 8).

The relocation of the NCCOSC's Research, Development, Testing, and Evaluation (RDT&E) Division (or NRaD) headquarters from Crystal City, in the Washington, D.C. area, to San Diego's USAF Plant 19 was the result of a 1995 BRAC decision (GlobalSecurity.org 2020). NISE West merged with NRaD in early 1996, adding direct fleet support and in-service engineering. NRaD became the SPAWAR Systems Center. Relocating SPAWAR headquarters from Washington, D.C., began in April 1996 with an official transition in 1997. It is now known as Naval Information Warfare Systems Command. The NCCOSC operations at the site has been identified as a:

> …full-spectrum RDT&E laboratory serving the Navy, Marine Corps, and other DoD and national sponsors within its mission, leadership assignments, and prescribed functions. It has facilities for conducting RDT&E and life cycle support functions in C4ISR.[6] These laboratories offer worldwide networking capabilities plus the ability to participate in major joint exercises. In San Diego, the center occupies more than 580 acres. Facilities are concentrated in four major areas: Topside, Bayside, Seaside, and Old Town. Extensive in-service engineering facilities, located nearby on the OTC, provide a full range of systems engineering, management, logistics, installation, and technical support (GlobalSecurity.org 2020).

[5]Programs included NESEC San Diego and Vallejo; NISE West Activity Pearl Harbor; Field Office at Adak, Alaska; NISE West Facility Guam; and NISE West Facility Japan. Tenant detachments included: NISE West Detachment of Vallejo, California (host: Mare Island Naval Shipyard); NISE West Crypto Repair Facility of San Diego (host: Naval Station San Diego); NISE West GPS Facility of Imperial Beach (host: Naval Air Station, Imperial Beach); NISE West Field Office, Key West in Key West, Florida (Naval Air Station Key West, Florida); NISE West Activity Pearl Harbor, Hawaii (host: Pearl Harbor Naval Shipyard); NISE West Activity Pearl Harbor Field Office in Adak, Alaska (host: Naval Air Station Adak); NISE West Facility Guam of Finegayan, Guam (host: Naval Computer and Telecommunications Area Master Station Western Pacific or NCTAMS WESTPAC); and NISE West Facility, Japan of Yokosuka, Japan (host: SRF Yokosuka) Navy, "Defense Base Closure and Realignment Commission: 1993 Report to the President," 1-68, 1-69; Naval Command, Control and Ocean Surveillance Center, In-Service Engineering, West Coast Division, "BRAC-95 Data Call Number One: Data for Naval Command, Control and Ocean Surveillance Center, ISE West Coast Division, San Diego," 1995.

[6] According to Northrop Grumman, "C4ISR, or Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance, brings together arguably the most important elements of the infrastructure of global national security into a single, memorable term. C4ISR can be defined as the web of platforms, payloads, sensors and other systems that inform and connect warfighters and first responders." Northrop Grumman, "C4ISR," available at https://www.northropgrumman.com/Capabilities/C4ISR/Pages/default.aspx#targetText=C4ISR%20can%20be%20defined%20as,connect%20warfighters%20and%20first%20responders, accessed October 24, 2019.

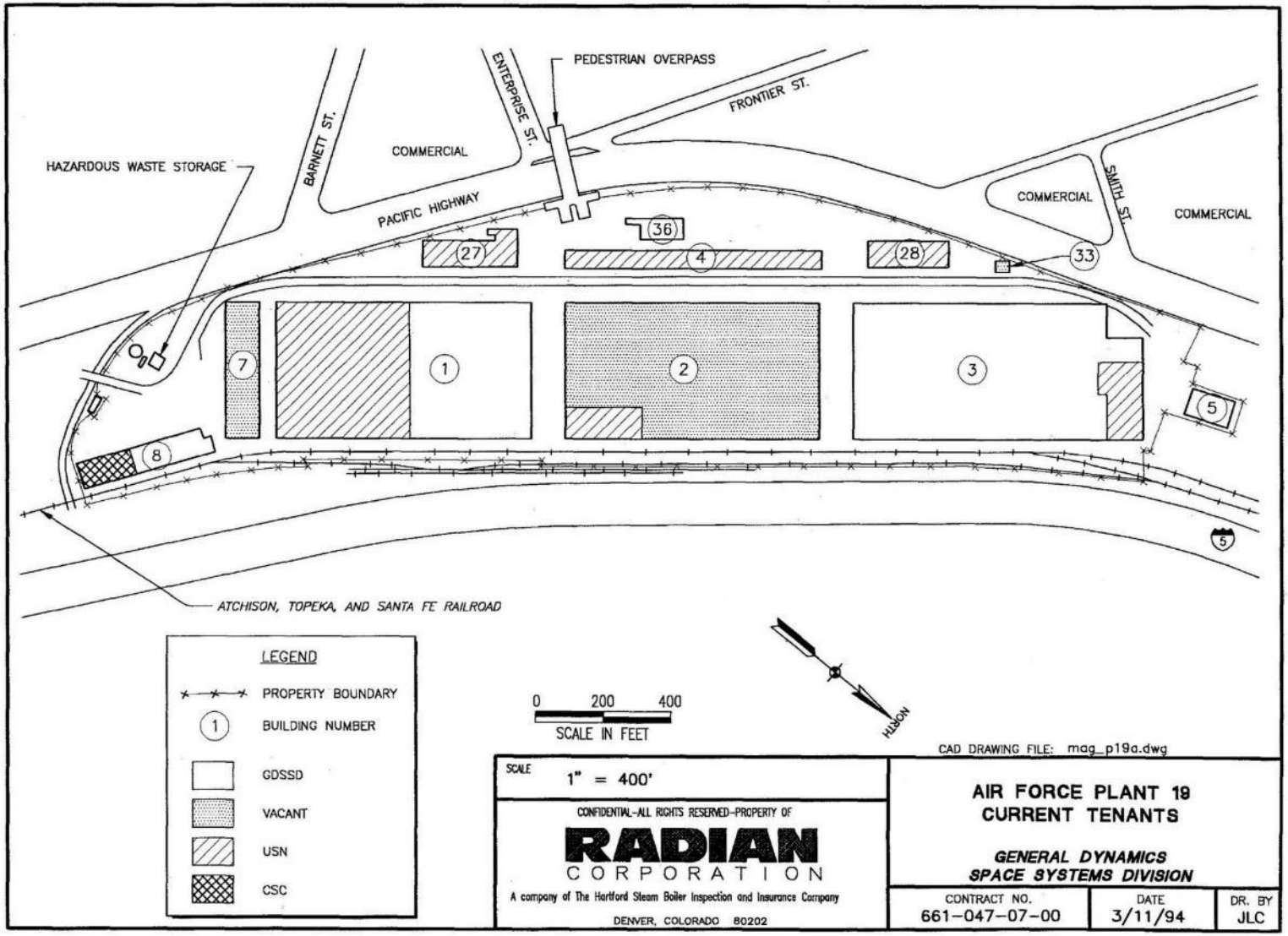

Figure 4.2-62 USAF Plant 19 Tenants in 1994
Courtesy of Radian Corporation.

The transition to San Diego meant an expansion of activities that have increasingly shifted to include:

> …development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs (Navy, 2019, p. 2).

4.4 Architecture

4.4.1 Modern Industrial Architecture

The following sections are excerpted and adapted from R. Christopher Goodwin and Associates (1997), *Historic Context for Department of Defense Facilities World War II Permanent Construction;* KEA Environmental, Inc. (1996), *General Dynamics Facilities Demolition Project. Draft EIS Environmental Impact Report,* specifically Appendix B; *SurveyLA Los Angeles Citywide Historic Context Statement: Industrial Development, 1850-1980* (2011); and additional sources, as indicated.

Industrial factory designs emerged in the late nineteenth and early twentieth centuries that came to influence modern architecture, symbolizing our new partnership with the machine. Early in the twentieth century, architects and builders in Europe and the United States created the first truly modern factories dedicated to mechanized industry using modern building materials. European architects consciously developed architectural theories that reflected their interpretation of the spirit of the modern age. Communities of architects, artists, and craftsmen, established as forums for progressive designers, flourished throughout Europe at the time.

In 1908, Peter Behrens emerged from one such progressive community, the Deutsche Werkbund, and designed the *Allgemeine Elektricitäts-Gesellschaft* (AEG) Turbine Factory in Berlin. The factory was constructed of reinforced concrete and steel, both of which were expressed on the exterior of the building. Although the factory lacks traditional ornamentation and abandons historicism, the regularity of its composition establishes a design rhythm on the façade of the building (Pevsner, 1976, p. 288; Frampton, 1980, pp. 111–113) (Figure 4.4-1).

In 1910, Behrens's pupil, Walter Gropius, designed the Fagus Factory in Alfeld, Germany, which effectively established the International Modern style with its rhythmic proportions and glass curtain wall (Pevsner, 1976, p. 288) (Figure 4.4-2). Gropius's use of a structural steel frame and glass curtain wall is one of the earliest examples of a building with an exposed supporting skeleton. The industrial work of both Behrens and Gropius illustrates the conscious development in Europe of the factory building type as a symbol of modern industry and technology. The early work of these architects established the basis from which both the twentieth century industrial complex and the Modern stylistic movement emerged.

Figure 4.4-1 The AEG Turbine Hall in 1928
Source: Siemens AG, in New York Times, January 18, 2010.

Industrial architecture in the U.S. at the same time developed primarily from the practical and economic directives of the businesses they served, rather than from the theories of architects consciously pursuing an architectural identity for the modern age (Hildebrand, 1974, p. 3). Most factory buildings were designed by engineers rather than architects, as they interpreted the practical, operational, and economic needs of the industry (Wilson et al., 1986, p. 185).

Like European architects, American designers exploited the modern building materials of steel and reinforced concrete, which were chosen solely because of their suitability to house modern industry. One important innovation of early twentieth century industrial construction that departed from the relatively dark nineteenth century examples is the daylight factory. These buildings used reinforced concrete and steel frames to replace load-bearing walls, providing uninterrupted interiors for industrial processes under one roof and allowing large expanses of glass to admit natural light into the work areas within (Halsey, 1952, p. 201).

Figure 4.4-2 Fagus Factory, Alfeld, Germany, 1910
Source: Wikimedia Commons, https://commons.wikimedia.org/wiki/Category:Fagus-Werk#/media/File:Fagus_Gropius_Hauptgebaeude_200705_wiki_front.jpg.

The more important influence on the form of the 1930s industrial building was the American predisposition toward efficiency rather than tradition (Halsey, 1952, p. 193). Applying the design principles of scientific management known as Taylorism, as developed by Frederick Winslow Taylor, the architect—or engineer—studied the manufacturing process in order to generate the form of the building (Taylor, 1911). The designer drew a flow diagram of the industry that included the movement of both materials and workers within the factory. The industry's production line was the most important element considered by the designer (Halsey, 1952, p. 191). The production line included the route travelled by materials from the point that they entered the plant as raw materials, to their exit as finished products. As with the assembly buildings at Plant 2, the requirements of the production line determined the form of the building.

By the 1930s, designers usually chose a steel frame to support a single-story factory because their vast interior spaces divided by only one or two rows of support piers were better suited to the expansive, increasingly mechanized assembly lines of modern production (Halsey, 1952, p. 197). If a standardized arrangement of bays could accommodate the manufacturing process, steel structural bays were fabricated off-site. These prefabricated frames reduced construction time and eased the construction process (Halsey, 1952, p. 197). Steel offered several advantages. Steel frames could withstand greater stresses than wood frames, and steel support piers occupied less interior space than reinforced concrete piers. These factors enabled architects to use steel structural systems to enclose immense and complex manufacturing operations within expansive, simple, and direct plans. Finally, a factory composed of the orderly arrangement of steel frame bays could be expanded, modified, or disassembled easily (*Architectural Record,* 1939, p. 99).

With the development of the modern assembly line and heavy mechanized production, the single-story, steel-framed factory became the most efficient type of factory constructed in the U.S. This type of factory dominated the industrial landscape during the late 1930s and possessed several distinctive

characteristics. Although the design of the buildings rarely displayed intentional symmetry, steel frame structural systems resulted in a regularity in the spacing of bays that often imbued a sense of style in the façade of the building. Like the International Style, the steel frame also freed the walls from supporting the building. Non-load-bearing walls therefore could be composed of glass, or clad with brick, stucco, or metal veneer. A curtain wall of corrugated metal or asbestos attached to a steel skeleton frame, as in the assembly buildings at Plant 2, was a type of low-cost construction that was considered satisfactory for buildings in which thermal insulation was not essential (*Architectural Record,* 1939, pp. 97–102). The 1930s factory could enclose enormous amounts of space, often creating an almost monumental interior work environment.

The functional arrangements of architectural features frequently emphasized horizontality on the exterior of the building. Bands of windows set above horizontal bases provided a regularity and simplicity to the factory façade that corresponded to the modern sensibility. The light needs of the industry housed within the building often dictated the roof shape. When natural light was desirable on the interior of the factory, one of three basic types of roofs—the sawtooth, butterfly, or monitor roof—admitted large amounts of overhead light (Halsey, 1952, p. 197). Consequently, the factory often displayed an unusual animated roof line.

4.4.2 Influence of Architect Albert Kahn

Arguably the most powerful influence in the development of the late 1930s industrial building was architect Albert Kahn. Known as “the architect of Detroit,” Kahn designed a number of industrial buildings for the automobile industry and became well-known through his association with Henry Ford. These mammoth manufacturing plants became the standard by which the majority of WWII industrial building complexes were built.

Kahn was born in 1869 in Germany. In 1880, the family moved to Detroit, Michigan, drawn by the promise of economic opportunity. At the age of 16, Kahn took a job as an office boy in the architectural office of Mason and Rice in Detroit, where he became a draftsman and studied architecture on his own in the firm’s library (Ferry, 1987, pp. 8–10). Kahn’s career coincided with the emergence of the auto industry, which created a demand for factories. Kahn enthusiastically accepted the challenge of designing industrial facilities, and over the next four decades he was a major influence on modern American industrial architecture (Ferry, 1987, p. 11).

Kahn learned about handling and organizing information from the industries he served, specifically the auto industry. Through the application of meticulous organizational procedures, Kahn created a process by which enormous industrial complexes could be rapidly designed and built. This speed and organization enabled Kahn’s practice to flourish during WWII, when the need for modern industrial facilities expanded dramatically.

Kahn’s early industrial plants were precursors to the industrial and military factories of the late 1930s and WWII periods. In 1906, Kahn designed the George N. Pierce Plant in Buffalo, New York (Figure 4.4-3). The plant was a complex of eight buildings, one administrative and seven production buildings, designed and constructed to manufacture the Pierce Arrow automobile. Most of the seven production buildings were single-story buildings of various heights, supported by reinforced concrete frames and illuminated by various forms of lighting. The plan of this complex became the model for factory design during the next several decades (Hildebrand, 1974, p. 34). The industrial flow chart developed for production of the automobile determined the design of the complex. The position of each of the buildings was determined by the factory’s workflow, much like the positioning of the buildings at Plant 2. Rail lines connected the separate buildings; at Plant 2, the monorail system served the same function. Most of the production took place in single-story buildings, with monitor and sawtooth roofs evenly

distributing natural light throughout the buildings. To accommodate the various production processes, Kahn was able to increase the length and width of the interiors of the plant as needed without concern about the light source. This type of manufacturing complex proved remarkably well suited to modern production techniques and was applied by Taylor and Taylor in the design of Plant 2 (Hildebrand, 1974, p. 39).

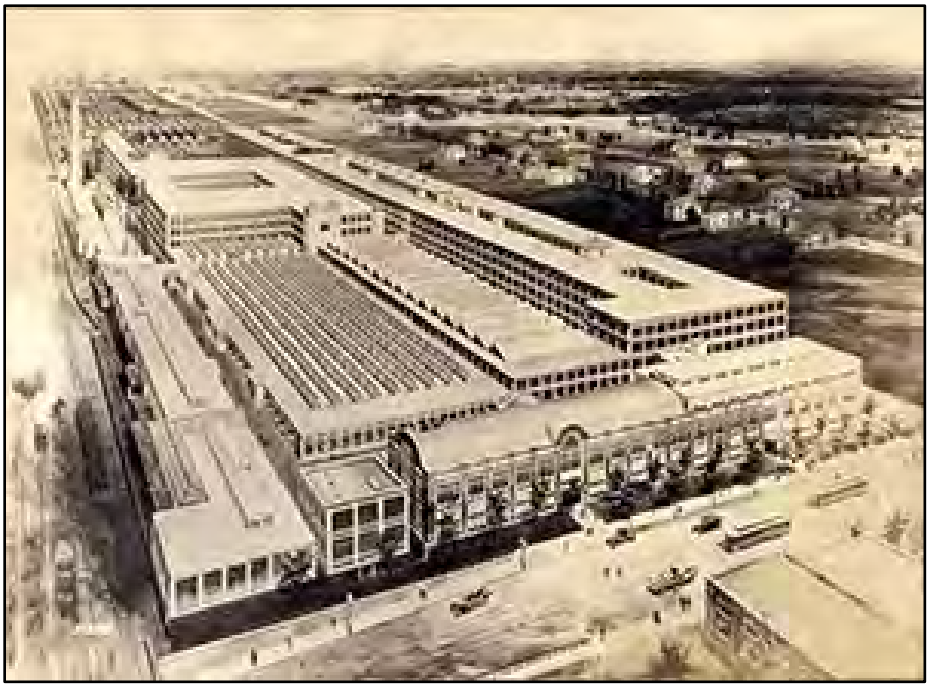

Figure 4.4-3 Pierce Arrow Factory Complex, Buffalo, New York, Designed by Albert Kahn, 1906
Source: Pierce Arrow Museum, http://www.pierce-arrow.com/history.

Another innovative early project was the Ford River Rouge Plant, built outside Detroit in 1918. An NRHP-listed historic district, the River Rouge plant was composed of a series of single-story buildings of uniform height (Figure 4.4-4). The plant housed a large and complex manufacturing process within a simple and economical plan of modular mechanical systems and conveyors. With River Rouge, Kahn showed his commitment to steel frame construction. Before 1914, Kahn had worked almost exclusively in concrete. With the adoption of the mechanized assembly line by the auto industry and the resulting predominance of the single-story factory, steel frame construction became the most practical design alternative (Christian, 1977). By using prefabricated steel frames, Kahn was able to construct the plant with remarkable speed. The River Rouge Plant received critical acclaim and wide publicity. By the early 1940s, Albert Kahn, Inc., was designated by *Architectural Forum* as the premier national defense architect (*Architectural Forum,* 1940, p. 2).[7]

[7] This section is excerpted and adapted from KEA, 1996, pp. B-40 et seq.

Figure 4.4-4 River Rough Plant, Ford Motor Company, 1975, Designed by Albert Kahn

4.4.3 World War II Industrial Buildings

During WWII, the U.S. military created two broad types of permanent industrial construction. These included heavy industry factories that produced planes, tanks, and heavy artillery; and ammunition production and loading facilities. Architects and engineers relied on the form of the 1930s factory for the design of the WWII industrial complex. Wherever possible, architects relied on precedents established in the 1930s, specifically modular steel frame, single-story construction, for the design of the WWII industrial complex. Heavy industry military production facilities were housed in factories similar in design to the factories that housed automobile production a decade earlier. The form of the more volatile ammunitions loading facilities, which for reasons of safety could not be housed within a single building, still relied on the production line to generate the plan of the entire complex. Under the military's supervision, collaborative architect/engineering firms designed and built enormous war-related industrial complexes in remarkably short periods of time during the late 1930s and early 1940s. The success of these ventures was due to standards established in the efficient design of the modern American factory.

The two most prolific architecture and engineering firms during the WWII period were Kahn and Smith, Hinchman, and Grylls of Detroit. From December 1939 to December 1942, Kahn received more than $200 million in government commissions (Hildebrand, 1974, p. 197). During the same period, Smith, Hinchman, and Grylls received almost $500 million in government contracts, accumulated a staff of 1,200, and built numerous industrial complexes containing more than 1,000 buildings (*Architectural Forum,* 1942, p. 62). When dealing with numbers so large and with short time spans, standardization became the means by which these firms achieved such dramatic results. Architects reproduced and

repeated designs where possible, making alterations only to accommodate individual site or manufacturing constraints.

Style was not a consideration in the design of the WWII industrial building. During this period, economy of time, materials, and funds required the elimination of everything but the utilitarian. In adhering to this requirement, however, these buildings reflected important elements of modernism. The WWII industrial complex exemplifies one of the clearest examples of American functionalist architecture and displays a beauty in the relationship and order of its various structural elements.

4.4.3.1 *Aircraft Production and Assembly*

As the U.S. moved closer to involvement in WWII during the late 1930s, the necessity to increase the military's supply of weaponry became apparent. By 1936, Army planners realized that involvement of the U.S. in a global war would require both large-scale arms manufacturing in existing plants and the construction of new facilities to supplement commercial manufacturers. Between 1939 and 1942, the U.S. military devoted a large percentage of its construction program to industrial production facilities, including heavy industry factories used to produce aircraft. Modern architectural theory, technology of building materials, and the production process influenced the design of the modern factory building. In addition to theoretical and technological developments, economic and time constraints imposed by the global emergency of the late 1930s and early 1940s played an equally significant role in the development of the WWII industrial building.

The production of some products required major spatial and engineering changes to the factories. Businesses were reluctant to invest money in facilities for the production of goods that would have a minimal post-war market. Businesses customarily recovered the cost of capital improvements through price adjustments. The unknown length of the war, with its markets for military products, made it impossible for businesses to factor the cost of capital improvements into the unit price.

To overcome this obstacle, the federal government explored ways to encourage the involvement of private industry in war production. The government offered an accelerated tax amortization to companies certified by the War or Navy Departments. In August 1940, the government created the DPC, a federally sponsored enterprise, similar to the Farm Security Administration. The DPC loaned money to build new factories, while retaining title to the facility. The factory operator had the option of either repaying the mortgage or allowing the government to take possession of the plant (Connery, 1951, p. 348).

Expansion of the American aircraft industry ranks among the more important industrial achievements of WWII. The contrast between the aircraft industry before and after the war is remarkable. In 1939, the private aviation industry, under contract to the Army Air Corps, began production of the first American-made aircraft capable of exceeding 400 miles per hour, the P-38 (Caidin, 1966, pp. 80, 82). Within 5 years, the American aviation industry not only had produced sufficient numbers of aircraft to fight a two-ocean, multi-front war, but also was assisting Allied countries.

To create a military aviation industry, the U.S. government first identified existing aircraft manufacturers with room for expansion at their facilities. Demand for aircraft grew so rapidly that the government financed additions to existing privately owned plants under the provisions of DPC contracts (Holley, 1972, p. 490). In 1939, Congress authorized more than $34 million for use in placing "educational orders" to private aircraft manufacturers. These orders, in effect aircraft sample orders, were intended to provide a learning curve in developing the techniques for rapid aircraft production. By 1940, the need for aircraft was considered so critical that Congress allotted $12.5 billion for military aviation to the prewar emergency budget (Fine and Remington, 1972).

Major aviation manufacturers such as Boeing, Lockheed, and Consolidated used these funds to construct new facilities that could support around-the-clock manufacturing. These plants required new production buildings, runways, and test facilities, as well as security and defense modifications. The construction of these additional facilities typically absorbed all land available in the vicinity of the existing plants. Constraints on the ability of existing plants to expand further limited their aircraft production capacity. To alleviate the space and scheduling problems, President Roosevelt asked Congress to provide funds for the expansion of the aviation industry. In 1940, Congress passed "An Act to Expedite the Strengthening of the National Defense," which gave the Secretary of War broad powers to boost war equipment production (Allen, 1989).

To improve aircraft production, the War Department built GOCO aircraft plants, as was the case at Plant 2. Their purpose was to assemble aircraft from components rather than to manufacture aircraft from raw materials. Thus, one of the more important site selection criteria was the proximity of rail lines to the plant site. A major consideration in the construction of GOCO aircraft plants was the need to operate the facility 24 hours a day. Around-the-clock operations required power and water availability that exceeded the capabilities of civilian infrastructure. Consequently, the Army spent more than $75,000 in 1942 to build small power plants, install electrical lines, water storage and wells, plumbing, and the necessary support buildings for GOCO aircraft assembly plants (Campbell, 1946, p. 39).

Like those at Consolidated Aircraft in San Diego, buildings were massive assembly line buildings that fed out to an aircraft ramp. The basic design included a concrete foundation with a steel or wood-frame and steel exterior. The assembly buildings were large enough to allow the aircraft to be assembled inside; storage or office space was built along the side walls at the second or third floor levels on a mezzanine (*Engineering News-Record,* 1942, pp. 133–136).

By 1945, the American aviation industry had built 231,099 aircraft of all types. Aircraft assembled at GOCOs, including B-29s, C-47s, and B-24s, played a critical role in the war effort. When the war ended, military planners understood the value of the large buildings and reinforced runways at the retired GOCO plants. The Air Corps identified fields with the greatest potential for conversion to active installations. Over the next several years the industrial buildings on these stations were repaired and modified for continued use by the Air Force as storage areas, hangars, and modification centers.

The Navy had maintained an aircraft factory in Philadelphia since 1917. Its purpose was to produce small numbers of new models of aircraft, rather than produce large numbers of existing models. During WWII, the Naval Aircraft Factory performed important work on the Kingfisher, an amphibious patrol plane. The factory also produced new models of carrier catapults and arresting gears. Personnel at the factory also produced drones and pilotless aircraft. Recognizing the potential for pilotless aircraft to carry a warhead, one officer, Commander (later Admiral) D. S. Fahrney began experiments that resulted in the beginnings of the Navy's guided missile program (Trimble, 1990, pp. 234–309) (see Section 4.2.3.1).

4.4.4 Architects Taylor and Taylor

The following section is excerpted from KEA Environmental, Inc. (1996), *General Dynamics Facilities Demolition Project. Draft Environmental Impact Report,* specifically Appendix B.

The Los Angeles firm of Edward Cray Taylor and Ellis Wing Taylor, Architects & Engineers, designed Consolidated's expansion in San Diego, including the 1942 buildings at OTC Site 1 that comprise most of Plant 2. Technical drawings on file in the Tech Library at NBPL attributed to the firm show that Consolidated Aircraft Corp. Parts Manufacturing Plant Buildings 1, 2, and 3 share the same plan and were designed in 1941 (Taylor and Taylor, 1941). Of the extant Buildings at OTC Site 1, 11 were constructed in 1942. Of those, Buildings 7 and 8 are minimally altered and share design features of Buildings 1 through 3.

The Taylors were brothers, born little more than a year apart, who established a partnership in 1912 and practiced in Los Angeles, except for a few years during WWI, when Edward served in the U.S. Army Corps of Engineers. Edward Cray Taylor was the senior member of the design team. Either individually or in partnership, they were responsible for a variety of projects in southern California and eventually became known for specializing in aircraft and industrial buildings, school buildings, warehouses, and commercial buildings, according to a 1941 ad for the firm (*Los Angeles Times*, 1941). In addition to the Consolidated plant in San Diego, the firm's large-scale industrial achievements include the Douglas Aircraft facilities in Santa Monica (1938) and Long Beach (City of Los Angeles, 1941), as well as serving as consulting industrial architects on the Ryan Aeronautical facilities in San Diego and Vernon in 1937 and 1940 (Wagner, 1937).

In earlier years, the Taylors produced notable Art Deco, or Streamline Moderne, buildings, including the landmarked Acres of Books building in Long Beach (ca. 1924) and the Flintkote Company facilities in Los Angeles (*Los Angeles Times*, 1937). One of their largest commissions was the concrete and steel Moderne style Helms Olympic Bakeries facilities (City of Los Angeles, 1941). They also worked in a variety of revival styles, including the Tudor Revival-style Wolfer Printing Company Building (1929) in downtown Los Angeles, which is mentioned in the much-referenced Gebhard and Winter Los Angeles architecture guide (Gebhard and Winter, 2003, p. 253).

Edward Cray Taylor (April 5, 1886–January 28, 1946) studied architecture and engineering at Columbia University. He was known for his work in the modern styles of the 1920s and 1930s. After the 1933 Long Beach Earthquake, Taylor redesigned Glassell Park Elementary School (1924) in the popular Public Works Administration Streamline Moderne style. The school was listed in the NRHP at the local level of significance under Criterion A for its association with the Reconstruction Program of the Los Angeles city schools that occurred between 1933 and 1935. The school was also listed under Criterion C as a good example of a new building style promulgated by the Los Angeles Unified School District during the 1930s, and as the work of Edward Cray Taylor, "a prominent local master architect" (SHPO, 2020). Edward married Viola Hamilton in 1920; his brother Ellis served as best man. Viola studied art in Paris. Edward served 18 months in France with the 25th Engineers, and he took charge of the American students of architecture at the Beaux Arts, Toulouse (*Los Angeles Times,* 1920).

Ellis Wing Taylor (October 2, 1887–January 20, 1951) was born in Chicago and educated at the University of California, receiving a B.S. degree in Mechanical Engineering in 1912, and Columbia University School of Engineering. He served in WWI as a submarine officer (City of Los Angeles, 1946). In 1931, Ellis Taylor "secretly" married actress Anne Cornwall in Yuma County, Arizona (*Minneapolis Star*, 1931).[8] The marriage ended in divorce in 1936, with Taylor filing a complaint against his wife, charging she "lashed him with a leather strap" (*Santa Rosa Press Democrat*, 1936). She also beat him and scratched his face on another occasion, "to the point that he became extremely nervous and could not attend properly to his work" (*Los Angeles Times*, 1936).

The Taylors made their reputation in the aircraft manufacturing business late in their careers. In 1934, the Douglas Aircraft Company hired the firm to design their plant in Los Angeles. The Taylors' solid structural designs led to work with other aviation companies, including Lockheed and Ryan. Consolidated retained the firm to design their 1936 expansion in San Diego and again for wartime expansion, including Plant 2 *(Engineering News-Record*, 1940, p. 70; *Southwest Builder and Contractor,* May 5, 1939).

The firm's work for the Douglas Aircraft Company was the pinnacle of their careers in aircraft plant design. Taylor and Taylor began their working relationship with Douglas in 1934. In 1939, they helped

[8] It is unclear what Ellis Taylor was doing in Yuma, but his Art Deco Masonic Temple in Yuma (1929–1931) is listed in the NRHP.

design the company's new unit in Santa Monica (*Southwest Builder and Contractor,* April 7, 1939; May 12, 1939), which resembled the architecture of Plants 1 and 2. The Long Beach plant was an entirely different architectural style and a different function than Consolidated Plants 1 and 2. The Long Beach plant was to be California's first "blackout" factory, designed expressly for military use, and constructed of lightweight materials that would not shatter under direct bomb impact, a dull all-black exterior to escape detection, and underground bomb shelters for the personnel (KEA, 1996, p. B-7).

During the 1939 and 1941 Consolidated plant expansions in San Diego, the Taylors worked closely with company engineers and contractors. Viewing the plants as points of corporate pride, in 1941 the San Diego Plant Engineer wrote a story in the *Consolidator* newsletter titled "18 Years," depicting the company's buildings over time culminating with a drawing by architects Taylor and Taylor of the three assembly buildings and a few ancillary buildings at Plant 2 (Figures 4.4-5 through 4.4-8). Taylor and Taylor structural designs allowed construction of buildings featuring spaces large enough to accommodate aircraft manufacturing, such as the three assembly buildings at Plant 2. Problems such as the difficulties in heating such huge spaces were handled with high-velocity, high-output heating systems attached to the trusses. Utilities were placed underground, and steel walls with continuous bands of windows, sawtooth roofing, and incandescent lights provided adequate lighting for both day and night shifts (*Engineering News-Record*, October 24, 1940, pp. 66–70; *Architectural Forum*, 1940, pp. 375–377, as cited in KEA, 1996, p. B-40).

Figure 4.4-5 Consolidated Unit No. 1, Buffalo, CA, 1923
Source: SDASM archives.

The design and construction of Plant 2 presented additional problems, including the site itself. On land reclaimed from the bay, the geologic formation was a soft alluvium. The Taylors noted their handling of the problem:

> Our difficulty was to construct heavy steel frame buildings with concrete floor slabs and foundations for heavy machinery and warehouse loads and numerous pits required in the processes of manufacture on this mud foundation. Piling was decided upon. … Special designs provide pile caps, foundation footings and concrete ties between pile caps for the concrete fast floors and for special machinery, tanks, furnaces, anodic pits, etc. (*Architectural Forum,* 1941, p. 423, as cited in KEA, 1996, p. B-40).

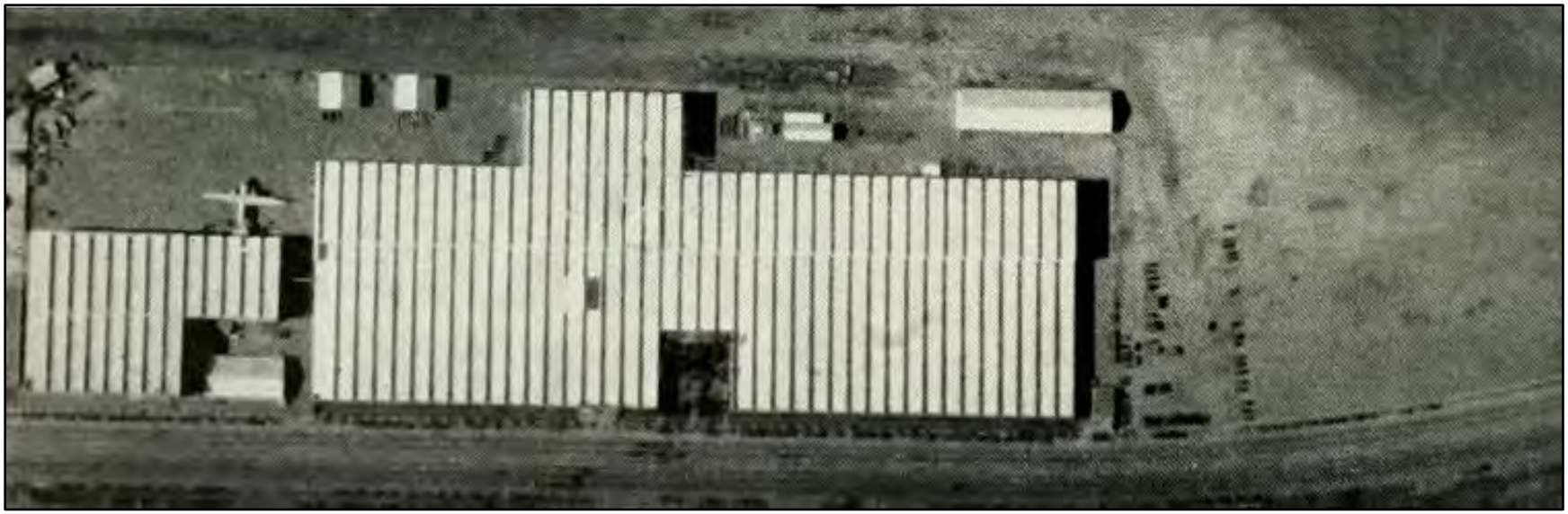

Figure 4.4-6 View of Plant 1 as it Stood at the Beginning of 1940
Source: Maloney 1941.

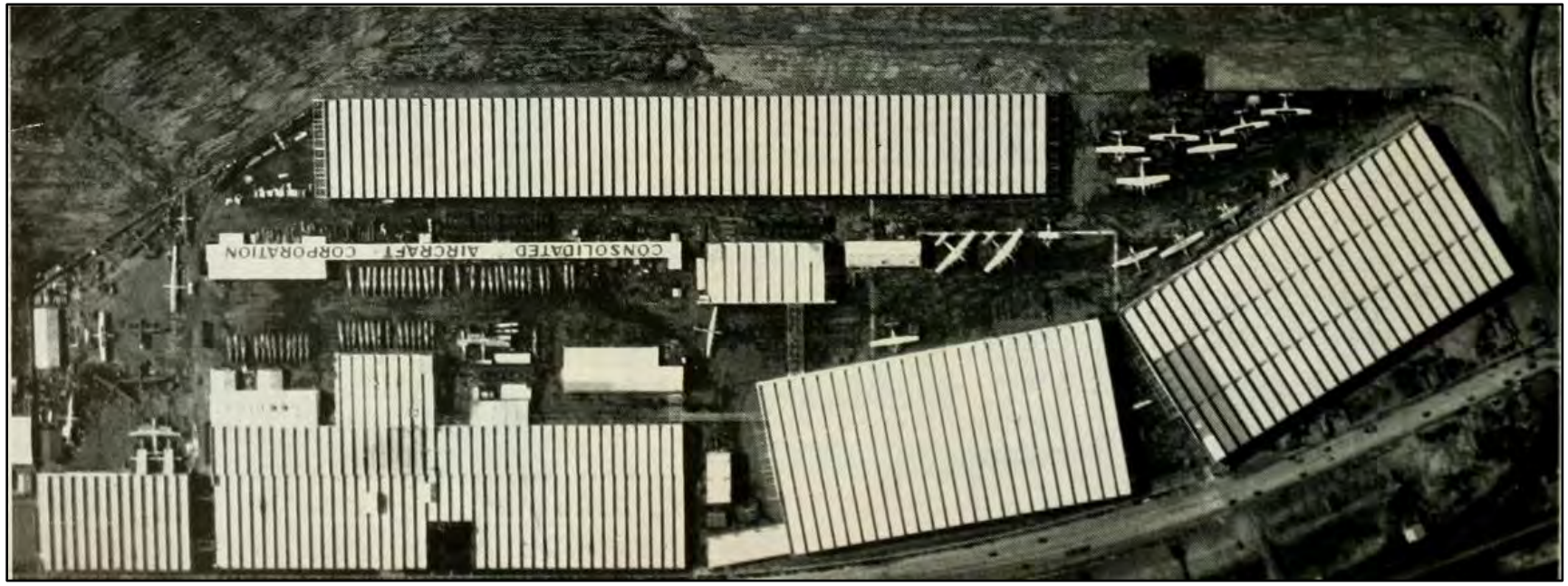

Figure 4.4-7 Aerial View of Plant 1 on February 15, 1941
Source: Maloney 1941.

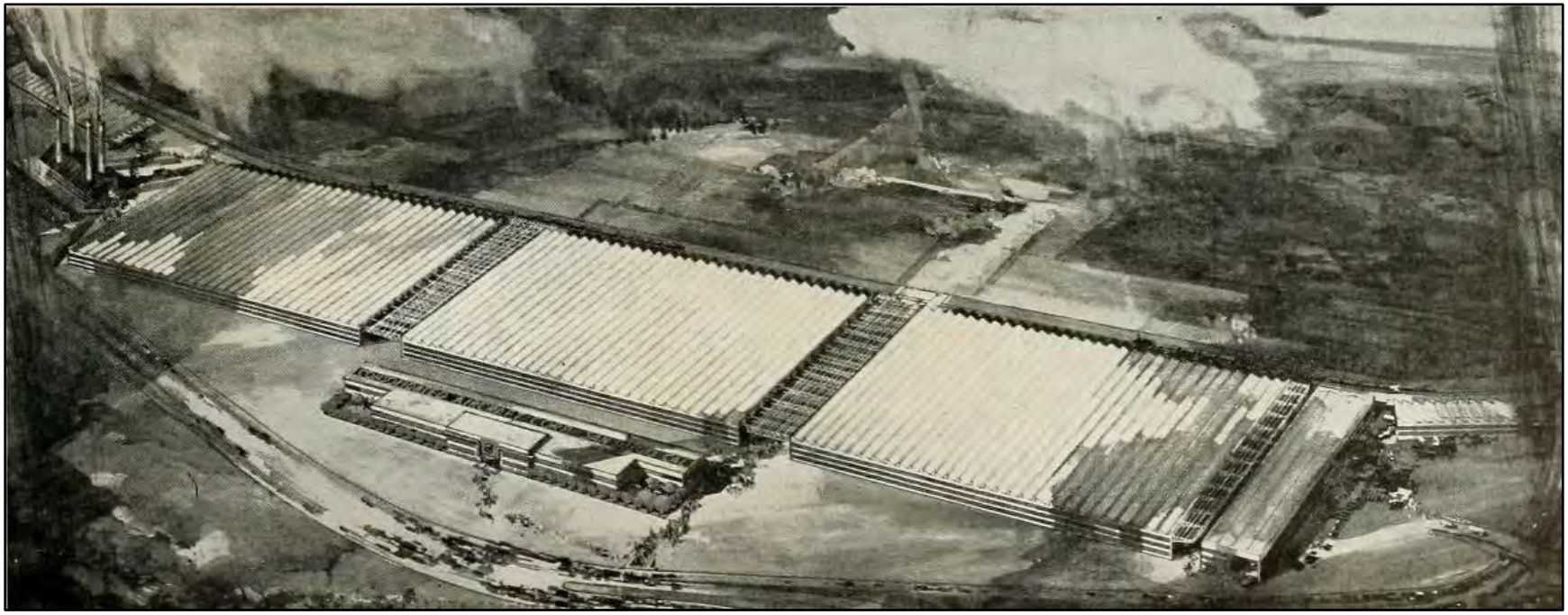

Figure 4.4-8 Architect's Rendering of Plant 2, 1.3 Miles North of Plant 1
Source: Maloney 1941.

The Taylors' plan for the eight buildings at Plant 2 was specifically designed to accommodate the inter-connecting monorail system that Consolidated used to move assemblies throughout their plants. The three main buildings were arranged end to end to permit the use of a continuous loading platform paralleling the below-grade railroad siding and a continuous monorail over the platform connecting all units of a project (*Architectural Forum*, 1941, p. 424, as cited in KEA, 1996).

Interior illumination was provided with high-yield fluorescent lamps and low-bay and high-bay reflectors, coupled with white concrete flooring. The original buildings were completed in only 10 months for a total cost of $12 million and featured the most advanced airplane manufacturing equipment (*Southwest Builder and Contractor*, June 20, 1941, pp. 17–18; *Architect and Engineer*, July 1941, p. 47; *Aviation*, October 1941, pp. 52–53).

Edward died in Beverly Hills at the age of 59 as a result of heart disease, and the funeral was delayed until his two sons could return from fighting in WWII (*Los Angeles Times*, 1946). Ellis died suddenly in Arcadia, California, at the age of 63. His obituary is titled, "E.W. Taylor, Designer of Plane Factories, Dies: Douglas and Consolidated Plants Built by Architect and Structural Engineer." According to the story, he designed some of southern California's largest airplane plants, and in 1936 served as consulting engineer for a large plant in England. In addition to his architectural achievements, he was an enthusiastic competitive yachtsman (*Los Angeles Times*, 1951).

4.4.5 Property Types and Features

In a special issue dedicated to the defense industry, *Architectural Forum* presented a variety of defense property types. Under the category of "Aircraft," the first example shown is Consolidated's San Diego Plant 1. Although the plants described are not identified by location, presumably for security reasons, plants by established architects Albert Kahn, John and Donald R. Parkinson, and Gordon B. Kaufmann, among others, are shown. All are enormous in scale, like Consolidated Plants 1 and 2 with similar sawtooth roofs. Examples of rapid expansion are depicted, also like the Consolidated plants (*Architectural Forum*, 1940, pp. 375–385).

The roofs and walls of early industrial buildings were engineered to provide light and ventilation for manufacturing space. Daylight, specifically northern light, was preferred for manufacturing space because of its diffused, indirect quality. Even after the introduction of gas and electric lighting, natural light remained cheaper and better. Artificial light was used to supplement daylight during the early morning and late afternoon hours only as necessary. The term "daylight factory" became prevalent when reinforced concrete and steel-framed construction nearly doubled the amount of wall space that could be devoted to window openings (Bradley, 1999, p. 161).

The desire for natural light influenced many aspects of the design of manufacturing works. Typically, buildings were positioned to avoid blocking the light of neighboring structures. The maximum width of industrial buildings was determined by the extent to which light could penetrate into the interior. The quality of light in various areas determined the positioning of operations in factories. Handwork, as well as fine machine work, was undertaken at benches placed directly below or perpendicular to window openings. Industrial lighting also relied on the installation of specially designed lighting fixtures (Bradley, 1999, p. 161).

4.4.5.1 *The Sawtooth Roof*

A sawtooth roof consists of a series of parallel one-sided skylights placed so that light is admitted into a building from only the direction that avoids direct sunlight; in the northern hemisphere, the skylights are on the northern face. The roof projections, triangular in section, are positioned so that the shorter, more

vertical slope is glazed. The sawtooth roof has historically also been called a weave shed roof or a silk mill roof, referring to its original use in factories in the nineteenth century (Bradley, 1999, pp. 267–268).

Prominent British engineer and shipbuilder Sir William Fairbairn (1789–1874) is credited with the early designs for what he termed the *shed principle.* In his extensive *Treatise on Mills and Millwork* (1863), Fairbairn states that "the amalgamation of the different processes under one management and under one roof, gave rise to the Shed system, where the operations of the manufacture of cotton are carried on under what is called the *'sawtooth'* roof" (Fairbairn, 1865, p. 51). "Contemporaneous with the architectural improvements in mills," he wrote, "the shed principle lighted from the roof, or the 'sawtooth' system, came into operation. It was chiefly adapted for power-weaving and contained many advantages in having the machines on the ground floor" (Fairbairn, 1865, p. 115). As one engineer enthused, "No one who has ever seen a machine shop interior lighted by the sawtooth roof can have any adequate idea of the effect of the abundant overhead illumination which it secures" (Horace Arnold, 1896, as cited in Bradley, 1999, p. 191). The sawtooth roof was rapidly adopted during the industrial revolution in England for the many new so-called "daylight factories," where good natural lighting was considered essential in the manufacturing process and large expanses of enclosed space were required to house machinery.

Perhaps more than any other aspect of the industrial building, the roof was engineered to serve industry—to provide ventilation and light, resist fire, span large areas, and support equipment. Factory roofs also gave industrial buildings, particularly production sheds, their distinctive form and character. In the nineteenth century, roofs engineered to provide light varied from the gable roof pierced by skylights to roofs that *were* skylights, i.e., the sawtooth roof. A related common factory roof type was the monitor roof, with its raised central section held aloft by extensive clerestory windows (Bradley, 1999, p. 177).

Initially, American engineers were hesitant to use the sawtooth roof first known to them as the British "weave shed roof" for their one-story "weave sheds" because of the snow loads where most of the industry was located. Before it became common in northern industrial cities, the sawtooth roof was likely used in the South, where the glare of the sun was more of a problem. Around the end of the nineteenth century, improvements in heating, ventilating, and caulking enabled the construction of sawtooth roofs that did not leak or create overheated conditions (Bradley, 1999, p. 37).

There was a decline the use of the sawtooth when artificial lighting became prevalent, but the design re-emerged in the last quarter of the twentieth century and early twenty-first century, as architects and designers placed greater importance and value in introducing natural light into buildings for environmental efficiency. However, the distinctive shape offers potential for solar panels to be installed, as seen at Plant 2.

Many early examples of sawtooth roofs were associated with the textile industry. The silk dyeing works of Jacob Weidmann (ca. 1882; Paterson, New Jersey) had two buildings with sawtooth roofs. During the mid-1880s, sawtooth roofs appeared on one-story silk mills in the New Jersey and Pennsylvania area, including the Otz Silk Mills (New Jersey). By 1890, a number of sawtooth roofs had been erected in the Philadelphia area, the weave shed of Planet Mills (Brooklyn) had been rebuilt with a sawtooth roof, and a sawtooth roof had also been used on the Farr Alpaca Co. Works (Holyoke Mass) (Bradley, 1999, pp. 192–193). Soon the roof form appeared on the production sheds of other industries where large floor areas were needed, including the machine shops of the Straight Line Engine Works (1889, Syracuse, New York) and the De La Val Co. (ca. 1896, Poughkeepsie, New York) (Bradley, 1999, p. 193).

In the military context, the sawtooth profile used in the Navy's B-M Hangar designs is unique. It consists of a mostly flat roofline with two "sawtooth" projections. Other forms include simple sloping shed and

flat rooflines. The military began to incorporate monitors (rows of clerestory windows at or near the roofline) into hangar design in the Interwar years. Hangar designs with sawtooth or monitor rooflines included rows of windows that provided more natural light for maintenance operations. This practice became less common in the Cold War years (Aaron, 2011, pp. 5–7).

4.4.5.2 *Steel Sash Windows*

Regularity in the size and placement of window openings in industrial buildings was generated by the identical dimensions of the bays within and the need for even interior lighting (Bradley, 1999, p. 162). "In most every case steel sash is the most economical and practical for the modern factory, and it is also possible to obtain maximum light and ventilation—which cannot be accomplished by using double-hung or counterbalanced wood sash" (McMullen, 1919, p. 9). The introduction of mechanical sash control devices during the 1880s transformed window sash into ventilating equipment. Fixed sash that had been used in roof monitors, or clerestories, could be replaced with horizontally pivoting sash that could be easily operated from the shop floor (Bradley, 1999, p. 163).

In the 1930s, steel sash windows such as those at the Plant 2 assembly buildings were commonly produced by one of two companies: David Lupton's Sons Company or Fenestra (a brand of Detroit Steel Products). A Lupton catalog of pivoted steel sash from 1931 shows products closely resembling those in the Plant 2 assembly buildings (David Lupton Son's Company, n.d.). The same year, Fenestra produced a catalog called "The Blue Book of Steel Windows" that depicted similar windows, as well as Operating Devices for Pivoted Windows resembling those at the Plant 2 assembly buildings (Driscoll et al., n.d., pp. 88–90).

4.4.5.3 *Hangar-Type Doors*

Doors at Plant 2 assembly buildings are multi-leaved steel sliding hangar-type doors that span the height of the buildings. They are manually operated and run on tracks above and below. Similar large sliding doors have been employed in hangar construction at least since 1917 and continue to be used today. Modern track door systems consist of bottom rollers of cast steel, running on floor tracks. The doors and leaves are constructed of steel. Antifriction bearings are also incorporated into the system (Aaron, 2011, pp. 5–7).

4.5 Evaluation Framework

The evaluation framework used to evaluate OTC Site 1, OTC Site 2 (Building 34), and TSC under criteria A, B, and C is generally based on the four-volume *California Historic Military Buildings and Structures Inventory* (2000) prepared by JRP Historical Consulting Services for the U.S. Army Air Corps of Engineers. Other criteria, such as NRHP Criterion D, CRHR Criterion 4, and San Diego Local Register criteria E/F, are discussed in Section 6. The guidelines outlined in that report were used to evaluate the resources at Plant 2, specifically the assessment of association, rarity, and integrity (JRP, 2000c, pp. 1–8). The *Historic Context for Department of Defense Facilities: World War II Permanent Construction* (1997), prepared by R. Christopher Goodwin and Associates for the U.S. Army Corps of Engineers, although generalized to nationwide properties, provided additional guidance in how to categorize the Plant 2 buildings according to permanent military construction. However, because Plant 2 was not designed and constructed by the military, this evaluation also relies on historic contexts addressing private industrial properties, which architecturally resemble the Plant 2 assembly buildings more closely than manufacturing facilities used by the military for similar purposes, such as hangars. Specifically, the *Los Angeles Citywide Historic Context Statement: Industrial Development, 1850-1980* (rev. 2018), prepared for the City of Los Angeles Department of City Planning, Office of Historic Resources, was developed for the evaluation of industrial buildings constructed during the WWII period. The *Midway-Pacific Highway Community Plan* (2018), prepared by the City of San Diego, was consulted for local historical background and guidance for

evaluating properties within the local context. The NPS also provides guidelines for evaluating historic aviation properties in National Register Bulletin #43 (1998) and establishes themes in *World War II and the American Home Front: A National Historic Landmarks Theme Study* (2007) and *Protecting America: Cold War Defensive Sites, A National Historic Landmark Theme Study* (2011).

Theme: World War II

Sub-Theme: Aircraft Manufacturing

Summary Statement of Significance: Resources evaluated under this theme may be significant in the area of military and industrial history for their association with the development and manufacturing of aircraft utilized in WWII. Although most aircraft production in the U.S. occurred in private industry, there was some government production. Extant local resources are rare.

Period of Significance: 1939–1945

Period of Significance Justification: Date range encompasses a brief but prolific period during which manufacturing occurred during and after WWII.

Criteria: NRHP A/B; CRHR 1/2, Local Register A/B

Property Type: Assembly Buildings/Factory

Property Type Description: Buildings/structures utilized for aircraft manufacturing; the main buildings of a complex are often massive.

Registration Requirements: Resources may be significant individually or as part of a historic district. A resource or historic district must have a significant association with this theme. Manufacturing that occurred at the property must be associated with a major WWII aircraft manufacturer or products that made a significant contribution to the war effort. Eligible resources must have been utilized during the theme's period of significance and retain most of the essential character-defining features of the property type.

Character-Defining Features

- 1 to 3 stories in height (second and third stories are often mezzanine levels)
- Wide expanses of uninterrupted interior space
- Smaller support and administration buildings may be part of an eligible district
- Some examples may exhibit Art Deco style elements, others will have little to no stylistic application
- Located at or near an existing or former airfield or airport

Eligibility Standards

- Constructed within the period of significance
- Associated with significant achievements in aircraft manufacturing, research and/or development

Integrity Considerations

- Should retain integrity of Location, Design, Materials, Feeling, and Association
- Setting may have changed since the time of its construction
- Original use may have changed

Theme: World War II

Sub-Theme: Homefront/Labor

Summary Statement of Significance: Resources evaluated under this theme may be significant in the area of labor history for their association with homefront during WWII. The number of women and minorities in the workforce increased dramatically to fill labor shortages and produce essential wartime goods and technology. Extant local resources are rare.

Period of Significance: 1939–1945

Period of Significance Justification: Date range encompasses the period of homefront mobilization in support of WWII.

Criteria: NRHP A/B; CRHR 1/2, Local Register A/B

Property Type: Assembly Buildings/Factory

Property Type Description: Buildings/structures utilized for aircraft manufacturing; the main buildings of a complex are often massive.

Registration Requirements: Resources may be significant individually or as part of a historic district. A resource or historic district must have a significant association with this theme. Activities that occurred at the property must demonstrate a significant contribution to the war effort. Eligible resources must have been utilized during the theme's period of significance and retain most of the essential character-defining features of the property type.

Character-Defining Features

- 1 to 3 stories in height (second and third stories are often mezzanine levels)
- Wide expanses of uninterrupted interior space
- Smaller support and administration buildings may be part of an eligible district
- Some examples may exhibit Art Deco style elements, others will have little to no stylistic application

Eligibility Standards

- Constructed within the period of significance
- Associated with significant contribution to the war effort

Integrity Considerations

- Should retain integrity of Location, Design, Materials, Feeling, and Association
- Setting may have changed since the time of its construction
- Original use may have changed

Theme: Architecture

Sub-Theme: Aircraft Manufacturing and Assembly Plants

Summary Statement of Significance: Resources evaluated under this theme may be significant in the area of military and industry. Excellent examples of industrial building types include daylight factories and WWII permanent construction. Some buildings were impressive innovations in design because of the advanced technology used to create enormous interior spaces with natural light. Extant local resources are rare. Some examples may be the work of noted architects.

Period of Significance: 1939–1945

Period of Significance Justification: Date range encompasses a brief but prolific period during which daylight factories were part of the standard industrial design, from the introduction of industrial sash to the rise of the controlled conditions factory after WWII.

Criteria: NRHP C; CRHR 3, Local Register C/D

Property Type: Assembly Buildings/Factory

Property Type Description: Buildings/structures utilized for aircraft manufacturing; the main buildings of a complex are often massive. Prior to the widespread use of electric lighting, natural lighting was a necessary component of the design which used expansive industrial sash windows, skylights, and specialized roof forms to bring light into the interior.

Significance of Property Type: The tremendous expansion of the American aircraft industry was an important architectural achievement during WWII. Assembly buildings generally contained massive indoor assembly lines. Noted architects may be responsible for the design. Many factors, including environmental cleanup, industry preference for controlled conditions, and difficult location for alternative uses, threaten the extant stock of these visually striking buildings. Few WWII-era aircraft assembly plants remain under DoD ownership.

Registration Requirements: Resources may be significant individually or as part of a historic district. A resource or historic district must have been constructed for the assembly, research, or development of aircraft during WWII and be a good example of the method of construction for this property type. Eligible resources must have been constructed during the theme's period of significance and retain most of the essential character-defining features of the property type.

Character-Defining Features

- 1 to 3 stories in height (second and third stories are often mezzanine levels)
- Continuous industrial steel sash on two or more elevations
- Oversized bays of industrial sash
- Sawtooth, butterfly, or monitor rooflines
- Extensive skylights
- Wide expanses of uninterrupted interior space
- Smaller support and administration buildings may be part of an eligible district
- Some examples may exhibit Art Deco style elements, others will have little to no stylistic application
- Located at or near an existing or former airfield or airport
- May also be a significant example of the work of a noted architect

Eligibility Standards

- Constructed within the period of significance
- Designed for aircraft manufacturing, research and/or development
- Exemplifies the use of industrial sash and distinctive roof forms to maximize and control the level of natural light inside the building

Integrity Considerations

- Should retain integrity of Location, Design, Materials, Feeling, and Association
- Setting may have changed since the time of its construction

- Original use may have changed

Theme: Cold War

Sub-Theme: Manufacturing

Summary Statement of Significance: Resources evaluated under this theme may be significant in the area of military and industrial history for their association with development and manufacturing in support of the Cold War. Technological advancement during the Cold War signified an important historical transition from functional war technologies developed quickly during WWII to competitive technological warfare. Although most manufacturing in the U.S. occurred in private industry, the client was the government.

Period of Significance: 1950–1991

Period of Significance Justification: Date range encompasses the Cold War period.

Criteria: NRHP A/B; CRHR 1/2, Local Register A/B

Property Type: Assembly Buildings/Factory

Property Type Description: Buildings/structures utilized for aircraft manufacturing; the main buildings of a complex are often massive.

Registration Requirements: Resources may be significant individually or as part of a historic district. A resource or historic district must have a significant association with this theme. Manufacturing that occurred at the property must be associated with a major Cold War program or products that made a significant contribution to the Cold War. Eligible resources must have been utilized during the theme's period of significance and retain most of the essential character-defining features of the property type.

Character-Defining Features

- 1 to 3 stories in height
- Large interior spaces
- Smaller support and administration buildings may be part of an eligible district
- Located at or near an existing or former airfield or airport

Eligibility Standards

- Constructed within the period of significance
- Associated with significant achievements in manufacturing, research and/or development

Integrity Considerations

- Should retain integrity of Location, Design, Materials, Feeling, and Association
- Setting may have changed since the time of its construction
- Original use may have changed

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5.0 Architectural Descriptions

5.1 Plant 2 Overview

Plant 2 originally consisted of eight buildings: the three mammoth main assembly buildings (Buildings 1, 2, and 3), an office building (Building 4), a paint shop, a three-story drop hammer building (the sawtooth roof section of Building 8), a warehouse (Building 6; demolished), and a boiler house (Building 4; demolished), totaling 1.6 million square feet of manufacturing space *(Architectural Forum,* 1941, p. 423, as cited in KEA 1996, pp. B-23–B-24) (Figures 5.1-1 through 5.1-3). The plant was connected to the Lindbergh Field Plant (Plant 1) by a private road with an overpass crossing Pacific Highway (*Consolidator*, 1941, pp. 16–17, 32).

A 1946 report issued by the U.S. Surplus Property Administration describes Plant 2 (Plancor 20) as consisting of three parcels. Parcel No. 1 is the Parts Plant Site, approximately 55.5 acres; Parcel No. 2 is the Parking Area, approximately 33.7 acres; and Parcel No. 3 is the Warehouse Site, approximately 3.5 acres (TSC). Parcel No. 1 (OTC Site 1) contained three "main factory buildings" with steel frame construction, a 100,000-square-foot warehouse building, and 22 other miscellaneous buildings, some of wood construction. A spur track served only the three main buildings (United States Surplus Property Administration, 1946, p. 42).

A disposition report on Plant 2 by the WAA on December 11 and 12, 1946, assessed the property for future use and described conditions of the buildings. Referring to the property as Plancor 20, the report summarized its findings:

> Although large enough to permit the assembly of many types of aircraft, it was used primarily for making sub-assemblies. It adjoins and has an overpass connection to the permanent plant of Consolidated Vultee [Plant 1], but it does not adjoin an airfield, nor does it abut on the water. Considered from the point of view of an airplane manufacture alone it is therefore not well adapted for independent operation (Ruckman, ca. 1946, p. 1).

The buildings are described as sheathed in corrugated iron, bolted to substantial steel frames, and painted a dull olive drab color. The plant is "of modern design," but "the value of its sawtooth roof and of the well-arranged belts of windows which were intended to provide excellent natural lighting has been entirely destroyed by the application of coats of 'black out paint' over the glass, according to a report by the WAA" (Ruckman, ca. 1946, p. 1). The possibility of removing the peeling paint is discussed in terms of expense related to the possibility of leasing out or disposing of the buildings. Difficulty in heating the plant is also discussed, in part because of the height of the major buildings, which creates a notable "chimney effect," resulting in the rising of heat during the winter, and "the number of very large and high doors which tend to make the lower level drafty." The presence of "makeshift application of various types of insulation" on many windows confirms the ongoing problems with temperature control (Ruckman, ca. 1946, p. 1).

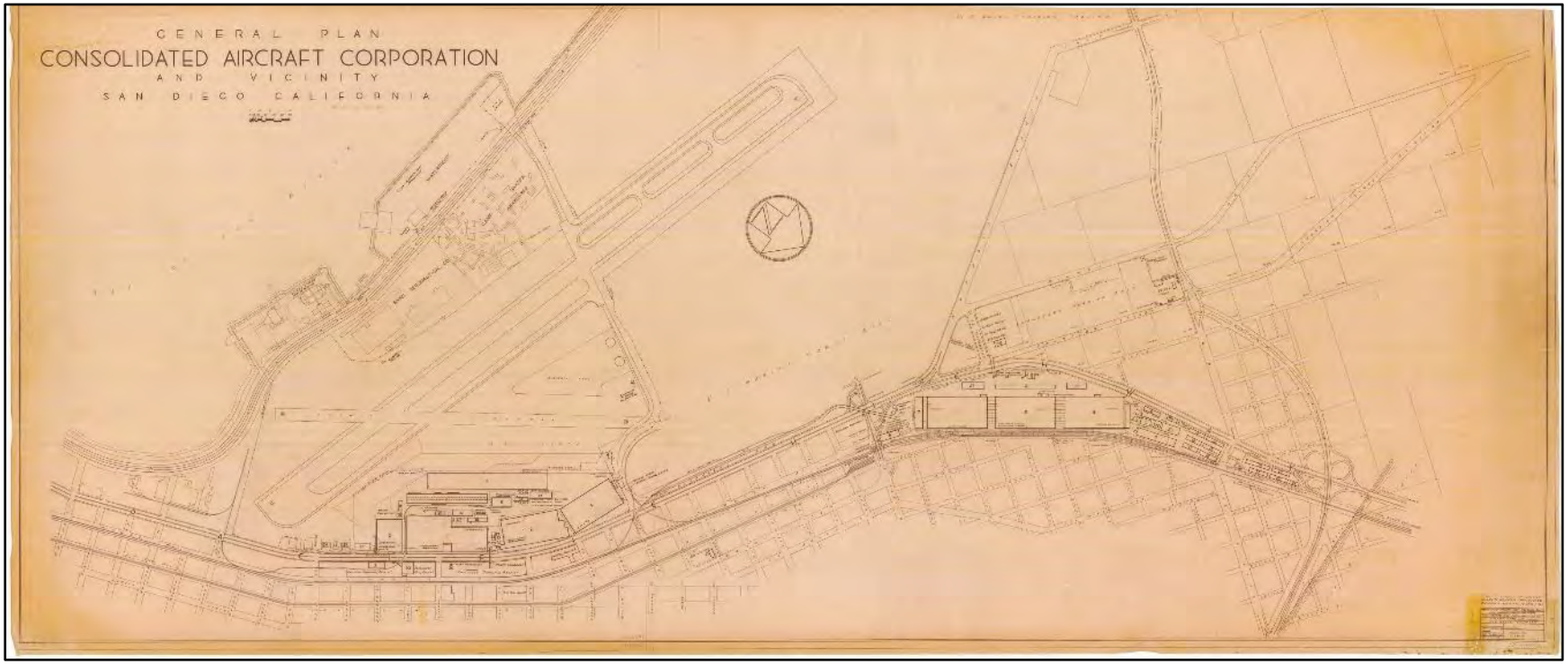

Figure 5.1-1 General Plan, Overview of Consolidated Aircraft Corporation, 1942
Shows Plant 1 and Plant 2, the waterfront, and the airfield, with revisions dated 1943, 1948, and 1949.
Source: SDASM archives.

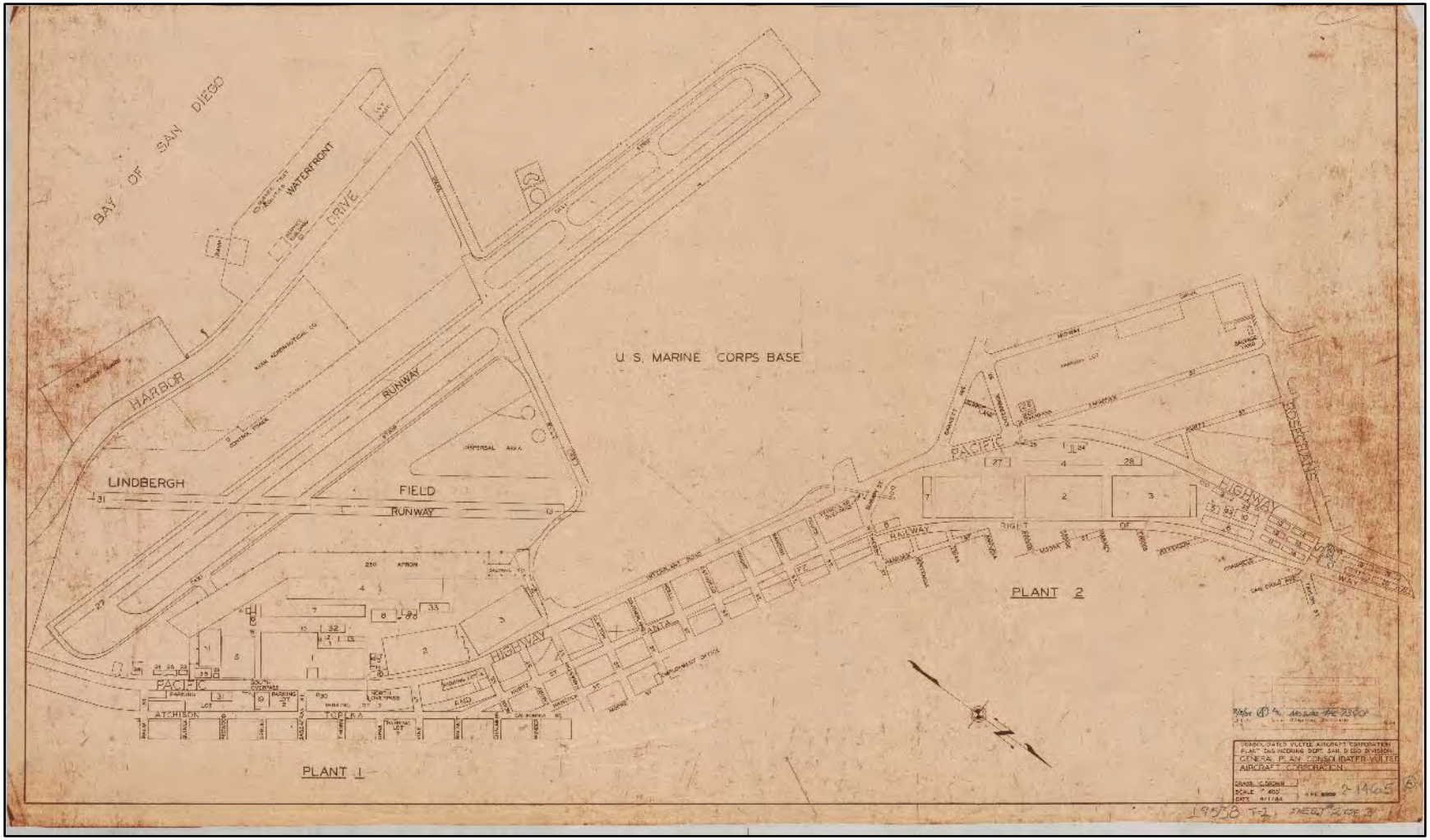

Figure 5.1-2 General Plan Consolidated Vultee Aircraft Corporation, June 1, 1944

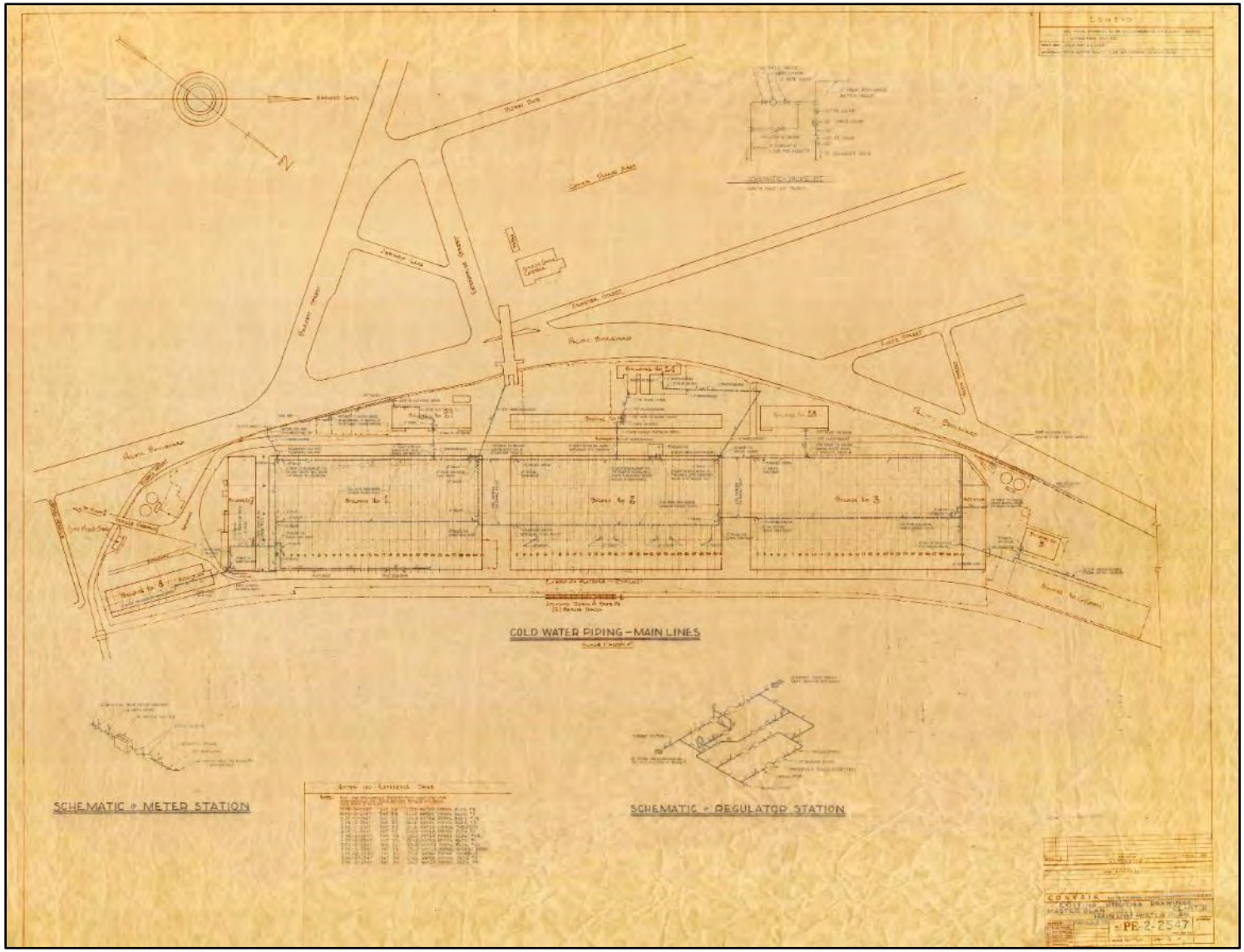

Figure 5.1-3 Plant 2 Master Plan, June 1, 1955.
Shows buildings, former Convair Cafeteria, Tavern, pedestrian bridge, and vehicle overpass to Plant 1.

The disposition report states that it is not recommended to alter the buildings to accommodate multiple small firms because "[t]he buildings' chief value lies in their clear span and height. Even if at the moment no suitable use appears it is believed inadvisable to wreck them or too greatly alter them," the report states (Ruckman, ca. 1946, p. 4). Instead, the report recommends the buildings could be used by "large firms producing large, light products, preferably for Mexican, South American, or the Australasian market" (Ruckman, ca. 1946, p. 4).

5.2 Assembly Buildings

Buildings 1, 2, and 3 represent the core of Plant 2. All three were constructed based on a single set of architectural drawings and therefore were originally similar if not identical. The buildings exemplify construction techniques and styles that are typical of aircraft plants built in southern California during the years of national mobilization to fight WWII. The buildings resulted from a combination of structural design principles that were adapted to the needs of aircraft manufacturers and local climatic conditions (KEA, 1996, p. B-47). The most prominent features of the three large assembly buildings are the sawtooth roofs and the multi-light steel windows lining the walls and the northern faces of the angular roofs.

The aircraft parts assembly buildings at Plant 2 are all approximately 47 feet high. They consist of open bays framed by rows of steel I-beam support columns. The columns are joined at the top by trusses that support sawtooth roofs with continuous rows of steel sash, multi-pane industrial windows on the north side. These have central panels that pivot to allow ventilation (*Engineering News-Record*, 1940, as cited in KEA, 1996, p. B-47).

> The buildings were designed to manufacture sub-assemblies (wings, tail surfaces, etc.) for assembly at Consolidated Vultee Plant 1, which was privately owned and had access to the airfield. The buildings of Plant 2 were designed to provide plenty of head room (36 feet to roof trusses) and about 99 feet of clear span in the main manufacturing bays. The ground floors were designed to carry a comparatively light load, approximately 250 pounds per square foot in the north half of the plant and 125 pounds per square foot on the remainder. The mezzanines were designed to handle only 75 pounds per square foot. The electrical distribution system is carried by underground conduits, which also carry the main steam distribution line. The conduits in general pass under the buildings, making it impossible to maintain or operate utilities unless the plant is under a single management or unless extensive easements are granted. This was designed as a daylight plant, but the windows were covered with blackout paint, and it is estimated that it would cost from $10,000 to $20,000 for removal (Consolidated Vultee, 1947).

A 1946 appraisal of the complex states that steel trusses were in place, carrying a crane monorail along the northeastern façades of Building 7 and running continuously along the northeastern façades of Buildings 1, 2, and 3, part of Building 6 (demolished), and the south façade of Building 3. Intended to carry parts and product between buildings throughout the plant, the monorail measured 3,550 feet in length and was 15 feet wide. Some lengths of the monorail were covered by a roof (Lockwood Greene Engineers, Inc., ca. 1946, p. 22). Historical photos confirm the presence of the crane monorail on the northeast façades paralleling the Santa Fe tracks, as well as several Gantry cranes that passed over the tracks for loading and unloading (Figures 5.2-1 and 5.2-2). With the exception of the truss systems between the main buildings, the crane system at the exterior of the buildings has been mostly removed. Parts of the overhead conveyance system remain at the interiors, including 5-ton capacity cranes and manned cabs.

Figure 5.2-1 Historical Photo of the Crane Monorail

Shows trusses between buildings that ran along the northeastern façades of the manufacturing buildings, and also camouflage netting; view toward the south; March 6, 1944. Source: SDASM archives.

All three assembly buildings are constructed of steel and concrete, with corrugated iron cladding and have overhead crane systems using 10 2.5-ton-capacity and 25-ton-capacity cab hoist units. Pipe tunnels were installed throughout the plant for conveying steam, air, water, and gas between the various buildings, and the roofs were designed to support 5-ton monorail equipment (DPC, ca. 1946). Pipe downspouts on each of the northwest and southeast façades correspond to the lowest points of the roof. The buildings have two levels of mezzanine floors, in two sections at each level. They are constructed of wood on steel beams supported on steel columns and enclosed by steel and wire mesh guard rails. Five 2-ton hydro-electric freight elevators serve the mezzanine levels and sets of open metal stairs travel between mezzanines. Between the mezzanines, three sections remain open for the full height of the buildings. All three buildings have 31 sawtooth and 30 bays between columns on the interior. Each element of the sawtooth is glazed on the north side with multi-light steel windows. A central portion of each sash is connected to an electrical crank system that operates several windows simultaneously. Solar panels are located on the unglazed parts of the sawtooth roofs of the northwest half of Building 1 and the southeast half of Building 2.

Figure 5.2-2 Historical Photo of the Crane Monorail and Buildings 1 through 3
View toward the south; March 6, 1944. Source: SDASM archives.

The three buildings have full-height steel hangar-type doors that slide on overhead and in-ground rails. The placement of the hangar-type doors varies among buildings, with some instances of the doors spanning the entire width of the building and others in which the doors are interspersed with rows of similar windows, as specified in the descriptions below.

The three buildings have three continuous rows of windows spanning most of the northeast and southwest façades. At the interiors, the original multi-light partially operable steel windows are intact. Almost all of the windows have been covered on the exterior with a black opaque film, which emphasizes the horizontal aspect of the continuous rows. The rows of windows correspond to the three levels at the center of the interiors, defined by a ground floor and two mezzanines above. The windows are multi-light steel sash with generally three-by-two-light pivoting central sections that are manually operated (Figure 5.2-3). Although the windows have been covered with opaque solar sheets on the exterior, the windows remain intact. A truss system immediately above the hangar-type sliding doors connects Buildings 1 and 2 and Buildings 2 and 3.

Figure 5.2-3 Typical Multi-light Steel-framed Side Window with Pivoting Center Section

5.2.1 Building 1

Building 1 is an assembly building located approximately 150 feet northeast of Pacific Highway (Figure 5.2-4). According to building records, it measures 754 by 446 feet. The northeast and southwest exterior walls have three continuous rows of vented steel sash. At the southeast façade is a mix of ribbons of windows and multi-leaved hangar-type doors. Hangar-type sliding doors of steel construction extend along the entire northwest end and part of the southwest side of the building (DPC, ca. 1946, p. 3). A story-and-a-half shed addition is at the north end of the southwest façade. At the northwest façade, a newer aluminum-and-glass entry has been constructed at the center of one of the hangar-type doors. Double sliding glass doors with aluminum frames have lights on the sides and a transom above. The entry is marked by a high aluminum-and-glass grid that extends almost to the bottom of the truss structure joining Buildings 1 and 2 (Figures 5.2-5 through 5.2-7).

At the interior are two mezzanines, 40 feet wide and the full length of building, connected by a mezzanine 50 feet wide at the southeast end. Mezzanines are located at 11.5 feet and 23 feet above ground floor. The space within the building has been partially filled with prefabricated one- or two-story corrugated metal buildings with very slightly sloped gabled roofs and other “buildings” of various materials, sizes, and types. Most of the mezzanine space is filled with offices, either extending to the edge of the mezzanine or within a few feet to allow space for a corridor. The walls are composed of wallboard with horizontally oriented two-part aluminum windows (Figures 5.2-8 through 5.2-23).

Figure 5.2-4 Building 1, Southwest Façade
View toward the southeast.

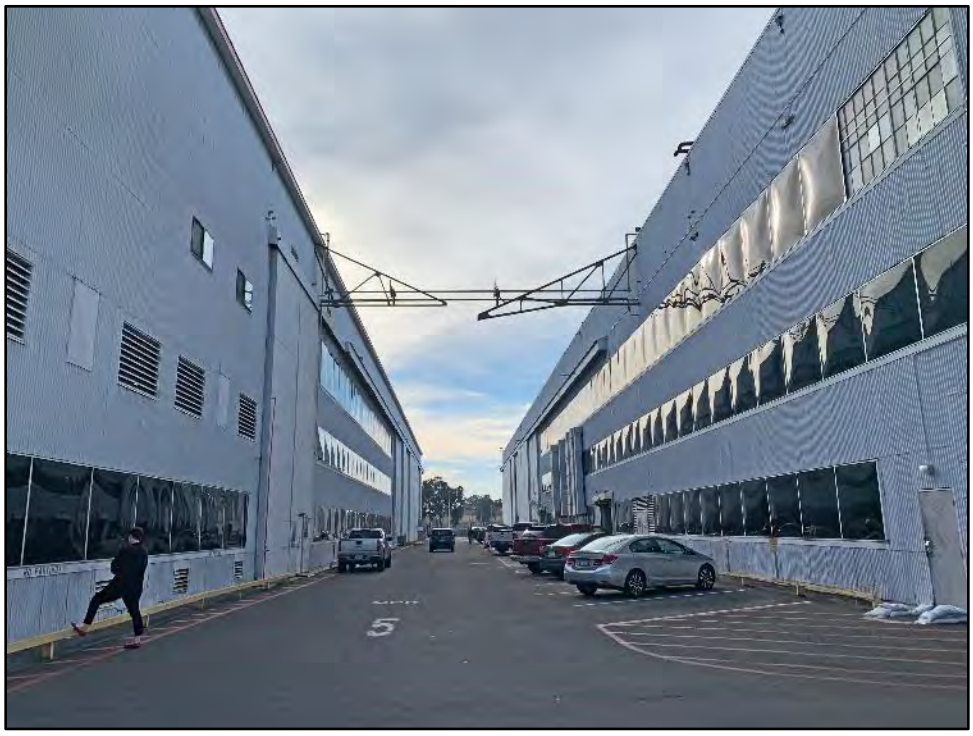

Figure 5.2-5 Building 7, Northwest Façade (left) and Building 1, Southeast Façade (right)
View toward the west.

Figure 5.2-6 Building 1, Northwest Façade (left) and Building 2, Southeast Façade (right)
View toward the west.

Figure 5.2-7 Building 1, New Entrance to Offices at Northwest Façade
View toward the southeast.

Figure 5.2-8 Building 1 Interior
View toward the northeast.

Figure 5.2-9 Building 1 Interior, Showing Sawtooth Roof Window Arrangements and Suspended Lighting Fixtures
View toward the northwest.

Figure 5.2-10 Building 1 Interior, Detail View of Sawtooth Window Arrangements
View toward the northwest.

Figure 5.2-11 Building 1 Interior, Detail of Window Operating Mechanisms
View toward the west.

Figure 5.2-12 Building 1 Interior Showing Crew-operated Cab Suspended from Beam and Three-story Steel Hangar-type Doors Sliding
View toward the south.

Figure 5.2-13 Building 1 Interior, with Detail of Underhung Crane and Suspended Hoist Mechanism
View toward the northwest.

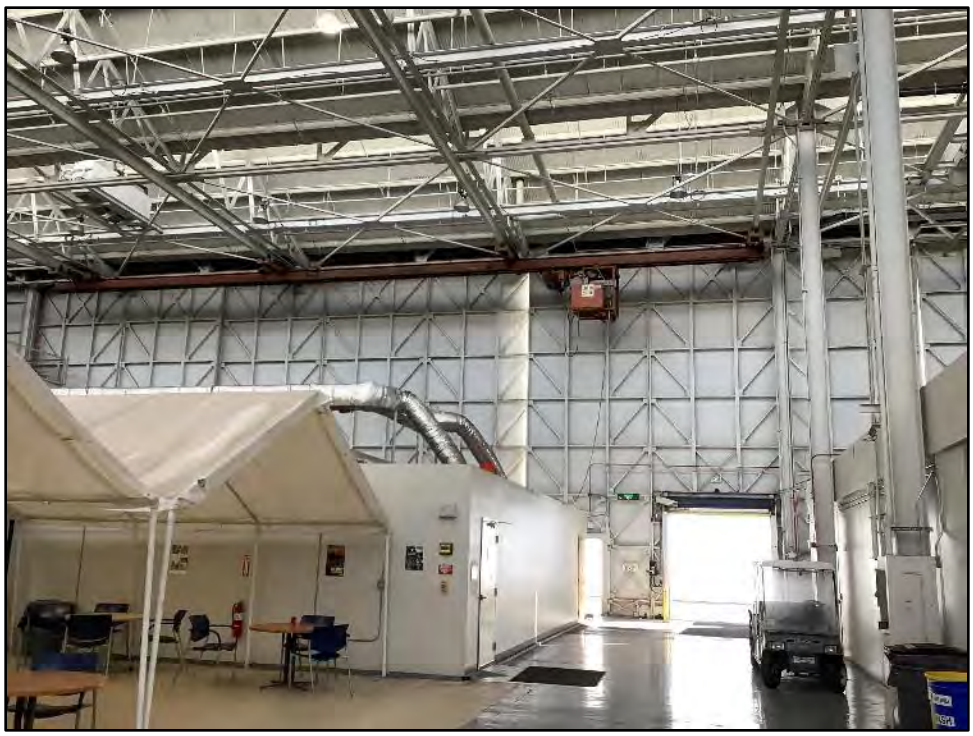

Figure 5.2-14 Building 1 Interior, Crew-operated Cab and Hangar-type Doors
View toward the southeast.

Figure 5.2-15 Building 1 Interior, Third Floor Mezzanine
View toward the west.

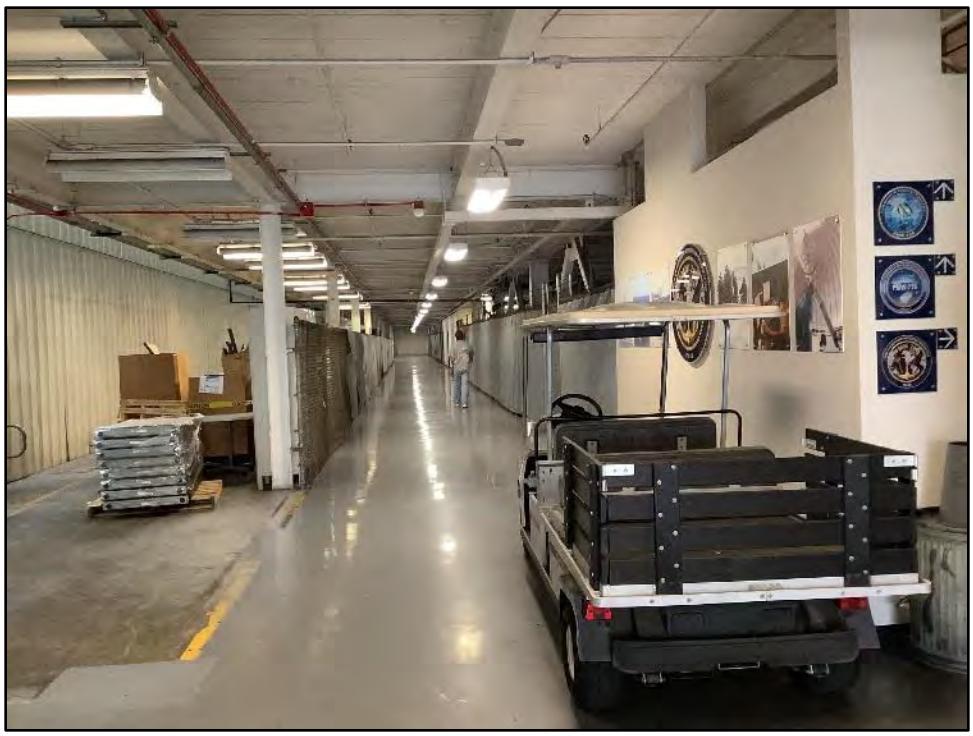

Figure 5.2-16 Building 1 Interior, Main Floor Corridor
View toward the northwest.

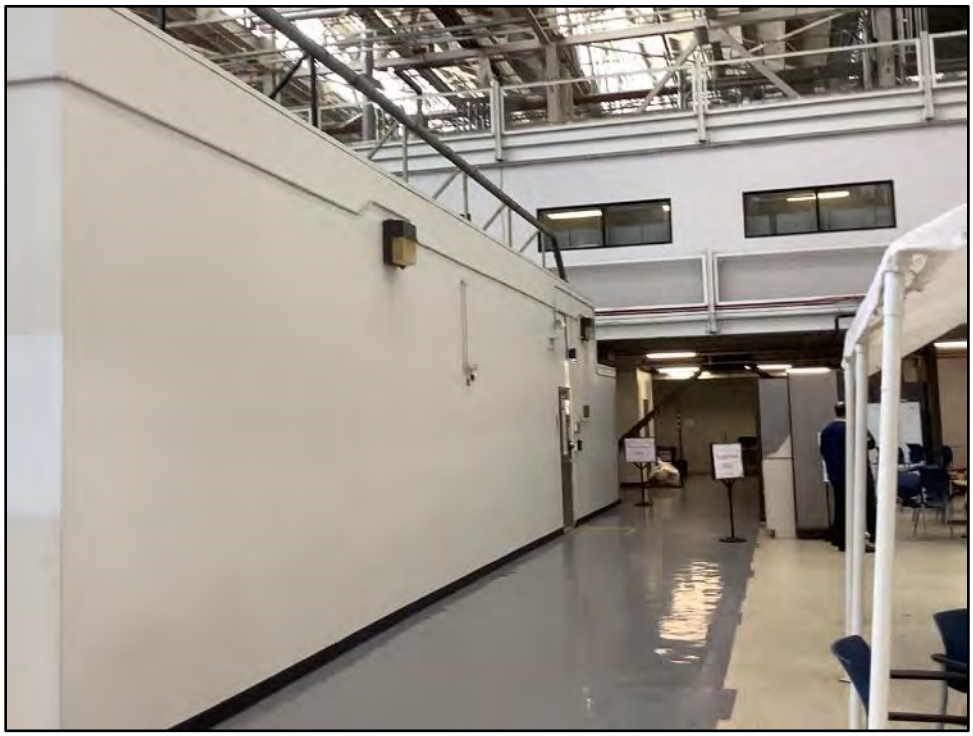

Figure 5.2-17 Building 1 Interior, Partitions and Windows on Second Floor Mezzanine
View toward the northeast.

Figure 5.2-18 Building 1 Interior, Corrugated Two-story Building within the Main Building
View toward the north.

Figure 5.2-19 Building 1 Interior, Wood Board Flooring on Second Floor Mezzanine
View toward the southeast.

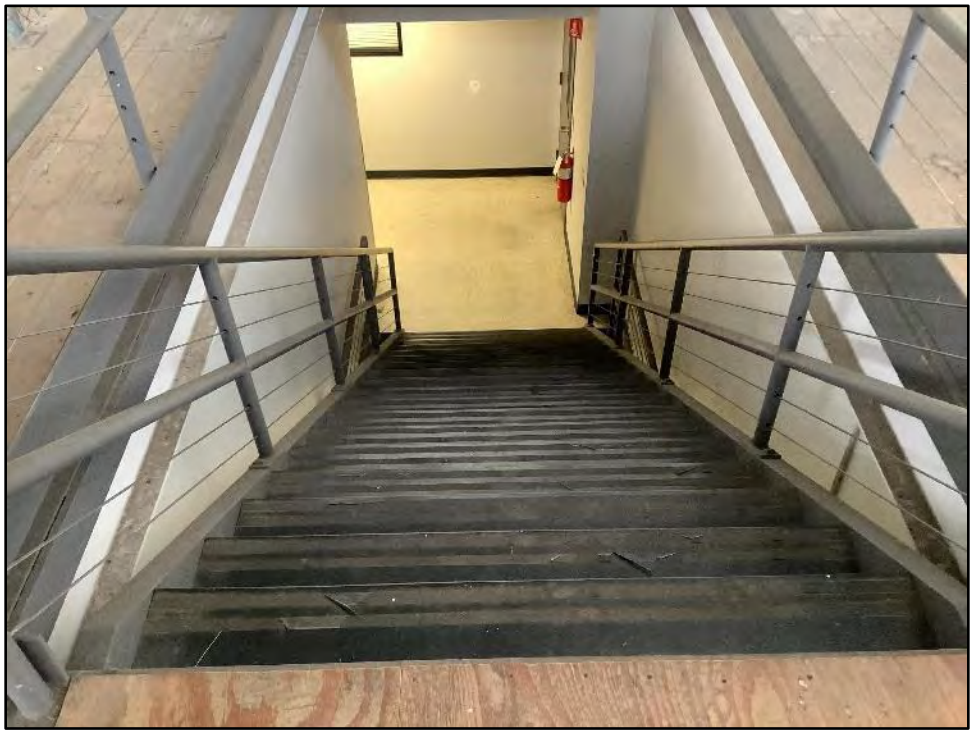

Figure 5.2-20 Building 1 Interior, Stairway
View toward the southeast.

Figure 5.2-21 Building 1 Interior, Freight Elevator
View toward the southeast.

Figure 5.2-22 Building 1 Interior, Corrugated Two-story Building Roof
Viewed from the third floor mezzanine toward the northwest.

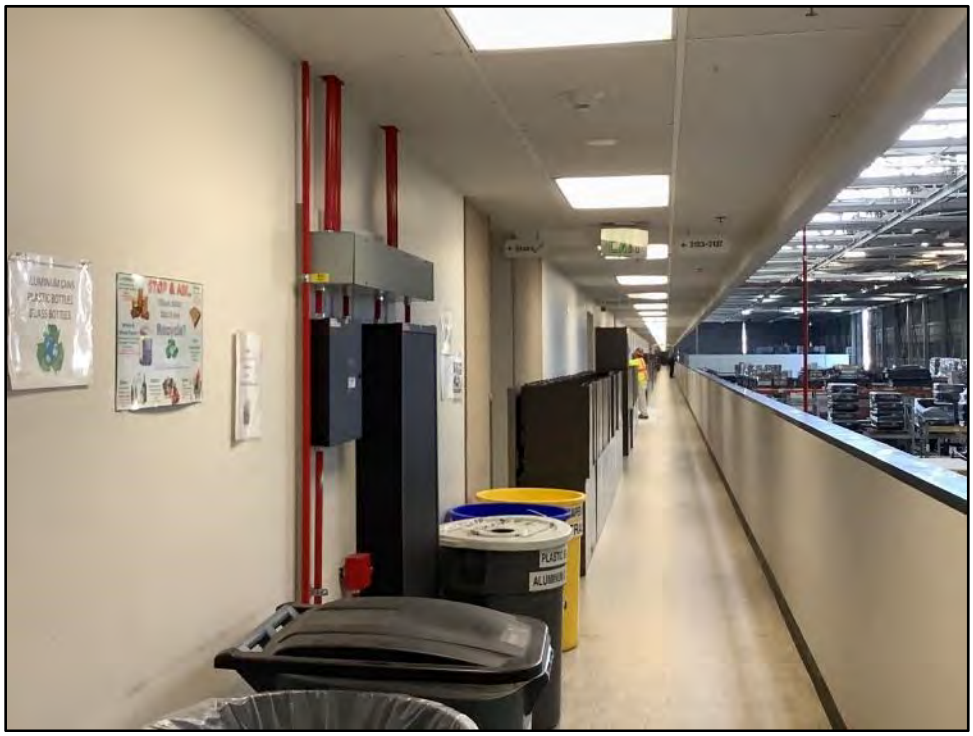

Figure 5.2-23 Building 1 Interior, Mezzanine Corridor
View toward the northwest.

An entrance to the Program Executive Office at the southwest façade consists of a set of glass doors in metal frames with side lights and transoms below a flat canopy. At the interior is a lobby and finished offices with wood paneling and ceiling lights behind a curved metal screen.

5.2.2 Building 2

Building 2 is an assembly building closely resembling Building 1, as described above. It is located approximately 350 feet northeast of Pacific Highway and 100 feet southeast of Building 1, to which it is joined by an overhead system of trusses. Building 2 is joined to Building 3 to the northwest with a similar system of trusses. According to property records, Building 2 measures 752 feet by 403 feet. Sliding hangar-type doors extend along the entire northwest façade. There are three sets of hangar-type sliding doors at the northeast façade interrupting the rows of windows. The sawtooth pattern is absent above the doors. At the southeast façade are an exterior steel stairway with landings and doors at levels 2 and 3 and a shed-roofed corrugated metal addition with roll-up vehicle doors and no windows. At the northwest façade is a series of hangar-type doors, along with a single-story corrugated addition and a three-level metal staircase. The single-story Building 30 adjoins Building 2 at the southwest façade. Also, at the southwest façade is a newer central pedestrian entrance composed of a set of double metal doors with sidelights and sheltered by a metal canopy with heavy metal fascia. A concrete walkway forming the approach is bracketed by three concrete planters on each side, each containing a palm tree. A concrete wall creating an enclosure adjoins the building at the north end of the southwest façade (Figures 5.2-24 through 5.2-28).

On the ground floor of the building interior, the central corridor is flanked by fencing. Several “buildings within buildings” have been constructed on the ground floor. In addition to the original mezzanines, newer ones have been added at the ground floor. Much of the ground floor appears to be used for warehousing. The third floor mezzanine is completely open (Figures 5.2-29 through 5.2-38).

5.2.3 Building 3

The third assembly building is located 100 feet northwest of Building 2, to which it is joined by an overhead system of trusses. According to property records, Building 3 measures 829 feet by 403 feet. Similar to Building 2, three sets of hangar-type doors interspersed with continuous rows of windows are on the northeast façade near the railroad easement (Figures 5.2-39 and 5.2-40). Hangar-type doors extend across the full width of the southeast façade (Figure 5.2-41). The façade has been altered toward the north by a newer entrance consisting of a double set of glazed doors sheltered by a canvas canopy and a three-level exterior staircase (Figure 5.2-42). A painted sign on the canopy reads “Office of the Chief Engineer.” At the northwest façade are two single-story corrugated shed additions, two single-story vehicle doors, and irregular rows of windows (Figure 5.2-43). There are no hangar-type doors on the northwest façade.

The configuration of the interior resembles Buildings 1 and 2, with mezzanines at two levels. The sawtooth windows and the operating mechanism are clearly visible from the highest mezzanine. Although some of the mezzanines and the ground floor have been filled with offices, much of the space remains open (Figures 5.2-44 through 5.2-47).

Figure 5.2-24 Building 2, Northeast Façade
View toward the west.

Figure 5.2-25 Building 2, Exterior of the Northwest and Southwest Façades
View toward the east.

Figure 5.2-26 Building 2, Southwest Façade
View toward the north.

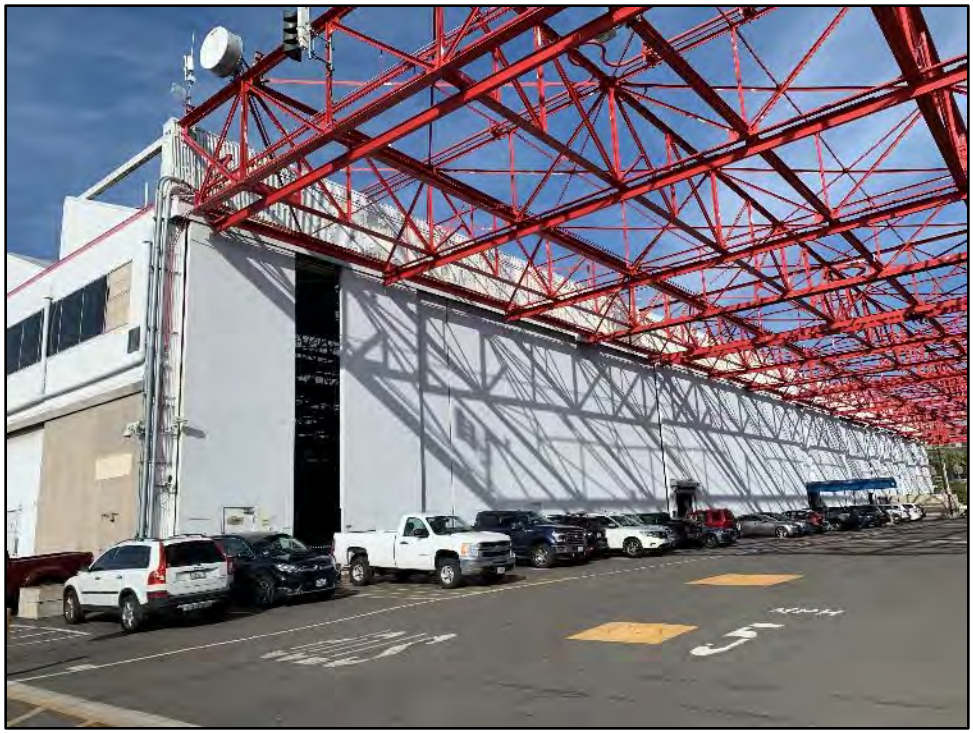

Figure 5.2-27 Building 2, Southeast Façade
View toward the north

Figure 5.2-28 Building 2, Exterior Stairs and Addition at the Southeast Façade
View toward the north.

Figure 5.2-29 Building 2, Crane Hoist
View toward the northeast.

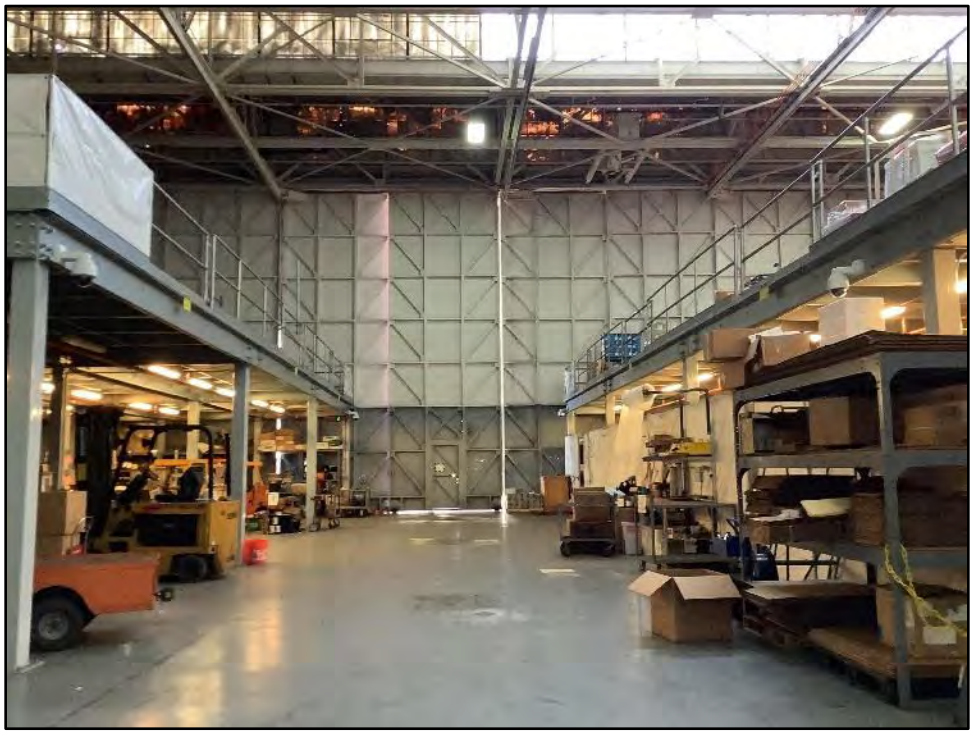

Figure 5.2-30 Building 2, Hangar-type Doors
View toward the northwest.

Figure 5.2-31 Building 2, Building within the Main Building
View toward the northeast.

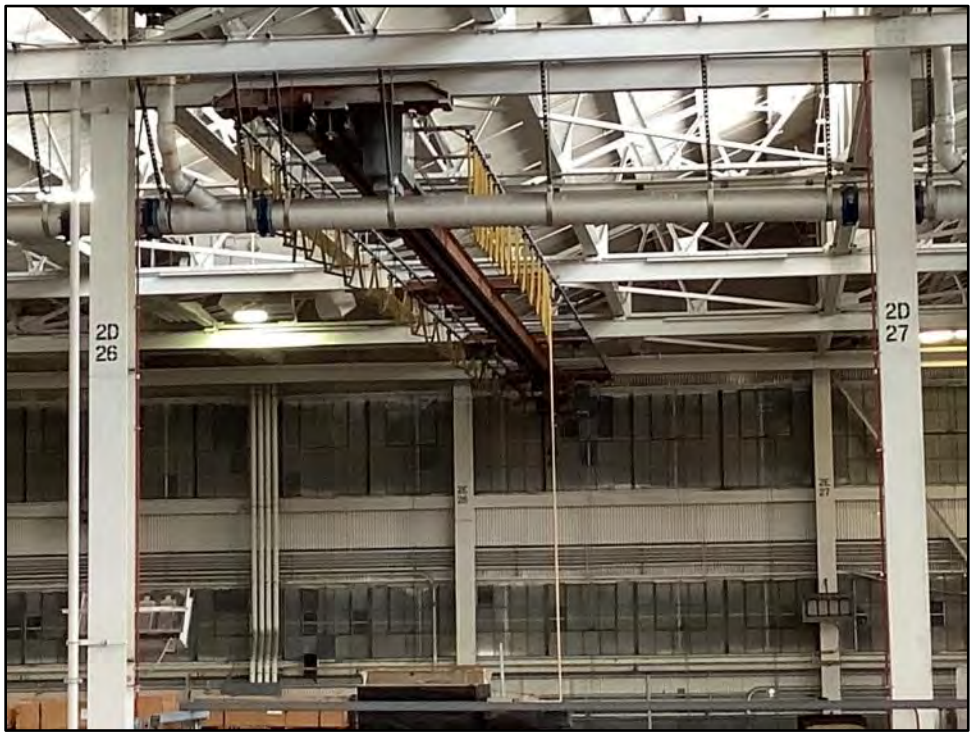

Figure 5.2-32 Building 2, Intact Typical Side Wall Steel Windows
View toward the southwest.

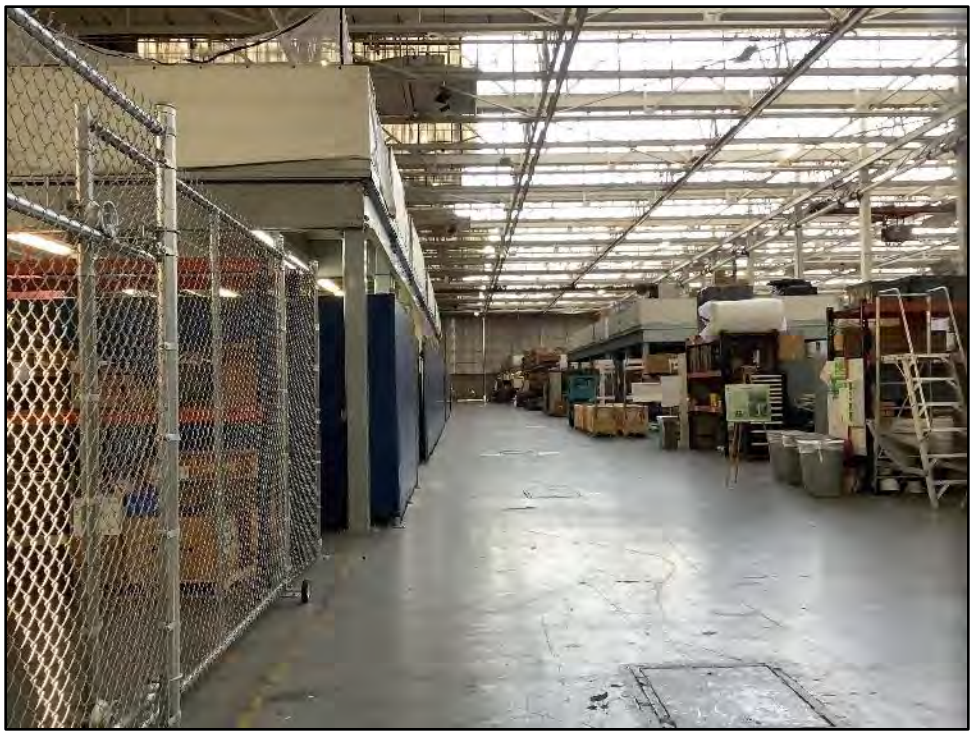

Figure 5.2-33 Building 2 Interior, Storage Areas on Ground Floor
View toward the northwest.

Figure 5.2-34 Building 2 Interior, Corridor with Fenced Storage Areas
View toward the east.

Figure 5.2-35 Building 2 Interior, Second and Third Floor Mezzanines from the Ground Floor
View toward the northwest.

Figure 5.2-36 Building 2 Interior, Ground Floor Corridor and Partitions with Windows at the Second Floor Mezzanine
View toward the southwest.

Figure 5.2-37 Building 2 Interior, Stairway to the Second Floor Mezzanine
View toward the northwest.

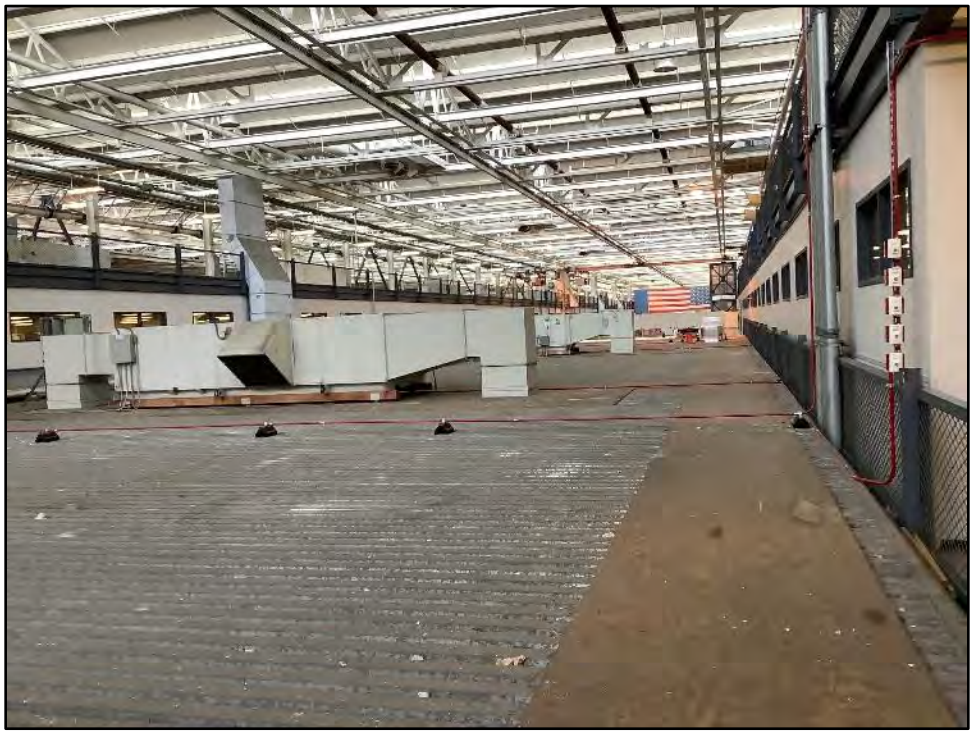

Figure 5.2-38 Building 2 Interior, Roof of Corrugated Building within the Main Building.
View toward the southeast from the third floor mezzanine.

Figure 5.2-39 Building 3, the Southwest Façade
Distant view toward the northeast.

Figure 5.2-40 Building 3, the Northwest Façade
View toward the southeast.

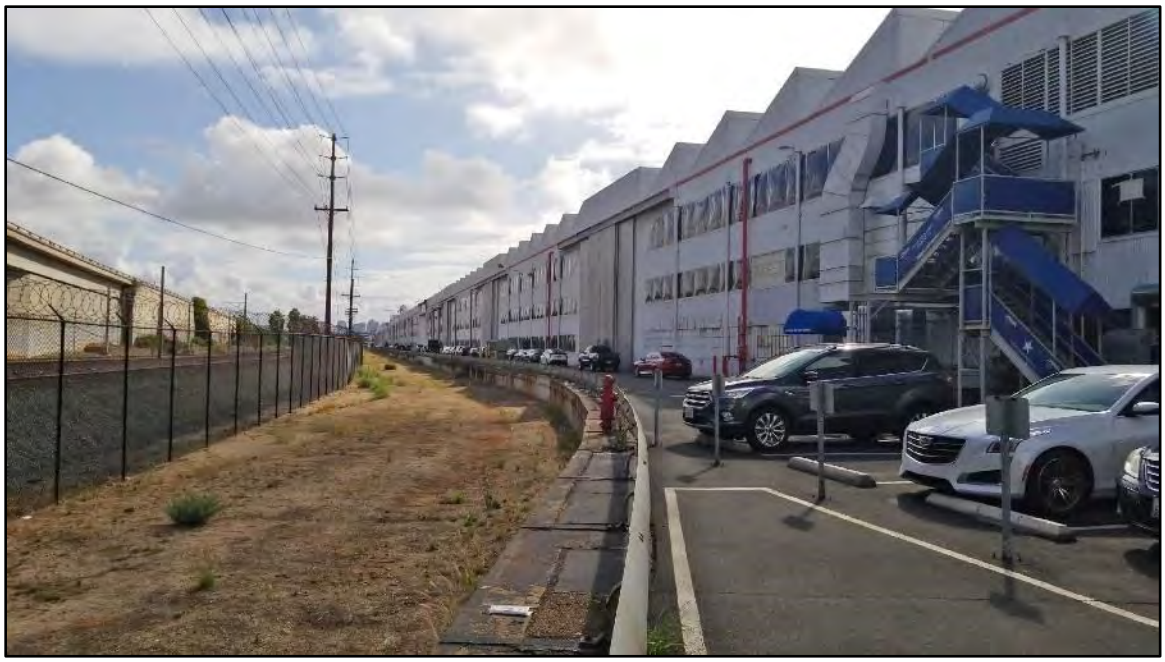

Figure 5.2-41 Building 3, the Northeast Façade and Railroad Easement
View toward the south.

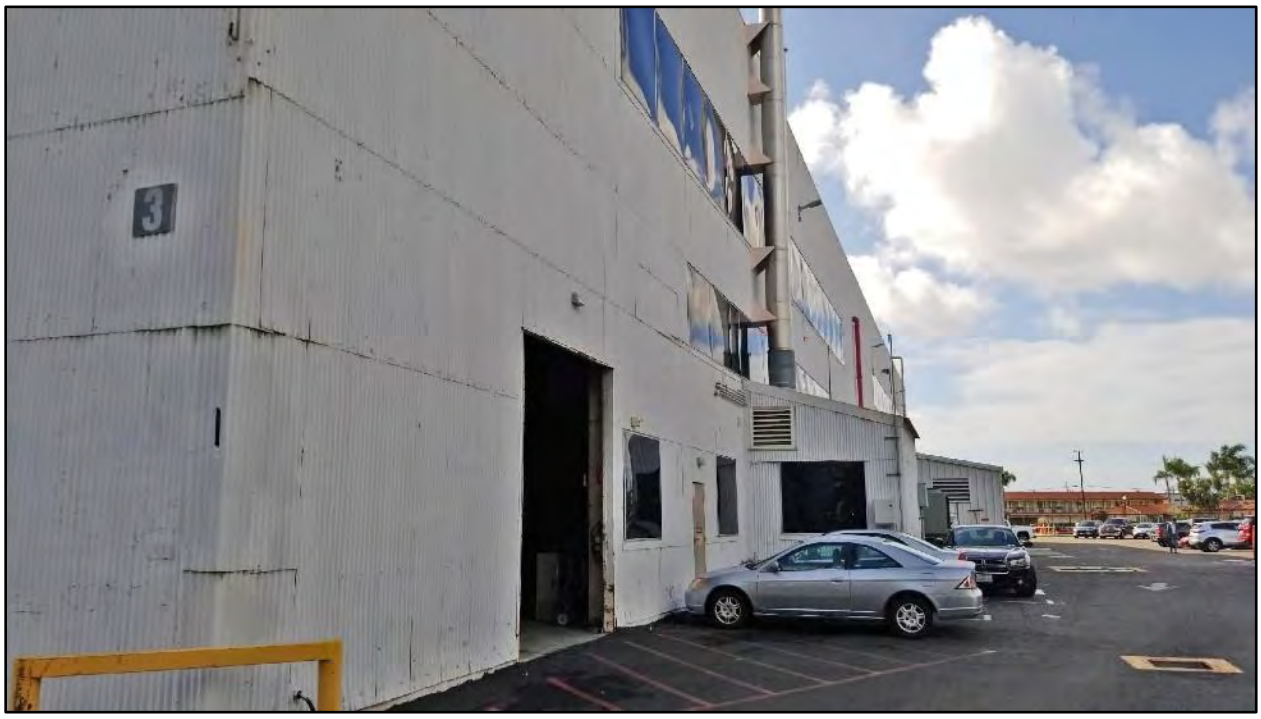

Figure 5.2-42 Building 3, the Northwest Façade
View toward the west.

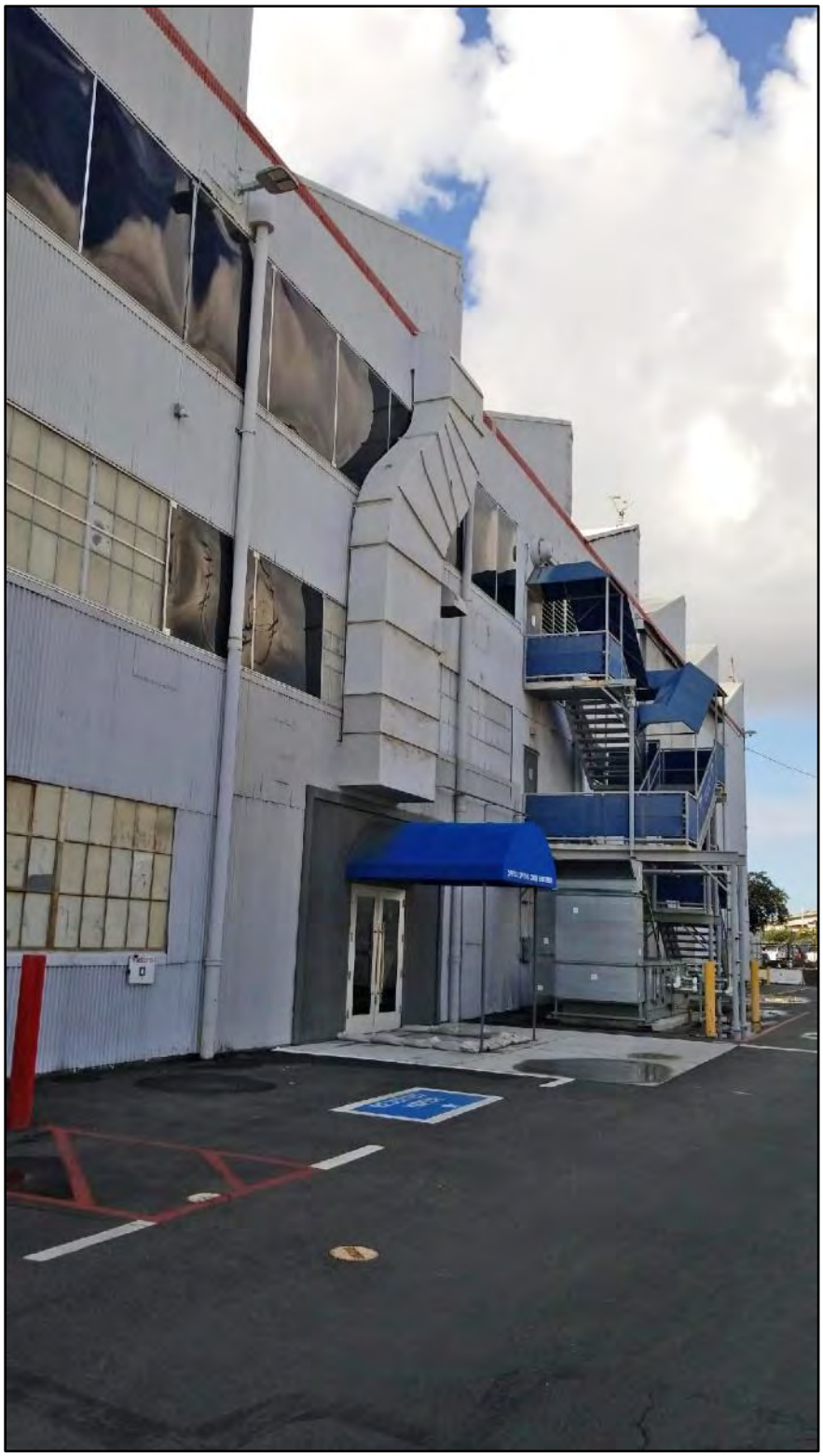

Figure 5.2-43 Building 3, Entrance and Stairway Addition at the North End of the Northeast Façade
View toward the north.

Figure 5.2-44 Building 3 Interior, Showing Sawtooth Windows from the Highest Mezzanine
View facing northeast.

Figure 5.2-45 Building 3 Interior, Detail View of the Operating Mechanism of the Sawtooth Windows
View toward the northwest.

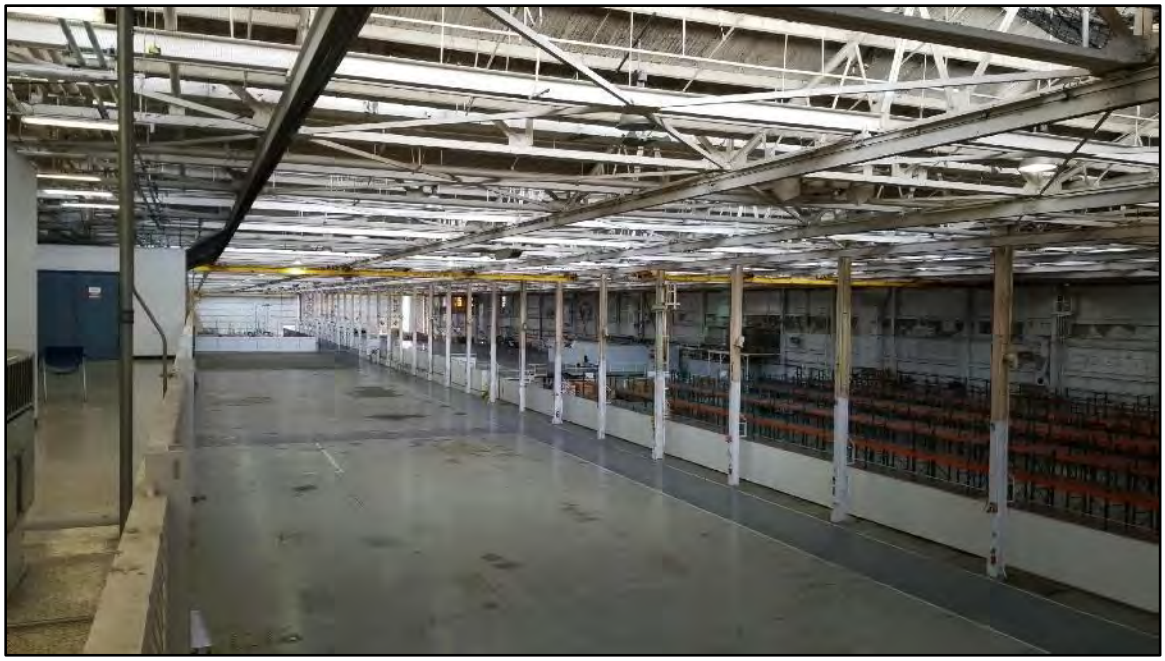

Figure 5.2-46 Building 3 Interior, Third Mezzanine
View toward the southeast.

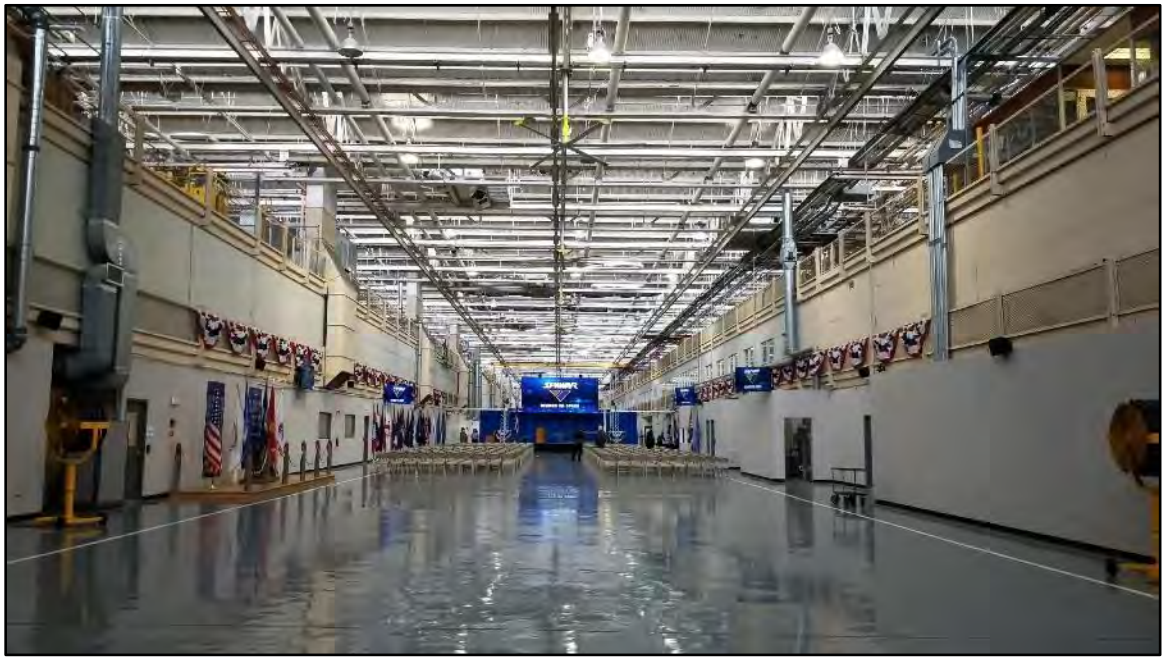

Figure 5.2-47 Building 3 Interior, Middle of the Ground Floor
View toward the southeast.

5.3 Building 4

Building 4 is a two-story office/administration building located approximately 225 feet east of Pacific Highway and 100 feet to the west of Building 2. According to building records, it measures 772 by 57 feet. The building was constructed in 1942. It is a flat-roofed steel frame building set on a reinforced concrete foundation. It is rectangular in plan, notable for its elongated measurements of 772 feet by 57 feet. It has been extensively modified on both its exterior and interior (Figure 5.3-1). A 1945 appraisal describes the exterior as cement plaster on metal lath (Lockwood Greene Engineers, 1945). The exterior has been clad in smooth panels with an irregular scored grid pattern. Continuous rows of mirrored windows at each floor have narrow aluminum frames and fixed panes. All are approximately the same size but vary in pattern between two and three panes. Pipe downspouts are located at regular intervals along the southwest and northwest façades, spanning from scuppers at the top and traveling to the ground. At the southeast façade is a single centrally located door flanked by windows in groups of four at the ground level, as well as a recessed open area with heavy round columns at the second floor. A flat plane extends beyond the face of the wall at three sides. At the northwest façade, an exterior staircase is screened by a curved wall. A double door is on the ground level and a single door is at the second floor on this façade. The northeast façade has three main entrances at the ground floor; two are sheltered by flat semicircular Deco style canopies, and a third entrance to the SPAWAR Commander offices replaced the Deco canopy toward the south end of the façade in 2012. Here, the entrance consists of a double set of glass doors sheltered by a curved translucent canopy and flanked by square segmented columns. An exterior staircase with a solid railing parallels the exterior wall and has a flat canopy at the second-floor entrance. An elevator tower is adjacent to the staircase. At the southwest façade, a centrally located entrance has been enhanced by the addition of a double set of metal-framed glass doors flanked by two-story heavy round columns. The round columns recessed into three-sided indentations are repeated at regular intervals along the southwest façade (Figures 5.3-2 through 5.3-11).

A central lobby extends across the building, with entrances at the southwest and northeast façades (Figure 5.3-12). The southwest entrance consists of a set of metal-framed glass doors with a transom and flanked by two revolving doors. A two-flight stairway and an elevator are accessible from the central lobby (Figure 5.3-13). The floors are covered in vinyl. The ceiling of the lobby has a polygonal soffit with recessed can lighting. The walls are either smooth or clad in synthetic square panels corresponding to the exterior materials. The floor of the SPAWAR Commander's lobby is also covered in vinyl. The ceiling is a grid of acoustical panels and recessed lighting. The inner offices are accessed through etched sliding glass doors. Behind the doors is a curved wall. The entire interior was not accessible, but it appears to consist of offices in large open spaces with low partitions. The ceilings are acoustical tile and recessed lighting, and the floors are covered in carpet tiles (Figure 5.3-14). Heavy square columns are located throughout the spaces, and diagonal steel beams for earthquake resistance are visible within the large spaces (Figure 5.3-15).

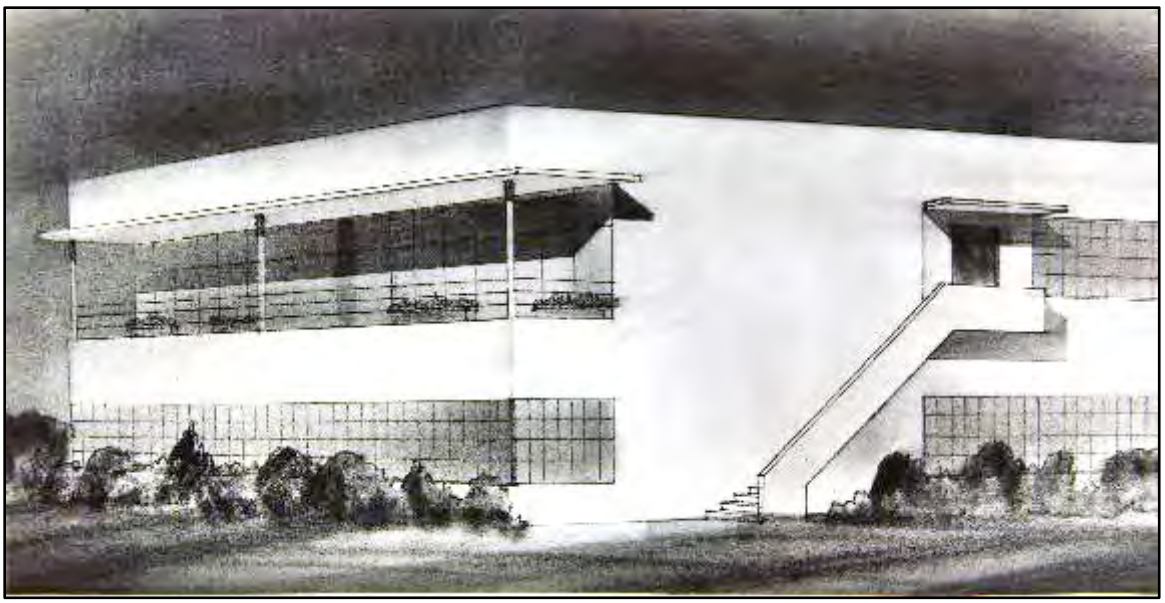

Figure 5.3-1 Building 4, Architect's Rendering, 1941
View toward the west.

Figure 5.3-2 Building 4, Northwest and Northeast Façades
View toward the south.

Figure 5.3-3 Building 4, Southwest and Southeast Façades
View toward the north.

Figure 5.3-4 Building 4, Northwest and Southwest Façades
View toward the southeast.

Figure 5.3-5 Building 4, Northwest and Southwest Façades
View toward the south.

Figure 5.3-6 Building 4, Northeast and Southeast Façades
View toward the north.

Figure 5.3-7 Building 4, Detail of Southwest Façade
View toward the northeast.

Figure 5.3-8 Building 4, Detail of Entrance at the Southwest Façade
View toward the north.

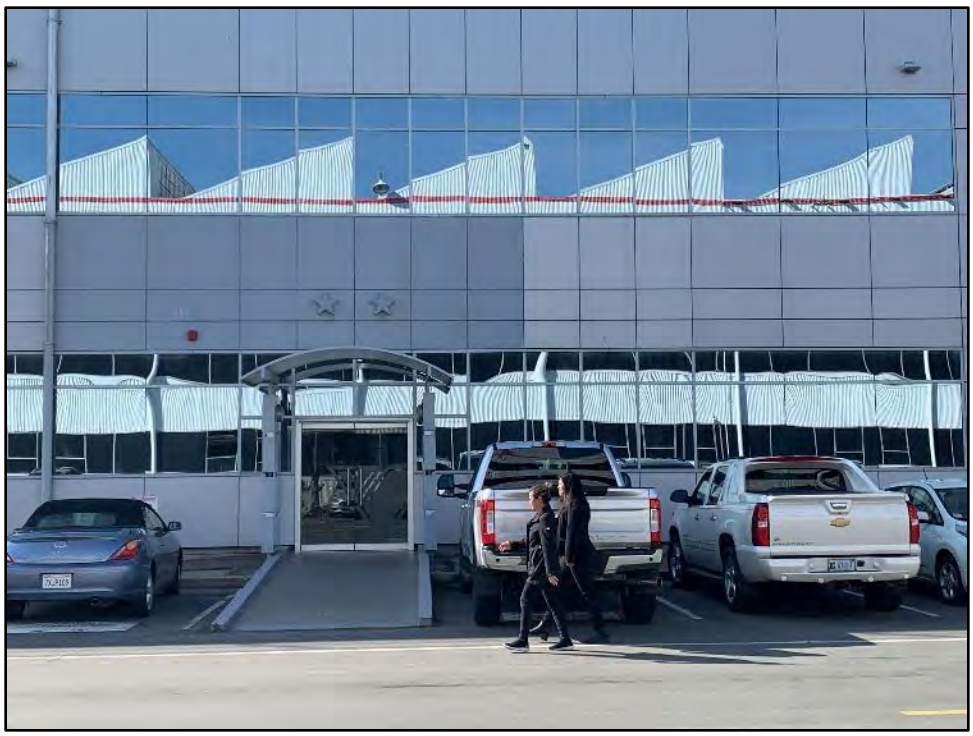

Figure 5.3-9 Building 4, New Entrance at Northeast Façade
View toward the southwest.

Figure 5.3-10 Building 4, Original Canopy at Northeast Façade
View toward the south.

Figure 5.3-11 Building 4, Utility Lift to Second Floor at the Northeast Façade
View toward the northwest.

Figure 5.3-12 Building 4 Interior, Main Lobby at Center of Building
View toward the southwest.

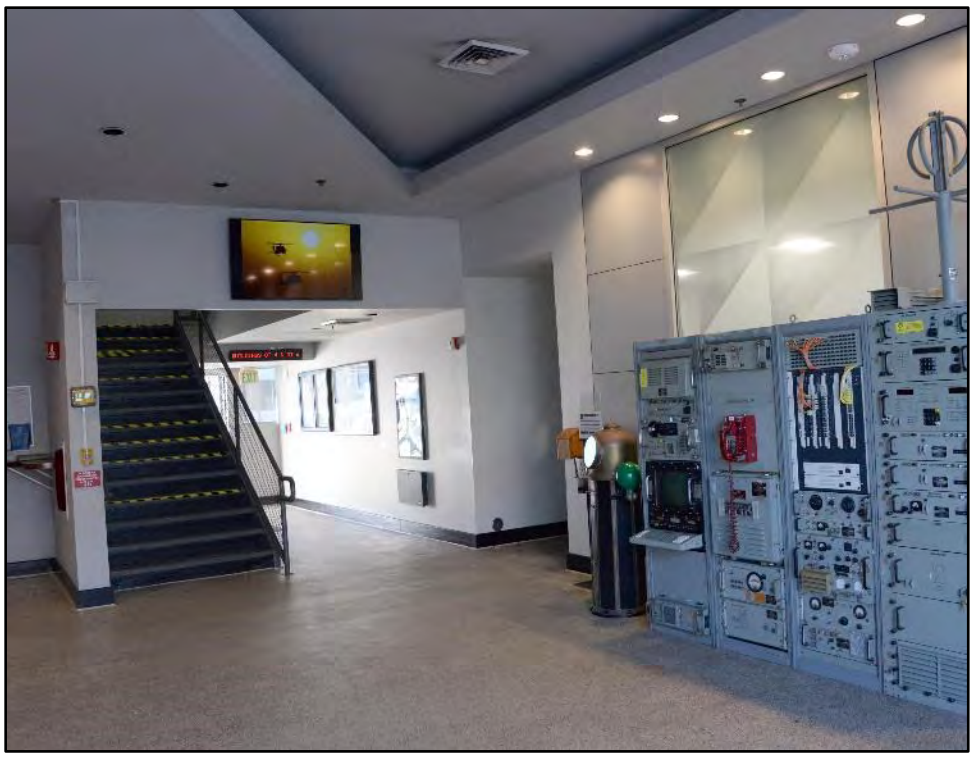

Figure 5.3-13 Building 4 Interior, Main Lobby
View toward the northeast.

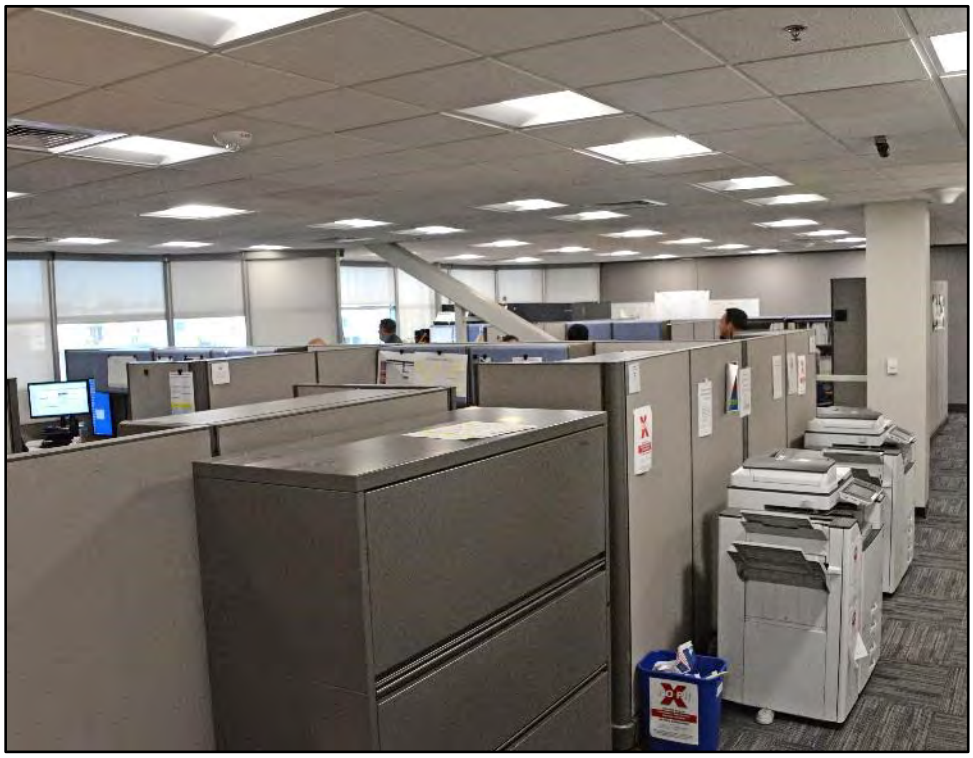

Figure 5.3-14 Building 4 Interior, Offices with Partitions
View toward the south.

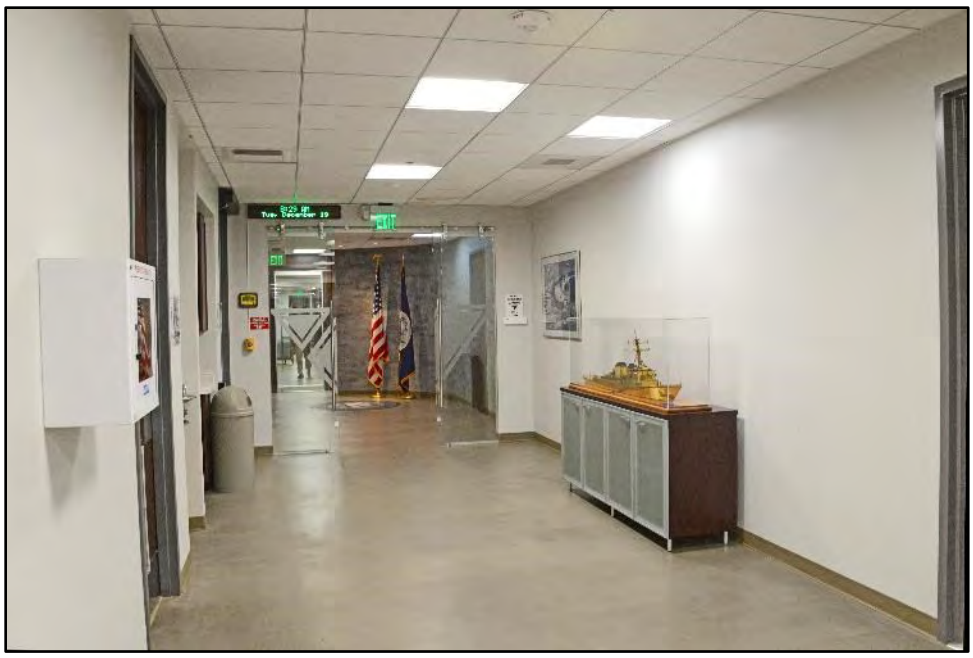

Figure 5.3-15 Building 4 Interior, Commander's Foyer at the Northeast Façade
View toward the southwest.

5.4 Building 7

Building 7 is a three-story steel and corrugated metal building with a mezzanine constructed in 1942. It is located approximately 50 feet southeast of Building 1. According to building records, it measures 402 feet by 104 feet. It is rectangular in plan with a flat roof and sits on a poured-concrete foundation. It has been historically referred to as the Paint Shop or the Camouflage Building (Ruckman, ca. 1946, p. 2). It was designed to accommodate a one-half-ton crane and a 2,000-pound-capacity monorail system, although the system has been partially dismantled (DPC, ca. 1946). It currently serves as a warehouse and is described in property records as a Staging Warehouse. The southeast façade has hangar-type doors running on an overhead track that continues above three continuous rows of windows toward the eastern end of the façade. The southwest façade has three continuous rows of windows covered in opaque solar sheeting. At the northeast façade is an entrance labeled “Paint Shop” that includes a single door with four lights and a row of vents at the third level. A truss is connected to the north corner that appears to be remnants of the monorail that originally connected the assembly buildings. The northwest façade resembles the southeast façade, with a mix of hangar-type doors and rows of windows (Figures 5.4-1 through 5.4-7).

The interior is mainly one large open space. The ceiling is composed of wood boards crossing rails that span the length of the building, curving at the center and at the ends to allow transport of products. The windows at the interior are visible as the original multi-pane steel windows. There are two small wood mezzanines and a two-flight metal stairway at the northeast end of the building. The stairs lead to a single flat metal door. A row of two-part aluminum windows is located at the third level (Figures 5.4-8 through 5.4-13).

Figure 5.4-1 Building 7, Northwest and Southwest Façades
View toward the east.

Figure 5.4-2 Building 7, Southeast Façade
View toward the north.

Figure 5.4-3 Building 7, Southwest Façade
View toward the north.

Figure 5.4-4 Building 7, Detail of Door at Southeast Façade.
View toward the northwest.

Figure 5.4-5 Building 7, Northwest and Northeast Façades
View toward the south.

Figure 5.4-6 Building 7, Detail of Entrance to Paint Shop at Northeast Façade
View toward the southwest.

Figure 5.4-7 Building 7, Detail of Vehicle Door at the Southeast Entrance
View toward the northwest.

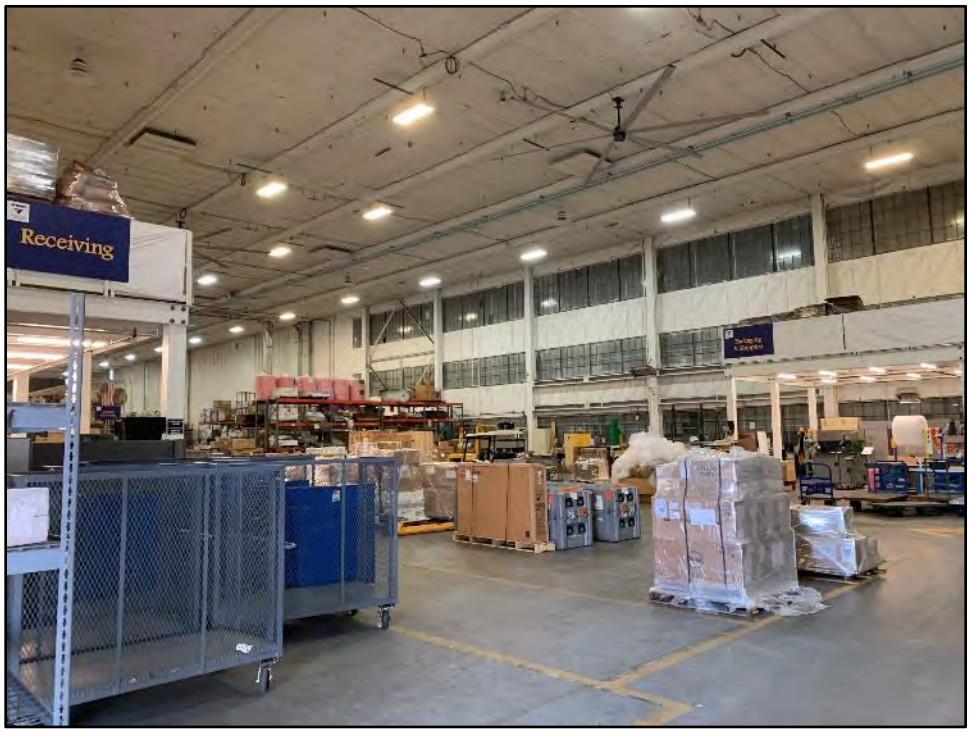

Figure 5.4-8 Building 7 Interior
View toward the west.

Figure 5.4-9 Building 7 Interior, View Toward the Northeast

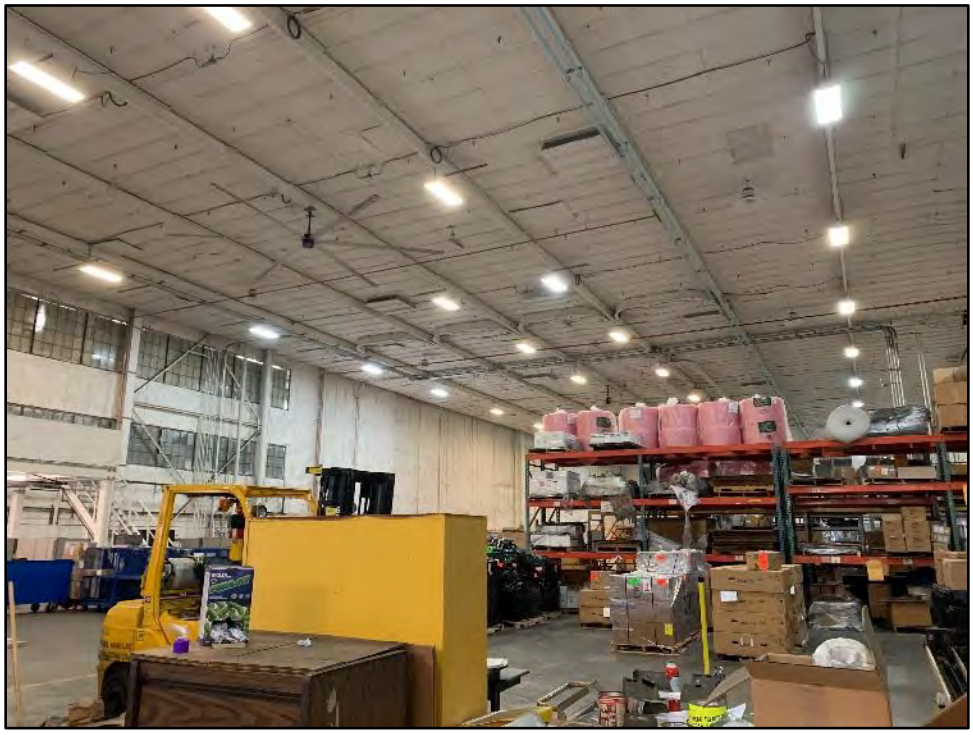

Figure 5.4-10 Building 7 Interior
View toward the south.

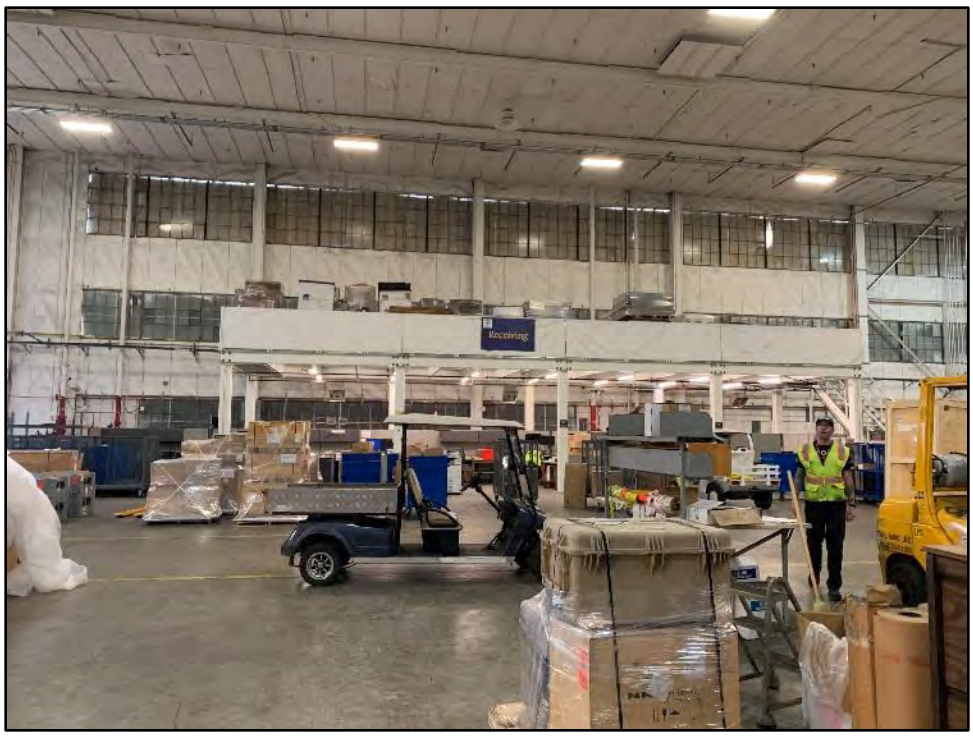

Figure 5.4-11 Building 7 Interior, Mezzanine and Original Steel Windows
View toward the northwest.

Figure 5.4-12 Building 7 Interior
View toward the north.

Figure 5.4-13 Building 7 Interior, Steel Steps to Second Floor Offices and Original Sliding Doors
View toward the northeast.

5.5 Building 8

Building 8 is located in the southeast corner of the Plant 2 property. According to building records, it was constructed in 1942 and measures 400 feet by 147 feet. Described in property records as a Warehouse, it was previously referred to as the Drop Hammer Building and the Forge Shop (Ruckman, ca. 1946, p. 2). The main part is a three-story steel and corrugated iron building with a 10-part sawtooth roof resembling those on the three assembly buildings. A single-story flat-roofed wing was added at the northwest façade before 1955, and a single-story corrugated metal gabled roof addition is at the southwest façade. Fenestration is irregular, consisting mainly of two continuous rows of windows at the second and third floors, with those at the third floor shorter than those at the second floor. At the ground floor are deeper multi-pane steel windows and vehicle entrances with roll-up doors.

At the interior, the first floor contains concrete pits and a concrete floor, exposed corrugated metal exterior walls, and steel framing. The second and third floors have wood floors over steel framing. There is one freight elevator. The building originally contained 26 hammers and was said to be the most unique structure in the original plant; it required extensive engineering to address the site's soft mud geology to accommodate the force of the hammers. When constructed, the building housed the largest battery of drop hammers and hydraulic presses under one roof on the Pacific Coast. The building also contained a complete pattern shop, a foundry, and die storage (*Consolidator,* 1941). It originally housed two 5-ton-capacity hoist and monotractor units, as well as a 2,000-pound-capacity monorail (Figures 5.5-1 through 5.5-17) (DPC, ca. 1946).

Figure 5.5-1 Building 8, Northwest and Southwest Façades
View toward the east.

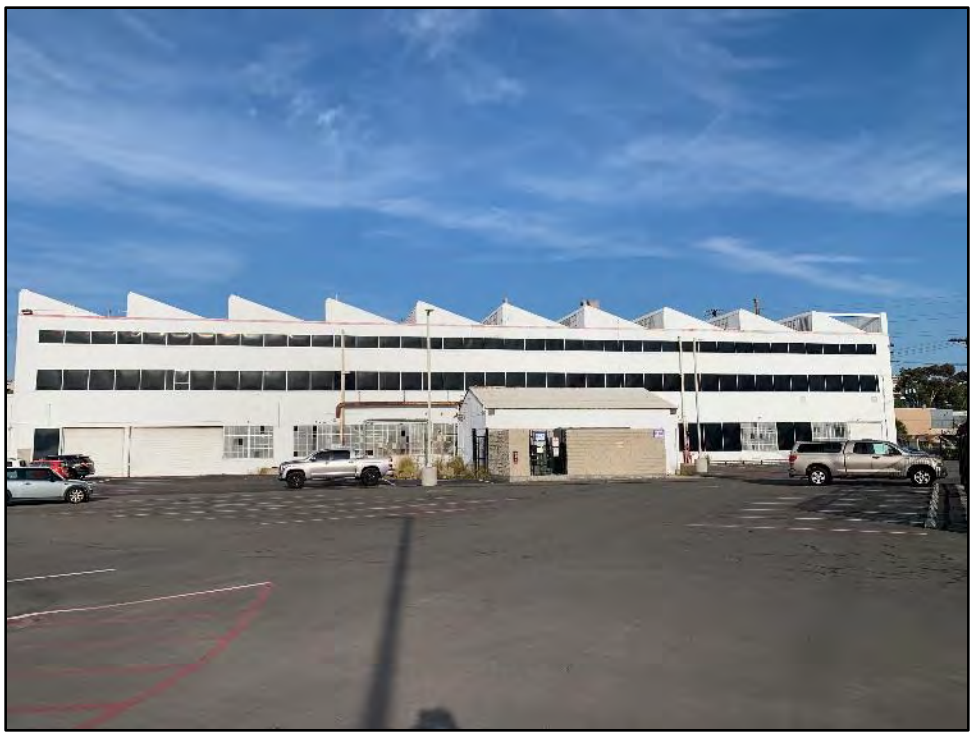

Figure 5.5-2 Building 8, Southeast End of Southwest Façade
View toward the northeast.

Figure 5.5-3 Building 8, Addition at Southwest Façade
View toward the north.

Figure 5.5-4 Building 8, Addition at Southwest Façade
View toward the east.

Figure 5.5-5 Building 8, Northwest End of Southwest Façade
View toward the north.

Figure 5.5-6 Building 7 (left) and Building 8 (right)
View toward the northeast.

Figure 5.5-7 Building 8, Northeast Façade with Building 7 to the Right
View toward the west.

Figure 5.5-8 Building 8, Detail of Window at Southwest Façade
View toward the northeast.

Figure 5.5-9 Building 8 Interior, View from Roll-up Door at the Northwest Façade
View toward the southeast.

Figure 5.5-10 Building 8 Interior, Northeast Wall of Ground Floor
View toward the east.

Figure 5.5-11 Building 8 Interior, Ground Floor
View toward the north.

Figure 5.5-12 Building 8 Interior
View toward the northeast.

Figure 5.5-13 Building 8 Interior
View toward the east.

Figure 5.5-14 The American Monorail Tag on a Crane Rail at the Northeast Side of Building 8
View toward the northeast.

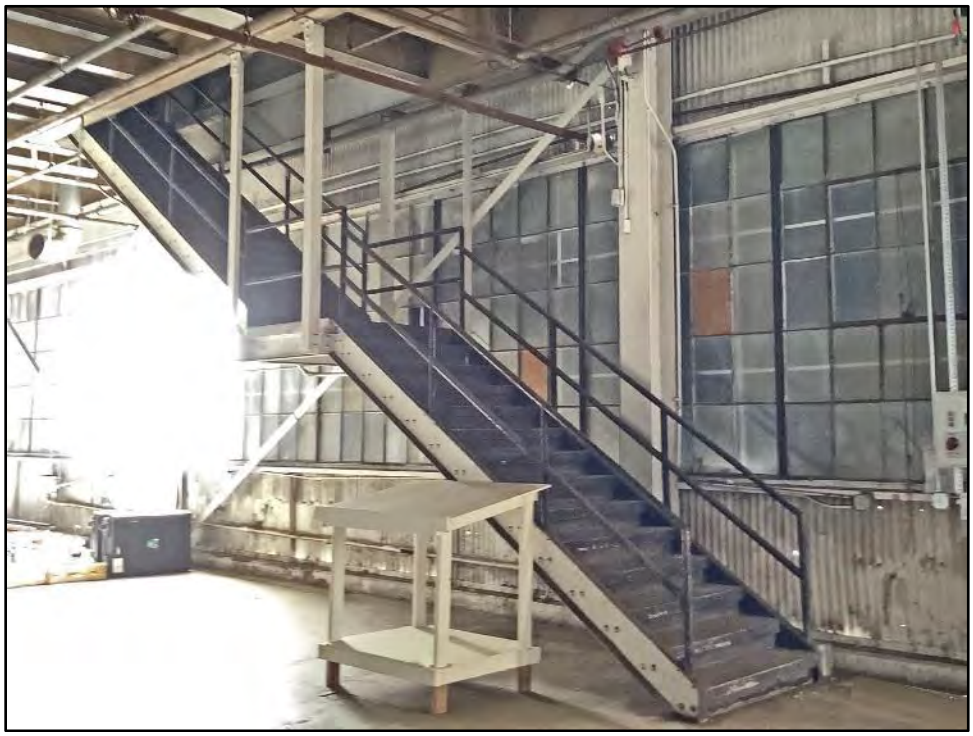

Figure 5.5-15 Building 8 Interior, Stairway from Ground Floor to Second Floor at Southwest Wall
View toward the southeast.

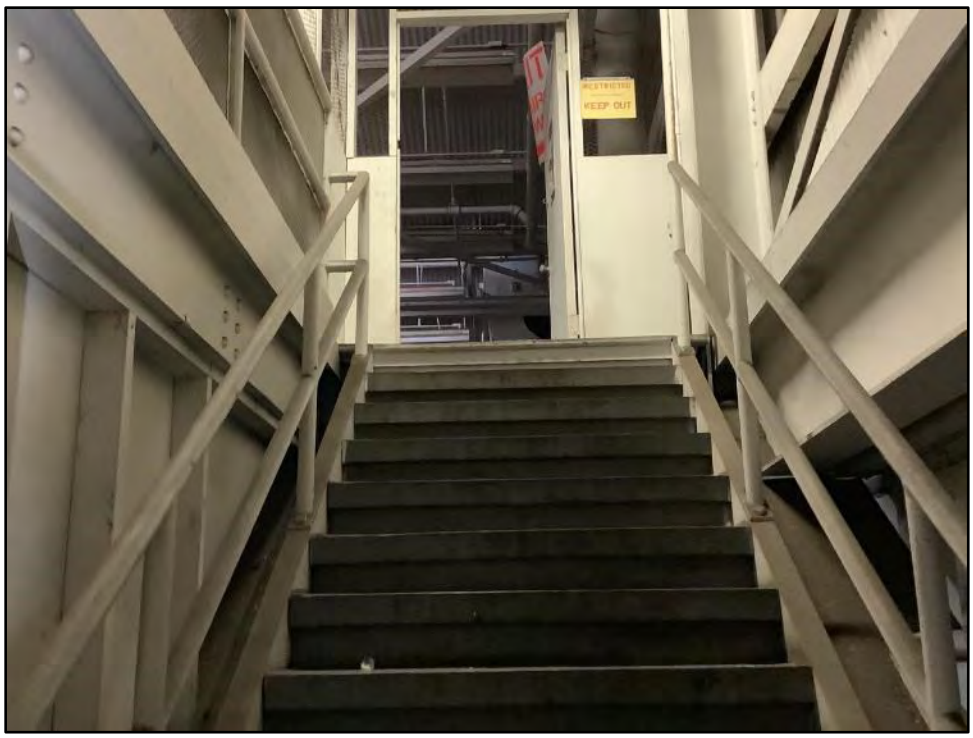

Figure 5.5-16 Building 8 Interior, Stairway to Third Floor
View toward the southeast.

Figure 5.5-17 Building 8 Interior, Third Floor
View toward the northwest.

5.6 Building 27

Building 27 is a single-story wood-framed building constructed in 1941. It is located approximately 40 feet north of Pacific Highway and 140 feet south of Building 4. A 1945 appraisal described it as Cafeteria #6 (Lockwood Greene Engineers, 1945). It has a rectangular plan and measures 281 feet by 83 feet, according to building records. It sits on a poured-concrete foundation. It has a very slightly sloped front-gabled roof with a moderate overhang, flat fascia, and exposed beams. Fenestration is irregular, consisting of fixed-pane windows, all of the same size, either single or in groups of two or three. At the northwest façade are two entrances to the Deli & Grill, one set of double doors and another single door, all flat metal variety. Both are sheltered by curved fabric canopies. At the northeast façade are two more doors, both with flat canopies. A vehicle entrance is centered on the southeast façade, flanked by a single flat metal door with a canopy and two windows. Similarly, the southwest façade has several doors with canopies and windows in a variety of configurations (Figures 5.6-1 through 5.6-4). The building houses a lunch facility at the northwest end, a warehouse space at the southeast façade, and a fitness center at the center. A patio extends across the northwest end of the building outside of the lunch area. A central corridor leads from the dining area to the interior of the building. The fitness center was remodeled in 2011 and has new finishes and a dropped ceiling with acoustic panels and recessed lighting. At the southeast end of the building is a warehouse space that appears to be original to the year of construction. The beamed ceiling is exposed, along with steel cross beams connecting to wood support columns (Figures 5.6-5 and 5.6-6).

5.7 Building 28

Building 28 is a single-story wood-frame administrative building sitting on a poured-concrete foundation and measuring 242 feet by 84 feet by 18 feet. Constructed in 1941, it is located approximately 25 feet east of Pacific Highway and 150 feet northwest of Building 4. A 1945 appraisal described it as Cafeteria #7 (Lockwood Greene Engineers, 1945). It was clad in flat cement asbestos sheets over wood studs and columns, with wood double-hung sash, hinged and sliding wood doors. The interior consisted of wood columns and partitions, walls generally plastered or covered with 1-inch insulation board, and a refrigerator room.

Currently, the 20,194-square-foot building houses offices and telephone exchange equipment. It has a very slightly sloped, slightly overhanging front-gabled roof with a flat fascia board. Metal pipe railings follow the perimeter of the roof. HVAC equipment and antennas sit atop the roof. The exterior has been re-clad in stucco with vertical expansion joints. The primary entrance at the northwest façade consists of two groups of fixed glazing set in an aluminum grid. A glazed, aluminum-framed door is set in the southwest group, and it is sheltered by a flat canopy. A second entrance to the northeast consists of a set of double flat utility doors (Figures 5.7-1 through 5.7-4).

Fenestration is irregular. Windows are all fixed with aluminum frames. At the northeast façade is a wide patterned-concrete patio known as the “Wi-Fi Café,” which was added in 2012. The café is furnished with outdoor tables, chairs, and umbrellas. The patio is lined with concrete planters. Full-height windows opening to the patio are arranged in groups of four or two following the grid pattern on the primary façade. Northwest of the patio is a flat metal door with a single light. Three smaller windows with aluminum frames are also located on the northwest façade, a single window, and a group of two.

Figure 5.6-1 Building 27, Northwest and Northeast Façades
View toward the south.

Figure 5.6-2 Building 27, Southwest Façade
View toward the east.

Figure 5.6-3 Building 27, Southeast Façade
View toward the northwest.

Figure 5.6-4 Building 27, Southwest Façade
View toward the north.

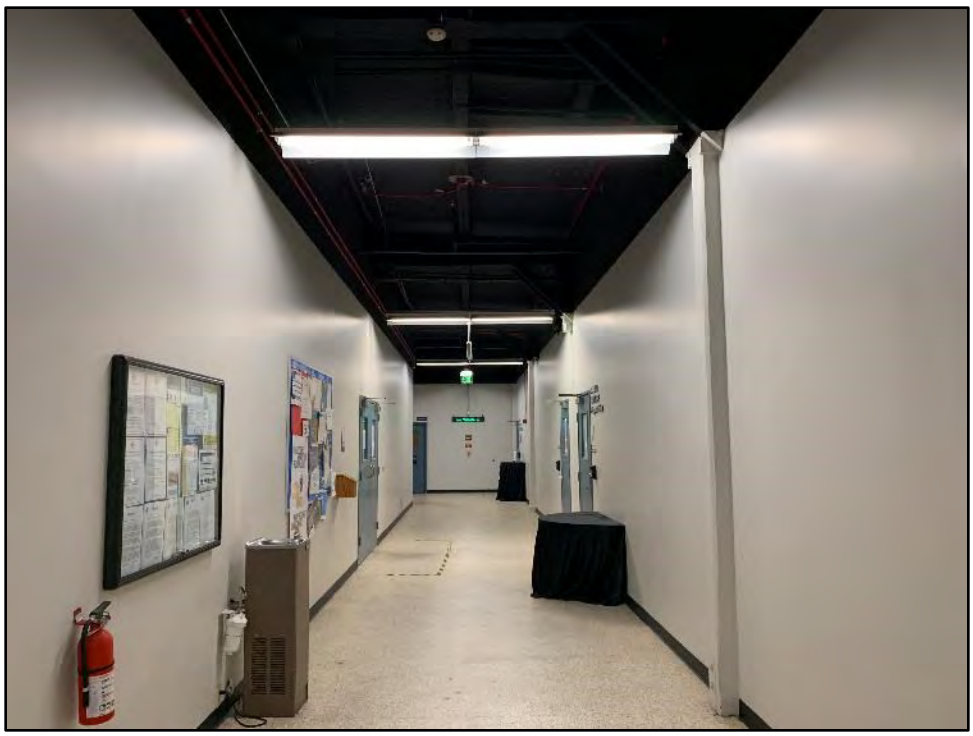

Figure 5.6-5 Building 27 Interior, Central Corridor at Northwest End of Building
View toward the southeast.

Figure 5.6-6 Building 27 Interior, Warehouse Area at Southeast End of Building
View toward the northwest.

Figure 5.7-1 Building 28, Northwest and Northeast Façades
View toward the south.

Figure 5.7-2 Building 28, Detail of Northeast Façade.
View toward the southwest.

Figure 5.7-3 Building 28, Northwest Façade
View toward the southeast.

Figure 5.7-4 Building 28, Southwest and Southeast Façades
View toward the north.

At the northwest façade are two doors with glazing, one sheltered by a curved canvas canopy, and three single fixed windows with narrow aluminum surrounds. At the southwest façade are groups of two or three or single windows with narrow aluminum surrounds and several single flat doors. At the south end of the façade is a corrugated metal parking structure.

The interior has been completely remodeled to accommodate open and private offices. Heavy square columns are regularly spaced throughout, and the ceilings are covered in a grid of acoustical panels with recessed square lighting. Inside the southeast entrance, a curved drop ceiling defines a lounge/waiting area. The floors are covered in carpet panels. Low prefabricated, moveable partitions with transparent panels at the top break the large space to the northwest into work cubicles. Along the northeast wall is a series of more private office spaces with opaque partitions and doors. In the northeast corner of the open space is a completely enclosed office with walls that continue to the ceiling (Figure 5.7-5). The remainder of the building is irregularly partitioned to form a central corridor, double loaded with rooms of various sizes. The kitchen area to the right of the corridor has walls with fixed glass panels and an open doorway (Figure 5.7-6).

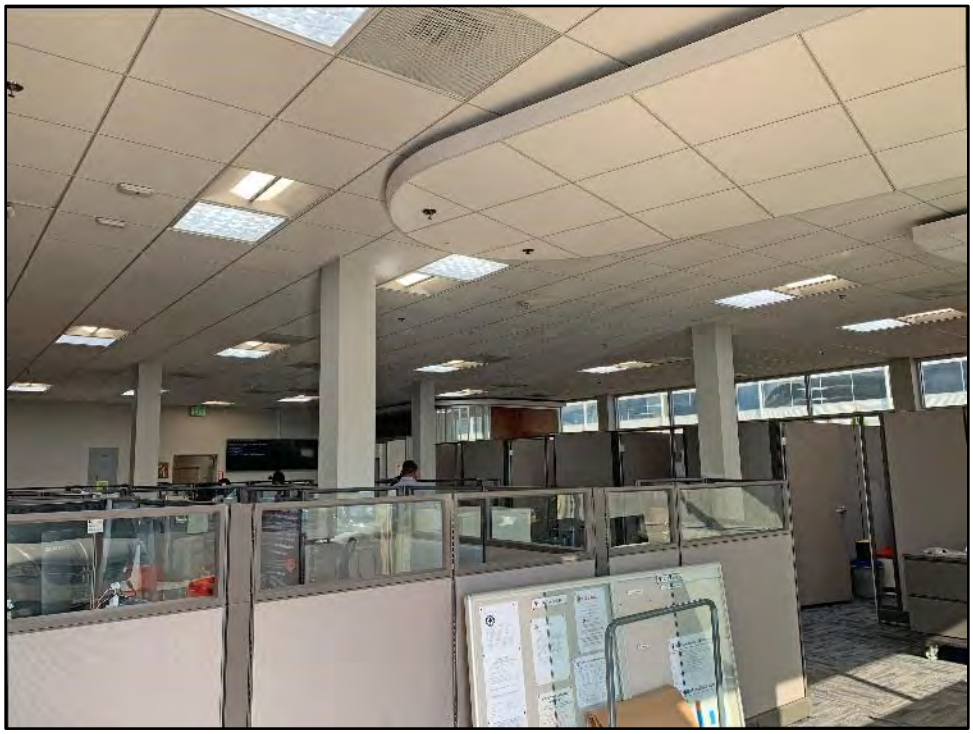

Figure 5.7-5 Building 28 Interior
View toward the north from the southeast entrance.

Figure 5.7-6 Building 28 Interior
View toward the northeast.

5.8 Building 30

Building 30 is a single-story storage/utility building constructed in 1941. According to a 1945 appraisal, the building was a "Lamp Storage Room" (Lockwood Greene Engineers, 1945). The main mass has a square plan measuring 41 feet by 41 feet. The building is 18 feet high and sits on a poured-concrete foundation. It has a flat roof or parapet and is clad in stucco. Approximately 2 feet from the top edge of the walls are regularly spaced vents. The building is connected to the northwest façade of Building 2. The original windows are recessed, with a three-by-three-light configuration and categorized as partially operable awning type with a lever closer. All the windows are the same size; there are two at the northwest façade and one at the southwest façade. The opening for a similar window at the southeast façade is filled in with T1-11 siding, and two more windows at the southeast façade are obscured by a shed-roofed addition to the building, although they are visible from the interior. At the primary (southwest) façade are a double flat metal door and a single door set in an area filled in with T1-11 siding. The addition has one door and is clad in T1-11 plywood siding. Inside, the ceiling is constructed of exposed wood planks. Hanging fixtures with fluorescent tubes provide lighting. The walls have partially exposed framing and are partially finished (Figures 5.8-1 through 5.8-4).

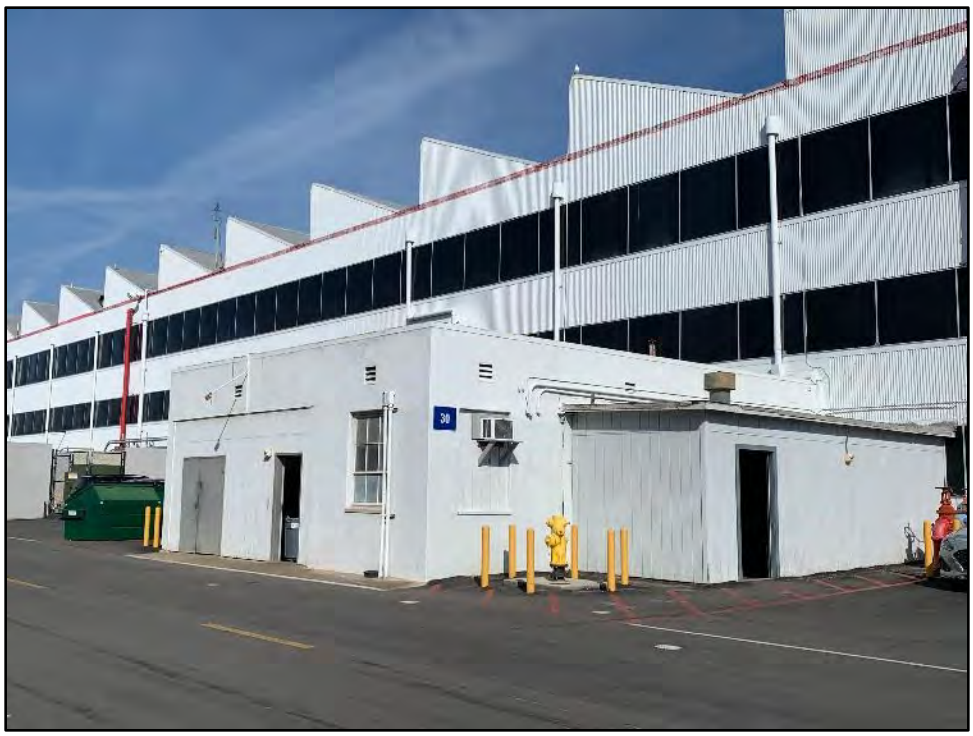

Figure 5.8-1 Building 30, Southwest and Southeast Façades
View toward the north.

Figure 5.8-2 Building 30, the Northwest and Southwest Façades
View toward the east.

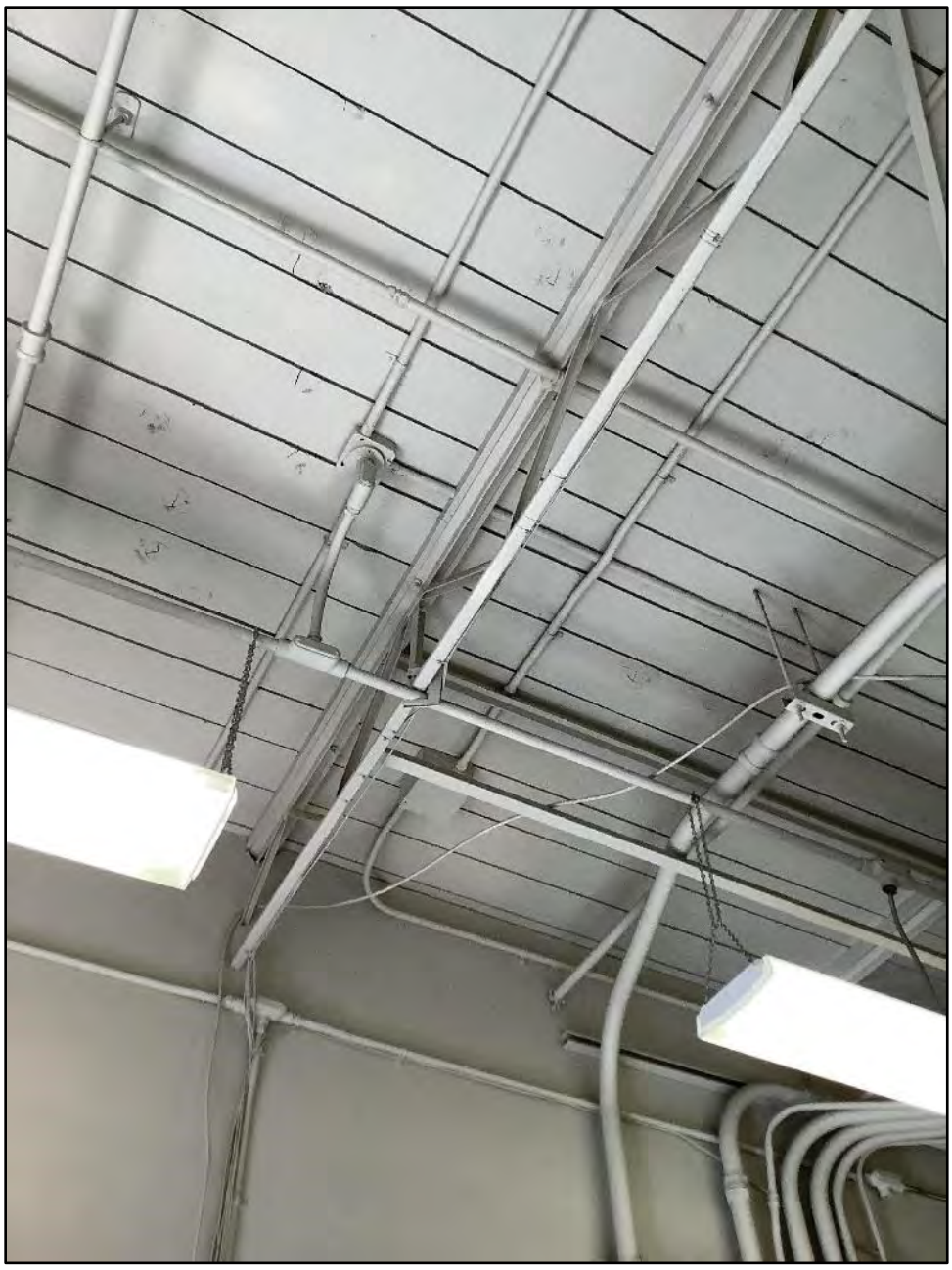

Figure 5.8-3 Ceiling of Building 30

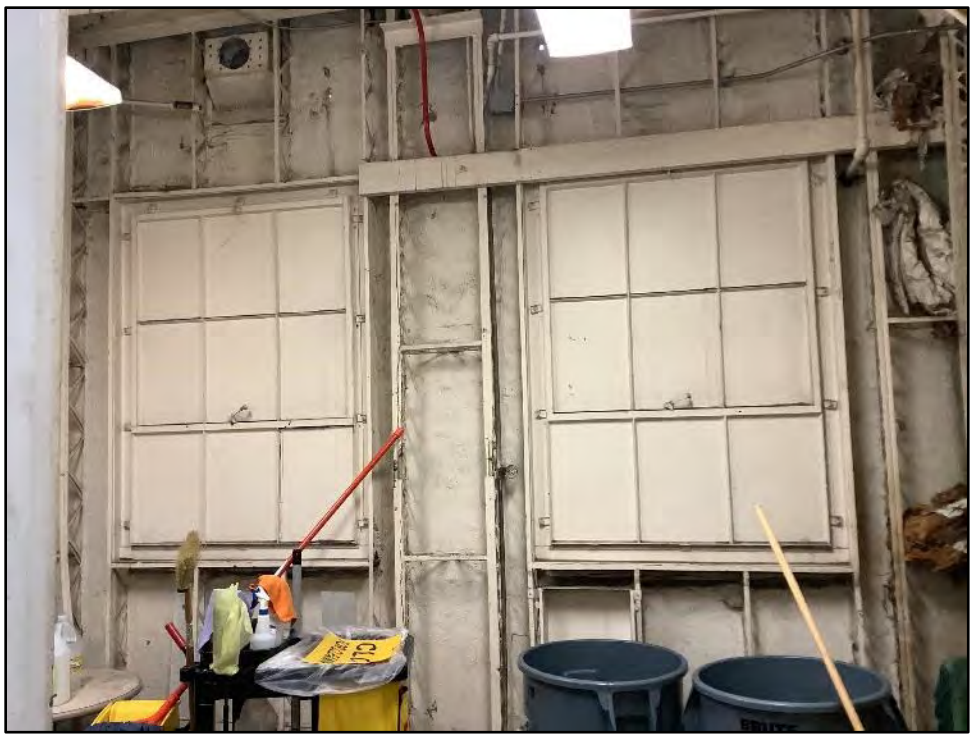

Figure 5.8-4 Building 30, Original Steel Windows from the Interior
View toward the northwest.

5.9 Building 32

Building 32 is located within a few feet of the southwest façade of Building 2. Although property records state it was constructed in 1941, Building 32 is described in a 1945 appraisal of Plancor 20 as an 11-by-35-foot "Pump House & Tanks (South End)" or "Pump House (for Standby Water Supply)" located in the southwest corner of the property, which does not appear to describe the current Building 32 (Lockwood Greene Engineers, 1945). It is not shown in 1942 or 1955 site plans, and it is not visible in a 1960 aerial, indicating the year of construction is post-1960. Building 32 has a flat roof and is constructed of concrete masonry units and sits on a poured-concrete foundation. It is 1,468-square-foot building measuring 49 feet by 30 feet and 13 feet high. Described as a lunchroom/locker room in current building records, it houses a convenience store called the Grab & Go. At the primary façade is a double set of doors with glazing, a small fixed-pane window, and a two-part sliding window. A poured-concrete patio surrounded with pipe railings extends from the southwest side of the building. At the northwest façade is a door with two vents and an ATM machine sheltered by a cantilevered awning, and at the northwest façade are flat metal double doors and a single door. Several turban-style vents sit on the roof.

Within the interior is a dropped ceiling with recessed fluorescent lighting and ceiling fans. The concrete masonry units of the construction are visible within the interior, and the floor is covered in vinyl tile (Figures 5.9-1 through 5.9-4).

Figure 5.9-1 Building 32, the Primary (Southeast) Façade
View toward the northwest.

Figure 5.9-2 Building 32, Northwest and Southwest Façades
View toward the east.

Figure 5.9-3 Building 32 Interior
View toward the southwest.

Figure 5.9-4 Building 32, Southwest and Southeast Façades
View toward the north.

5.10 Building 37

Building 37 is a small fire pump building located in the parking area at the southeast end of OTC Site 1 constructed in 1984. It is adjacent to a water tank (Building 63), to which it is connected by a heavy valve and a system of pipes. Constructed in 1984, it has a rectangular plan measuring 35 by 12 feet and sits on a poured-concrete foundation. It appears to be constructed of concrete covered in stucco. It is 11 feet high and has a flat roof with a flat fascia and a narrow overhang. At the north façade are two recessed doors constructed of vertical boards with exposed hinges. There is no fenestration at the east façade. At the west façade is a flat metal door with central vents and a heavy bolted surround. A corrugated metal canopy extends from the east façade and shelters a diesel tank enclosed in a low, heavy concrete wall. There are two deeply recessed openings with vents at the east façade (Figures 5.10-1 through 5.10-3).

Figure 5.10-1 Building 37, the West and South Façades
View toward the northeast.

Figure 5.10-2 Detail of Building 37, the North and West Façades
View toward the southeast.

Figure 5.10-3 Building 37, the East Façade
View toward the west.

5.11 Building 63 (Tank)

Building 63, or Tank 63, is a fire protection water tank constructed in 1984 alongside the fire pump house (Building 37). The metal tank is 55 feet in diameter and 16 feet in height (Figures 5.11-1 and 5.11-2).

Figure 5.11-1 Tank 63
View toward the southeast.

Figure 5.11-2 Tank 63
View toward the northeast.

5.12 Building 73

Building 73 is a utilitarian hazardous waste storage structure. According to property records, it measures 56 feet by 28 feet and was constructed in 1992. It is constructed of steel plates with regularly spaced vertical steel supports. It has a slightly sloped shed roof and sits directly on the asphalt parking surface. There are two sturdy steel doors flush with the west façade. It is located in a fenced area including a small shed south of Buildings 7 and 8 (Figures 5.12-1 and 5.12-3).

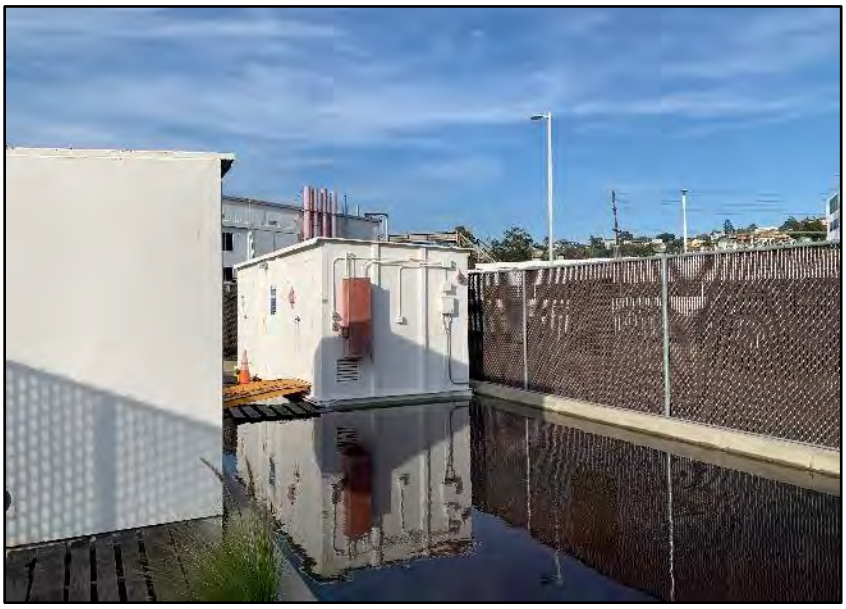

Figure 5.12-1 Building 73, West and South Façades
View toward the northeast.

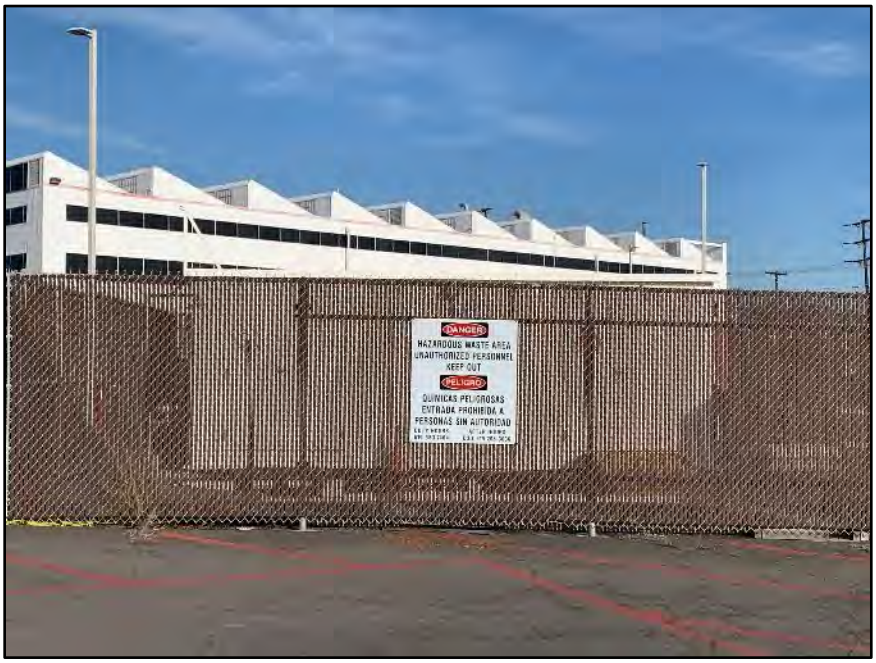

Figure 5.12-2 Building 73, South Façade
View toward the north.

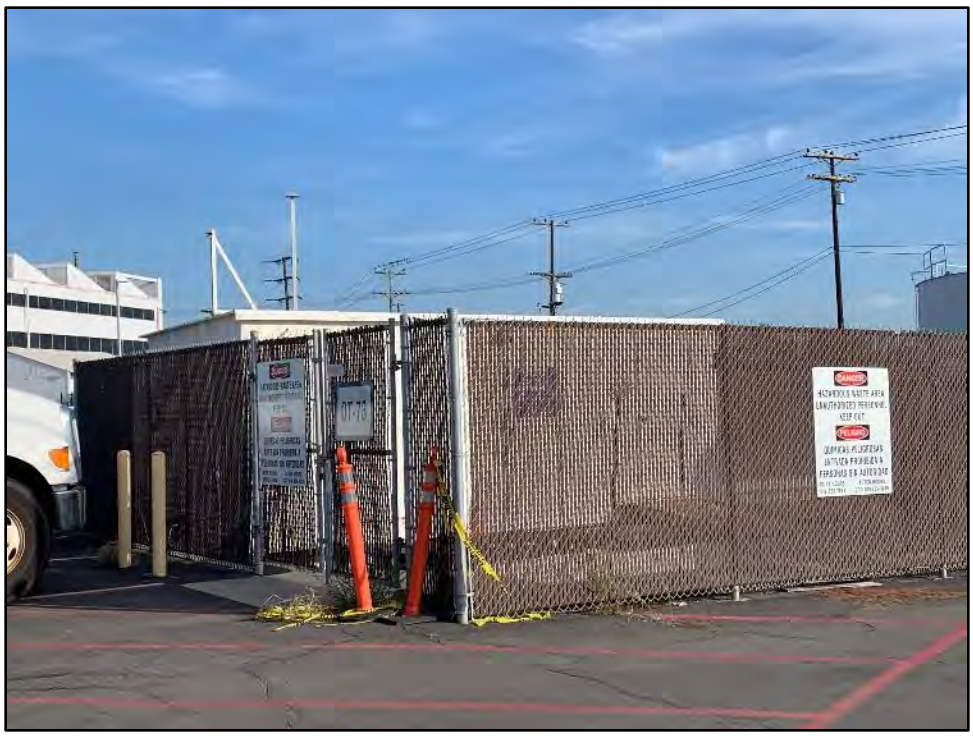

Figure 5.12-3 Building 73, North and West Façades
View toward the southeast.

5.13 Pedestrian Bridge (Facility 69)

The Pedestrian Bridge is a reinforced concrete overpass crossing Pacific Highway connecting the manufacturing area of Plant 2 on the east side of the highway with the parking lot on the west side (Figures 5.13-1 and 5.13-2). According to property records, it measures 283 feet by 52 feet and is 30 feet high. The bridge is part of the original plan for Plant 2. As such, it was constructed and designed at the same time as Buildings 1, 2, 3, 4, 7, 8, 27, 28, 30, and 32, as well as several buildings and structures that have been demolished. In the simple curved lines, the bridge bears some features of the Art Moderne architectural style consistent with the original style of Building 4. The original rails are stucco, flat at the top. Metal tubular handrails have been added to the single wide stairway at the southwest end, and there are indications that side stairways might have been removed from the southwest end. At the entry to the plant (the northeast end), are two narrower stairways and two additional stairways leading from the top of the bridge at right angles. The bridge is clearly designed to move large numbers of workers quickly in and out of the plant simultaneously (Figures 5.13-3 through 5.13-9). No plans were found indicating that the bridge was designed by Taylor and Taylor, but it may have been designed by master architect Richard Requa, whose signature is on an architectural rendering of the bridge (Figure 5.13-10). The Pedestrian Bridge was a critical component of the work at Plant 2 during WWII, as it connected the assembly and administrative buildings with the parking areas across Pacific Highway.

Figure 5.13-1 Workers Approaching the Pedestrian Bridge at End of Shift
Building 4 is in the background left, ca. 1954. Source:* Convairiety*, San Diego Edition, 1954.

Figure 5.13-2 Workers Leaving Plant 2 at the End of a Shift
View of the northeast end of the bridge toward the southwest, undated. Source: SDASM archives.

Figure 5.13-3 Northwest Side of the Bridge
View toward the southeast.

Figure 5.13-4 Northwest Side of the Bridge and Side Steps
View toward the east.

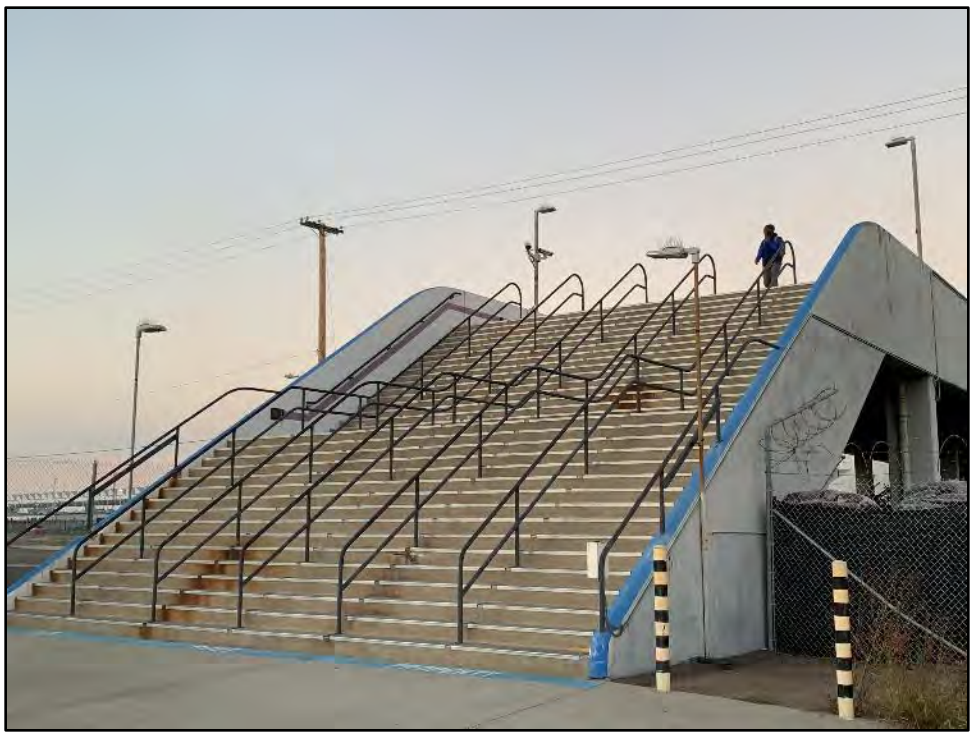

Figure 5.13-5 The Southwest Side of the Bridge
View toward the northeast.

Figure 5.13-6 The Southeast Side of the Bridge
View toward the northeast.

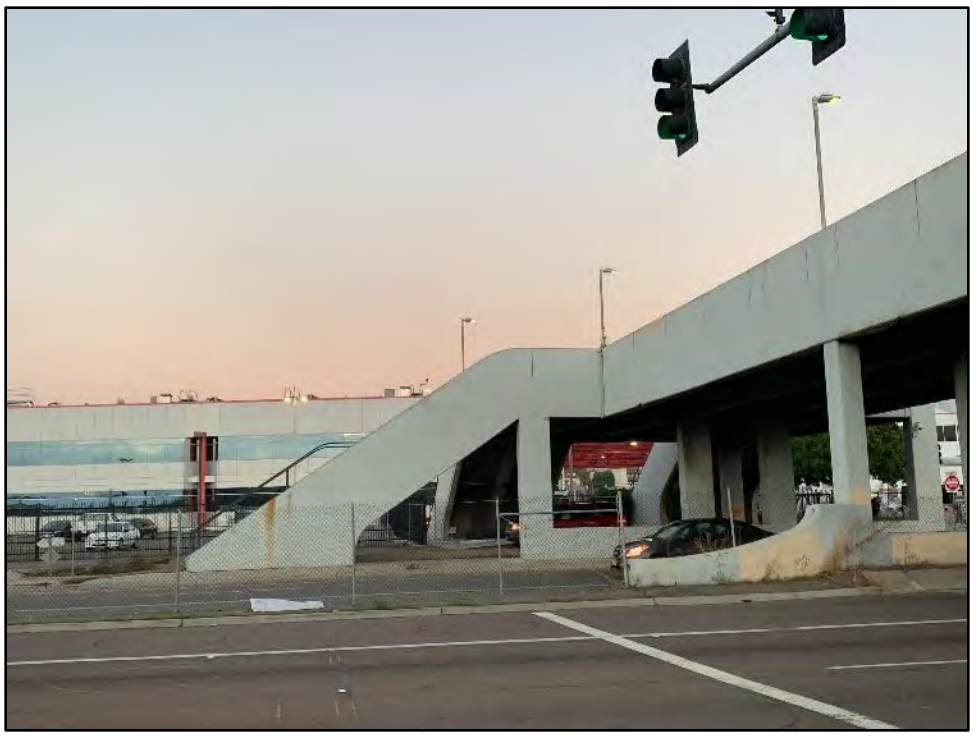

Figure 5.13-7 The Northwest Side of the Bridge
View toward the east.

Figure 5.13-8 Detail of the Side of a Support on the Southwest Side of Pacific Highway
View toward the southeast.

Figure 5.13-9 Detail of the Underside of the Deck
View toward the east.

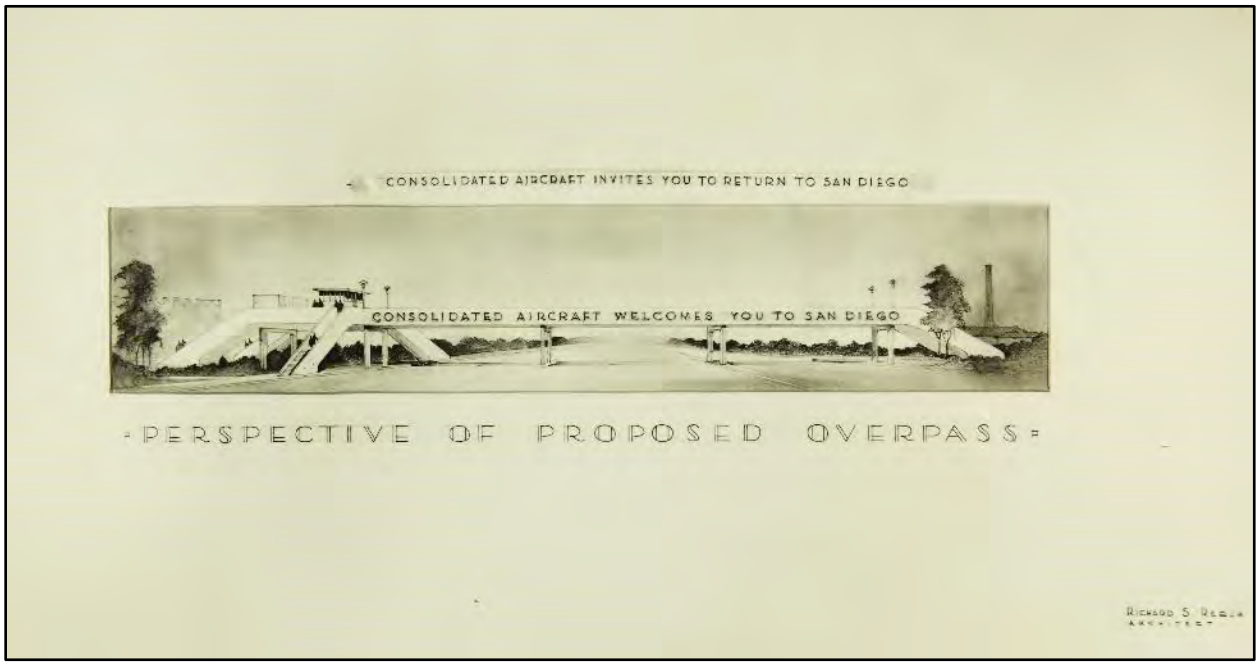

Figure 5.13-10 Architect's Rendering of the Pedestrian Bridge Signed by Richard S. Requa, n.d.
Source: SDASM archives.

5.14 Taylor Street Complex

The TSC is composed of a group of long, single-story wood-frame buildings with barrel roofs constructed in 1943 (Figure 5.14-1). The complex is located north of the OTC and southeast of the junction of

Interstate 5 and Interstate 8. The complex was described in a 1946 WAA report as Parcel No. 3 of "Plancor 20" (WAA, 1948). The architect of the four buildings at the TSC is unknown.

Figure 5.14-1 Overview of TSC from the Northwest
Source: Google Earth Streetview, May 2019.

The TSC Buildings (17, 18, 19, 20, and 21; after numerous reconfigurations now numbered 1-4) became known as the Rosecrans Warehouses (Office of the Chief of Engineers, 1966). In 1946, they were utilized by Bobbi-Car Company, Hubbell Bakeries, and Western Heat and Vent. They were then officially leased as part of a 5-year lease beginning in August 1946. During that time period, the buildings were utilized, at a minimum, by Superior Heating and Ventilating Company and then Ace Van and Storage Company (Building 18) and Salem Sales Commodities or Guthrie Biscuit Company (Buildings 17, 19, 20, and 21), who subleased to Mrs. Hubbell's Western Bakeries (Evans, 1948; GSA, 1952). The lease for the five buildings was terminated as of August 24, 1951. Thereafter, the GSA permitted use of the five buildings (57,000 square feet) to the U.S. Navy for use by the Naval Supply Depot (Small, 1951; Peyton, 1951).

After soliciting information from government entities, the GSA Real Property Disposal Division determined this portion of Plant 2 was not needed by the Federal Government and it was deemed available as surplus property as of October 6, 1955 (GSA, 1955). However, San Diego County and the Navy were both interested in using those five buildings (Vincenz, 1955). The GSA kept the property and on May 10, 1956, transferred the five TSC buildings to the U.S. Army Corps of Engineers for use by the USAF in conjunction with Air Force Plant 19 as storage for the production operations of the F-102 aircraft (GSA, 1956a, 1956b). In 1966, the Naval Shore Electronics Engineering Activity, which also was using a portion of Building 4 (OTC Site 1) at that time, began using the five buildings. Ownership of the TSC buildings was officially transferred from the USAF to the Naval Facilities Engineering Command by February 8, 1968 (Office of the Chief of Engineers, 1968a, 1968b).

Although historical documentation shows separate buildings corresponding to the current Building numbers 1 through 4, previously separate Buildings 1 and 3 and Buildings 2 and 4 have been joined at the narrow ends. Two sections of Building 4 have also been joined (Figure 5.14-2). These alterations occurred in part in 1946, to accommodate the occupation of Buildings 2 and 4 by the Hubbell Bakery. The bakery adapted the buildings by cutting openings between them and enclosing the spaces between

them to permit the installation of straight line baking and production equipment involving a conveyor system. The bakery also proposed adding railroad sidings to the east of the buildings for shipping and receiving (Hubbell, 1946).

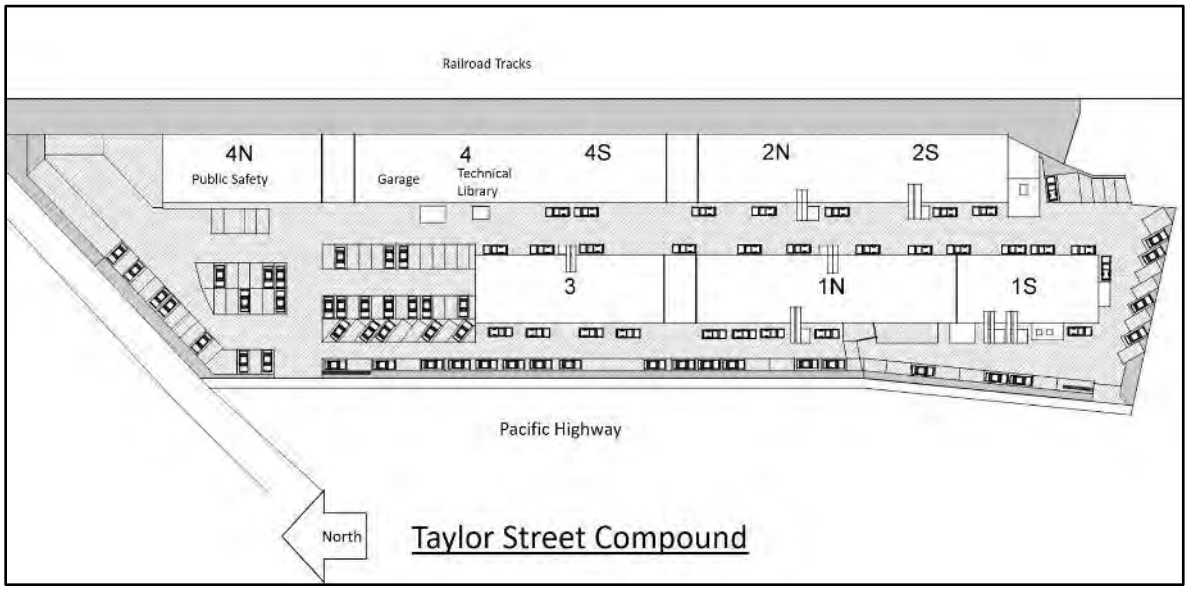

Figure 5.14-2 Site Plan Showing Building Numbers

Historical aerial views confirm that Buildings 2N and 4S were joined by 1964, Buildings 1N and 3 by 1981, and Buildings 4S and 4N by 1989 (historicalaerials.com). Site plans and historic aerials show several additional similar buildings between TSC and OTC Site 1 to the southeast; specifically, 1979 drawings show Building 6 north of Building 4 and Buildings 5 and 7 north of Building 3 (Figures 5.14-3 and 5.14-4). Like the other buildings in the Consolidated complex, the TSC buildings were disguised by use of camouflage, including fake trees and second floors, to make them appear as non-military buildings during WWII (Figure 5.14-5). A historical site plan of all the Plant 2 buildings (undated) depicts six long buildings similar in width to those at TSC and show the current buildings at TSC as numbers 18 through 21 (see Sections 5.1-1 through 5.1-4).[9] One of those is currently on the property of Old Town San Diego Historic Park, and therefore is omitted from this report; the others appear to have been demolished to accommodate the construction of Interstate 5 in the 1960s.

[9] Note that building numbers have changed over time. The 1997 drawings show Building 4 as much shorter than it is currently designated, with the remaining part of the easternmost building occupied by buildings 2 north and south. For the purposes of this report, the designations according to Navy facilities property records are used.

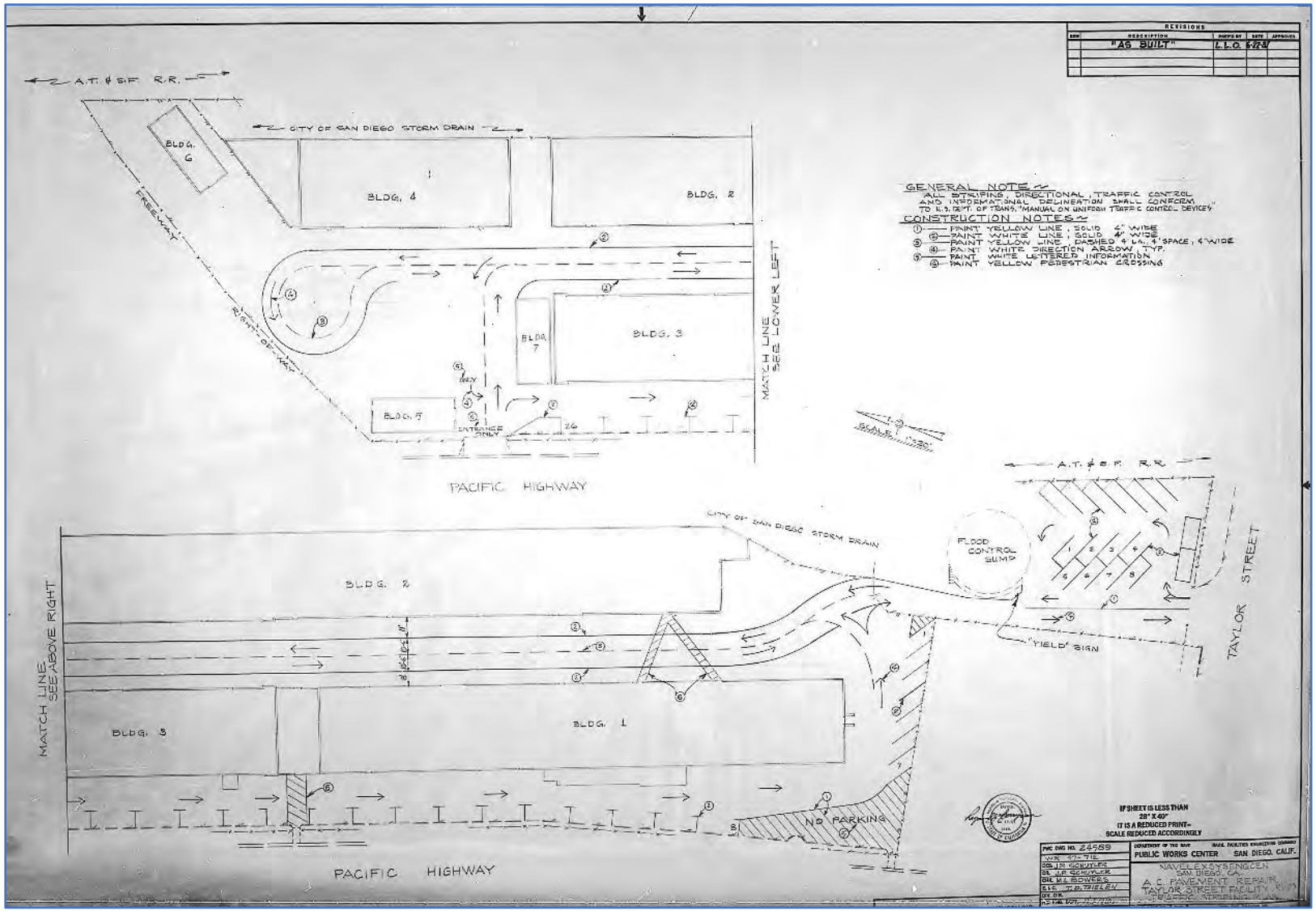

Figure 5.14-3 Taylor Street Complex, Pavement Repair Traffic Striping Plan, 1979
Source: TSC Tech Library archives.

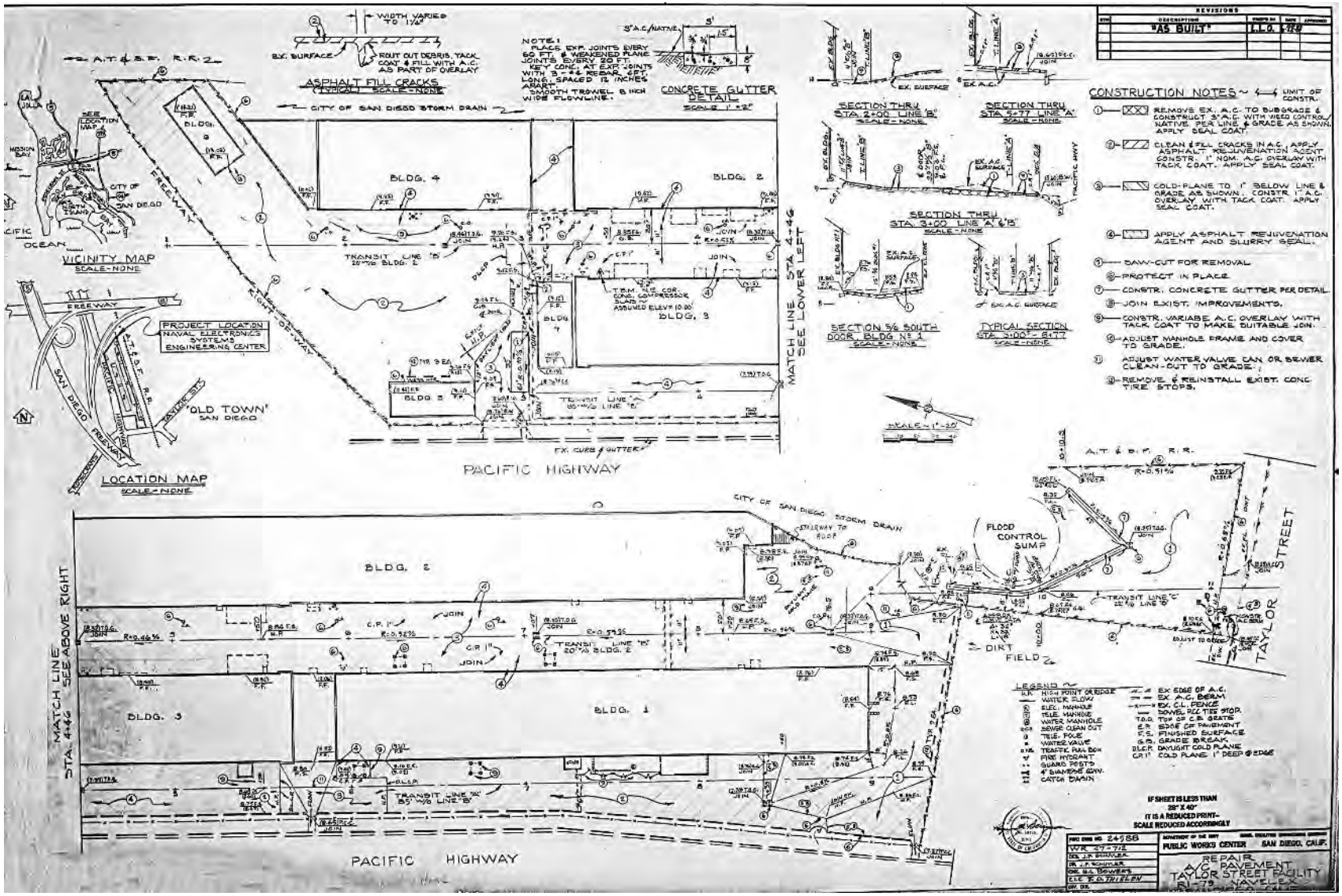

Figure 5.14-4 Taylor Street Complex, Pavement Repair Drawing, 1979
Source: TSC Tech Library archives.

Figure 5.14-5 TSC Camouflaged for Wartime, Undated
Source: Defense Plant Corporation sales brochure, ca 1946.

The buildings are aligned end to end in two groups in a generally north-south direction. According to property records, all are approximately 50 feet in width and vary in length from 165 feet to 425 feet. They are wood-framed with conventional two-by-four stud walls with wood Lamella truss roofs. The Lamella roof system was invented in Germany in 1908. The construction technique of the roofs was developed to span long distances with small pieces of wood (typically two-by-tens), which are bolted together in a variation of a geodesic dome arrangement. The walls have a series of steel tension cables with turnbuckles to withstand the overturning forces from the roof; the steel cables prevent the walls from being pushed outward and collapsing. This technique worked well during the war because of material shortages, as a Lamella form can be composed of small pieces of wood that might be cut-offs or waste from some other project. The building type is similar to those used in Consolidated feeder shops in Anaheim, Pasadena, and elsewhere. All of the TSC buildings are described as warehouses in original property records, but most have been converted to offices and various shops (Robert Quisenberry, Base Architect, NBPL, email correspondence, January 10, 2020).

The south part of Building 4 is framed by two stepped brick parapets extending above the roofline, connected to truncated brick walls that wrap around the exterior walls. The south end of Building 3 displays the same configuration of parapet and wall.

In addition to the barrel roofs covered in asphalt shingles, all of the buildings have straight vertical sides clad in stucco. Doors are single or double flat metal with single lights and fixed transoms. Some spaces have roll-up metal vehicle doors. Windows are generally a two-part aluminum sliding type, with variations as detailed in the individual building descriptions below. Interiors have been subdivided and finished to accommodate the various tenants. Large rectangular ducts run from the ground, angling up toward the roof, then down to connect to the interiors. These distinctively shaped ducts are positioned in pairs, three at the west façade of Building 1, one at the east façade of Building 1, two at the west façade of Building 2, and two at the flat-roofed connection between Buildings 2 and 4. Two small flat-roofed additions extend from the west façade of Building 1 (Figures 5.14-6 through 5.14-10).

Figure 5.14-6 The West Façades of Buildings 3 and 1
View toward the northeast.

Figure 5.14-7 The West Façades of Buildings 3 and 1
View toward the northeast.

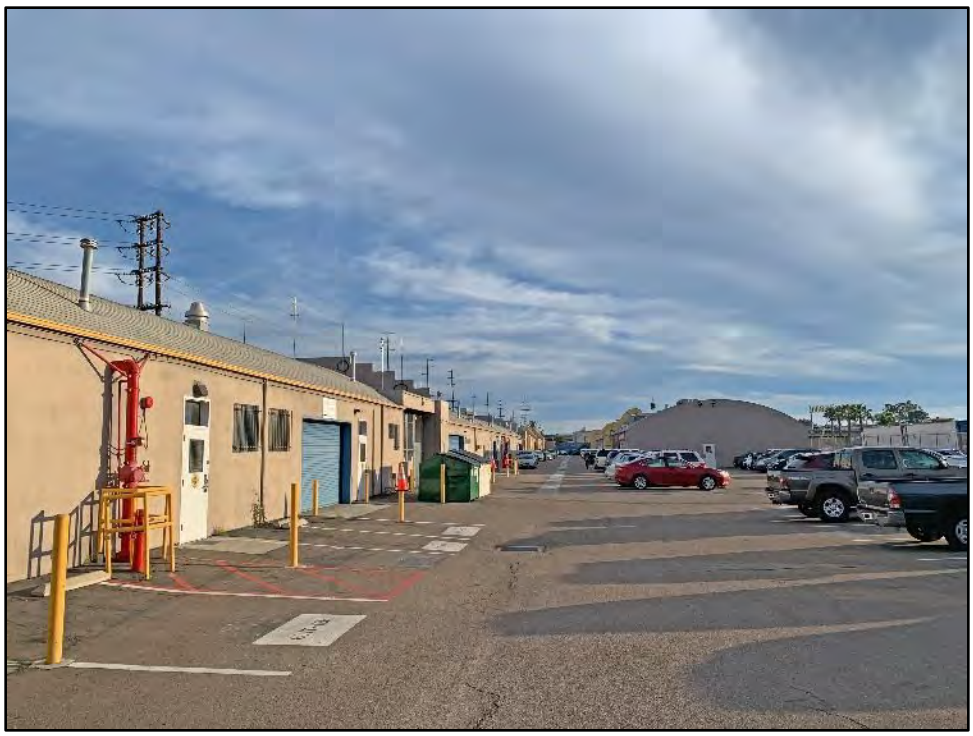

Figure 5.14-8 The West Façades of Buildings 4 and 2 and the North Façade of Building 3
View toward the southeast.

Figure 5.14-9 Overview of the Complex toward the Northeast

Figure 5.14-10 Overview of the Complex and Railroad Looking toward the Northwest

A 1997 plan for the complex shows areas slated for demolition, including a large portion to the north of Building 3, in addition to a 900-square-foot building and a 400-square-foot building (Buildings 5 and 8) at the north end of the property. All of these areas were converted to parking. The remaining buildings, with the exception of the north end of Building 1 and the south end of Building 2, were to be remodeled (Figures 5.14-11). An undated photograph of the south façade of Building 1 shows few exterior features were altered in the remodel, with the exception of the flat suspended canopy, which was replaced in 2008 with a front-gabled canopy supported by heavy square columns clad in faux stone masonry (Figures 5.14-12). The windows appear to be unchanged, with the exception of the removal of metal awnings, and exterior air conditioning units have been removed, presumably replaced by a central system.

Although the four buildings at TSC are similar in size and exterior finishes, there are some variations in fenestration and interiors, as described below (Figures 5.14-13 through 5.14-29).

The south part of Building 1 contains offices. The main lobby is accessed through double glazed doors at the south façade. At the interior, the walls and ceiling are finished with wallboard, and the floor is covered in carpet panels. Lighting is provided by ceiling-mounted fluorescent fixtures. The lobby area has freestanding wood-veneered furnishings. A secondary lobby is accessed from the west behind a stucco-clad screen. The dropped ceilings are covered in wallboard or sheetrock, and lighting is recessed fluorescent fixtures. The floor is covered in carpet panels. The central section is an open space extending from the east to west façades, which both have two-part aluminum sliding windows. Within the open space are partially partitioned work spaces. North of the work spaces are a kitchen and restrooms.

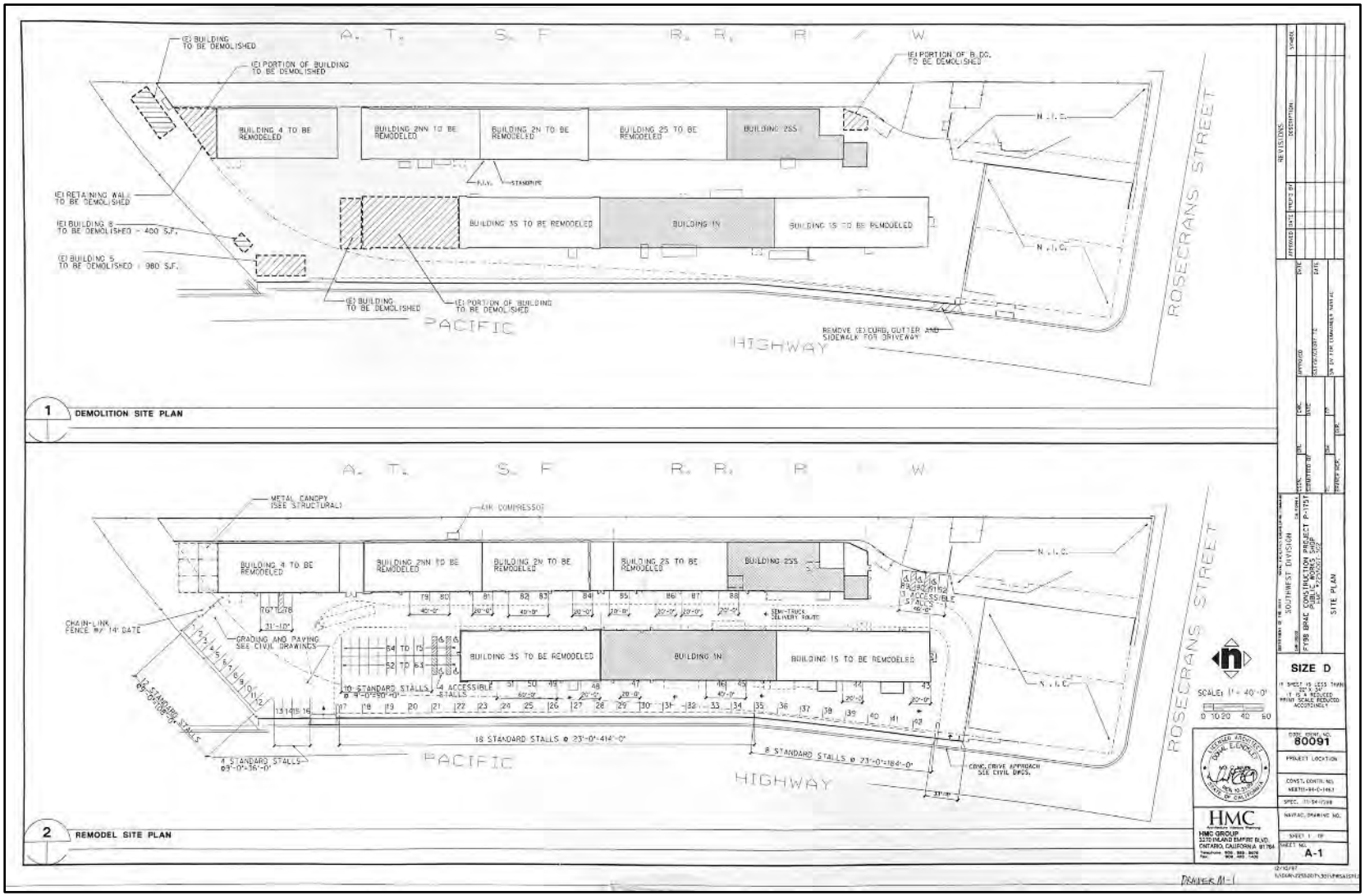

Figure 5.14-11 Historical Site Plan of Taylor Street Complex, Showing Demolition and Remodeling Plans, 1997
Source: TSC Tech Library archives.

Figure 5.14-12 Historic View of the South Façade of Building 1, undated
Source: TSC Tech Library archives.

Figure 5.14-13 The West and South Façades of Building 1
View toward the northeast.

Figure 5.14-14 The West Façade of Building 1
View toward the east.

Figure 5.14-15 The Open Area at the North Façade of Building 1
View toward the south.

Figure 5.14-16 The South and East Façades of Building 1 South
View toward the northwest.

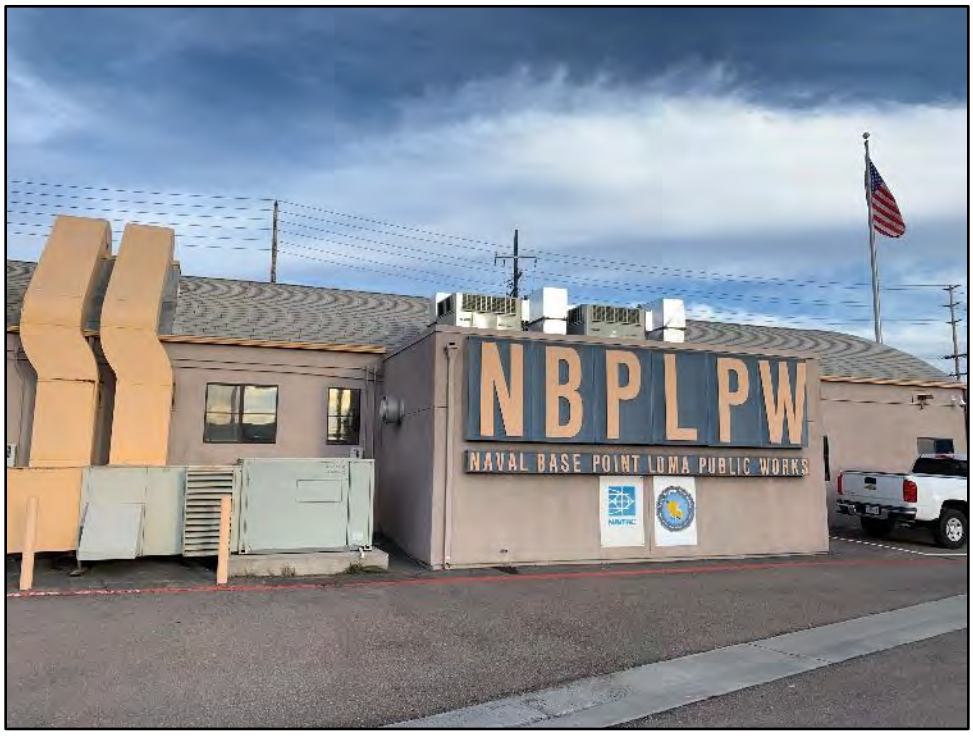

Figure 5.14-17 Detail of the West Façade of Building 1 South
View toward the east.

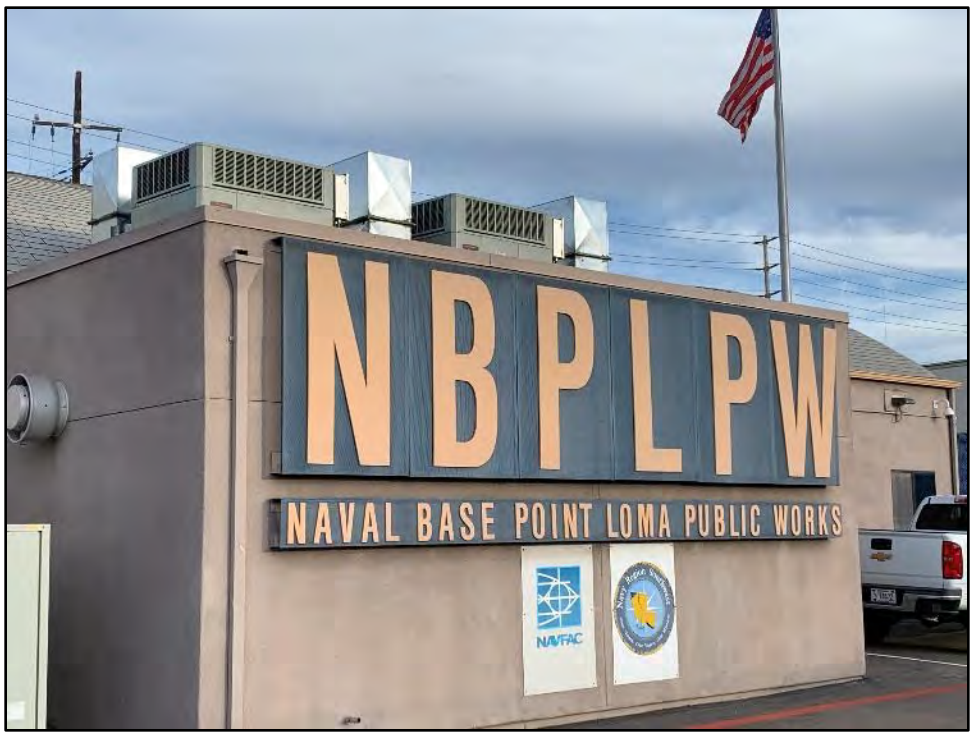

Figure 5.14-18 Detail of the West Façade of Building 1 South
View toward the southeast.

Figure 5.14-19 Detail of the West Façade of Building 1 South

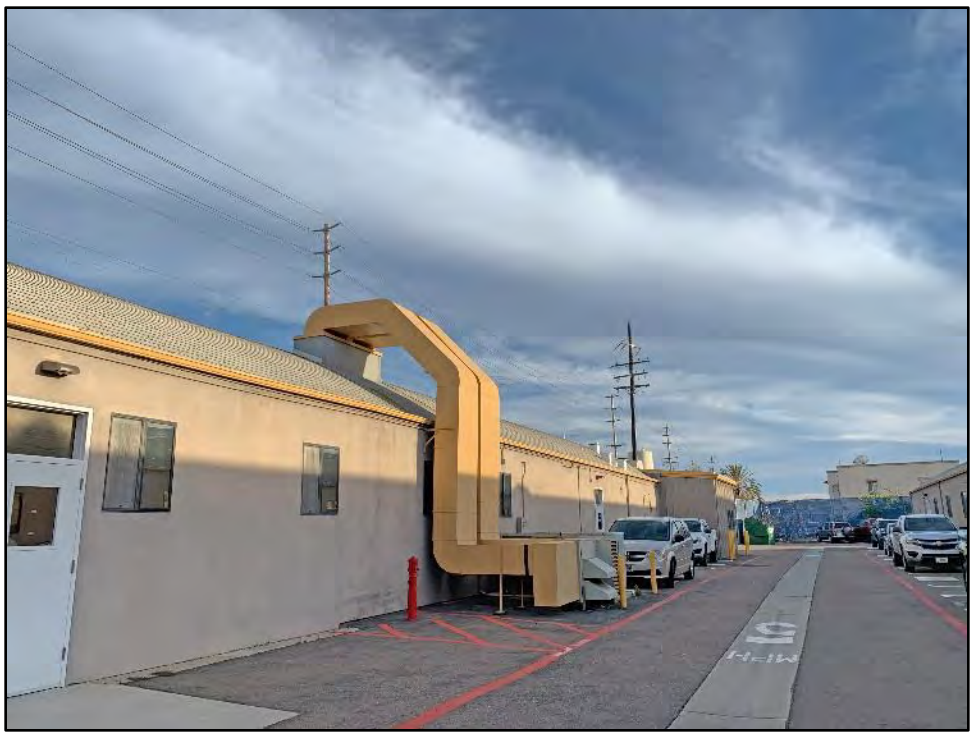

Figure 5.14-20 The West Façade of Building 2
View toward the southeast.

Figure 5.14-21 The West and South Façades of Building 2
View toward the northeast.

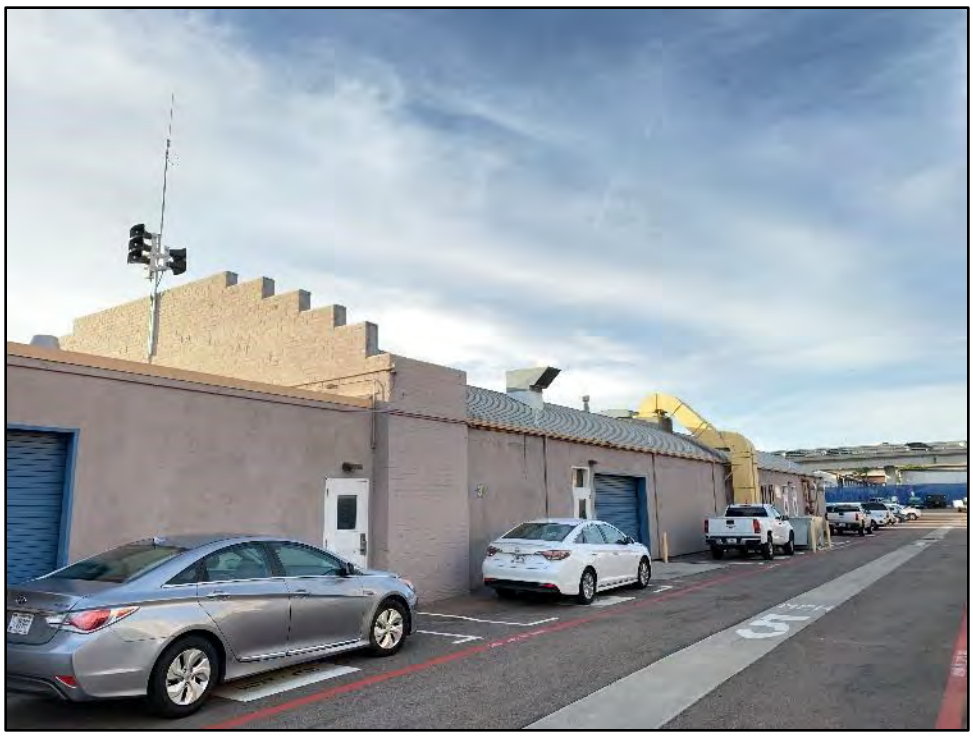

Figure 5.14-22 The East Façade of Building 3
View toward the northwest.

Figure 5.14-23 Detail of the North End of the East Façade of Building 3
View toward the west.

Figure 5.14-24 The West Façade of Building 3
View toward the east.

Figure 5.14-25 The North and West Façades of Building 4
View toward the southeast.

Figure 5.14-26 The West Façade of Building 4
View toward the east.

Figure 5.14-27 The East Façade of Building 4
View toward the west.

Figure 5.14-28 The West Façade of Building 4.
View toward the east.

Figure 5.14-29 Detail of the West Façade of Connection between Buildings 4 and 2
View toward the east.

Between Building N1 and Building 3 is a flat-roofed section joining the two buildings. A gymnasium is located in this area, with a corrugated metal roll-up door at the east side and a flat metal door with a single light at the west side. North of the gymnasium is a storage area. The barrel ceiling is covered with insulation. Lighting is provided by dropped fluorescent tube fixtures. There are two doors, including a corrugated metal roll-up door and a flat metal door with a single light and a transom at the east side.

Building 2N is occupied by a suite of offices with partial-height partitions, sheetrock walls, carpeting, and two-part aluminum sliding windows along the east side. In one section, a drop ceiling is covered in insulation with dropped continuous fluorescent tube lighting fixtures. Farther south, the barrel ceilings are covered in exposed insulation, and tubular skylights pierce the roof. To the south of these offices is a conference room, which was remodeled in 2009. The drop ceiling is composed of acoustical panels with recessed lighting and dropped ceiling fans. The walls are of wood composite, and the floor is carpeted. The room is windowless and is designed to accommodate audiovisual presentations.

A corrugated metal addition at the south façade of Building 2S is offset to the west. It has a slightly sloped front-gabled room and houses a lunchroom, which was added sometime after 1979. Windows are groups of three two-part sliders, and there are two flat metal doors at the south façade. The dropped ceiling is composed of acoustical panels with recessed fluorescent lighting. The walls are finished, the floor is covered in vinyl tile, and a bank of cabinets including a countertop and sink link the north side of the room.

The north end of Building 3 is occupied by offices, consisting of a large open area with partitioned work spaces and a hallway, restrooms, and a kitchen to the north end of the space. There are doors with single lights and transoms on the north at the end of the hallway and at the east side of the kitchen.

Building 4 is considered to be the northern two-thirds of the eastern building. At the north façade is a polygonal open area with a flat corrugated metal roof and sides composed of chain link fencing with slats. Within the fenced area is a concrete slab floor including a poured-concrete platform approximately 8 inches in height that appears to have once been a restroom. At the interior of the north end of Building 4, the walls are covered in wallboard or sheetrock. The barrel ceiling is covered in exposed insulation, and lighting is provided by fluorescent tube fixtures attached to horizontal metal members and covered with metal mesh. Windows are two-part aluminum sliders. On the west wall are doors with transoms and two metal roll-up vehicle doors. There is no fenestration on the east side. There is a partition extending to the barrel ceiling between two sections of the north end of Building 4. The areas appear to serve as storage. A third section of Building 4 houses the Technical Library. The interior has been remodeled to include a drop ceiling with acoustical tile and recessed fluorescent lighting, finished walls, and carpeting.

Building 4S is the least altered of the TSC buildings. It is occupied by a large storage area with an exposed Lamella ceiling. The Lamella structure of the ceiling creates the barrel roof that is visible in other sections of the buildings and at the exteriors throughout the complex. The south wall of this section is composed of exposed brick, with rectangular sections at the center suggesting large sections of the wall were filled in (Figures 5.14-30 through 5.14-52).

Figure 5.14-30 Gymnasium, in Connecting Space between Buildings 1 and 3
View toward the east.

Figure 5.14-31 The Kitchen in Building 1
View toward the northeast.

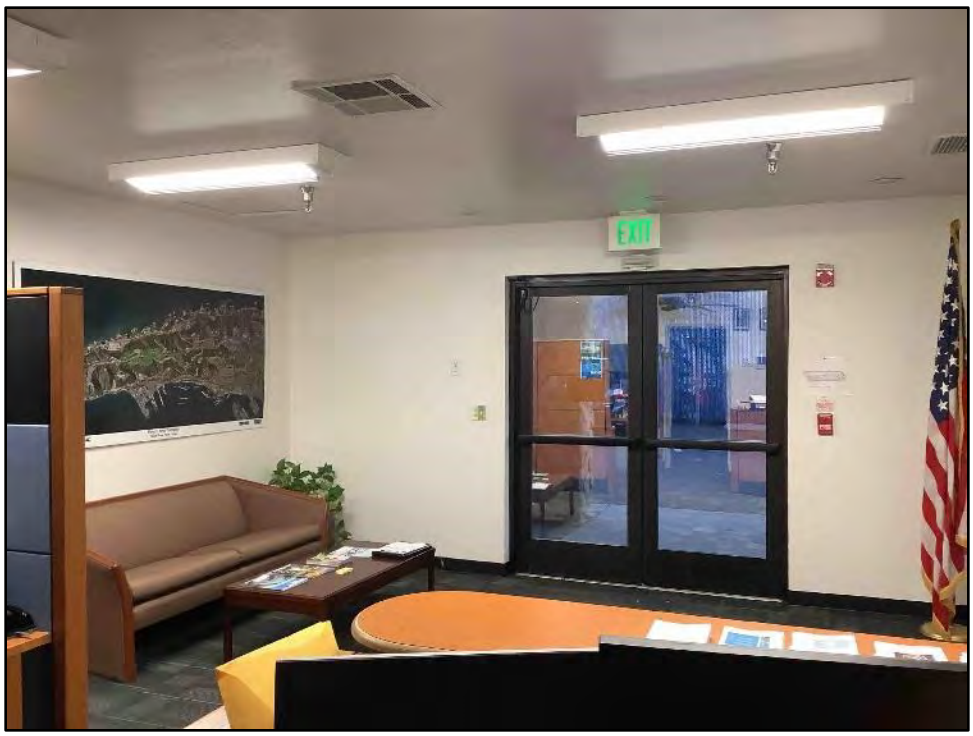

Figure 5.14-32 Lobby in Building 1
View toward the south.

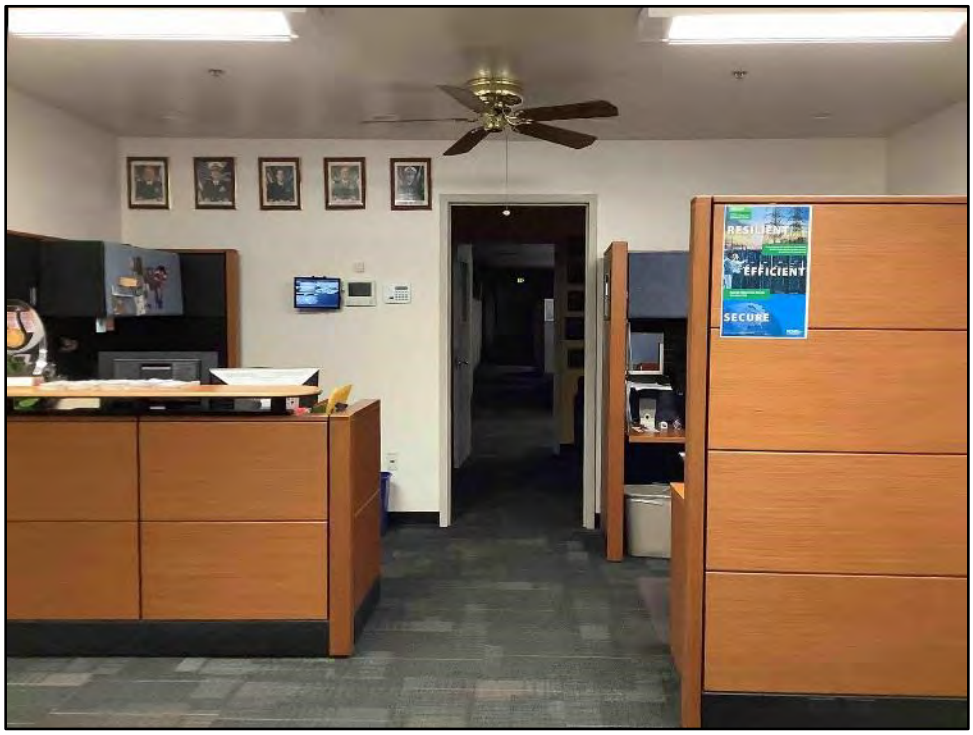

Figure 5.14-33 Lobby in Building 1
View toward the north.

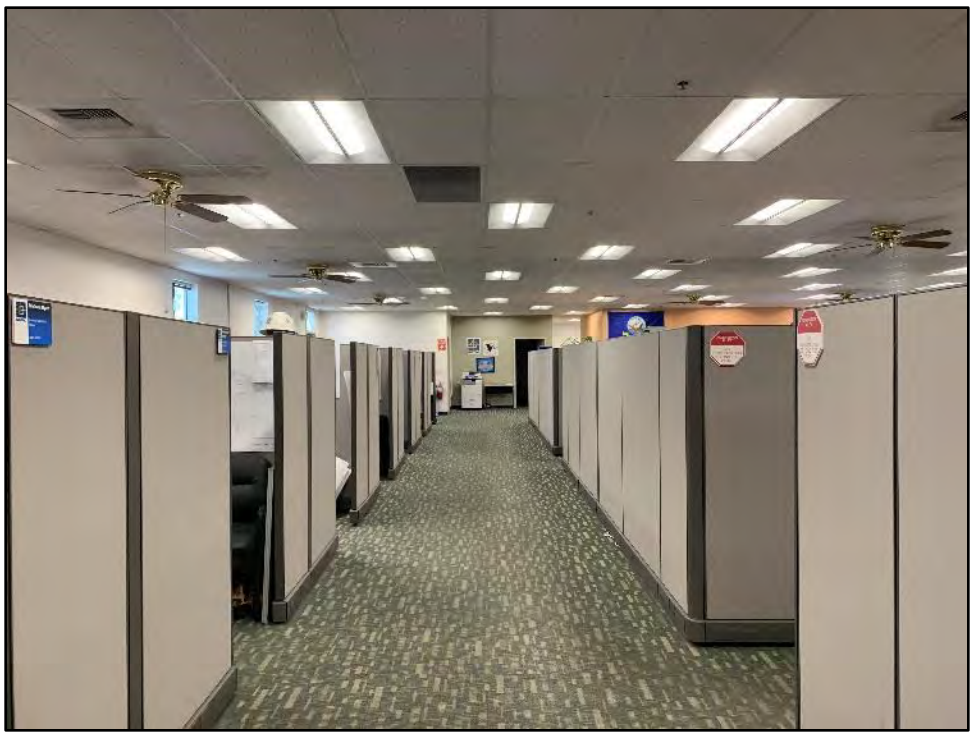

Figure 5.14-34 Central Passageway between Rows of Cubicles in Building 1
View toward the north.

Figure 5.14-35 Central Passageway between Rows of Cubicles in Building 1
View toward the south.

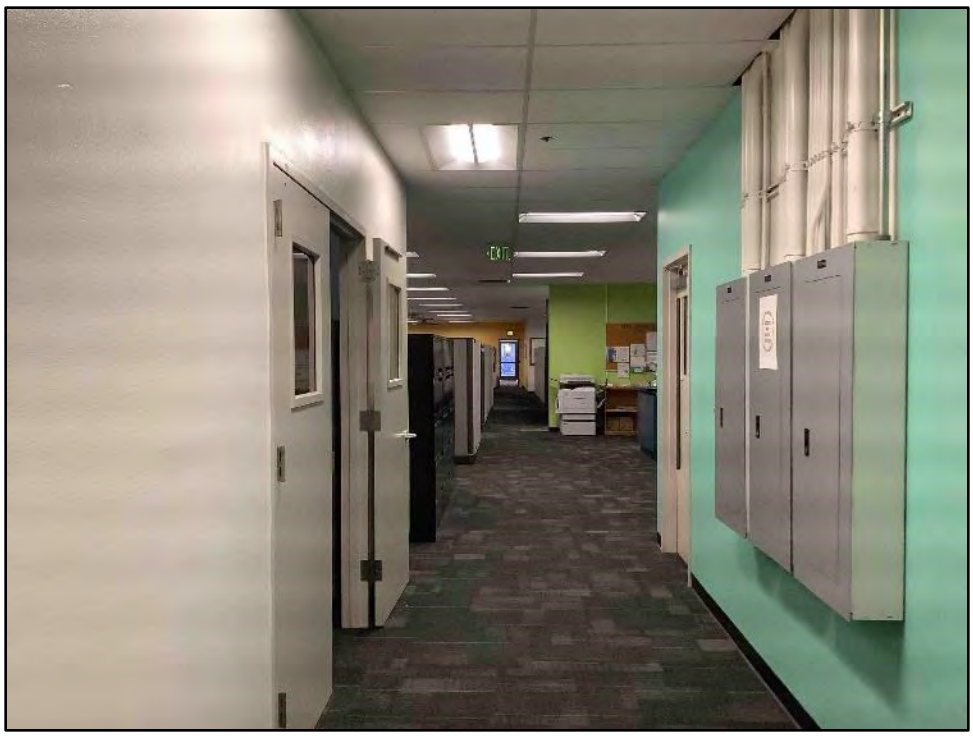

Figure 5.14-36 Building 1 Corridor, Looking Southeast toward Building 3

Figure 5.14-37 Building 2 Conference Room
View toward the northeast.

Figure 5.14-38 Building 2 Lunchroom Addition
View toward the northeast.

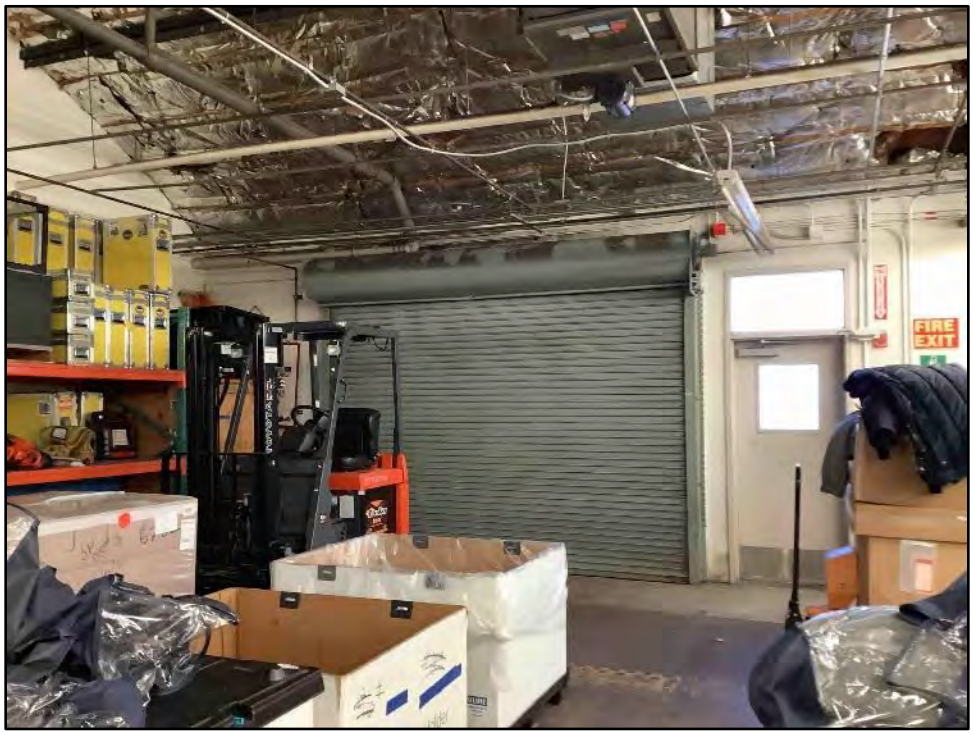

Figure 5.14-39 Storage Area in Building 3
View toward the east.

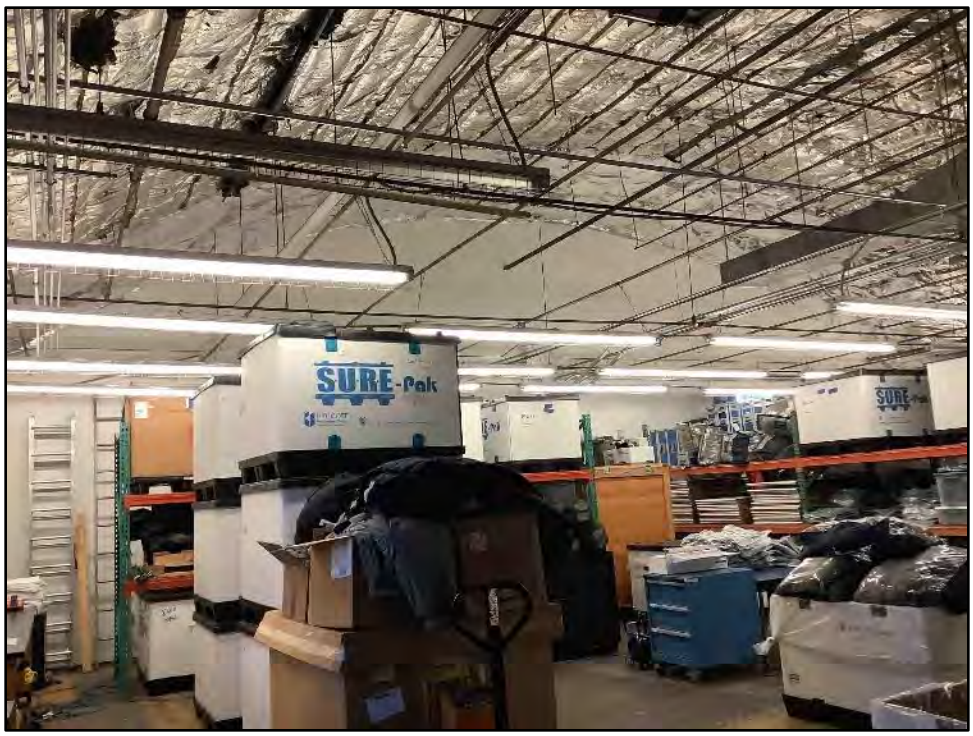

Figure 5.14-40 Storage Area in Building 3
View toward the south.

Figure 5.14-41 Hallway and Door at the North End of Building 3

Figure 5.14-42 Kitchen in Building 3
View toward the east.

Figure 5.14-43 North End of Building 4 Interior
View toward the south.

Figure 5.14-44 North End of Building 4 Interior
View toward the west.

Figure 5.14-45 Interior at Middle of Building 4
View toward the southwest.

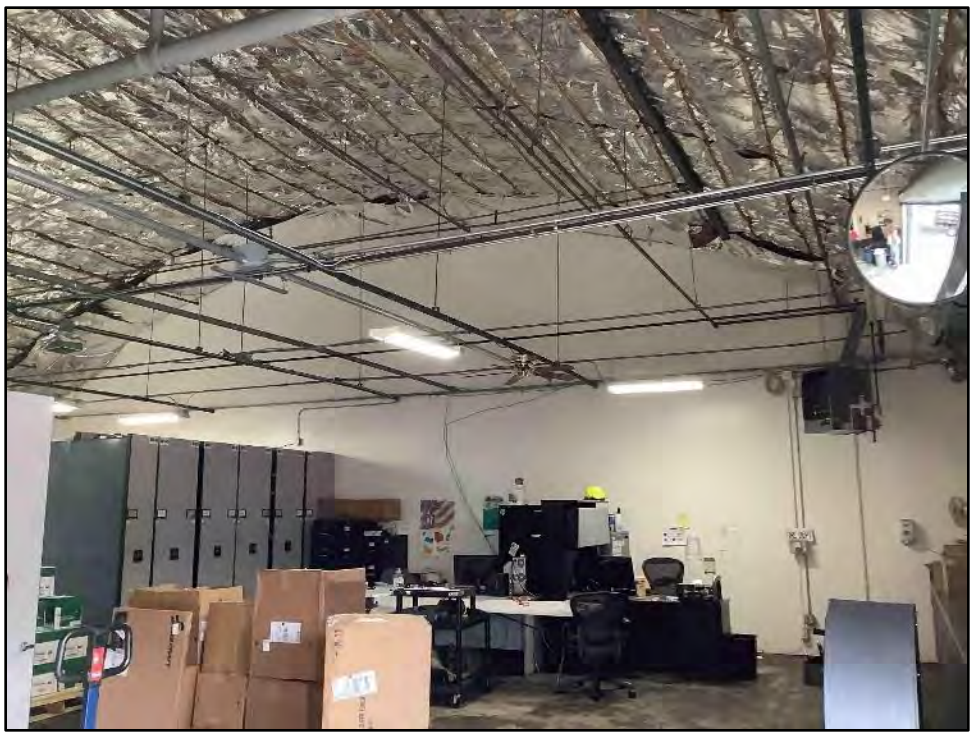

Figure 5.14-46 Middle of Building 4
View toward the south.

Figure 5.14-47 The Open Area at the North Façade of Building 4
Shows concrete slab for restroom, view toward the east.

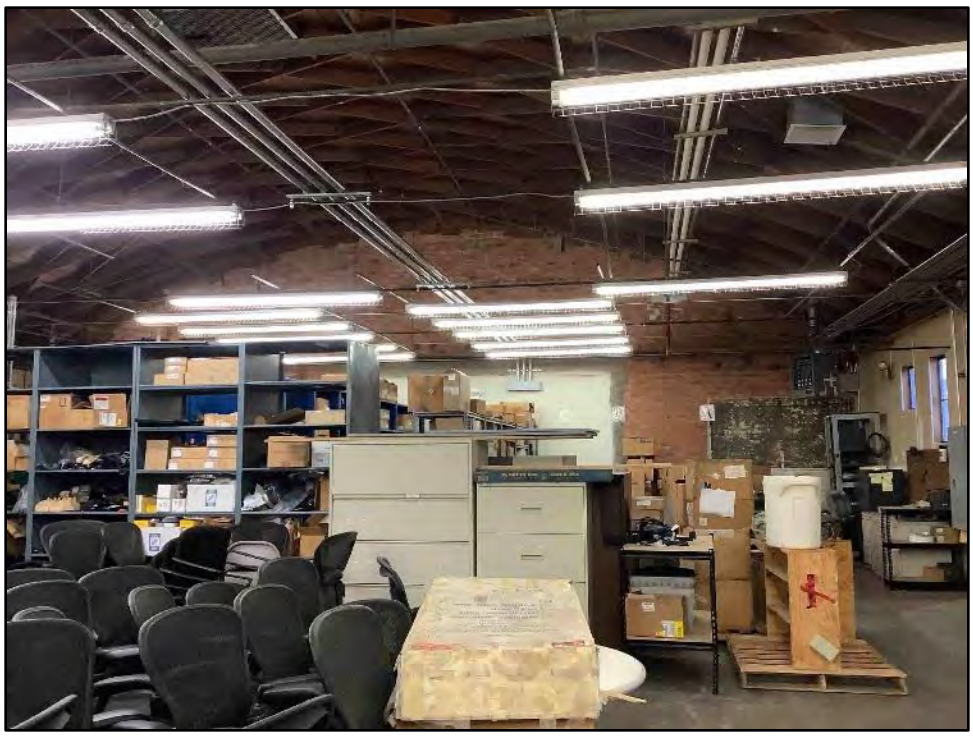

Figure 5.14-48 Middle section of Building 4.
Shows original Lamella ceiling and brick wall, view toward the south.

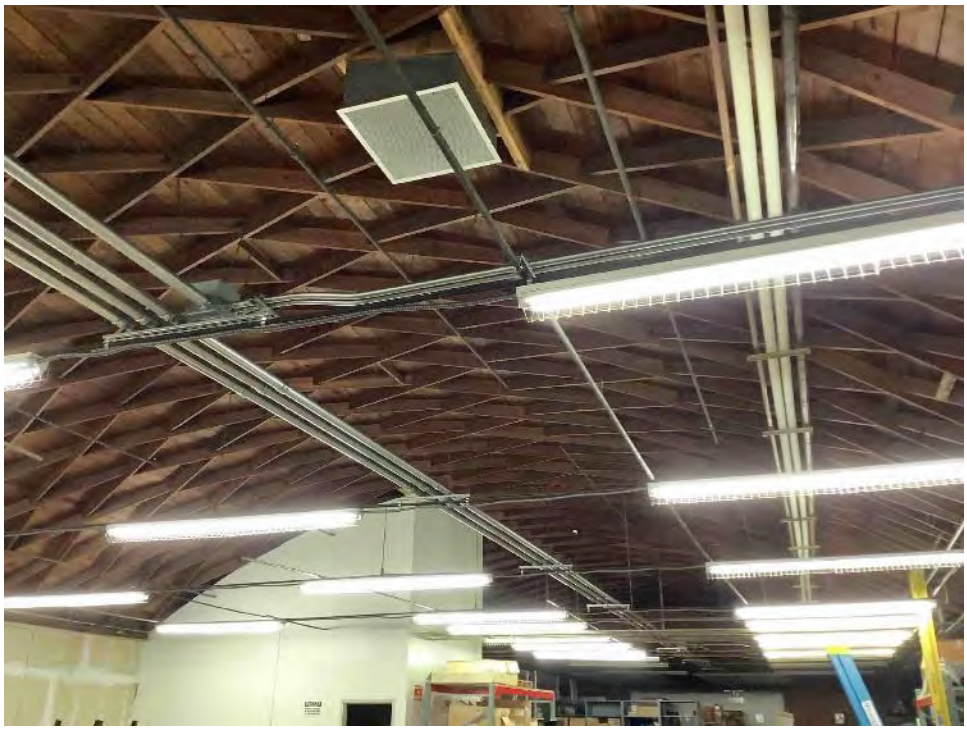

Figure 5.14-49 Detail of Lamella Ceiling in Building 4

Figure 5.14-50 Detail of Brick Wall in Building 4
View toward the south.

Figure 5.14-51 Interior of the Technical Library in Building 4
View toward the northeast.

Figure 5.14-52 Ceiling of Remodeled Section of Building 4, Showing Insulation and Skylights

5.15 Building 34

Building 34 is located in OTC Site 2, west of OTC Site 1 on Sports Arena Boulevard. A 1994 evaluation of the building describes it as a Salvage Yard Office for Plant 2, probably constructed in the 1940s. It is currently vacant. It is a small side-gabled wood-frame building with a rectangular plan. The roof has moderately overhanging eaves and is covered in composition shingles. At the ridgeline are two turbine-style ventilators. The exterior is clad in wood clapboard siding. The visible windows are identical in size and appear to be double-hung wood with narrow wood surrounds. An entrance on the northeast façade is flanked by three windows to the southeast and one window to the northwest. Two more windows are on the northwest façade. Because the building is located within a fenced area, only two façades were visible at the time of survey (Figure 5.15-1). The interior was not accessible at the time of survey.

Figure 5.15-1 Building 34, Salvage Yard Office on Sports Arena Boulevard.
Shows northwest and northeast façades, view toward the south.

6.0 Significance Criteria

Districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality illustrating or interpreting the heritage of San Diego, or the U.S. in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined by the NRHP, CRHR, and Local Register, provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

6.1 National Register of Historic Places

Authorized by the NHPA of 1966, the NPS's NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. The NRHP is the official list of the Nation's historic places worthy of preservation. The NRHP criteria for evaluation are designed to guide federal agencies and others in evaluating whether a property is eligible for inclusion in the NRHP. *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 15, was followed for the evaluation of OTC Site 1, OTC Site 2, and TSC (NPS, NRHP, 1991). The criteria for evaluation are as follows:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity (see Section 6.1.1 for the NRHP definition of integrity) and:

A. are associated with events that have made a significant contribution to the broad patterns of our history; or
B. are associated with the lives of persons significant in our past; or
C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. have yielded or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance; or
b) a building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
c) a birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
g) a property achieving significance within the past 50 years if it is of exceptional importance.

6.1.1 Integrity

In order to be eligible for listing in the NRHP or the CRHR, a property must also retain sufficient integrity to convey its significance. The NRHP publication *How to Apply the National Register Criteria for Evaluation*, NRHP Bulletin 15, establishes how to evaluate the integrity of a property: "Integrity is the ability of a property to convey its significance" (NPS, NRHP, 1991). The evaluation of integrity must be grounded in an understanding of a property's physical features, and how they relate to the concept of integrity. Determining which of these aspects are most important to a property requires knowing why, where, and when a property is significant. To retain historic integrity, a property must possess several, and usually most, aspects of integrity:

1) Location is the place where the historic property was constructed or the place where the historic event occurred.
2) Design is the combination of elements that create the form, plan, space, structure, and style of a property.
3) Setting is the physical environment of a historic property and refers to the character of the site and the relationship to surrounding features and open space. Setting often refers to the basic physical conditions under which a property was built and the functions it was intended to serve. These features can be either natural or manmade, including vegetation, paths, fences, and relationships between other features or open space.
4) Materials are the physical elements that were combined or deposited during a particular period of time, and in a particular pattern or configuration to form a historic property.
5) Workmanship is the physical evidence of crafts of a particular culture or people during any given period of history or prehistory and can be applied to the property as a whole, or to individual components.
6) Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, when taken together, convey the property's historic character.
7) Association is the direct link between the important historic event or person and a historic property.

6.2 California Register of Historical Resources

The CRHR program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. The criteria established for eligibility for the CRHR are directly comparable to the national criteria established for the NRHP.

In order to be eligible for listing in the CRHR, a resource must satisfy at least one of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
2) It is associated with the lives of persons important to local, California, or national history.
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Historical resources achieving significance within the past 50 years are considered for eligibility for the CRHR only if they meet special consideration. In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance. The NRHP has a comparable special consideration for resources less than 50 years old and requires those resources to be of "exceptional importance." In 2012, the California Office of Historic Preservation clarified that the guidance regarding resources less than 50 years old is the same for both the CRHR and NRHP, and that the intent of the CRHR regulations is to be the same as the NRHP (California Department of Transportation, 2012).

Not only must historical resources eligible for listing in the CRHR meet one of the criteria of significance described above, eligible resources must also retain integrity, or enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. For the purposes of eligibility for the CRHR, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (Office of Historic Preservation, 2001). This general definition is strengthened by the more specific definition offered by the NRHP—the criteria and guidelines on which the CRHR criteria and guidelines are based upon.

6.3 San Diego Register of Historical Resources

The Historical Resources Guidelines of the City of San Diego's Land Development Manual identifies the criteria under which a resource may be historically designated. It states that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated a historical resource by the City of San Diego Historical Resources Board if it meets one or more of the following designation criteria:

A. Exemplifies or reflects special elements of the City's, a community's, or a neighborhood's, historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development.
B. Identified with persons or events significant in local, state, or national history.
C. Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.
D. Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman.
E. Is listed or has been determined eligible by the NPS for listing on the NRHP or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources.

F. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

7.0 Evaluation of Significance

In order to interpret a resource's significance, a comprehensive evaluation must be conducted, including measuring the resource against the guidelines and criteria established by the NRHP, CRHR, and/or Local Register, as identified in Section 6, as well as assessing the integrity of the resource. To minimize the subjectivity of the interpretive process, it is important to utilize a standard assessment approach for that evaluation. ASM's approach to determining the historic significance of OTC Site 1, OTC Site 2, and TSC was based on guidance from the NRHP—specifically to *How to Apply the National Register Criteria for Evaluation*, NRHP Bulletin 15 (NPS, NRHP, 1991). ASM also referred to guidance from the California Office of Historic Preservation's Technical Assistance Series #6*: California Register and National Register: A Comparison* for purposes of determining eligibility for the California Register (Office of Historic Preservation, 2001). Bulletin 15 establishes the nationally accepted professional protocols to be followed in determining eligibility for nomination/listing:

1. Categorize the property. Determine whether the property is a district, site, building, structure, or object.
2. Determine which prehistoric or historic context(s) the property represents. A property must possess significance in American history, architecture, archaeology, engineering, or culture when evaluated within the historic context of a relevant geographic area.
3. Determine whether the property is significant under the NRHP criteria. This is done by identifying the links to important events or persons, design or construction features, or information potential that make the property important.
4. Determine if the property represents a type usually excluded from the NRHP. If so, determine if it meets any of the Criteria Considerations.
5. Determine whether the property retains integrity. Evaluate the aspects of location, design, setting, workmanship, materials, feeling, and association that the property must retain to convey its historic significance.

7.1 National Register of Historic Places

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the NRHP under Criteria A, B, and C for its association with WWII and the Cold War within a local San Diego area context/level of significance. The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69) (Table 7.1-1). These contributing resources were all interrelated components of the manufacturing/assembly plant during WWII and the Cold War and retain integrity to both periods of significance. Non-contributors include OTC Site 1 Buildings 4, 27, 28, 32, 37, 63, and 73, and TSC Buildings 1-4. The boundaries of the Consolidated Aircraft Plant 2 Historic District encompass OTC Site 1 and TSC; OTC 2 is excluded as it was not directly related to the significant themes of the district (Figure 7.1-1).

Table 7.1-1 Consolidated Aircraft Plant 2 Historic District

Building No.	*Building Name*	*Current Function*	*Year Built*	*Contributor*
OTC 1	South Administration/ Warehouse Facility	Operational storage, administrative office, research lab	1941	Yes
OTC 2	Administration/Research Lab Facility	Research lab, RDT&E lab, administrative office	1941	Yes
OTC 3	Former Lockheed Martin Facility	General purpose warehouse, operational storage, exchange retail store, research lab, general purpose auditorium	1941	Yes
OTC 4	SPAWAR Command Building	Administrative building	1941	No
OTC 7	Staging Warehouse/ Camouflage Building / Paint Shop	Paint and blasting shop, general purpose warehouse, administrative office	1941	Yes
OTC 8	Warehouse / Drop Hammer Building	Storage	1941	Yes
OTC 27	Storage Facility	Storage, food service, administrative office, indoor physical fitness center	1942	No
OTC 28	Administration Structure	Administrative building, telephone exchange building	1942	No
OTC 30	Storage Facility	Storage facility, administrative	1941	Yes
OTC 32	Lunchroom Facility	Lunchroom/locker room	Post-1960	No
OTC 37	Pump House	Pump house, fire protection building	1984	No
OTC 63	Tank	Fire protection water tank	1984	No
OTC 69	Pedestrian Bridge	Pacific Highway pedestrian bridge	1942	Yes
OTC 73	Hazardous Waste Storage	Hazardous waste storage	1992	No
TSC 1	Building 1N and 1S	Administration office	1943	No
TSC 2	Taylor Street Building 2	Offices	1943	No
TSC 3	Taylor Street Building 3	General purpose warehouse	1943	No
TSC 4	Public Safety Support Building	Auto vehicle maintenance, general purpose warehouse, administration office	1943	No

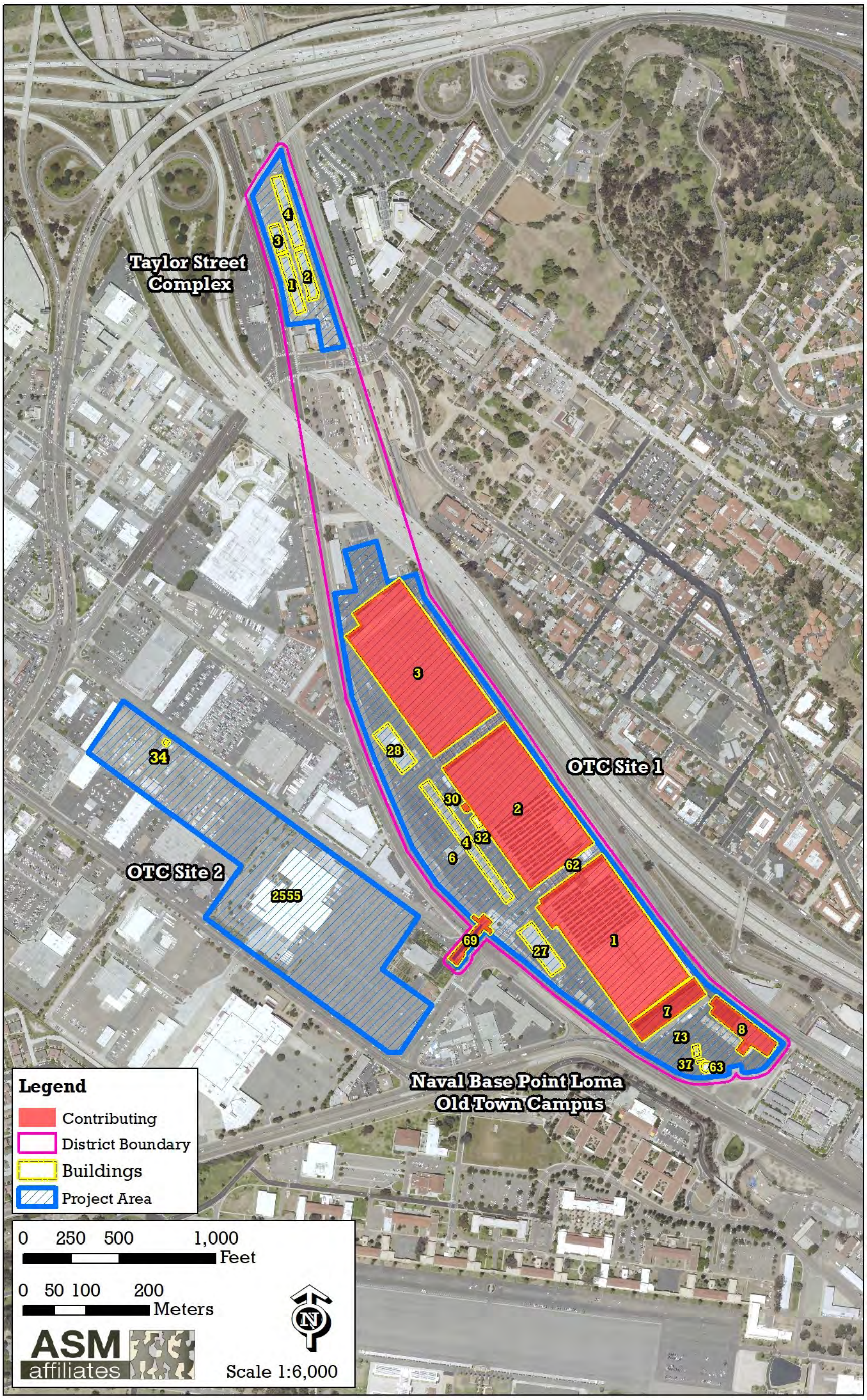

Figure 7.1-1 Consolidated Aircraft Plant 2 Historic District

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7.1.1 Criterion A

Under Criterion A, the Consolidated Aircraft Plant 2 Historic District is recommended eligible under the theme of WWII and subthemes of Aircraft Manufacturing and Homefront/Labor. B-24 heavy bombers and PBY *Catalinas* played essential roles during WWII and were essential weapons in the success of the Allies in both the Pacific and European war theaters. They were designed in San Diego at Consolidated Aircraft and constructed here and at other plants in the U.S. Women comprised a significant portion of the workforce at the plant (40 percent at the peak in 1943), part of the nationwide utilization of women on the homefront during WWII. The period of significance is 1941–1945, starting with the completion of the plant in October of 1941, and ending in 1945 when production of WWII-era aircraft ended at Plant 2.

Both Plant 2 and Plant 1 were integral to the production process that began with parts assembly at Plant 2 and completed at Plant 1 during the WWII-era. As Plant 1 has been demolished, Plant 2 contains the only extant physical manufacturing components of the larger Consolidated Aircraft complex.

The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69) (see Table 7.1-1). These contributing resources were all interrelated components of the manufacturing/assembly plant during WWII and retain integrity to that period of significance (see Section 7.1.5). Non-contributors include those building from the WWII-era that no longer retain integrity (OTC Site 1 Buildings 4, 27, and 28, and TSC Buildings 1–4), and buildings constructed after the end of period of significance (OTC Site 1 Buildings 32, 37, 63, and 73).

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for the NRHP under Criterion A under the theme of the Cold War and subtheme of Manufacturing. During the plant's association with the Cold War, numerous significant aircraft, orbiters, and missiles were manufactured and/or assembled here including: *Terrier* Surface-to-Air Missile (SAM), F-102 and F-106 interceptor aircraft; *Atlas* and *Centaur* tanks; mid-fuselages of orbiters *Enterpris*e, *Columbia*, *Challenger, Discovery*, and *Atlantis*; and GLCM, TEL, and LCC. *Terrier* Surface-to-Air Missile (SAM) prototypes developed helped lay the groundwork for U.S. Naval SAM advancements (1950-1953). Delta-winged F-102 and F-106 interceptor aircraft provided the Air Force with critical Cold War air support and advanced wing design (1956-1988). *Atlas* and *Centaur* tanks housed the energy that propelled successful space launch vehicles (1960-1992). Since Plant 1 and the Kearny Mesa Plant no longer exist, Consolidated Aircraft Plant 2 Historic District is the last Cold War *Atlas* and *Centaur* production site. Orbiter mid-fuselages for the *Enterpris*e, *Columbia*, *Challenger, Discovery*, and *Atlantis* housed the payloads necessary for important experiments and essential satellite launches (1974–1987). The effectiveness of the GLCM TELs and GLCM LCCs produced for Soviet IRBM deterrence (1980–1987) is evidenced in the 1988 Soviet Union inspection of the plant to confirm that production of GLCM TELs and LCCs at the plant had ended. The period of significance is 1950–1988, beginning with the first significant Cold War-era manufacturing (prototype of the *Terrier* SAM) and ending in 1988 when Cold War-era production of GLCM TELs and GLCM LCCs ceased at the facility and the Air Force declared it excess property. The contributing resources to the district for this period of significance are those that were all interrelated components of the manufacturing/assembly plant during the Cold War and retain integrity to both periods of significance (see Section 7.1.5). Non-contributors include those buildings from the Cold War-era that no longer retain integrity (OTC Site 1 Buildings 4, 27, and 28, and TSC Buildings 1–4), and buildings that were not integral to the assembly process (OTC Site 1 Buildings 32, 37, 63, and 73).

7.1.2 Criterion B

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the NRHP under Criterion B under the theme of WWII and sub-theme of Aircraft Manufacturing for its association with Reuben H. Fleet. For a property to be eligible under Criterion B, an individual must have gained importance within

their field *and* the property must be associated with their productive life and significant accomplishments (NPS, 1991, p. 15). Fleet is a significant individual within the contexts of aircraft manufacturing/aviation as demonstrated by the accomplishments in his career. Fleet was directly responsible for the expansion of the aircraft manufacturing industry in San Diego and made significant contributions to the innovations and growth of aerospace technology in the U.S.
Fleet founded Consolidated Aircraft in 1923 and moved the company to San Diego in 1935 where it became the leading U.S. manufacturer of military training planes. Long-term success of Consolidated Aircraft is the direct result of Fleet's ingenuity and early entrance into both military and commercial aircraft. His importance to the field of aviation is recognized by his acceptance to the International Air & Space Hall of Fame and National Aviation Hall of Fame.

The Consolidated Aircraft Plant 2 Historic District is the only remaining property within the local-level context associated with Fleet's productive career. Fleet and Consolidated established Plant 2 to further the company's expansion of aircraft manufacturing in San Diego. Additionally, Fleet maintained an office in Plant 2. Manufacturing sites with known direct associations with Fleet were the Curtiss plant on Elmwood Avenue in Buffalo, New York; Consolidated Aircraft Plant 1; and Consolidated Aircraft Plant 2. Of those three locations, only Plant 2 remains. Consolidated Aircraft Plant 1 (previously recommended eligible under Criterion B) was demolished in 1996/1997. The Curtiss plant was demolished in March 2019. Consolidated Aircraft Plant 2 Historic District is therefore eligible under Criterion B for association with Fleet within the local San Diego context. The period of significance under Criterion B is 1941–1945, starting with Fleet's association with the property during the last years of his productive career and ending in 1945 when his association with the property ended.

Consolidated Aircraft Plant 2 Historic District eligibility under Criterion B on the local level is further supported by comparison of this property to other extant San Diego properties associated with Fleet. His primary residence during the years of his productive career in San Diego was demolished. His home at 565 Gage Lane remains, however, he had stopped working for Consolidated-Vultee Aircraft by the time he moved to Gage Lane and therefore his association with that property post-dates his significant accomplishments (NPS, 1991, p. 15). Additionally, there are only a few other properties within the broader state or national-level context that are remain which are associated with Fleet, further supporting the significance of Fleet's association with the Consolidated Aircraft Plant 2 Historic District. Properties at Mather AFB might also be eligible for association with Fleet's early career prior to Consolidated. Residential properties are known to exist in Escondido and Palm Springs, but those are believed to be associated with Fleet after the end of his productive career. San Diego's Fleet Science Center was named in honor of him but is not a comparable property as it is not associated with Fleet's productive career and commemorative properties are generally not eligible (NPS, n.d., p. 15). Especially as there are no other comparable properties extant associated with Fleet's career in San Diego, Consolidated Aircraft Plant 2 Historic District is the best representation of his career.

7.1.3 Criterion C

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for the NRHP under Criterion C for the WWII theme of Architecture, with a sub-theme of Aircraft Manufacturing and Assembly Plants. The period of significance under Criterion C is 1941, the year of construction for the plant. The contributing resources to the historic district under Criterion C are limited to Buildings 1, 2, 3, 7, and 8.

The large-scale design of Buildings 1, 2, 3, 7, and 8 represents a property type developed during the Industrial Revolution, which suited the massive industrial construction program that the nation's private manufacturers used to produce military aircraft essential to the war effort during WWII. The plant

buildings were among the last manufacturing buildings built in the United States or Europe that represented the value of plentiful natural light and air in an industrial setting.

The buildings of the Consolidated Aircraft Plant 2 Historic District also represent the company's progress in the growth of "physical bigness" since it began airplane production in 1923 (Maloney, 1941). The major manufacturing buildings at Plant 2 represent a distinctive type of permanent military architecture seen in aircraft production and assembly installations with massive assembly line buildings that allowed aircraft assembly to occur indoors. Soon after, the advent of windowless "blackout" buildings became the preferred method of construction for large-scale military production facilities, as well as for private industrial buildings enabled by advances in fluorescent lighting and air conditioning.

The major buildings of the plant were designed by architects Taylor and Taylor, an architectural firm based in Los Angeles. The architectural plans are signed by both Edward Cary and Ellis Wing Taylor. The firm was prolific in designing and engineering institutional and industrial properties; its most notable projects drew on historical revival styles. However, there is not sufficient evidence that the firm of Taylor and Taylor should be considered a master architect. The historic district is the only remaining industrial plant designed by Taylor and Taylor as other plants designed by the firm have been demolished, including the previously adjacent Consolidated Plant 1 and the even larger, more ambitious project at Douglas Aircraft Company plant in Long Beach. However, neither Plant 1 nor the Douglas plant were recommended eligible for listing in the NRHP under Criterion C nor did either report recognize the firm or architects as masters (KEA, 1996, Appendix B; Historic American Engineering Record No. CA-315, ca. 1968).

Edward Cray Taylor has been recognized individually as "a prominent regional master architect" for his design of Glassell Park Elementary School (1924) in the NRHP nomination for that property in Los Angeles, California (Smith and Gallegos, 2006). However, the nomination only noted Edward as the master, not the firm, and the school was eligible for listing in the NRHP under Criterion C for the Streamline Modern style. The firm has not been recognized by any southern California city which keeps lists of master architects. The Los Angeles Conservancy does not include the firm on their list of Architect Biographies (Los Angeles Conservancy, 2020). The firm was considered for inclusion on the Beverly Hills List of Master Architects, for its design of the Horace Mann Elementary School, also Spanish Colonial Revival style. The firm, as well as the two individual architects, were tentatively listed as engineers but were ultimately removed from the list (City of Beverly Hills, 2015). An evaluation of the Ventura Water Treatment Plant, designed and engineered by Taylor and Taylor with elements of Spanish Colonial Revival style (a good example of their work), concluded that "[n]o information was located to suggest that the architects should be regarded as 'masters,' in terms of the NRHP criteria" (San Buenaventura Research Associates, 2002:10). No contemporary articles critiquing the firm's work were located. The firm is listed in the current Pacific Coast Architects Database, but with very minimal information, atypical for master architects (Pacific Coast Architects Database, 2020). Gebhard and Winter only note one of their buildings in their widely respected *Architectural Guidebook to Los Angeles*, in stark contrast to the way in which that scholarly source addresses the buildings of well-established master architects (Gebhard and Winter, 2003). Therefore, the district is recommended not eligible for association with master architects under Criterion C.

Under the Cold War period and themes, the district is recommended not eligible under Criterion C. The buildings were not appreciably altered to meet later manufacturing needs, and do not reflect specific property types or methods of construction associated with the Cold War.

7.1.4 Criterion D

The Consolidated Aircraft Plant 2 Historic District is recommended not eligible under Criterion D. It is a common property type that does not have the potential to provide information about history or prehistory that is not available through historic research.

7.1.5 Assessment of Integrity

In order to be eligible for listing in the NRHP, the Consolidated Aircraft Plant 2 Historic District must also retain sufficient integrity to convey its significance under Criteria A, B, and C from the WWII period (1941–1945) and under Criteria A for the Cold War (1950–1988) period. The district is in its original **location**, and as such this aspect of integrity is high. The district retains sufficient integrity of **design, materials, and workmanship**. The architectural elements that originally created the form, plan, space, structure, and style of the property have only experienced minor alterations. For the contributing resources to the district, most of the alterations that have occurred are removable interior modifications, and some removable exterior alterations, most notably the solar shields to the windows. The enormous open spaces within the production buildings are still evident, and throughout the long period of significance provided the flexibility essential to efficiently respond to changing requirements. Although there are several non-contributors, their basic form and scale are unchanged and as such they are not deterrents or intrusions to the spatial relationship of the buildings or open space, and as such, do not detract from the setting or feeling of the district. The **setting** outside of the district has not been significantly altered since the end of the Cold War period of significance; there has been some intrusion to the setting from the WWII period specifically Interstate 5 to the east and mid-twentieth century construction to the west. Finally, because of the generally high integrity of location, design, setting, materials, and workmanship, Consolidated Aircraft Plant 2 Historic District conveys a strong sense of feeling and association, or a sense of history associated with the significant WWII and Cold War themes. Few examples of WWII-era aircraft assembly complexes exist in southern California, and as such the rarity of this property type allows for some loss of integrity (NRHP, 1997, p. 47). However, the overall integrity of the district and its contributing resources is high.

7.1.6 Character-Defining Features

The character-defining features of the Consolidated Aircraft Plant 2 Historic District include the following:

- massive size of OTC Site 1 Buildings 1, 2, and 3
- rectangular form and horizontal orientation of all the buildings
- broad expanses of steel sash, multi-pane industrial windows
- corrugated iron cladding
- high sawtooth roofs with skylights
- steel trusses between buildings
- remaining segments of monorail system
- interior overhead crane systems
- wide expanses of interior space
- views of the buildings from the immediate setting

7.1.7 Individual Eligibility

Each of the buildings and structures within the Consolidated Aircraft Plant 2 Historic District was also considered for individual eligibility. However, none of the buildings are individually eligible under any NRHP criteria. Under Criterion A, because of the nature of the work that was historically conducted at OTC Site 1 and TSC, none of the buildings is a good individual representation of the important themes

with which it is associated. Similarly, under Criterion B, Fleet's association is with the complex as a whole rather than a specific individual building. Under Criterion C, the buildings of the district are a better collective representation of the themes and property types under Architecture, and as works of Taylor and Taylor, than as individual representations. The Pedestrian Bridge was possibly designed by master architect Richard Requa, but it is not recommended eligible as a good example of the works of a master because his association could not be definitely confirmed and there are other notable properties that are better examples of his work including the 1935–1936 California Pacific International Exposition buildings in Balboa Park and the NRHP-listed Ford Building (now the home of the SDASM). Under Criterion D, none of these building or structures have the potential to provide information about history or prehistory that is not available through historic research.

Finally, Building 34 in OTC Site 2 was reconsidered for individual eligibility as it was previously evaluated and is located within the Project area. It is not considered a contributing resource to the Consolidated Aircraft Plan 2 Historic District as it is not directly related to the significant themes of the district. ASM concurs with the prior finding of ineligibility for this building. Under Criterion A, it historically was a storage building for the Navy salvage yard and is not a good representation of the any significant historical themes nor events. It is not likely to have any historically significant individuals closely associated with the building, and is therefore not eligible under Criterion B. Under Criterion C, it is not a good representation of a type, period, or method of construction, nor is it likely that it was designed by a master architect. Under Criterion D, it does not have the potential to provide information about history or prehistory that is not available through historic research.

7.2 California Register of Historical Resources

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the CRHR under Criteria 1, 2, 3, and 4, with the same contributing and non-contributing resources, following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP criteria. Also following the reasons outlined above, none of the buildings in OTC Site 1, OTC Site 2, and TSC are recommended individually eligible.

7.3 San Diego Register of Historical Resources

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the San Diego Register under Criteria A and B, with the same contributing and non-contributing resources, following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP Criteria A and B. It is eligible under San Diego Register Criterion C following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP Criterion C.

The Consolidated Aircraft Plant 2 Historic District is also eligible under Criterion F, as a finite group of resources related to one another in a clearly distinguishable way and in a geographically definable area which have historical interest. The Consolidated Aircraft Plant 2 Historic District is not recommended eligible under Criterion E, as it has not been previously listed or officially determined eligible by the NPS for listing in the NRHP or CRHR.

Following the reasons outlined in Section 7.1, none of the buildings in OTC Site 1, OTC Site 2, and TSC are recommended individually eligible.

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8.0 Summary

Within the Project area, ASM recommends that the Consolidated Aircraft Plant 2 Historic District is an NRHP-, CRHR-, and San Diego Register-eligible historic district. The Consolidated Aircraft Plant 2 Historic District is eligible for listing in the NRHP under Criteria A, B, and C for its association with WWII and the Cold War within a local San Diego area context/level of significance. The district is also eligible for listing in the CRHR under Criteria 1, 2, and 3, and the San Diego Register under Criteria A, B, C, D, and F. None of the buildings evaluated in this study are individually eligible under any NRHP, CRHR, or Local Register criteria.

Therefore, the Consolidated Aircraft Plant 2 Historic District meets the qualifications as a historic property pursuant to Section 106 (36 CFR 800) of the NHPA and as a historical resource pursuant to CEQA.

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ATTACHMENTS

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ATTACHMENT A

Prior SHPO Consultation and Department of Parks and Recreation 523 Site Records for Plant 19 (1993)

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STATE OF CALIFORNIA — THE RESOURCES AGENCY

PETE WILSON, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 653-6624
FAX: (916) 653-9824

(916) 653-6624
FAX (916) 653-9824

February 27, 1996

USN951218A

Kirk Evans, Captain
Department of the Navy
Naval Command, Control and Ocean Surveillance Center
Research, Development, Test, and Evaluation Division
SAN DIEGO CA 92152-5000

Re: Engineering Laboratory at Hangar 19, San Diego, San Diego County.

Dear Captain Evans:

Thank you for submitting to our office your December 12, 1995 letter and supporting documentation regarding a determination of eligibility for Air Force Plant 19 (Plant 19), a 13 structure complex operated by the Naval Command, Control and Ocean Surveillance Center (NCCOSC), San Diego, San Diego County. Plant 19 is one of two separate military facilities located within the proposed project Area of Potential Effect (APE). The other facility, Taylor Street Annex, lies 1/2 mile north of Plant 19. The proposed project will involve the transfer of the existing In-Service Engineering facility (electrical engineering) from the Navy's Vallejo location to a consolidated site at Plant 19.

You are seeking our comments on your determination of the eligibility of the structures located at Plant 19 and the Taylor Street Annex for inclusion on the National Register of Historic Places (NRHP) in accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. Our review of the submitted documentation leads us to concur with your determination that none of the structures located at either Plant 19 or the Taylor Street Annex are eligible for inclusion on the NRHP under any of the criteria established by 36 CFR 60.4. None of the structures have strong associations with historic events or persons, nor are they architecturally significant.

Thank you again for seeking our comments on your project. If you have any questions, please contact staff historian Clarence Caesar at (916) 653-8902.

Sincerely,

Cherilyn Widell
State Historic Preservation Officer

DEPARTMENT OF THE NAVY
NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION DIVISION
SAN DIEGO, CALIFORNIA 92152-5000

DEC 18 1995

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USN951218 A
CC

Mr. Clarence Caesar, Staff Historian
Office of Historic Preservation
Department of Parks and Recreation
P. O. Box 942896
Sacramento, California 94296-0001

Dear Mr. Caesar:

Enclosed is a copy of the report "Request for Determination of Eligibility Report/Environmental Assessment of In-Service Engineering Staging Facility and Engineering Lab at Hangar 19, San Diego, California". The report was prepared by Chambers Group, Inc. of Irvine, California. The document was prepared as an analysis of the historical significance of Air Force Plant 19 for compliance with Section 106 of the National Historic Preservation Act of 1966.

The former Air Force Plant 19 is on a parcel of approximately 82 acres north of downtown San Diego. The parcel has 13 permanent buildings and there is one additional building on a nearby separate parcel. Most of the buildings were erected between 1941 and 1945. A historic context statement and narrative is included in the Summary section of the document.

The Evaluation of Eligibility findings include the following statement: "The Air Force Plant 19 structures, particularly Structures 1, 2, and 3, are impressive in size and are highly visible from the adjacent freeway. They are substantially intact on the exterior and retain a relatively high degree of architectural integrity. They do not, however, represent a unique design, technological, or construction solution to a given problem and do not appear to be eligible for the National Register of Historic Places in relation to their architectural merits (NRHP Criterion C)."

We request your review of the enclosed survey. Please provide your concurrence, or address any questions, to my Cultural Resource Manager, Mr. Donald L. Lydy, Naval Command, Control and Ocean Surveillance Center RDT&E Division, Code 036, 53240 Engineer Street, San Diego, California 92152-7148, telephone number (619) 553-3859.

Sincerely,

KIRK EVANS
Captain, U. S. Navy
Commanding Officer

Encl:
(1) Request for Determination of Eligibility Report

Copy to: (w/o encl)
NCCOSC ISE WEST
NCCOSC
SOUTHWESTNAVFACENGCOM (Code 203.LM)
Advisory Council on Historic Preservation (West Office) (w/encl)
COMSPAWARSYSCOM (SPAWAR 10-118)

#1126899

PROJ.REVW AND RES.PROT.UNIT LOG-OUT PRINTOUT CLARENCE CAESAR

Undertaking Identifier: USN951218A 02/18/98 Page: 1
Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Applicant: USN City: SAN DIEGO
County(ies): SDI

Due: 01/17/96

TRANSACTION HISTORY

DATE IN	TO		DATE OUT	BY	ACTION
12/18/95	CC	-	02/27/96	CC	C5

****
****
There are 15 Hist. Prop. and no Arch. Sites involved in this unde
****

Property number: 101001
BUILDING 1 - AIR FORCE PLANT 19
Address:
4297 PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0108-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101002
BUILDING 2-AIR FORCE PLANT 19
Address: County: SDI
PACIFIC HWY X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1941 -
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0109-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****
Property number: 101003
BUILDING 3-AIR FORCE PLANT 19
Address: County: SDI
PACIFIC HWY X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1941 -
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0110-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Identifier: USN951218A 02/18/98 Page: 3
Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101004
BUILDING 4-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0111-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****

Property number: 101005
BUILDING 5-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0112-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Identifier: USN951218A 02/18/98 Page: 4
Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101006
BUILDING 6-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0113-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****

Property number: 101007
BUILDING 7-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0114-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Identifier: USN951218A 02/18/98 Page: 5
Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101008
BUILDING 8-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1941 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0115-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****

Property number: 101009
BUILDING 27-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1944 -
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0116-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101010
BUILDING 28-AIR FORCE PLANT 19
Address: County: SDI
PACIFIC HWY X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1944 -
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0117-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****
Property number: 101011
BUILDING 33-AIR FORCE PLANT 19
Address: County: SDI
PACIFIC HWY X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1950 -
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0118-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Identifier: USN951218A 02/18/98 Page: 7
Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101012
BUILDING 34-AIR FORCE PLANT 19
Address: County: SDI
X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1940 - 1945
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	OE-37-96-0119-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****
Property number: 101013
BUILDING 36-AIR FORCE PLANT 19
Address: County: SDI
PACIFIC HWY X-Street:
SAN DIEGO Vicinity:
Parcel #:

Category: B # of Props:
Owner Type: Pres. Use:
Other Recognition: CHL #:
Dates of Construction: 1950 - 1955
Architect: Builder:
Historic Attributes:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0120-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

Undertaking Name: HANGAR 19,IN-SERVICE ENGINEERING STAGING FAC/LAB,SAN DIEGO
Property number: 101014
INTERPLANT BRIDGE-AIR FORCE PLANT 19
Address:
PACIFIC HWY
SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: S
Owner Type:
Other Recognition:
Dates of Construction: 1940 - 1945
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0121-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

****

Property number: 101015
BUILDINGS 1,2,3,4,5,6-TAYLOR STREET ANNEX
Address:

SAN DIEGO

County: SDI
X-Street:
Vicinity:
Parcel #:

Category: B
Owner Type:
Other Recognition:
Dates of Construction: 1940 - 1970
Architect:
Historic Attributes:

# of Props:
Pres. Use:
CHL #:
Builder:
Eth:

Previous Determinations on this property:

Program	Prog. Ref Number	Eval	Crit	Eval-date	Evaluator
HIST.RES.	DOE-37-96-0122-0000	6Y2		02/27/96	CLARENCE CAESAR
PROJ.REVW.	USN951218A	6Y2		02/27/96	CLARENCE CAESAR

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 3

Other Listings _____
Review Code _____ Reviewer _____ Date _____

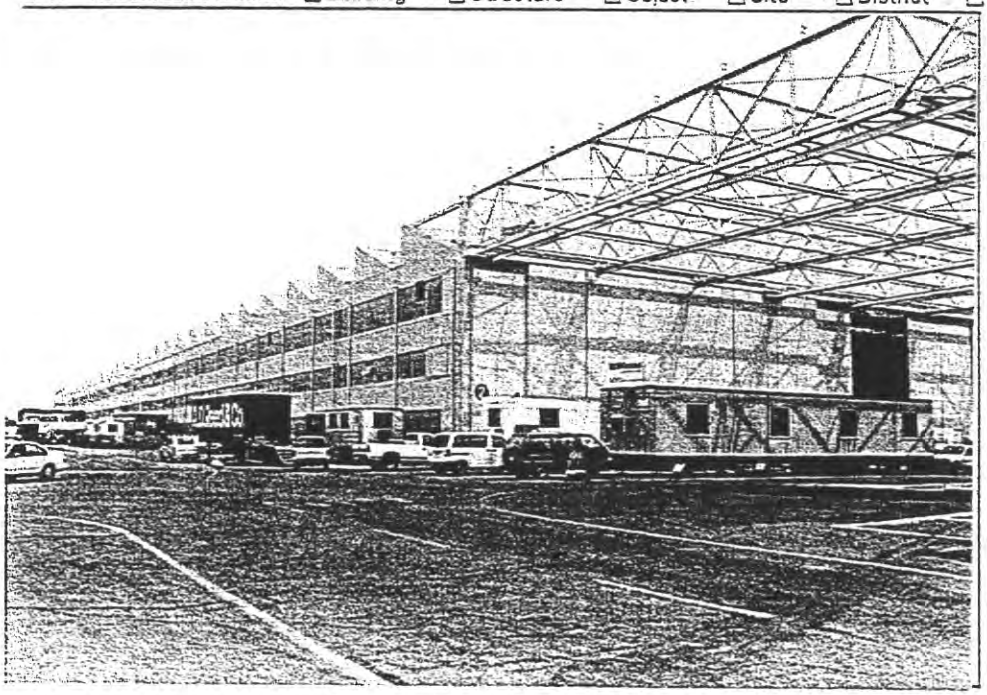
P1. Resource Identifier: 1994/LAn/450-550-08 B

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address 4297 Pacific Highway (Building 2)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____ ; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):
Project APE Map No. P 19, Site No. 2. San Diego County Assessor's Parcel Number 450-490-07 B.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This large industrial building is a single story with two mezzanines and is configured in a rectangular plan. The second in a line of three identical buildings, it features a saw-toothed roofline. The sawtooth is typical of World War II era industrial buildings, and it has skylights on the vertical planes, oriented north. It is clad in corrugated metal siding and the three levels are accentuated by continuous ribbon windows with steel sashes. A design feature of the Administration building, decorative streamline influenced rain gutters are set just above the third row of windows. On the eastern elevation, there are three sets of three story metal sliding doors with pedestrian doors. The north side features 32 (steel) manual sliding doors with a random arrangement of pedestrian doors and a superstructure of continuous crane joists, contiguous with Building 3. As built, the building was the second stop on an assembly line, the purpose of which was to manufacture airplanes for military use. Additional single story buildings have been constructed on the west side, (buildings 30 and 32) and the interior has been modified numerous times to accomodate manufacturing, office and military requirements.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1941

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☒ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 2

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/450-550-08 A
B2. Historic Name: Parts Manufacturing Plant, Building 1
B3. Common Name: Building 1
B4. Address: 4297 Pacific Highway (Building 1)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):

Farmham Mill Storage addition, west side; Pangborn Compressor Receiver addition, north side; wooden catwalks removed.

B9. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
B10. Related Features:

One of three nearly identical industrial buildings located in a complex of twelve buildings.

B11. Architect: Taylor & Taylor Builder: B.O. Larsen
B12. Historic Attributes: (List attributes and codes) HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Industrial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building 1 at Plant 19 was constructed in 1941 for the purpose of manufacturing sub-assembly parts for military aircraft. The owner, Consolidated Aircraft Corporation hired Edward Cray Taylor (1887-1946) and Ellis Wing Taylor (1887-1951) to design most of Plant 19 (then Plant 2). The Taylor brothers were former staff architects for Donald Douglas and thus were experienced aircraft factory designers. Buildings 1, 2 and 3 were erected to nearly identical specifications and were used for linear assembly work. This building (Number 1) was the initial stop among the three; at the last building,the parts were loaded onto railcars. Plant 19 was not the original Consolidated site in San Diego, nor was it the only important aircraft manufacturer in the area during World War II. The building does not possess high artistic values, nor does it represent a rare resource type in the Lindbergh Field area, therefore it would not qualify for inclusion in the National Register of Historic Places under Criterion C. The B-14 Liberator bombers which were partially assembled at the plant are considered to be one the Allied Forces' pivotal offensive weapons used to win the second World War. The plant was one of three in the country responsible for the production of B-14 Liberator bombers, hence its connection to the plane would not qualify the property for the National Register under Criteria A or B.

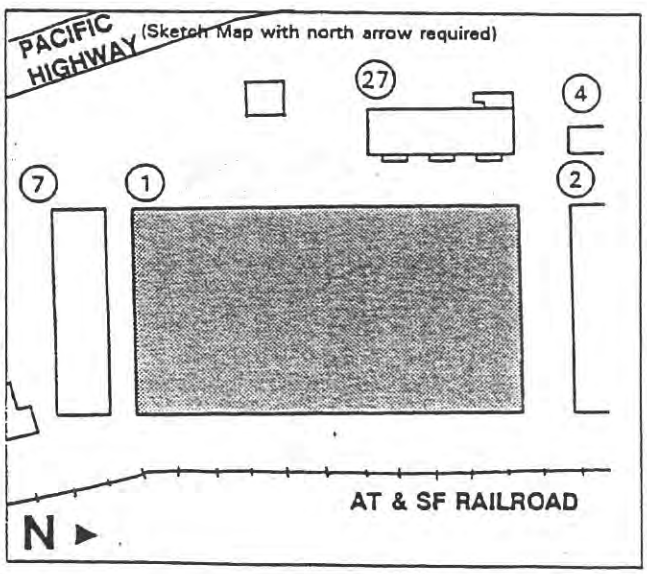
B14. References:

Taylor & Taylor "Foundation & 1st Floor Plan" 2/9/1941; "Building 1 Elevations..." 8/21/61, updated 5/6/77; "Plant 2 Becomes 'Miracle Mile'"

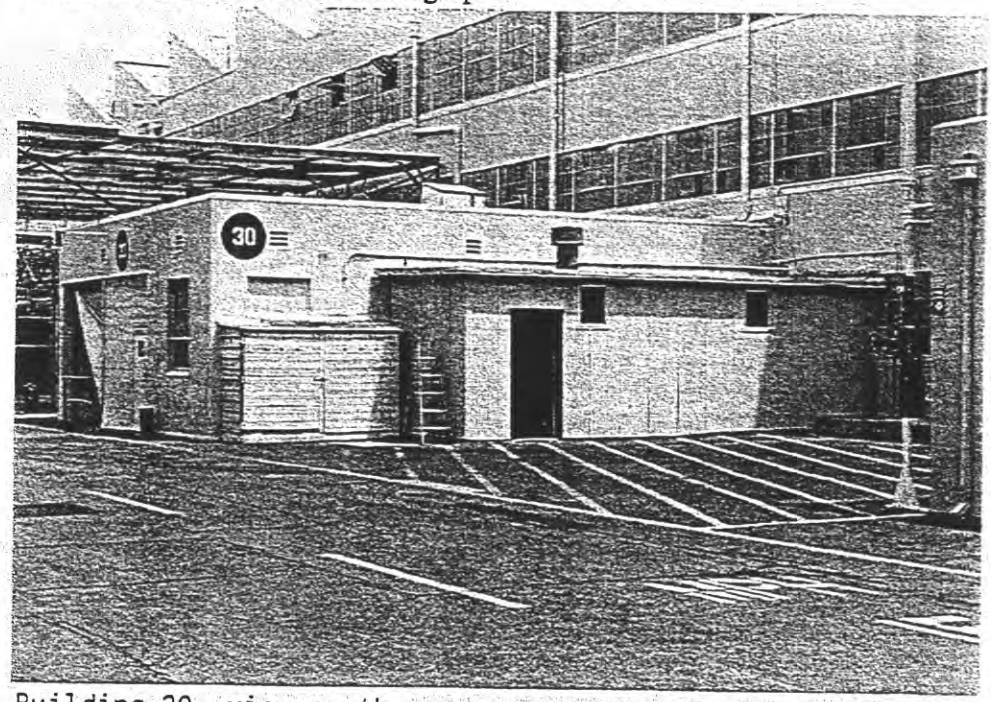
10/20/41; Whithey, H.F. ...DICTIONARY OF AMERICAN ARCHITECTS... 1956.

B15. Evaluator: _____
Date of Evaluation: _____

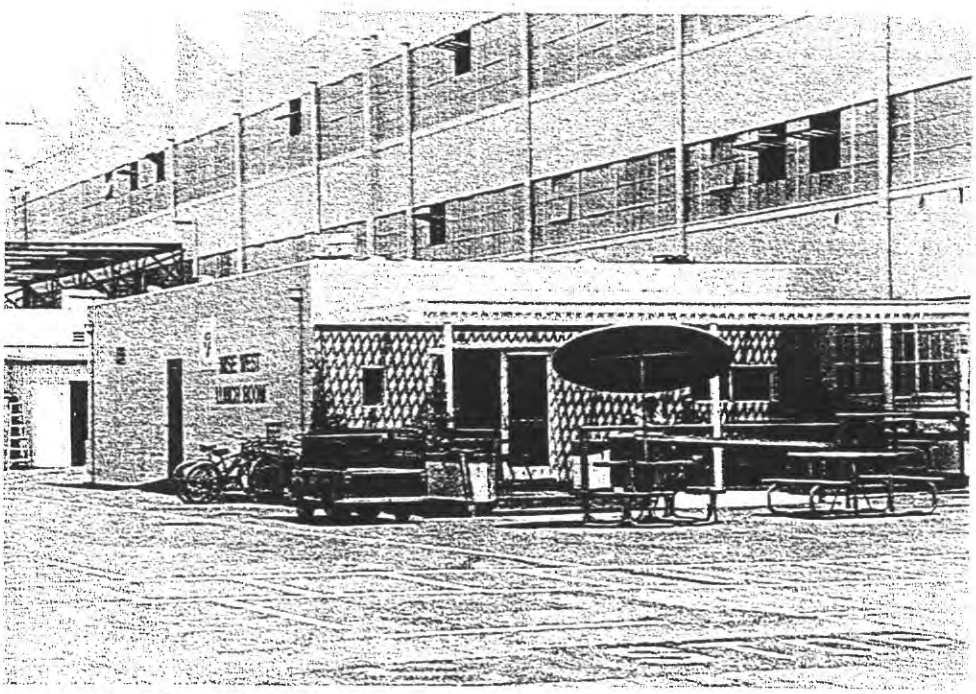
(This space reserved for official comments.)



BUILDING 2: Additional Photographs



Building 30, view north.



Building 32, view north.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____

 HRI # _____

B1. Resource Identifier: 1994/LAn/450-550-08 D

B2. Historic Name: Office Building

B3. Common Name: Building 4, Administration

B4. Address: 4297 Pacific Highway (Building 4)

City: San Diego County: San Diego Zip: 92140

B5. Zoning: N/A **B6. Threats:** Military Project

B7. Architectural Style: Streamline Moderne

B8. Alterations and Date(s):

Main entrance has been modified numerous times, original canopy, doors a nd sidelights have been removed.

B9. Moved? ■No ☐Yes ☐Unknown Date: _____ Original Location: _____

B10. Related Features:

This is the main administration building in a complex of twelve industrial buildings.

B11. Architect: Taylor & Taylor **Builder:** B.O. Larsen

B12. Historic Attributes: (List attributes and codes) HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego

Period of Significance 1941-1945 Property Type Industrial Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Administration Building at Air Force Plant 19 was erected by Consolidated Aircraft Company in 1941. Consolidated hired Taylor & Taylor of Los Angeles to design the nearly 100,000 square foot office building. The architects, Edward Cray Taylor (1887-1946) and Ellis Wing Taylor (1887-1951) were experienced in the design of such plant facilities, having designed the Douglas Aircraft Factory in Santa Monica while on staff for Donald Douglas. The purpose Consolidated's new airplane factory was to fill large orders for the U.S. government, particularly the B-24 Liberator, an important factor in the Allied Forces' victory in World War II. At the height of the war, the founder's motto "NOTHING SHORT OF RIGHT IS RIGHT" was painted across the cornice. The Administration Building, as it is now known was an exuberant example of the Streamline Moderne style, but its main feature, the canopied steel clad entrance, has been irreparably modified. Other modifications such as the removal of first floor windows has further affected the integrity of the building. Elsewhere in San Diego, there are intact examples of the style. Because of these changes, and the common presence of other such examples in the area, the building does not appear to be eligible for inclusion in the National Register of Historic Places under Criterion C. Furthermore, the building's association with the B-24 (built in a number of other cities) does not warrant further consideration for the National Register under Criteria A or B.

B14. References:

Taylor & Taylor "Parts Manufacturing Plant, Office Building" 1941.

Larry Davis B-24 LIBERATOR IN ACTION (Carrollton, Texas: Signal/Squadron)

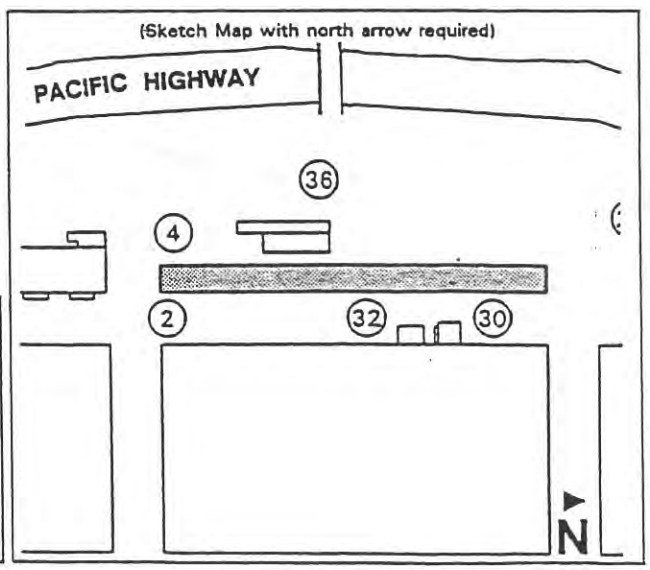
1977; "GenDyn's Shocker..." SAN DIEGO UNION-TRIBUNE, 5/31/92.

B15. Evaluator: _____

Date of Evaluation: _____

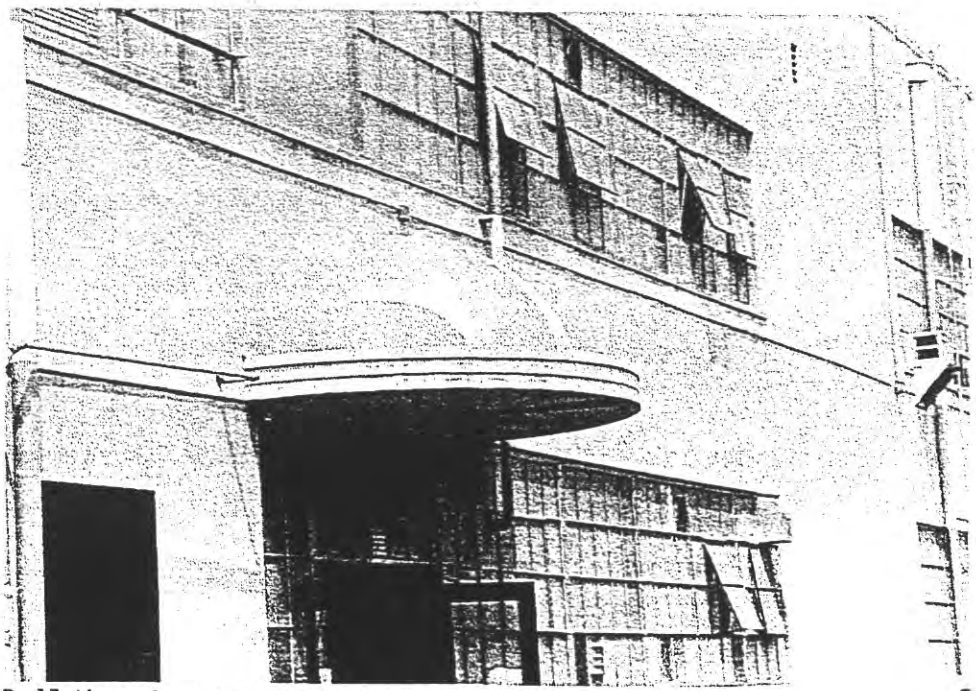
(This space reserved for official comments.)

(Sketch Map with north arrow required)



BUILDING 4: Additional Photographs

Building 4, view of south end.



Building 4, rear entrance.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

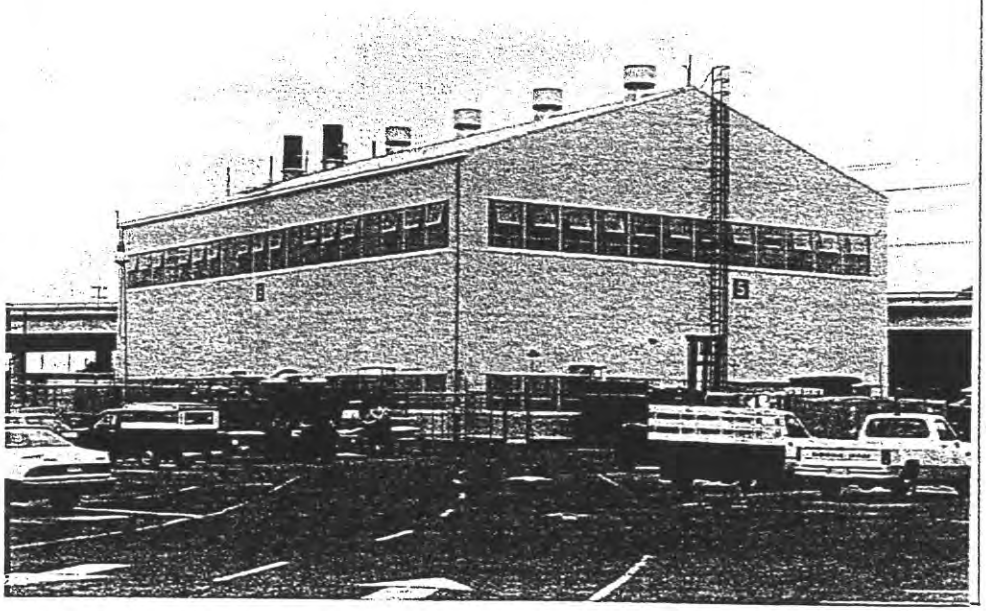
P1. Resource Identifier: 1994/LAn/450-550-08 E

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address 4297 Pacific Highway (Building 5)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This two story building is configured in a rectangle with a front facing, gabled roof. The roof and elevations are finished in corrugated metal and the long side elevations feature spans of ribbon windows. The continuous windows are steel sashed with small sills. The south end has four tall, sliding steel doors located on the eastern side. There are three boiler stacks and two large ventsset on the western plane of the medium pitched roof.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1941

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

Page 2 of 2

B1. Resource Identifier: 1994/LAn/450-550-08 F
B2. Historic Name: Parts Manufacturing Plant, Paint Shop
B3. Common Name: Building 7
B4. Address: 4297 Pacific Highway (Building 7)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):

Minor alterations to 1st floor, addition of men's and women's restrooms.

B9. Moved? ☐No ☐Yes ☐Unknown Date: _____ Original Location: _____
B10. Related Features:

One in a complex of twelve industrial buildings.

B11. Architect: Taylor & Taylor Builder: B.O. Larsen
B12. Historic Attributes: (List attributes and codes) HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Industrial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building 7 at Air Force Plant 19 was constructed in 1941 as part of Consolidated Aircraft Company's Plant 2 facility. The building was erected to serve as the Paint Shop for the new sub-assembly factory for military aircraft. Consolidated manufactured parts for the B-24 Liberator bomber at this plant, the plane widely accepted as one of the Allied Forces' main advantages winning the war. The B-24 was also manufactured elsewhere in San Diego, as well as at other plants in the U.S. Because of this shared connection with the B-24, the building does not appear to be eligible for inclusion in the National Register of Historic Places for its association with historic events or persons. Moreover, as a World War II-era aircraft manufacturing facility, it does not warrant further consideration for the National Register under Criterion C, as it is a very common resource type in the San Diego area.

B14. References:

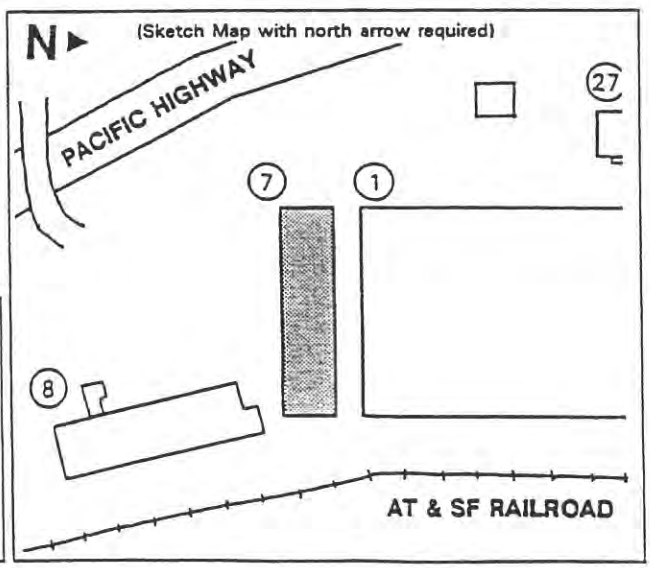
Taylor & Taylor "Parts Manufacturing Plant, Plot Plan" 1941.

"Elevations...As-Built Structural" August 1961, updated 5/4/77.

"Consair Plans Expansion... SAN DIEGO UNION, 12/8/40.

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

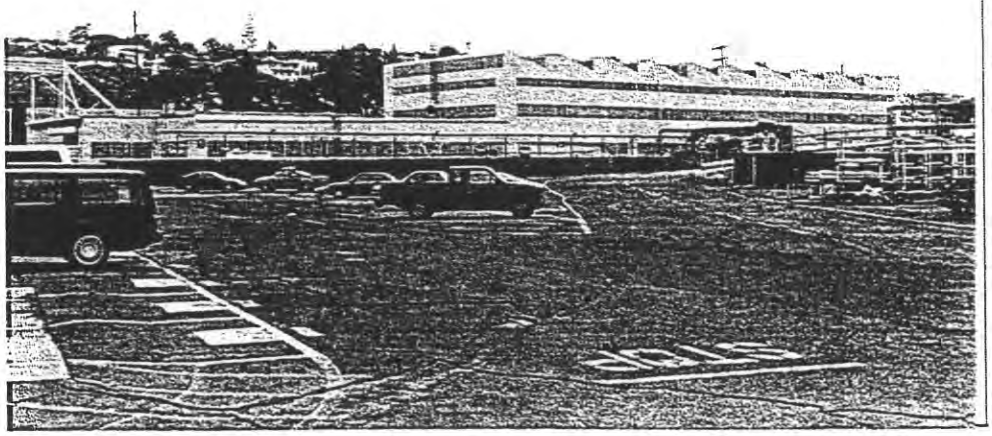
P1. Resource Identifier: 1994/LAn/450-550-08 G

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address 4297 Pacific Highway (Building 8)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____ ; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This three story industrial building is configured in an irregular L shape. Clad in corrugated metal, the largest section features a saw toothed roof, typical of industrial buildings durring World War II. The three story section is punctuated by unbroken stretches of ribbon windows. The first floor has the tallest band of steel sashed windows, graduating to a narrow strip at the top floor. The spandrels between the windows mimic the fenestration, the bands narrowing toward the top floor. The later Building 8 extension is a single story with a flat roof, extending the north side. The Air Compressor Building is a much smaller single story addition, with interconnecting gabled roof forms. Building 8 is on the southern border of Plant 19, next to the Interplant Bridge (Site 13).

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1941

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/450-550-08 I
B2. Historic Name: none
B3. Common Name: Building 28
B4. Address: 4297 Pacific Highway (Building 28)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):

Walk up windows added on east side.

B9. Moved? ■ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
B10. Related Features:

One of two nearly identical buildings in a complex of twelve industrial buildings.

B11. Architect: The Austin Company Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Industrial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building 28 at Air Force Plant 19 was built in 1944 and is nearly identical to Building 27 (originally the Cafeteria). The buildings were designed by the Austin Company of San Diego and executed in "asbestos cement siding." Although this finish material is no longer used, it was a common material during the second World War, especially in military-related projects. The building does not possess significant design or construction qualities, therefore it would not qualify for inclusion in the National Register of Historic Places under Criterion C. Furthermore, although it was built as an ancillary structure in the factory which produced the B-14 Liberator, other factories produced the same product, and a nearby plant was used for the initial steps in the process. For these reasons, Building 28 would not warrant consideration under Criteria A or B, for its association with a significant event or person.

B14. References:

"Floor & Plot Plans, Cafeteria No. 7" The Austin Company 1944.

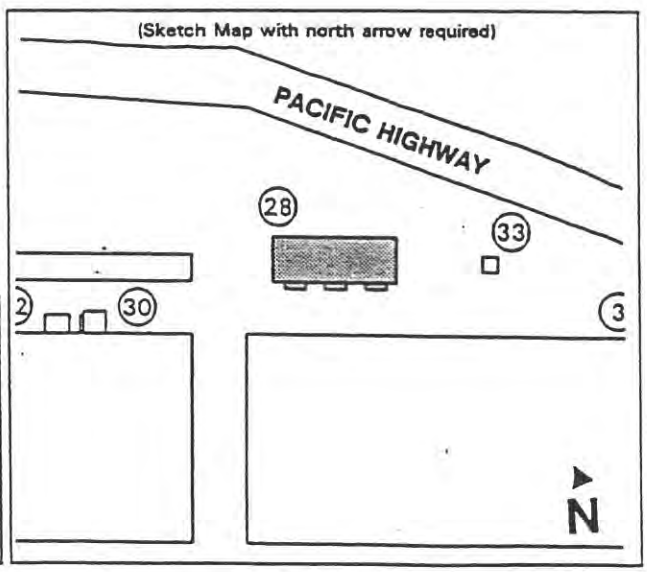
Larry Davis B-14 LIBERATOR IN ACTION (Carrollton, Texas: Squadron/

Signal Publications) 1987.

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

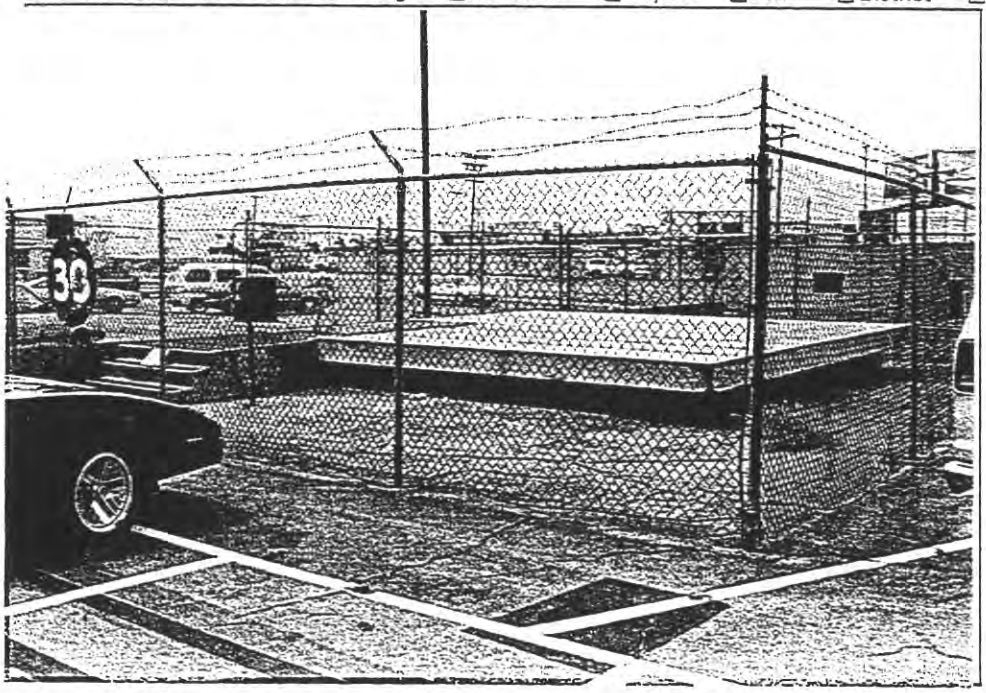
P1. Resource Identifier: 1994/LAn/450-550-08 J

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address 4297 Pacific Highway (Building 33)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This partially subterranean building is configured in a square and has a flat roof. The building's elevation is only two feet above ground level, most of the exterior is overhanging vertical sheet metal flashing. The flat roof is clad in a continuous sheet of waterproof membrane material. There are two concrete steps leading to the sheet metal entry hatch, which lays flat on the southeast corner of the roof. The subterranean walls are constructed of concrete blocks, reach nearly nine feet below ground and each of the four walls has two square vents. The building is located in a small paved yard, surrounded by a seven foot security fence with barbed wire.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1950s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Cahmbers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Appendix of In-Service Engineering Staging Facility & Engineering Lab at Air Force Plant 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 2

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/450-550-08 J
B2. Historic Name: Explosive Magazine Storage
B3. Common Name: Building 33
B4. Address: 4297 Pacific Highway (Building 33)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):
Virtually unaltered.

B9. Moved? ■ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
B10. Related Features:
One in a complex of twelve industrial buildings.

B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP14. Government Building, HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Industrial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Explosive Magazine Storage building was probably constructed in the 1950s for use by one of the many military branches that have occupied and/or leased the site since the 1940s. Known as Building 33, it was constructed to house ammunition and related items. The building has no features of design or engineering merit, nor is it directly associated with the B-24 Liberator bomber which was manufactured on the site during World War II. As an amunition storage facility it is a very common resource type among Southern California military bases. For these reasons, the building does not appear to be eligible for inclusion on the National Register of Historic Places under Criteria A, B or C.

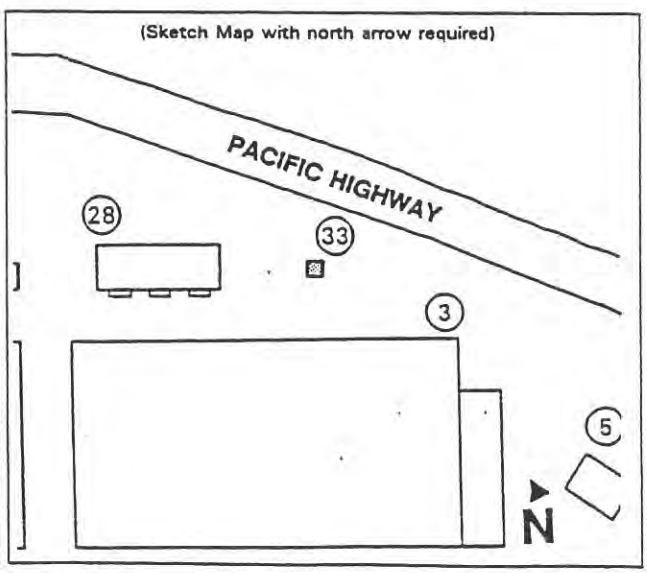
B14. References:
Taylor & Taylor "Plant 2, Plot Plan" 1941;

"Elevations...As Built Structural" 8/1961, updated 5/1977.

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

P1. Resource Identifier: 1994/LAn/450-490-007
P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address Sports Arena Bl. (Building 34)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____ ; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This small single story wood framed building is configured in a rectangle and has a side facing gabled roof. The building is finished in shiplap siding and the roof is clad in rolled composition material. The entrance is set toward the north end, and is flanked by three plain double hung windows on the south side with one on the north side.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District

P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1940s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaissance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 2

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/450-490-007
B2. Historic Name: Salvage Yard Office
B3. Common Name: Building 34
B4. Address: Sports Arena Bl. (Building 34)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Vernacular Cottage
B8. Alterations and Date(s):
Virtually unaltered.

B9. Moved? ☐No ☐Yes ☒Unknown Date: _____ Original Location: _____
B10. Related Features:
Located within one block of Plant 19, a complex of twelve industrial buildings. This building is part of Plant 19.
B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP14. Government Building, HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Indusrtial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

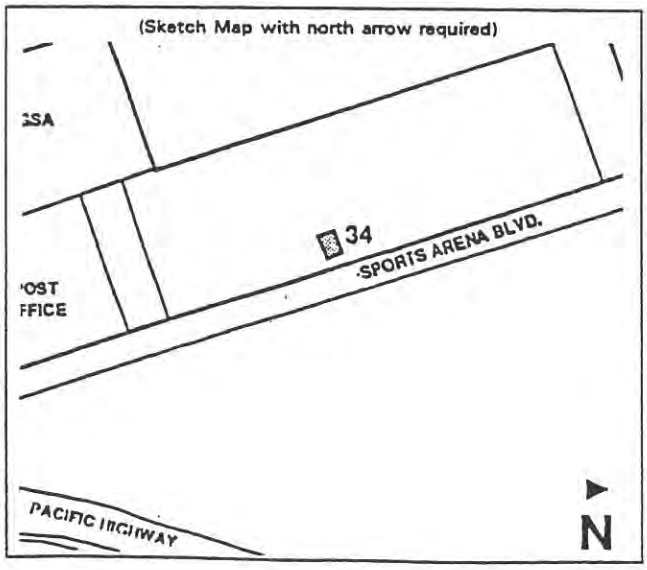
This building was probably built in the 1940s for use as the office for Consolidated Aircraft Company's Plant number 2 salvage yards. Its wood frame construction and diminutive size make it an extremely common resource type among Southern California military bases. Due to the common presence of the building type, it does not appear to be eligible for inclusion in the National Register of Historic Places under Criterion C. Additionally, there are no known associations with significant historic events or persons to warrant further consideration for the National Register under Criteria A or B.

B14. References:
"Salvage Yard Office Elevations, Air Force Plant 19" 8/1961, updated 7/1/77

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

P1. Resource Identifier: 1994/LAn/450-550-08 K

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)

b. Address 4297 Pacific Highway (Building 36)

City San Diego Zip 92140

c. UTM: USGS Quad _____ (7.5'/15') Date _____ ; Zone _____, _____ mE/ _____ mN

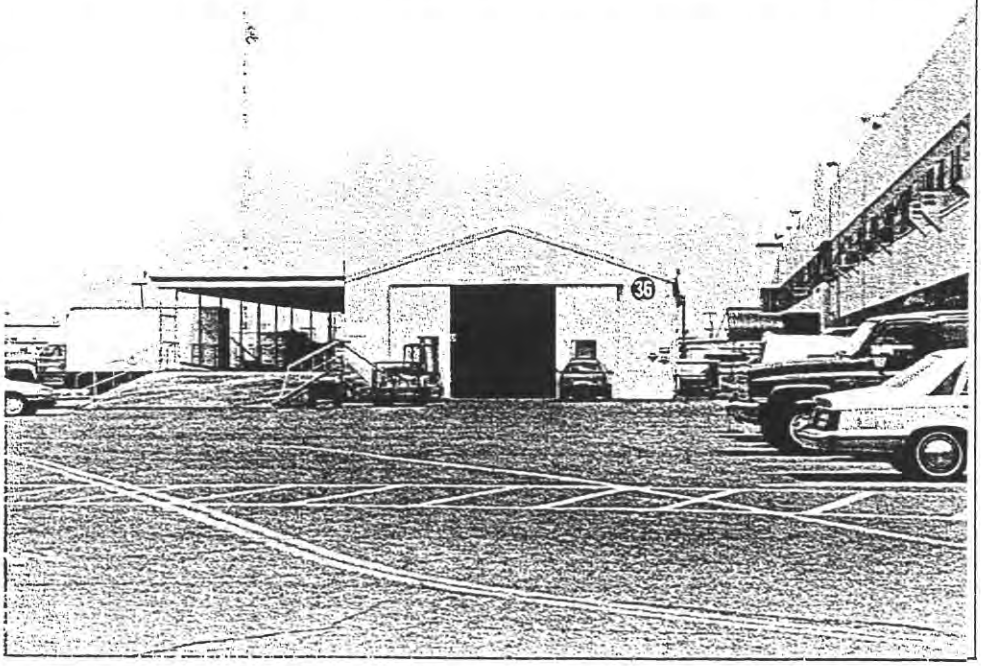
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

Project APE Map No. P 19, Site No. 12. San Diego County Assessor's Parcel Number 450-490-07 K.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This single story building is configured in an L and has a front facing gabled roof with a side shed extension. The building and the medium pitched roof are finished in corrugated metal. The main portion of the building is an enclosed warehouse loading dock, and features large sliding doors which fill the facade. The wide, at-grade loading dock runs the length of the west side and is enclosed by the shed roof. The south side of the loading dock is served by a long, low sloping concrete ramp with metal bannisters and a short stair.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1950s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ■ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Engineering of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ■ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 2

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/450-550-08 K
B2. Historic Name: none
B3. Common Name: Building 36
B4. Address: 4297 Pacific Highway (Building 36)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):

Virtually unaltered.

B9. Moved? ☐No ☐Yes ☐Unknown Date: _____ Original Location: _____
B10. Related Features:

One in a complex of twelve indistrial buildings.

B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Industrial Applicable Criteria _____
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building 36 at Air Force Plant 19 was probably constructed in the 1950s. Its design is entirely utilitarian and it represents a very common resource type in industrial areas throughout Southern California. Because of the common presence of other such buildings as well as its lack of distinction or connection with historical events or persons, the building does not appear to be eligible for inclusion in the National Register of Historic Places under Criteria A, B or C.

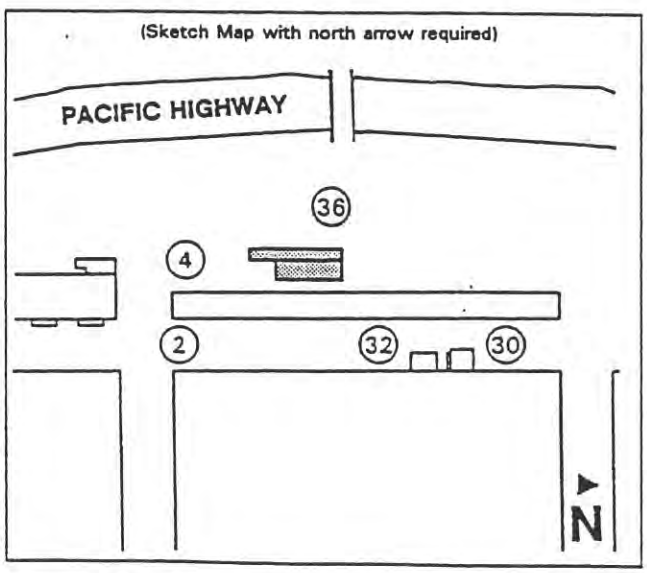
B14. References:

"Elevations, Air Force Plant 19, Building 36" 8/1961 and 6/3/77.

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

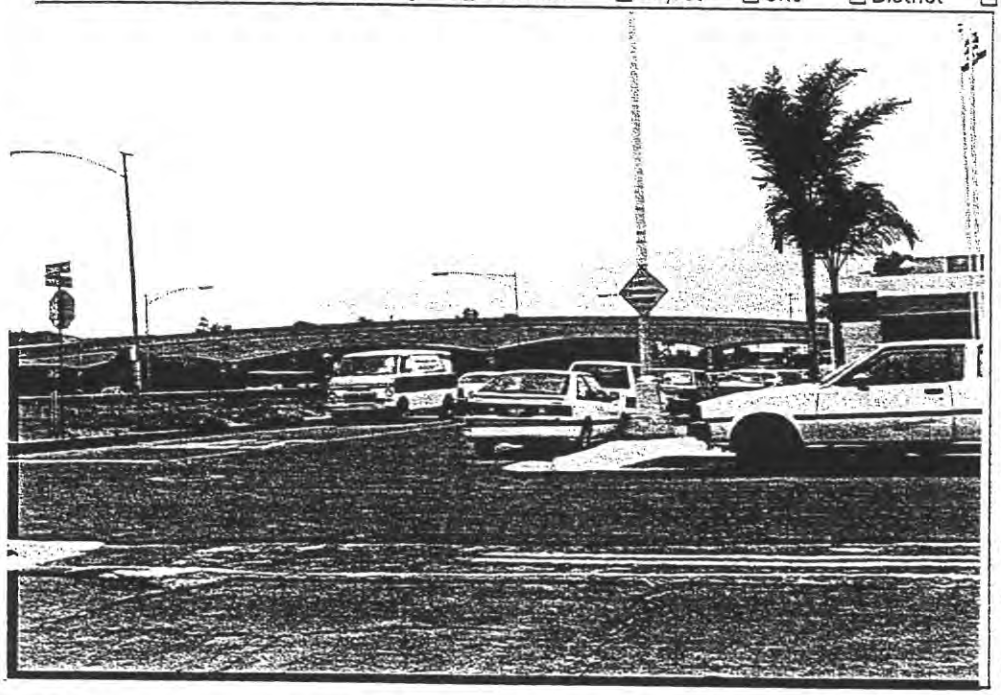
P1. Resource Identifier: 1994/LAn/

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address 4297 Pacific Highway (Interplant Rd. Bridge)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____; Zone _____, _____ mE/ _____ mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This two lane bridge spans Pacific Highway between the Marine Corp Recruit Depot and Air Force Plant 19. Constructed of poured-in-place concrete, the bridge is two paved lanes wide and makes a sweeping turn at the perimeter of the Plant 19 property. The bridge is five spans wide, with grouped piers which form losenge shaped supports at the bases. Between the supports, long, low pier arches of various lengths provide the only decorative feature of the bridge. Above the pier arches, there are plain, solid concrete ballusters with flat railings. The profile of the Interplant Bridge begins at-grade on either side, and elevates to approximately fourteen feet at the center, where the frontage roads and Pacific Highway pass beneath the structure.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District



P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1940s

P7. Owner and Address:
unknown

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ■ Intensive
☐ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 2

Primary # _____
HRI # _____

B1. Resource Identifier: 1994/LAn/
B2. Historic Name: none
B3. Common Name: Interplant Bridge
B4. Address: 4297 Pacific Highway (Interplant Rd. Bridge)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Industrial/ Utilitarian
B8. Alterations and Date(s):
Virtually unaltered.

B9. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
B10. Related Features:
This bridge serves as an interplant road, connecting the Marine Corps Recruit Depot and Plant 19. The bridge spans the east and west sides of Pacific Highway.
B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP19. Bridge

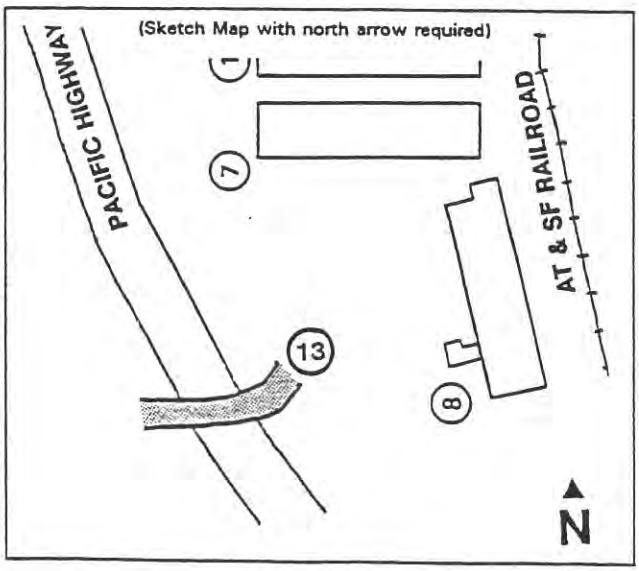
B13. Significance: Theme Military Area San Diego
Period of Significance 1941-1945 Property Type Bridge Applicable Criteria _____
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Interplant bridge was constructed in the early 1940s to serve the property now occupied by the Marine Corps Recruit Depot (MCRD). The bridge was originally used to transport goods among Consolidated's complexes, plants 1 and 2, for access to the rail loading area. The bridge does not possess high architectural or engineering values, nor does it represent a rare resource type in San Diego; therefore it would not qualify for inclusion in the National Register of Historic Place under Criterion C. Although it was used during World War II, there is no known connection between the bridge and any significant historic events or persons to warrant further consideration for the national Register under Criteria A or B.

B14. References:
Larry Davis B-24 LIBERATOR IN ACTION (Carrollton, Texas:Squadron/Signal),
1977; SAN DIEGO UNION, "Consolidated Dedication Day" 10/20/41;
John Wegg GENERAL DYNAMICS AIRCRAFT (no city: Naval Institute Press) no year.
B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 6

Other Listings _____
Review Code _____ Reviewer _____ Date _____

P1. Resource Identifier: 1994/LAn/Taylor Street

P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)

b. Address Taylor St. Annex Taylor St. & Pacific Highway

City San Diego Zip 92110

c. UTM: USGS Quad _____ (7.5'/15') Date _____ ; Zone _____, _____ mE/ _____ mN

d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

Project APE Map No. Taylor Street Annex, Site No. 1. San Diego County Assessor's Parcel Number unknown.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This resource is a complex of six military buildings. The buildings are known simply as Buildings 1, 2, 3, 4, 5 and 6. Each of the six is a single story building. Buildings 1, 2, 3 and 4 are confgured in long, narrow rectangles, Building 2 is nearly twice the length of the others. Each of these has a barrel shell roof clad in strips of composition roofing. There are intermediate stepped brick gables at intervals, and the walls are finished in smooth stucco. There are shed roofed small additions and metal storage lockers arranged at random along the sides. Buildings 5, 6 and the Lunch Room are each metal Butler-type buildings, both have extended shed roofed carports. The complex is entirely paved and there are two lane internal roads between the buildings. The eastern perimeter parallels the Santa Fe Railroad line and the western boundary follows Pacific Highway.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District

P5. Photograph or Drawing (Photograph required for buildings, structures, and objects)

Refer to
Continuation Sheets 3, 4 and 5

P6. Date Constructed/Age:

☐ Prehistoric ☒ Historic ☐ Both
1940s-1970s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☐ Intensive
☒ Reconnaisance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☒ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
Page 2 of 6 HRI # _____

B1. Resource Identifier: 1994/LAn/Taylor Street
B2. Historic Name: none
B3. Common Name: Taylor Street Annex
B4. Address: Taylor St. Annex Taylor St. & Pacific Highway
City: San Diego County: San Diego Zip: 92110
B5. Zoning: (N/A) B6. Threats: Military Project
B7. Architectural Style: Industrial/Utilitarian
B8. Alterations and Date(s):

Minor alterations throughout the yard facility. Additional Butler-type buildings have been erected.

B9. Moved? ■ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
B10. Related Features:

This yard is a complex of six military buildings, located between Pacific Highway. Taylor Street and Interstate 5.

B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP14. Government Building

B13. Significance: Theme Military Area San Diego
Period of Significance 1941-1945 Property Type Military Applicable Criteria _____
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Taylor Street Annex was developed concurrently with Consolidated Aircraft Company's nearby Plant 2, (now Air Force Plant 19) during the 1940s and was sold shortly after the end of World War II. Consolidated Aircraft Company erected their local plants to accomodate large government contracts for manufacturing fighter and training aircraft for military use. During the height of World War II, Consolidated was among the city's largest civilian employers. The Taylor Street Annex and Plant 19 were developed, in part, to build the B-24 Liberator bomber which is still considered to be a key to the Allied Forces' victory. The B-24 was also built and assembled elsewhere in the nation and in San Diego. Due to its shared connection with the B-24, the property does not appear eligible for the National Register of Historic Places under Criteria A or B, for its association with a significant event or person. Furthermore, the Taylor Street Annex has been modified over the years, features no distinctive design or engineering characteristics and is too common a resource type in the area to be considered for eligibility under Criterion C.

B14. References:

Larry Davis B-24 LIBERATOR IN ACTION (Carrollton, TX:Squadron/Signal) 1987;

(Sketch Map with north arrow required)

Refer to Continuation Sheet 6

B15. Evaluator: _____
Date of Evaluation: _____

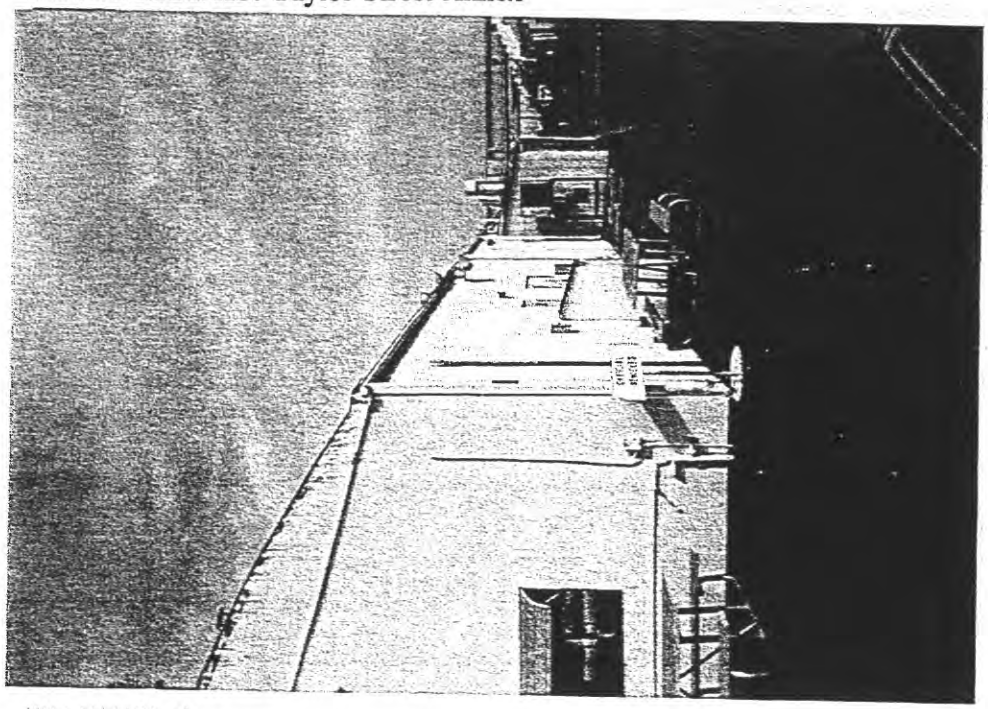
(This space reserved for official comments.)

PHOTOGRAPHS: Taylor Street Annex

Building 1

Building 2

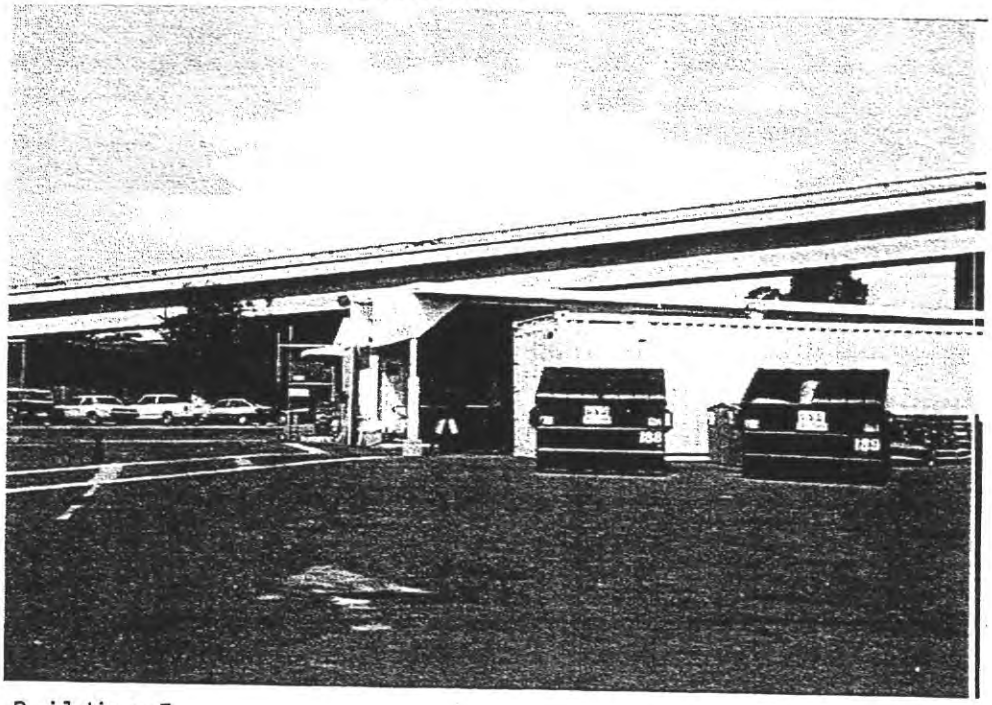
PHOTOGRAPHS: Taylor Street Annex



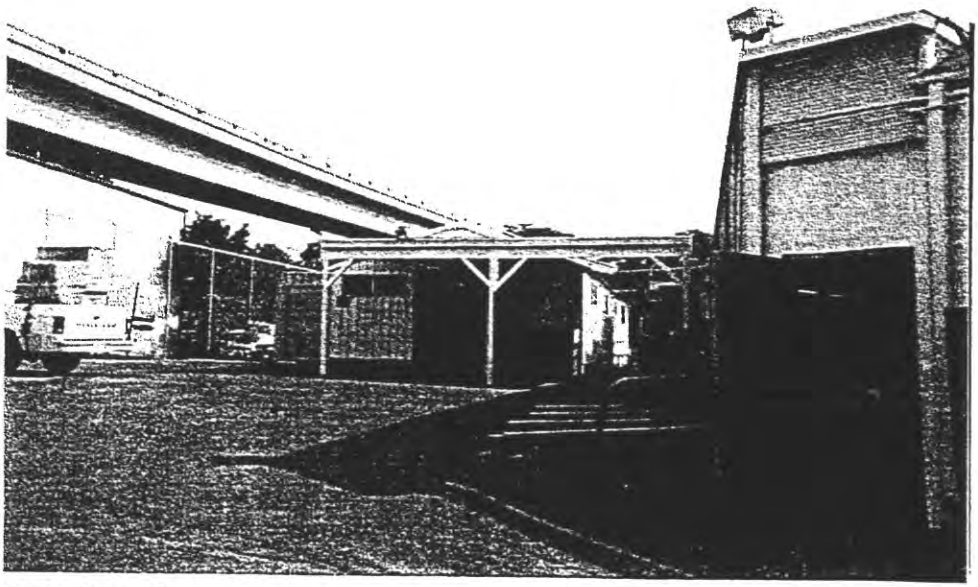
Building 3

Building 4

PHOTOGRAPHS: Taylor Street Annex

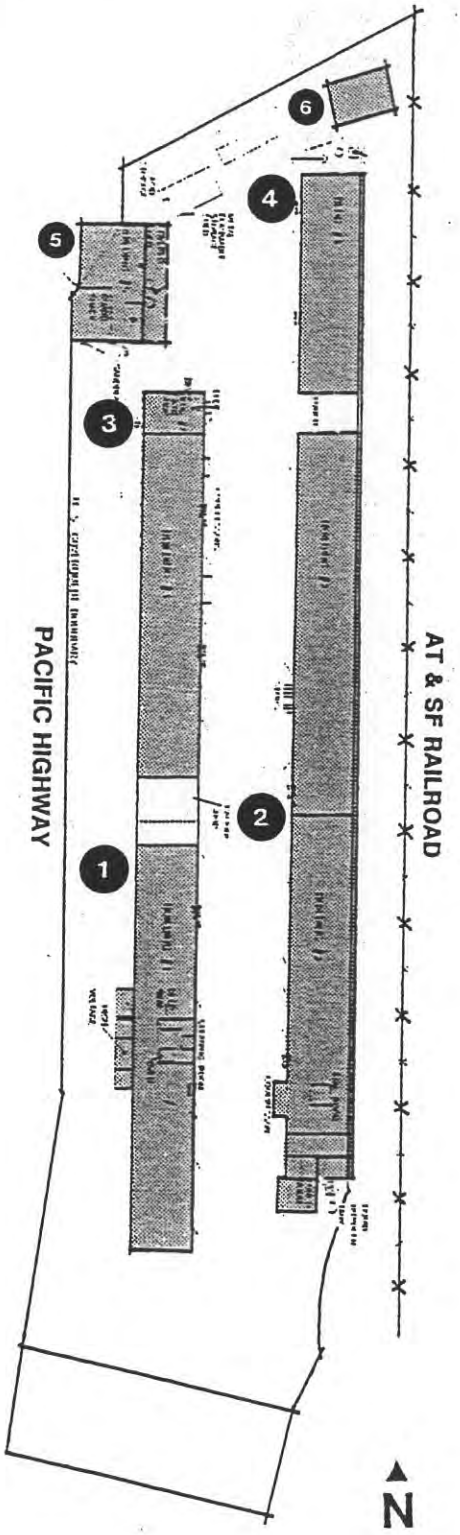


Building 5



Building 6

SITE MAP: Taylor Street Annex



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State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

P-37-035551

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

P1. Resource Identifier: 1994/LAn/450-490-007
P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address Sports Arena Bl. (Building 34)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____; Zone _____, _____mE/ _____mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

This small single story wood framed building is configured in a rectangle and has a side facing gabled roof. The building is finished in shiplap siding and the roof is clad in rolled composition material. The entrance is set toward the north end, and is flanked by three plain double hung windows on the south side with one on the north side.

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District

P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1940s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaissance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

DPR 523A-Test (12/93)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

P-37-035551

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

Page 2 of 2

B1. Resource Identifier: 1994/LAn/450-490-007
B2. Historic Name: Salvage Yard Office
B3. Common Name: Building 34
B4. Address: Sports Arena Bl. (Building 34)
City: San Diego County: San Diego Zip: 92140
B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Vernacular Cottage
B8. Alterations and Date(s):
Virtually unaltered.

B9. Moved? ☐No ☐Yes ☒Unknown Date: _____ Original Location: _____
B10. Related Features:
Located within one block of Plant 19, a complex of twelve industrial buildings. This building is part of Plant 19.
B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP14. Government Building, HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Indusrtial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

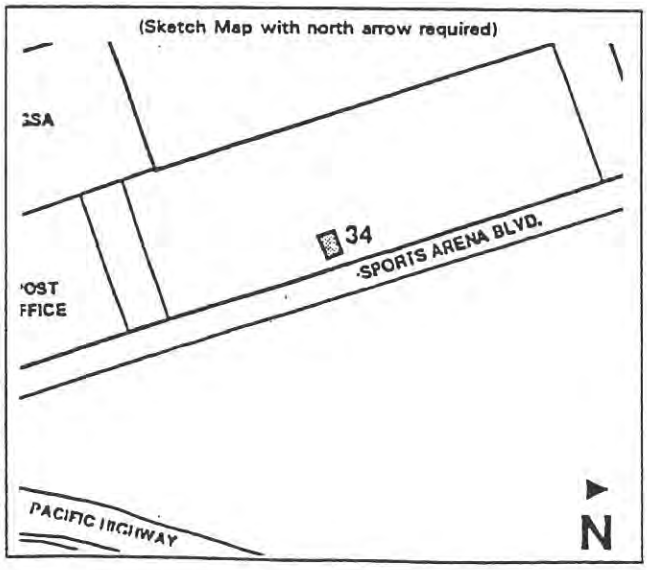
This building was probably built in the 1940s for use as the office for Consolidated Aircraft Company's Plant number 2 salvage yards. Its wood frame construction and diminutive size make it an extremely common resource type among Southern California military bases. Due to the common presence of the building type, it does not appear to be eligible for inclusion in the National Register of Historic Places under Criterion C. Additionally, there are no known associations with significant historic events or persons to warrant further consideration for the National Register under Criteria A or B.

B14. References:
"Salvage Yard Office Elevations, Air Force Plant 19" 8/1961, updated 7/1/77

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



The portion of site P-37-028552 within the Pacific Beach Pipeline Project APE site was relocated on 9 June 2015. The historic-era site, La Playa Trail, consists of several historic public streets (Midway Drive between Rosecrans Street and Barnett Avenue; Enterprise Street between Midway Dr. & Sports Arena Boulevard; and Rosecrans Street between Nimitz Boulevard and Pacific Highway). The La Playa Trail was a historic bayside trail in San Diego, connecting the settled inland areas to the commercial anchorage at Old La Playa on San Diego Bay (La Playa Trail Association 2014). The trail was already established by the time the Spanish settlers arrived in 1769; the first inhabitants of the area, including the Kumeyaay tribe, used it to access the beaches of San Diego Bay. It was improved and extended during the Spanish colonization of the region, reaching Old Town San Diego and Mission San Diego de Alcalá in Mission Valley by the 1770s. Cargo which had been unloaded by ship at Ballast Point in Old La Playa was transported along the trail several miles inland to Old Town. The La Playa Trail remained the primary transportation route for imports and exports from the time of San Diego's establishment in 1769 until the development of a better port in the 1860s at what is now Downtown San Diego. After most port activities moved to the downtown location, the southern portion of the trail retained its commercial character and became known as Rosecrans Boulevard (now Rosecrans Street). The streets that make up this site are heavily traveled public thoroughfares that have undergone trenching, repaving and restriping over time. They were not surveyed.

The portion of site P-37-028552 within the Project APE has not been evaluated for the CRHR or NRHP, but is believed to be listed on the City of San Diego Historical Resources Board register. It is unknown if the City has evaluated this resource, as no documentation was provided by the records search, and the resource is not listed on the City of San Diego Historical Resources Board register. The undertaking will not affect any of the characteristics that would make this resource eligible for either the CRHR or NRHP. No further evaluations are required for compliance with CEQA or Section 106, as there is no adverse effect.

Reference:

La Playa Trail Association

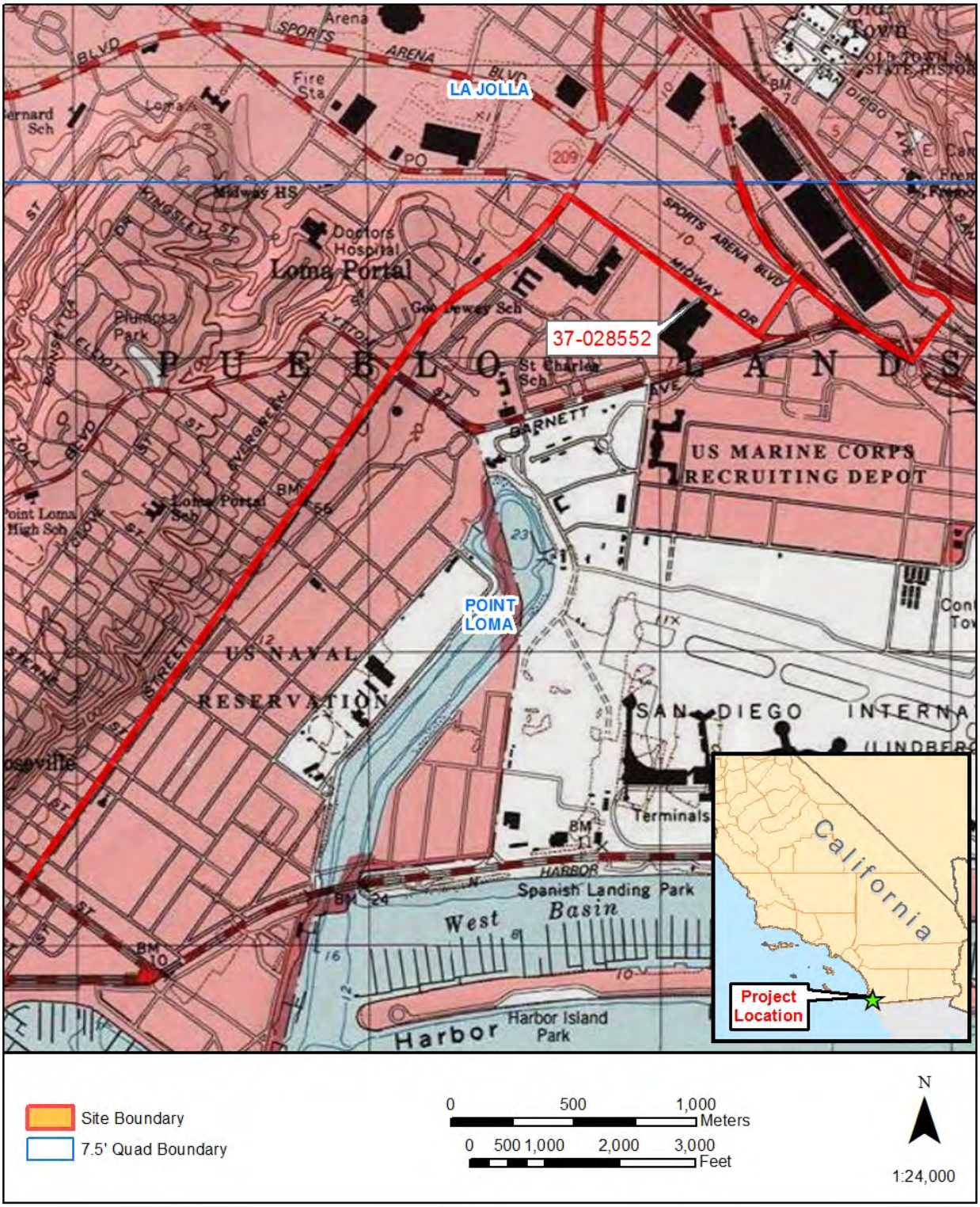
2013 La Playa Trail Association Website. Electrocic document, http://www.laplayatrail.org/, Viewed 8 June 2015.

State of California ◆ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-37-028552
HRI#
Trinomial

*Resource Name or # (Assigned by recorder)

*Map Name: Point Loma *Scale: 1:24,000 *Date of map: 06/11/2015



* Required information

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # P-37-028552
HRI#
Trinomial

Page 3 **of** 3 ***Resource Name or #** (Assigned by recorder)

***Drawn by:** Alice Brewster/PANGIS ***Date of map:** 06/11/2015

P-87-028552

CITY OF SAN DIEGO HISTORICAL SITE BOARD REGISTER NO. _____

1. LOCATION DESCRIPTION
Street No. St. & Barnett Ave.; Enterprise St. between
Legal Description Midway Dr. & Sports Arena Blvd; and
Other Identification Rosecrans St. between Nimitz Blvd. & Pacific Highway.

Midway Dr. between Rosecrans

2. NAME OF SITE Designated sections of Midway Dr., Enterprise St., and Rosecrans St. in the Dutch Flats District

3. OWNERSHIP DATA
Original Pueblo Indian Land
Present City of San Diego
Address

4. FACTUAL DETAILS
Original Use Public thoroughfare
Present Use
Architect
Builder
Date or Period
Other

5. PHYSICAL DETAILS
Style Public streets. Composition pavement with
No. of Stories concrete curbs and gutters.
Wall Construction
Condition

Exterior: Good
Interior: Good

6. OTHER COMMENTS

7. SUMMARY: HISTORICAL SIGNIFICANCE AND NOTABLE FEATURES

Please see attached continuation sheets.

8. LOCATION MAP (Optional)

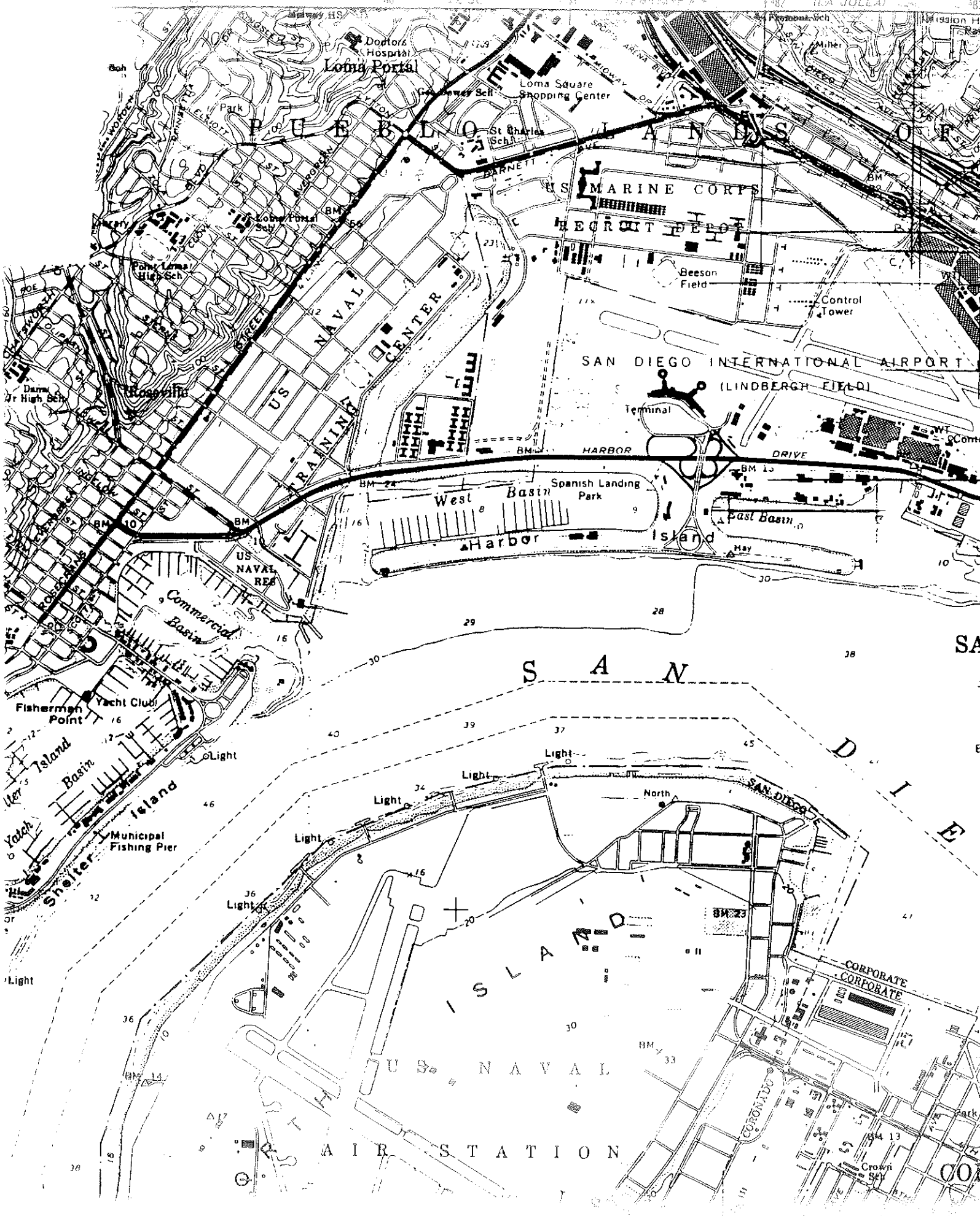
9. PHOTOGRAPH

10. TRANSMITTAL RECORD

	Date		Date
Bldg. Insp.		Site Owner	
Community Dev.		Fire Dept.	
Engineering		Prks. & Pub. Bldg.	
		Planning	

11. NAME AND ADDRESS OF RECORD OWNER

City of San Diego


Loma Portal
Doctors Hospital
Loma Square Shopping Center
PUEBLO
LANDS OF
St Charles Sch
Park
Loma Portal Sch
Point Loma High Sch
Rosecrans
US NAVAL TRAINING CENTER
US MARINE CORPS RECRUIT DEPOT
Beeson Field
Control Tower
SAN DIEGO INTERNATIONAL AIRPORT
(LINDBERGH FIELD)
Terminal
HARBOR DRIVE
West Basin
Spanish Landing Park
East Basin
Harbor Island
US NAVAL REC
Commercial Basin
Fisherman Point
Yacht Club
Shelter Island
Municipal Fishing Pier
Light
North
SAN DIEGO
BM 23
CORPORATE
U.S. NAVAL AIR STATION
CORONADO
Crown Sch

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ATTACHMENT B

Prior Department of Parks and Recreation 523 Site Records for Other Properties in Project Area

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State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

P-37-035551

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

Page 1 of 2

Other Listings _____
Review Code _____ Reviewer _____ Date _____

P1. Resource Identifier: 1994/LAn/450-490-007
P2. Location: a. County San Diego and (Address and/or UTM Coordinates. Attach Location Map as required.)
b. Address Sports Arena Bl. (Building 34)
City San Diego Zip 92140
c. UTM: USGS Quad _____ (7.5'/15') Date _____; Zone _____, _____mE/ _____mN
d. Other Locational Data (e.g. parcel #, legal description, directions to resource, additional UTMs, etc. when appropriate):

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.):

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P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District

P6. Date Constructed/Age:
☐ Prehistoric ☒ Historic ☐ Both
1940s

P7. Owner and Address:
United States Government

P8. Recorded by: (Name, affiliation, address):
The Chambers Group
Myra L. Frank & Associates
Hatheway & Associates

P9. Date Recorded: 05/08/1994

P10. Type of Survey: ☒ Intensive
☐ Reconnaissance ☐ Other
Describe: Technical Appendix

P11. Report Citation: (Provide full citation or enter "none"): Environmental Assessment of In-Service Engineering Staging Facility & Engineering Lab at Hangar 19 at San Diego, CA

Attachments: ☐ NONE ☐ Map Sheet ☐ Continuation Sheet ☒ Building, Structure and Object Record ☐ Linear Resource Record
☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other: (List) _____

DPR 523A-Test (12/93)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

P-37-035551

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

Page 2 of 2

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B5. Zoning: N/A B6. Threats: Military Project
B7. Architectural Style: Vernacular Cottage
B8. Alterations and Date(s):
Virtually unaltered.

B9. Moved? ☐No ☐Yes ☒Unknown Date: _____ Original Location: _____
B10. Related Features:
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B11. Architect: unknown Builder: unknown
B12. Historic Attributes: (List attributes and codes) HP14. Government Building, HP8. Industrial Building

B13. Significance: Theme Aerospace Area San Diego
Period of Significance 1941-1945 Property Type Indusrtial Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

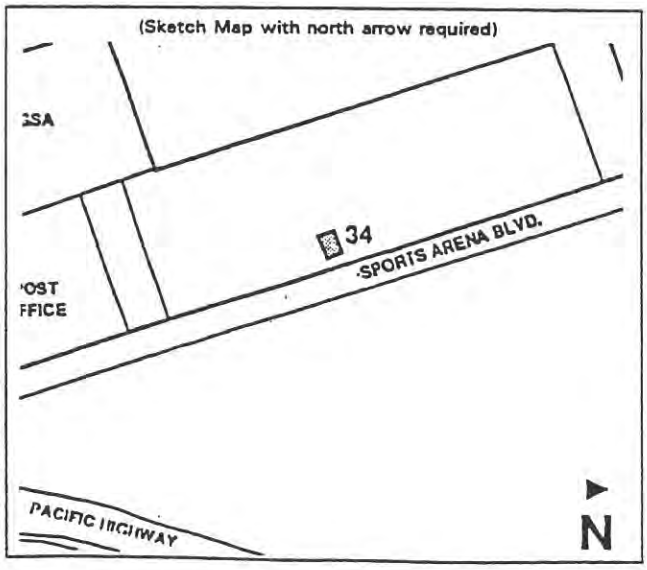
This building was probably built in the 1940s for use as the office for Consolidated Aircraft Company's Plant number 2 salvage yards. Its wood frame construction and diminutive size make it an extremely common resource type among Southern California military bases. Due to the common presence of the building type, it does not appear to be eligible for inclusion in the National Register of Historic Places under Criterion C. Additionally, there are no known associations with significant historic events or persons to warrant further consideration for the National Register under Criteria A or B.

B14. References:
"Salvage Yard Office Elevations, Air Force Plant 19" 8/1961, updated 7/1/77

B15. Evaluator: _____
Date of Evaluation: _____

(This space reserved for official comments.)

(Sketch Map with north arrow required)



The portion of site P-37-028552 within the Pacific Beach Pipeline Project APE site was relocated on 9 June 2015. The historic-era site, La Playa Trail, consists of several historic public streets (Midway Drive between Rosecrans Street and Barnett Avenue; Enterprise Street between Midway Dr. & Sports Arena Boulevard; and Rosecrans Street between Nimitz Boulevard and Pacific Highway). The La Playa Trail was a historic bayside trail in San Diego, connecting the settled inland areas to the commercial anchorage at Old La Playa on San Diego Bay (La Playa Trail Association 2014). The trail was already established by the time the Spanish settlers arrived in 1769; the first inhabitants of the area, including the Kumeyaay tribe, used it to access the beaches of San Diego Bay. It was improved and extended during the Spanish colonization of the region, reaching Old Town San Diego and Mission San Diego de Alcalá in Mission Valley by the 1770s. Cargo which had been unloaded by ship at Ballast Point in Old La Playa was transported along the trail several miles inland to Old Town. The La Playa Trail remained the primary transportation route for imports and exports from the time of San Diego's establishment in 1769 until the development of a better port in the 1860s at what is now Downtown San Diego. After most port activities moved to the downtown location, the southern portion of the trail retained its commercial character and became known as Rosecrans Boulevard (now Rosecrans Street). The streets that make up this site are heavily traveled public thoroughfares that have undergone trenching, repaving and restriping over time. They were not surveyed.

The portion of site P-37-028552 within the Project APE has not been evaluated for the CRHR or NRHP, but is believed to be listed on the City of San Diego Historical Resources Board register. It is unknown if the City has evaluated this resource, as no documentation was provided by the records search, and the resource is not listed on the City of San Diego Historical Resources Board register. The undertaking will not affect any of the characteristics that would make this resource eligible for either the CRHR or NRHP. No further evaluations are required for compliance with CEQA or Section 106, as there is no adverse effect.

Reference:

La Playa Trail Association

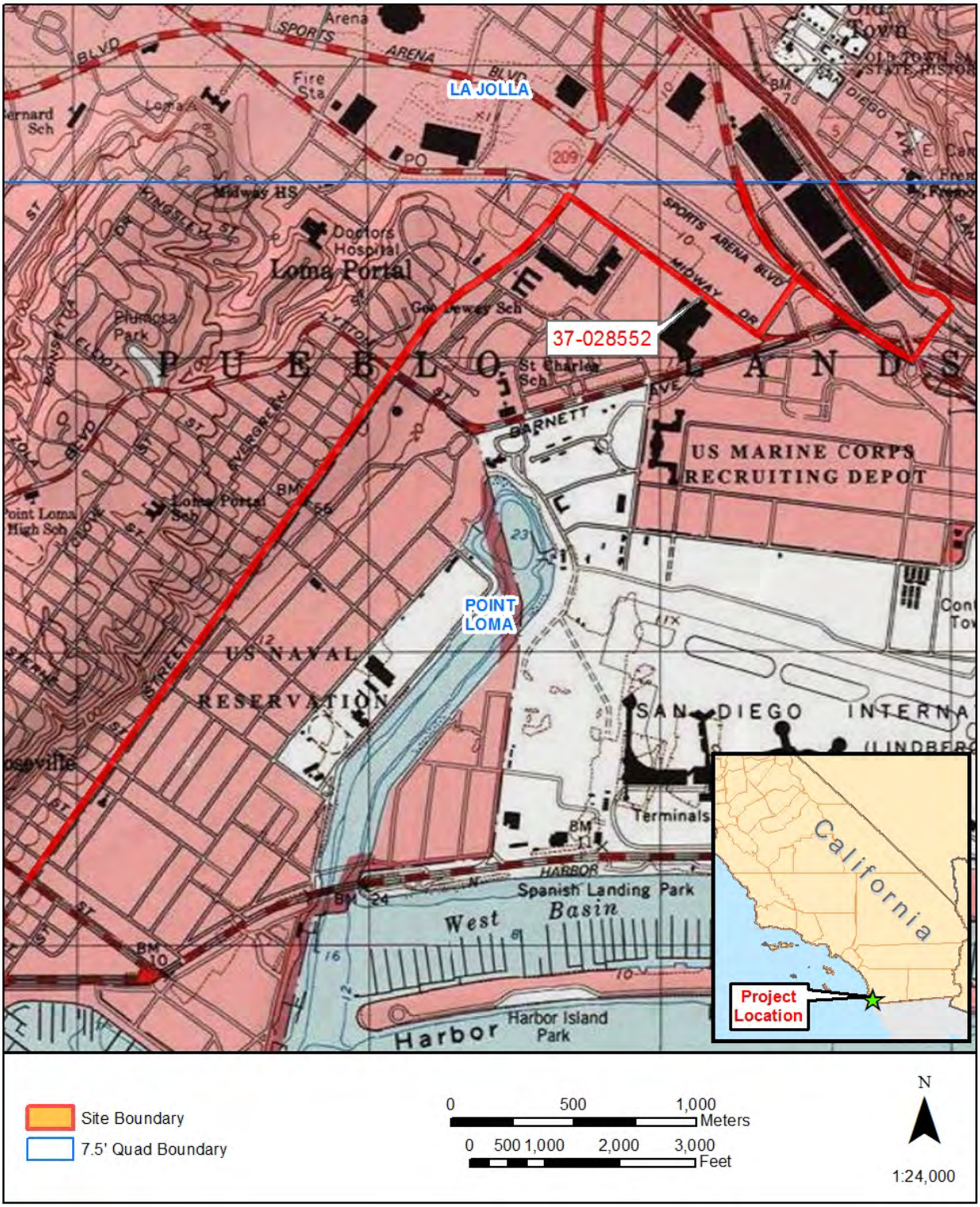
2013 La Playa Trail Association Website. Electrocic document, http://www.laplayatrail.org/, Viewed 8 June 2015.

State of California ◆ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-37-028552
HRI#
Trinomial

*Resource Name or # (Assigned by recorder)

*Map Name: Point Loma *Scale: 1:24,000 *Date of map: 06/11/2015



* Required information

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # P-37-028552
HRI#
Trinomial

Page 3 **of** 3 ***Resource Name or #** (Assigned by recorder)

***Drawn by:** Alice Brewster/PANGIS ***Date of map:** 06/11/2015

P-87-028552

CITY OF SAN DIEGO HISTORICAL SITE BOARD REGISTER NO. _____

1. LOCATION DESCRIPTION
Street No. St. & Barnett Ave.; Enterprise St. between
Legal Description Midway Dr. & Sports Arena Blvd; and
Other Identification Rosecrans St. between Nimitz Blvd. & Pacific Highway.

Midway Dr. between Rosecrans

2. NAME OF SITE Designated sections of Midway Dr., Enterprise St., and Rosecrans St. in the Dutch Flats District

3. OWNERSHIP DATA
Original Pueblo Indian Land
Present City of San Diego
Address

4. FACTUAL DETAILS
Original Use Public thoroughfare
Present Use
Architect
Builder
Date or Period
Other

5. PHYSICAL DETAILS
Style Public streets. Composition pavement with
No. of Stories concrete curbs and gutters.
Wall Construction
Condition

Exterior: Good
Interior: Good

6. OTHER COMMENTS

7. SUMMARY: HISTORICAL SIGNIFICANCE AND NOTABLE FEATURES

Please see attached continuation sheets.

8. LOCATION MAP (Optional)

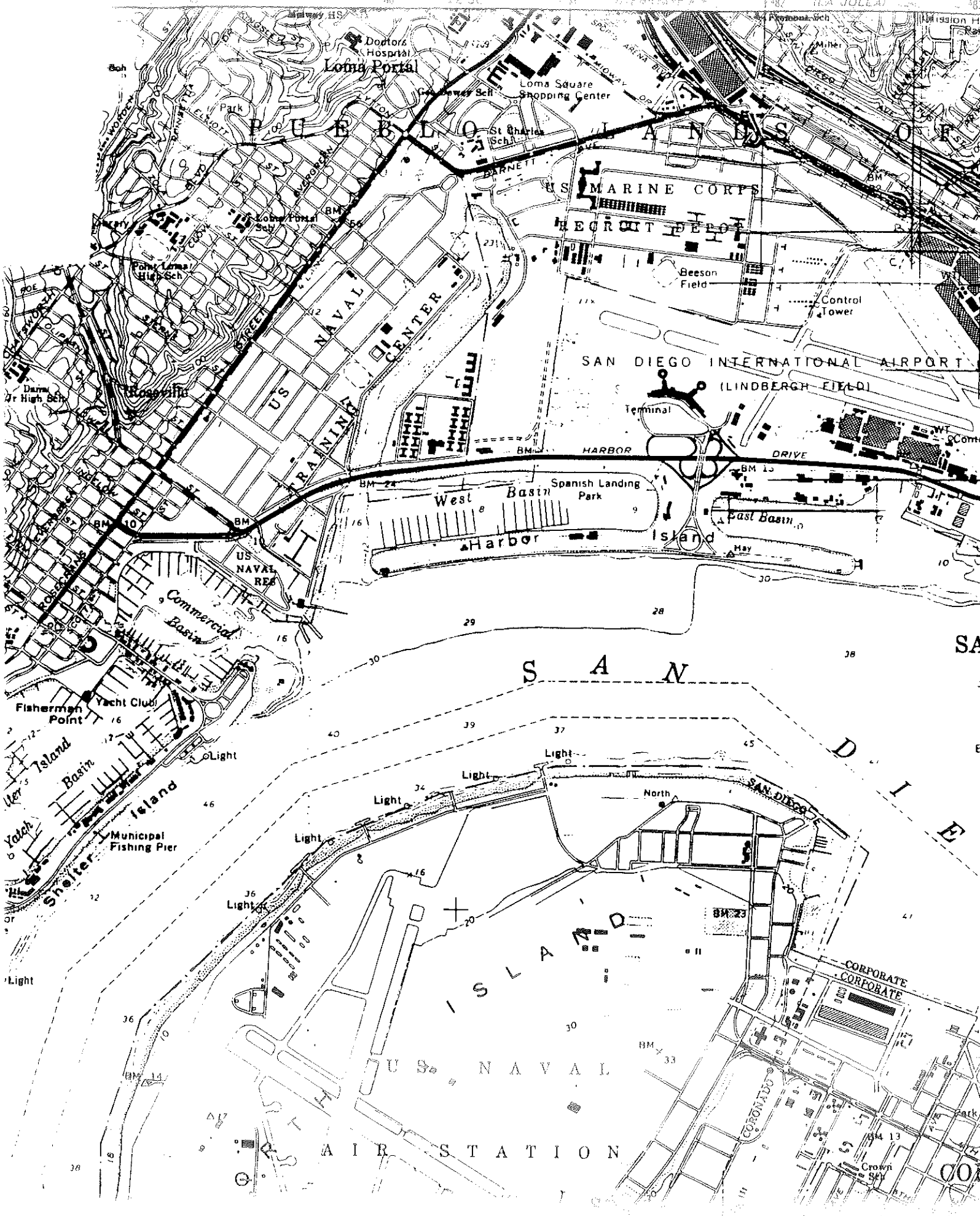
9. PHOTOGRAPH

10. TRANSMITTAL RECORD

	Date		Date
Bldg. Insp.		Site Owner	
Community Dev.		Fire Dept.	
Engineering		Prks. & Pub. Bldg.	
		Planning	

11. NAME AND ADDRESS OF RECORD OWNER

City of San Diego


Loma Portal
Doctors Hospital
Loma Square Shopping Center
PUEBLO
LANDS OF
St Charles Sch
Park
Loma Portal Sch
Point Loma High Sch
Rosecrans
US NAVAL TRAINING CENTER
US MARINE CORPS RECRUIT DEPOT
Beeson Field
Control Tower
SAN DIEGO INTERNATIONAL AIRPORT
(LINDBERGH FIELD)
Terminal
HARBOR DRIVE
West Basin
Spanish Landing Park
East Basin
Harbor Island
US NAVAL REC
Commercial Basin
Fisherman Point
Yacht Club
Shelter Island
Municipal Fishing Pier
Light
North
SAN DIEGO
BM 23
CORPORATE
U.S. NAVAL AIR STATION
CORONADO
Crown Sch

ATTACHMENT C

Department of Parks and Recreation 523 Site Records (2020)

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
DISTRICT RECORD

Primary #
HRI #
Trinomial

***Resource Name or #:** Consolidated Aircraft Plant 2 Historic District

D1. Historic Name: Plant 19

D2. Common Name: Naval Base Point Loma Old Town Campus

***D3. Detailed Description:** (Describe overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of district.)

The Consolidated Aircraft Plant 2 Historic District is located within the Naval Base Point Loma (NBPL) Old Town Campus (OTC) in San Diego County, California. OTC (4297 Pacific Highway, San Diego, California) comprises OTC Site 1 (48.7 acres) and OTC Site 2 (21.8 acres) for a total of 70.5 acres. OTC Site 1 includes three former WWII-era aircraft assembly plants (Buildings 1, 2, and 3) (approximately 310,000 square feet each) that are now used as administrative offices, laboratory, and warehouse spaces. Smaller buildings (including buildings 4, 7, 8, 27, 28, and 34) are also located at OTC Site 1. Paved access roads interweave between the buildings. Paved vehicle parking and materials storage areas are located throughout the remainder of the campus.

(see Continuation Sheet)

***D4. Boundary Description**: (Describe limits of district and attach map showing boundary and district elements.)

The Consolidated Aircraft Plant 2 Historic District is within the boundaries of the OTC, between Pacific Highway to the west and the railroad line to the east.

***D5. Boundary Justification**:

The boundaries of the Consolidated Aircraft Plant 2 Historic District encompass OTC Site 1 and the Taylor Street Complex (TSC); OTC 2 is excluded as it was not directly related to the significant themes of the district.

D6. Significance:

Theme World War II
Area: Aircraft Manufacturing and Homefront/Labor
Period of Significance: 1941-1945
Applicable Criteria: A/1, B/2

Theme Cold War
Area: Manufacturing
Period of Significance: 1950-1988
Applicable Criteria: A/1, B/2

Theme Architecture
Area: Aircraft Manufacturing and Assembly Plants
Period of Significance: 1941
Applicable Criteria: C/3

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the National Register of Historic Places (NRHP) under criteria A, B, and C for its association with WWII and the Cold War within a local San Diego area context/level of significance. The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69).

(see Continuation Sheet)

D7. References (Give full citations including the names and addresses of any informants, where possible.):

KEA Environmental, Inc. (1996, February 19). *Historical and Architectural Assessment of the General Dynamics Facility, Lindbergh Field, Appendix B: General Dynamics Facility Demolition Project, Environmental Impact Report*, Prepared for the San Diego Unified Port District, B-37.

(see Continuation Sheet)

***D8. Evaluators:** Shannon Davis, Sarah Stringer-Bowsher, Marilyn Novell **Date:** March 2020

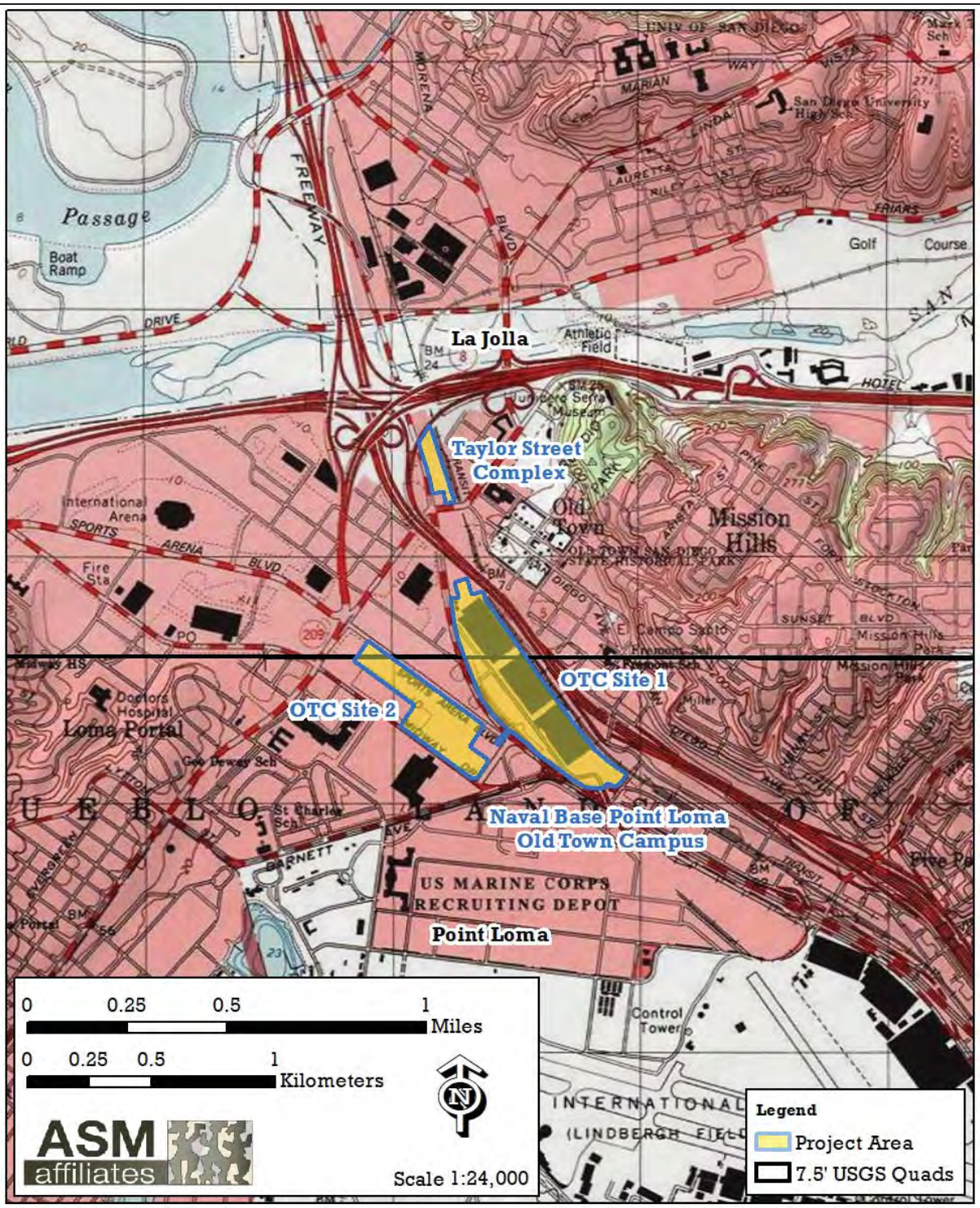
Affiliation and Address: ASM Affiliates, Inc., 20 N. Raymond Ave, Suite 220, Pasadena, California 91103

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or # (Assigned by recorder)** Consolidated Aircraft Plant 2 Historic District

***Map Name:** Location map of Consolidated Aircraft Plant 2 Historic District ***Scale:** 1:24,000 ***Date of Map:** 2020



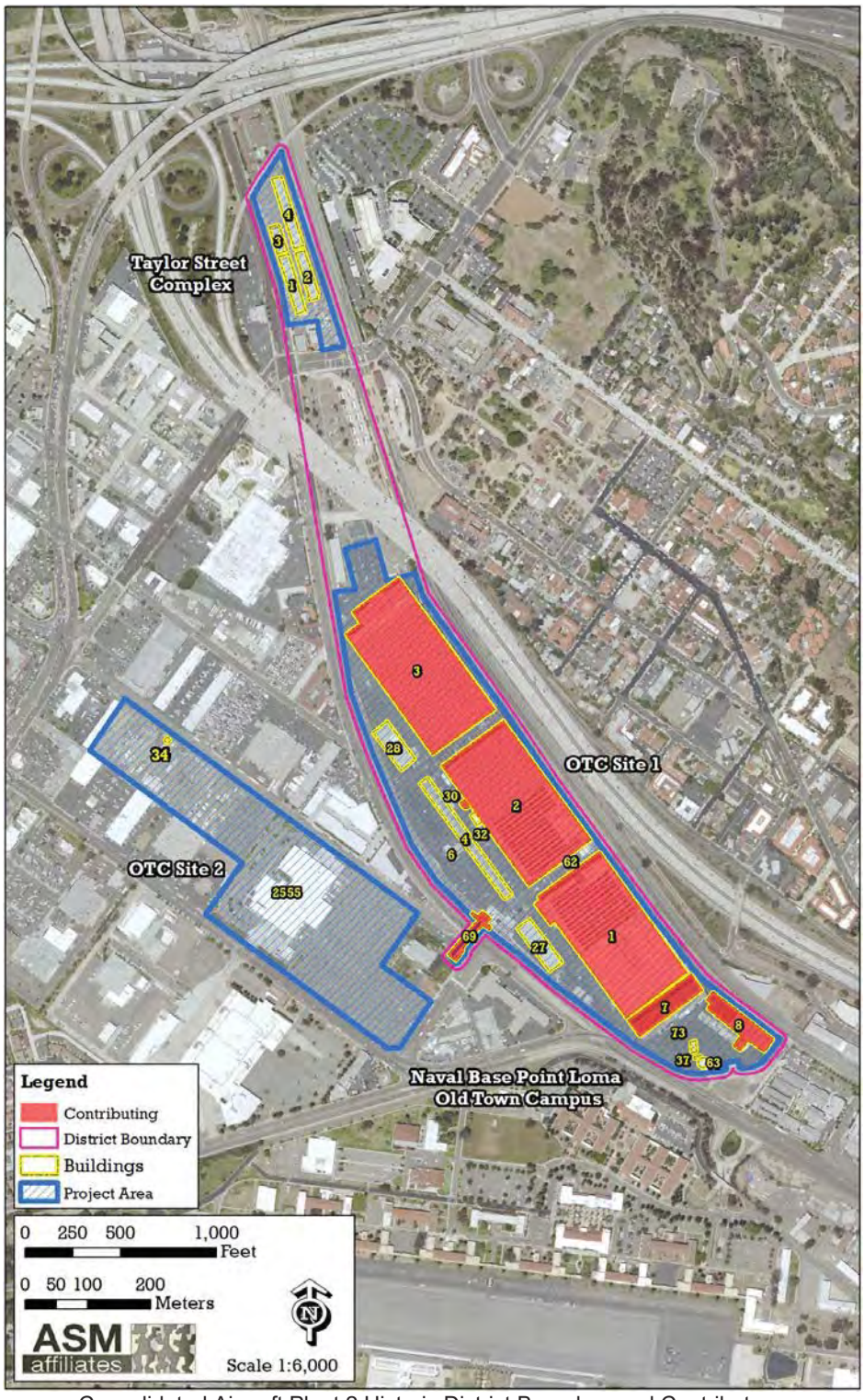
Vicinity map, based on 1996 Point Loma and La Jolla USGS 7.5-minute quadrangle maps.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or # (Assigned by recorder)** Consolidated Aircraft Plant 2 Historic District

***Map Name:** Consolidated Aircraft Plant 2 Historic District Boundary and Contributors ***Scale:** ***Date of Map:** July 2020



Consolidated Aircraft Plant 2 Historic District Boundary and Contributors.

Image 1. Historical Photo of the Crane Monorail, showing trusses between buildings that ran along the northeastern façades of the manufacturing buildings, and also camouflage netting; view toward the south; March 6, 1944. Source: San Diego Air & Space Museum archives.

Image 2. Historical Photo of the Crane Monorail and Buildings 1 through 3, view toward the south; March 6, 1944. *Source: San Diego Air & Space Museum archives.*

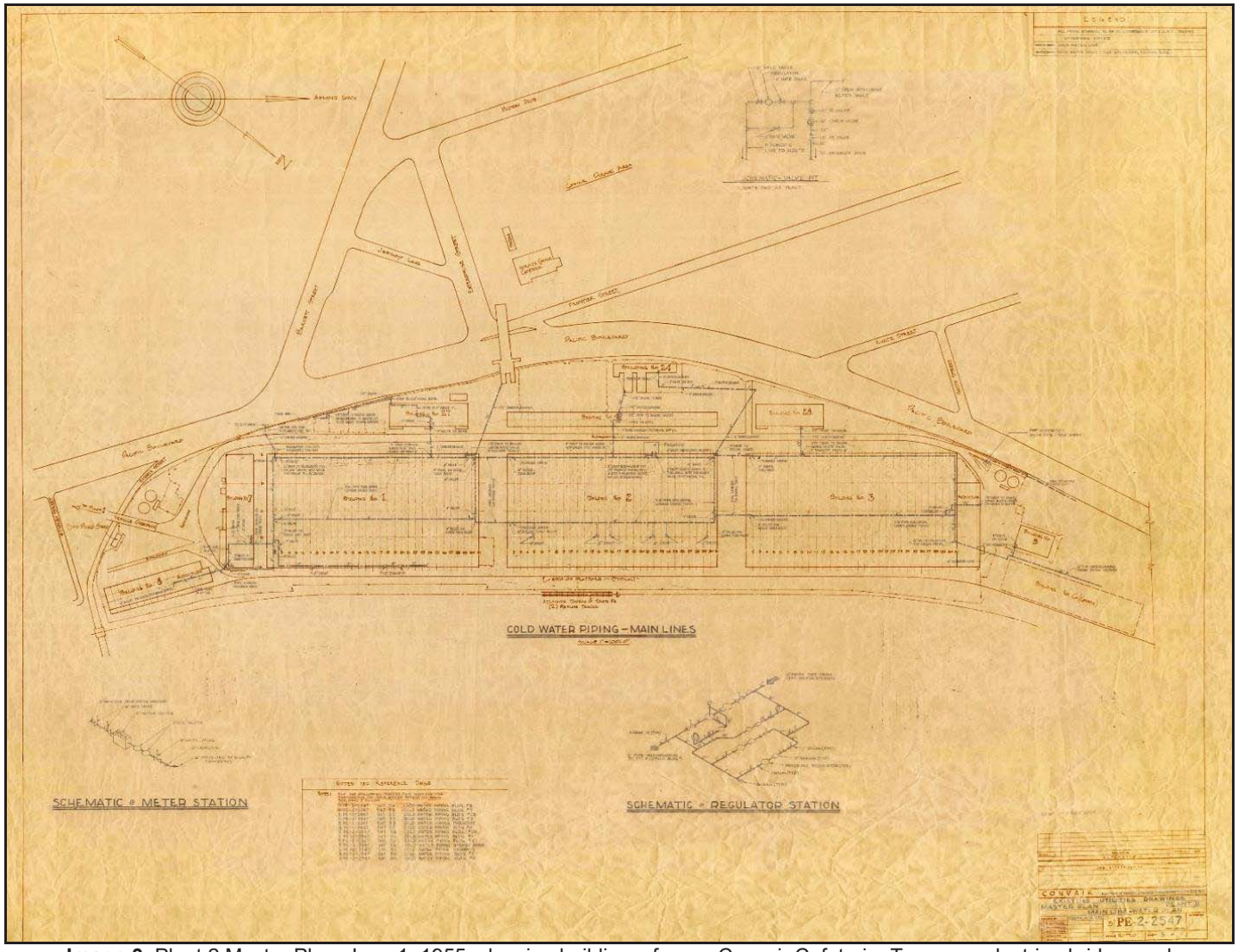


Image 3. Plant 2 Master Plan, June 1, 1955, showing buildings, former Convair Cafeteria, Tavern, pedestrian bridge, and vehicle overpass to Plant 1. Source: Taylor Street Complex Technical Library.

Image 4. Building 3, from Building 4, view toward the north.

Image 5. Building 7, view toward the east.

Image 6. Buildings 1 and 7, view toward the east from the Pedestrian Bridge.

Image 7. Building 3, view toward the north.

***D3. Detailed Description** (continued)

Interstate 5 is located directly north of OTC Site 1 and the Interstate 5/Interstate 8 interchange is located northwest of both OTC Site 1 and TSC. Pacific Highway borders the entire west and southwestern edge of OTC Site 1 and a variety of commercial and industrial properties are located west of (across) Pacific Highway. The Burlington Northern and Santa Fe railroad right-of-way parallels the entire eastern border of OTC Site 1 and is currently used for passenger and commercial rail service as well as local commuter trolley operations. East of Interstate 5 is the Old Town area of San Diego, which consists of light commercial and residential land uses. The Old Town Trolley Station is located north of the facility. Marine Corps Recruit Depot (MCRD) and San Diego International Airport are located to the south-southeast. Downtown San Diego is approximately 2 miles south and Liberty Station and Pechanga Arena (formerly known as the San Diego Sports Arena) are located near the project site.

OTC is located within the City of San Diego "Midway-Pacific Highway" Community Planning Area. The planning area is an urbanized neighborhood situated north of Downtown San Diego, between the Old Town and Point Loma communities. Midway-Pacific Highway encompasses approximately 800 acres of mostly flat land and comprises the central Midway area, the Pacific Highway corridor, and MCRD. The Midway area has a commercial core containing numerous shopping centers, institutional facilities, multifamily residential developments, visitor-oriented uses, and older industrial areas. The area is characterized by wide streets, flat topography, and a varied mixture of auto-oriented large and small commercial developments. The Pacific Highway corridor, located between Interstate 5 on the east and MCRD and San Diego International Airport on the west, contains commercial and industrial uses, multifamily residential developments, and airport-related commercial uses. TSC is located on the western edge of the Old Town Community Plan Area. The planning area is home to the Old Town San Diego State Park, the Birthplace of California.

Assembly Buildings

Buildings 1, 2, and 3 represent the core of Plant 2. All three were constructed based on a single set of architectural drawings and therefore were originally similar if not identical. The buildings exemplify construction techniques and styles that are typical of aircraft plants built in southern California during the years of national mobilization to fight WWII. The buildings resulted from a combination of structural design principles that were adapted to the needs of aircraft manufacturers and local climatic conditions (KEA, 1996, p. B-47). The most prominent features of the three large assembly buildings are the sawtooth roofs and the multi-light steel windows lining the walls and the northern faces of the angular roofs.

The aircraft parts assembly buildings at Plant 2 are all approximately 47 feet high. They consist of open bays framed by rows of steel I-beam support columns. The columns are joined at the top by trusses that support sawtooth roofs with continuous rows of steel sash, multi-pane industrial windows on the north side. These have central panels that pivot to allow ventilation (*Engineering News-Record*, 1940, as cited in KEA, 1996, p. B-47).

The buildings were designed to manufacture sub-assemblies (wings, tail surfaces, etc.) for assembly at Consolidated Vultee Plant 1, which was privately owned and had access to the airfield. The buildings of Plant 2 were designed to provide plenty of head room (36 feet to roof trusses) and about 99 feet of clear span in the main manufacturing bays. The ground floors were designed to carry a comparatively light load, approximately 250 pounds per square foot in the north half of the plant and 125 pounds per square foot on the remainder. The mezzanines were designed to handle only 75 pounds per square foot. The electrical distribution system is carried by underground conduits, which also carry the main steam distribution line. The conduits in general pass under the buildings, making it impossible to maintain or operate utilities unless the plant is under a single management or unless extensive easements are granted. This was designed as a daylight plant, but the windows were covered with blackout paint, and it is estimated that it would cost from $10,000 to $20,000 for removal (Consolidated Vultee, 1947).

A 1946 appraisal of the complex states that steel trusses were in place, carrying a crane monorail along the northeastern façades of Building 7 and running continuously along the northeastern façades of Buildings 1, 2, and 3, part of Building 6 (demolished), and the south façade of Building 3. Intended to carry parts and product between buildings throughout the plant, the monorail measured 3,550 feet in length and was 15 feet wide. Some lengths of the monorail were covered by a roof (Lockwood Greene Engineers, Inc., ca. 1946, p. 22). Historical photos confirm the presence of the crane monorail on the northeast façades paralleling the Santa Fe tracks, as well as several Gantry cranes that passed over the tracks for loading and unloading. With the exception of the truss systems between the main buildings, the crane system at the exterior of the buildings has been mostly removed. Parts of the overhead conveyance system remain at the interiors, including 5-ton capacity cranes and manned cabs.

D6. Significance (continued)

Contributing Resources

ASM recommends that the Consolidated Aircraft Plant 2 Historic District is an NRHP-, CRHR-, and San Diego Register-eligible historic district. The Consolidated Aircraft Plant 2 Historic District is eligible for the NRHP under Criteria A, B, and C for its association with WWII and the Cold War within a local San Diego area context/level of significance. The district is also eligible for the CRHR under Criteria 1, 2, and 3, and the San Diego Register under Criteria A, B, C, D, and F. None of the buildings evaluated in this study are individually eligible under any NRHP, CRHR, or Local Register criteria. Therefore, the Consolidated Aircraft Plant 2 Historic District meets the qualifications as a historic property pursuant to Section 106 (36 CFR 800) of the NHPA and as a historical resource pursuant to CEQA. The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69). The boundaries of the Consolidated Aircraft Plant 2 Historic District are limited to OTC Site 1.

Table 1. Consolidated Aircraft Plant 2 Historic District Contributors

Building No.	Building Name	Current Function	Year Built	Contributor
OTC 1	South Administration/ Warehouse Facility	Operational storage, administrative office, research lab	1941	Yes
OTC 2	Administration/Research Lab Facility	Research lab, RDT&E lab, administrative office	1941	Yes
OTC 3	Former Lockheed Martin Facility	General purpose warehouse, operational storage, exchange retail store, research lab, general purpose auditorium	1941	Yes
OTC 7	Staging Warehouse/ Camouflage Building / Paint Shop	Paint and blasting shop, general purpose warehouse, administrative office	1941	Yes
OTC 8	Warehouse / Drop Hammer Building	Storage	1941	Yes
OTC 30	Storage Facility	Storage facility, administrative	1941	Yes
OTC 69	Pedestrian Bridge	Pacific Highway pedestrian bridge	1942	Yes

The contributing resources were all interrelated components of the manufacturing/assembly plant during WWII and the Cold War and retain integrity to both periods of significance. Non-contributors include OTC Site 1 Buildings 4, 27, 28, 32, 37, 63, and 73, and TSC Buildings 1-4.

Criterion A

Under Criterion A, the Consolidated Aircraft Plant 2 Historic District is recommended eligible under the theme of WWII and subthemes of Aircraft Manufacturing and Homefront/Labor. B-24 heavy bombers and PBY Catalinas played essential roles during WWII and were essential weapons in the success of the Allies in both the Pacific and European war theaters. They were designed in San Diego at Consolidated Aircraft and constructed here and at other plants in the U.S. Women comprised a significant portion of the workforce at the plant (40 percent at the peak in 1943), part of the nationwide utilization of women on the homefront during WWII. The period of significance is 1941–1945, starting with the completion of the plant in October of 1941, and ending in 1945 when production of WWII-era aircraft ended at Plant 2.

Both Plant 2 and Plant 1 were integral to the production process that began with parts assembly at Plant 2 and completed at Plant 1 during the WWII-era. As Plant 1 has been demolished, Plant 2 contains the only extant physical manufacturing components of the larger Consolidated Aircraft complex.

The seven contributing resources to the historic district are OTC Site 1 Buildings 1, 2, 3, 7, 8, 30, and the Pedestrian Bridge (Facility 69) (see Table 7.1-1). These contributing resources were all interrelated components of the manufacturing/assembly plant during WWII and retain integrity to that period of significance (see Section 7.1.5). Non-contributors include those building from the WWII-era that no longer retain integrity (OTC Site 1 Buildings 4, 27, and 28, and TSC Buildings 1–4), and buildings constructed after the end of period of significance (OTC Site 1 Buildings 32, 37, 63, and 73).

D6. Significance (continued)

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for the NRHP under Criterion A under the theme of the Cold War and subtheme of Manufacturing. During the plant's association with the Cold War, numerous significant aircraft, orbiters, and missiles were manufactured and/or assembled here including: Terrier Surface-to-Air Missile (SAM), F-102 and F-106 interceptor aircraft; Atlas and Centaur tanks; mid-fuselages of orbiters Enterprise, Columbia, Challenger, Discovery, and Atlantis; and GLCM, TEL, and LCC. Terrier Surface-to-Air Missile (SAM) prototypes developed helped lay the groundwork for U.S. Naval SAM advancements (1950-1953). Delta-winged F-102 and F-106 interceptor aircraft provided the Air Force with critical Cold War air support and advanced wing design (1956-1988). Atlas and Centaur tanks housed the energy that propelled successful space launch vehicles (1960-1992). Since Plant 1 and the Kearny Mesa Plant no longer exist, Consolidated Aircraft Plant 2 Historic District is the last Cold War Atlas and Centaur production site. Orbiter mid-fuselages for the Enterprise, Columbia, Challenger, Discovery, and Atlantis housed the payloads necessary for important experiments and essential satellite launches (1974–1987). The effectiveness of the GLCM TELs and GLCM LCCs produced for Soviet IRBM deterrence (1980–1987) is evidenced in the 1988 Soviet Union inspection of the plant to confirm that production of GLCM TELs and LCCs at the plant had ended. The period of significance is 1950–1988, beginning with the first significant Cold War-era manufacturing (prototype of the Terrier SAM) and ending in 1988 when Cold War-era production of GLCM TELs and GLCM LCCs ceased at the facility and the Air Force declared it excess property. The contributing resources to the district for this period of significance are those that were all interrelated components of the manufacturing/assembly plant during the Cold War and retain integrity to both periods of significance. Non-contributors include those buildings from the Cold War-era that no longer retain integrity (OTC Site 1 Buildings 4, 27, and 28, and TSC Buildings 1–4), and buildings that were not integral to the assembly process (OTC Site 1 Buildings 32, 37, 63, and 73).

Criterion B

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the NRHP under Criterion B under the theme of WWII and sub-theme of Aircraft Manufacturing for its association with Reuben H. Fleet. Fleet was directly responsible for the expansion of the aircraft manufacturing industry in San Diego and made significant contributions to the innovations and growth of aerospace technology in the U.S.

Fleet founded Consolidated Aircraft in 1923 and moved the company to San Diego in 1935 where it became the leading U.S. manufacturer of military training planes. Long-term success of Consolidated Aircraft is the direct result of Fleet's ingenuity and early entrance into both military and commercial aircraft. Fleet is a member of the International Air & Space Hall of Fame and National Aviation Hall of Fame.

Manufacturing sites with known direct associations with Fleet were the Curtiss plant on Elmwood Avenue in Buffalo, New York; Consolidated Aircraft Plant 1; and Consolidated Aircraft Plant 2. Consolidated Aircraft Plant 1 (previously recommended eligible under Criterion B) was demolished in 1996/1997. The Curtiss plant was demolished in March 2019. Consolidated Aircraft Plant 2 Historic District is therefore the last remaining manufacturing property associated with Fleet's productive career, and therefore eligible under Criterion B for association with Fleet within the local San Diego context.

Comparison of the Consolidated Aircraft Plant 2 Historic District to other extant properties associated with Fleet supports its eligibility under Criterion B. His primary residence during the years of his productive career in San Diego was demolished. His home at 565 Gage Lane remains, however, he had stopped working for Consolidated-Vultee Aircraft by the time he moved to Gage Lane and therefore his association with that property post-dates his significant accomplishments (NPS, 1991, p. 15). Properties at Mather AFB might also be eligible for association with Fleet's early career prior to Consolidated. San Diego's Fleet Science Center was named in honor of him but is not a comparable property as it is not associated with Fleet's productive career and commemorative properties are generally not eligible (NPS, NRHP, n.d., p. 15). The period of significance under Criterion B is 1941–1945, starting with Fleet's association with the property during the last years of his productive career and ending in 1945 when his association with the property ended.

Criterion C

The Consolidated Aircraft Plant 2 Historic District is also recommended eligible for the NRHP under Criterion C for the WWII theme of Architecture, with a sub-theme of Aircraft Manufacturing and Assembly Plants. The period of significance under Criterion C is 1941, the year of construction for the plant. The contributing resources to the historic district under Criterion C are limited to Buildings 1, 2, 3, 7, and 8. The large-scale design of Buildings 1, 2, 3, 7, and 8 represents a property type developed during the Industrial Revolution, which suited the massive industrial construction program that the nation's private manufacturers used to produce military aircraft essential to the war effort during WWII. The plant buildings were among the last manufacturing buildings built in the United States or Europe that represented the value of plentiful natural light and air in an industrial setting.

D6. Significance (continued)

The buildings of the Consolidated Aircraft Plant 2 Historic District also represent the company's progress in the growth of "physical bigness" since it began airplane production in 1923 (Maloney, 1941). The major manufacturing buildings at Plant 2 represent a distinctive type of permanent military architecture seen in aircraft production and assembly installations with massive assembly line buildings that allowed aircraft assembly to occur indoors. Soon after, the advent of windowless "blackout" buildings became the preferred method of construction for large-scale military production facilities, as well as for private industrial buildings enabled by advances in fluorescent lighting and air conditioning.

The major buildings of the plant were designed by architects Taylor and Taylor, an architectural firm based in Los Angeles. The architectural plans are signed by both Edward Cary and Ellis Wing Taylor. The firm was prolific in designing and engineering institutional and industrial properties; its most notable projects drew on historical revival styles. However, there is not sufficient evidence that the firm of Taylor and Taylor should be considered a master architect. The historic district is the only remaining industrial plant designed by Taylor and Taylor as other plants designed by the firm have been demolished, including the previously adjacent Consolidated Plant 1 and the even larger, more ambitious project at Douglas Aircraft Company plant in Long Beach. However, neither Plant 1 nor the Douglas plant were recommended eligible for NRHP listing under Criterion C nor did either documentation report recognize the firm or architects as masters (KEA, 1996, Appendix B; HAER No. CA-315, ca. 1968).

Edward Cray Taylor has been recognized individually as a "a prominent regional master architect" for his design of Glassell Park Elementary School (1924) in the NRHP nomination for that property in Los Angeles, California (Smith and Gallegos, 2006). However, the nomination only noted Edward as the master, not the firm, and the school was eligible under Criterion C for the Streamline Moderne style. The firm has not been recognized by any southern California city which keeps lists of master architects. The Los Angeles Conservancy does not include the firm on their list of Architect Biographies (Los Angeles Conservancy, 2020). The firm was considered for inclusion on the Beverly Hills List of Master Architects, for its design of the Horace Mann Elementary School, also Spanish Colonial Revival style. The firm, as well as the two individual architects, were tentatively listed as engineers but were ultimately removed from the list (City of Beverly Hills, 2015). An evaluation of the Ventura Water Treatment Plant, designed and engineered by Taylor and Taylor with elements of Spanish Colonial Revival style (a good example of their work), concluded that "[n]o information was located to suggest that the architects should be regarded as 'masters,' in terms of the NRHP criteria" (San Buenaventura Research Associates, 2002:10). No contemporary articles critiquing the firm's work were located. The firm is listed in the current Pacific Coast Architects Database, but with very minimal information, atypical for master architects (PCAD, 2020). Gebhard and Winter only note one of their buildings in their widely respected *Architectural Guidebook to Los Angeles*, in stark contrast to the way in which that scholarly source addresses the buildings of well-established master architects (Gebhard and Winter, 2003). Therefore, the district is recommended not eligible for association with master architects under Criterion C.

Under the Cold War period and themes, the district is not recommended eligible under Criterion C. The buildings were not appreciably altered to meet later manufacturing needs, and do not reflect specific property types or methods of construction associated with the Cold War.

Criterion D

The Consolidated Aircraft Plant 2 Historic District is recommended not eligible under Criterion D. It is a common property type that does not have the potential to provide information about history or prehistory that is not available through historic research.

D6. Significance (continued)

Assessment of Integrity

In order to be eligible for listing in the NRHP, the Consolidated Aircraft Plant 2 Historic District must also retain sufficient integrity to convey its significance under Criteria A, B, and C from the WWII (1941–1945) and Cold War (1950–1988) periods. The district is in its original **location**, and as such this aspect of integrity is high. The district retains sufficient integrity of **design, materials, and workmanship**. The architectural elements that originally created the form, plan, space, structure, and style of the property have only experienced minor alterations. For the contributing resources to the district, most of the alterations that have occurred are removable interior modifications, and some removable exterior alterations, most notably the solar shields to the windows. The enormous open spaces within the production buildings are still evident, and throughout the long period of significance provided the flexibility essential to efficiently respond to changing requirements. Although there are several non-contributors, their basic form and scale are unchanged and as such they are not deterrents or intrusions to the spatial relationship of the buildings or open space, and as such, do not detract from the setting or feeling of the district. The **setting** outside of the district has not been significantly altered since the end of the Cold War period of significance; there has been some intrusion to the setting from the WWII period specifically Interstate 5 to the east and mid-twentieth century construction to the west. Finally, because of the generally high integrity of location, design, setting, materials, and workmanship, Consolidated Aircraft Plant 2 Historic District conveys a strong sense of feeling and association, or a sense of history associated with the significant WWII and Cold War themes. Few examples of WWII-era aircraft assembly complexes exist in southern California, and as such the rarity of this property type allows for some loss of integrity (NRHP, 1997, p. 47). However, the overall integrity of the district and its contributing resources is high.

Character-Defining Features

The character-defining features of the Consolidated Aircraft Plant 2 Historic District include the following:

- massive size of OTC Site 1 Buildings 1, 2, and 3
- rectangular form and horizontal orientation of all the buildings
- broad expanses of steel sash, multi-pane industrial windows
- corrugated iron cladding
- high sawtooth roofs with skylights
- steel trusses between buildings
- remaining segments of monorail system
- interior overhead crane systems
- wide expanses of interior space
- views of the buildings from the immediate setting

Individual Eligibility

Each of the buildings and structures within the Consolidated Aircraft Plant 2 Historic District was also considered for individual eligibility. However, none of the buildings are individually eligible under any NRHP criteria. Under Criterion A, because of the nature of the work that was historically conducted at OTC Site 1 and TSC, none of the buildings is a good individual representation of the important themes with which it is associated. Similarly, under Criterion B, Fleet's association is with the complex as a whole rather than a specific individual building. Under Criterion C, the buildings of the district are a better collective representation of the themes and property types under Architecture, and as works of Taylor and Taylor, than as individual representations. The Pedestrian Bridge was possibly designed by master architect Richard Requa, but it is not recommended eligible as a good example of the works of a master because his association could not be definitely confirmed and there are other notable properties that are better examples of his work including the 1935–1936 California Pacific International Exposition buildings in Balboa Park and the NRHP-listed Ford Building. Under Criterion D, none of these building or structures have the potential to provide information about history or prehistory that is not available through historic research.

California Register of Historical Resources

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the CRHR under Criteria 1, 2, 3, and 4, with the same contributing and non-contributing resources, following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP criteria.

D6. Significance (continued)

San Diego Register of Historical Resources

The Consolidated Aircraft Plant 2 Historic District is recommended eligible for the San Diego Register under Criteria A and B, with the same contributing and non-contributing resources, following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP Criteria A and B. It is eligible under San Diego Register Criterion C following the reasons outlined in the preceding section regarding eligibility under the comparable NRHP Criterion C.

The Consolidated Aircraft Plant 2 Historic District is also eligible under Criterion F, as a finite group of resources related to one another in a clearly distinguishable way and in a geographically definable area which have historical interest. The Consolidated Aircraft Plant 2 Historic District is not recommended eligible under Criterion E, as it has not been previously listed or officially determined eligible by the NPS for listing in the NRHP or CRHR.

D7. References (continued)

Consolidated Vultee. (1947, April 30) NARA, RG 269 Records of the General Services Administration, Region 9. Office of the Regional Counsel. Southern California Real Property Disposal Case Files, 1946-1962. National Archives Identifier 636808. Consolidated Vultee Aircraft Corp., Box 38, San Diego California. Plancor 20. War Assets Administration, Memo, Review of Tentative Determination of Fair Value, Consolidated Vultee Corporations, Plancor 20 (Residual as of Feb. 11, 1947).

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D

Other Listings
Review Code Reviewer Date

Page 1 of 6 ***Resource Name or #:** Building 1
P1. Other Identifier: Navy Old Town Campus, Assembly Building 1
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 4301 Pacific Highway City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481700.27 mE/ 3623273.28 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Southeast of Building 2, northwest of Building 7, northeast of Building 27

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 1 is one of three similar assembly buildings at Navy Old Town Campus (OTC). It is constructed of steel and concrete, with corrugated iron cladding and have overhead crane systems using 10 2.5-ton-capacity and 25-ton-capacity cab hoist units. Pipe tunnels were installed throughout the plant for conveying steam, air, water, and gas between the various buildings, and the roofs were designed to support 5-ton monorail equipment. Pipe downspouts on each of the northwest and southeast façades correspond to the lowest points of the roof. The buildings have two levels of mezzanine floors, in two sections at each level. They are constructed of wood on steel beams supported on steel columns and enclosed by steel and wire mesh guard rails. Five 2-ton hydro-electric freight elevators serve the mezzanine levels and sets of open metal stairs travel between mezzanines. Between the mezzanines, three sections remain open for the full height of the buildings. The building has 31 sawtooth sections and 30 bays between columns on the interior. Each element of the sawtooth is glazed on the north side with multi-light steel windows. A central portion of each sash is connected to an electrical crank system that operates several windows simultaneously. Solar panels are located on the unglazed parts of the sawtooth roofs of the northwest half of Building 1.

(continued on page 2)

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building; HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Southwest Façade.
View toward the east.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus.* Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***P3a. Description** (continued from page 1)**:**

The building has full-height steel hangar-type doors that slide on overhead and in-ground rails. The building has three continuous rows of windows spanning most of the northeast and southwest façades. At the interior, the original multi-light partially operable steel windows are intact. Almost all of the windows have been covered on the exterior with a black opaque film, which emphasizes the horizontal aspect of the continuous rows. The rows of windows correspond to the three levels at the center of the interior, defined by a ground floor and two mezzanines above. The windows are multi-light steel sash with generally three-by-two-light pivoting central sections that are manually operated. Although the windows have been covered with opaque solar sheets on the exterior, the windows remain intact. A truss system immediately above the hangar-type sliding doors connects buildings 1 and 2.

Building 1 is located approximately 150 feet northeast of Pacific Highway. According to building records, it measures 754 by 446 feet. The northeast and southwest exterior walls have three continuous rows of vented steel sash. At the southeast façade is a mix of ribbons of windows and multi-leaved hangar-type doors. Hangar-type sliding doors of steel construction extend along the entire northwest end and part of the southwest side of the building. A story-and-a-half shed addition is at the north end of the southwest façade. At the northwest façade, a newer aluminum-and-glass entry has been constructed at the center of one of the hangar-type doors. Double sliding glass doors with aluminum frames have lights on the sides and a transom above. The entry is marked by a high aluminum-and-glass grid that extends almost to the bottom of the truss structure joining buildings 1 and 2.

At the interior are two mezzanines 40 feet wide and the full length of building, connected by a mezzanine 50-feet wide at the southeast end. Mezzanines are located at 11.5 feet and 23 feet above ground floor. The space within the building has been partially filled with prefabricated one- or two-story corrugated metal buildings with very slightly sloped gabled roofs and other “buildings” of various materials, sizes, and types. Most of the mezzanine space is filled with offices, either extending to the edge of the mezzanine or within a few feet to allow space for a corridor. The walls are composed of wallboard with horizontally oriented two-part aluminum windows.

An entrance to the Program Executive Office at the southwest façade consists of a set of glass doors in metal frames with side lights and transoms below a flat canopy. At the interior is a lobby and finished offices with wood paneling and ceiling lights behind a curved metal screen.

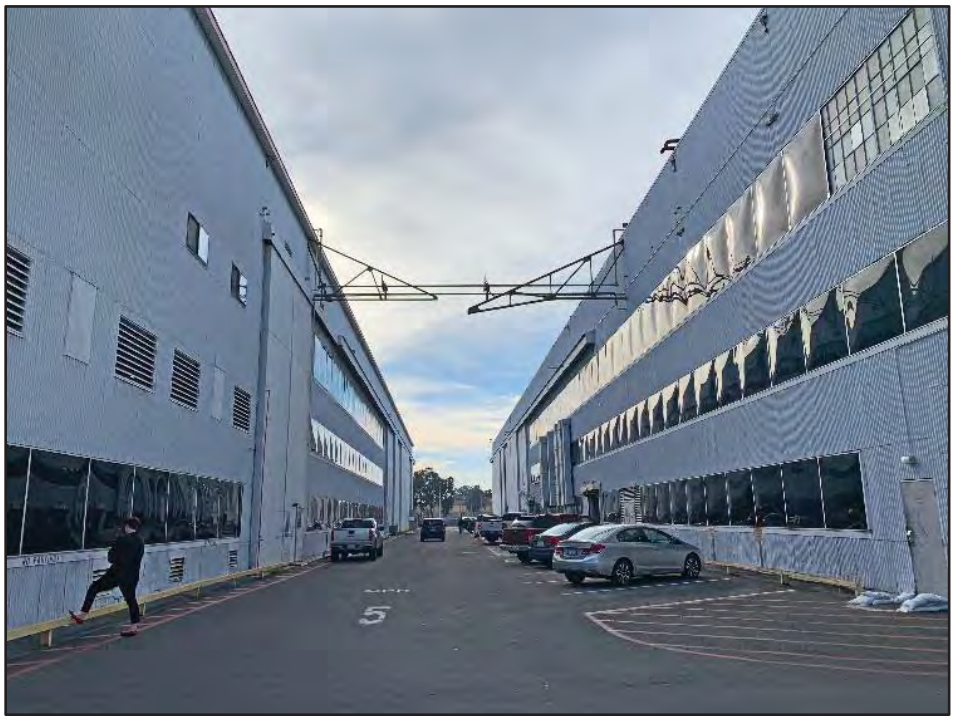


Image 1. Northwest Façade (right) and Building 7, Southeast Façade (left). View toward the southwest.

Image 2. Northwest Façade (left) and Building 2, Southeast Façade (right). View toward the southwest.

Image 3. Building 1 Interior, Showing Sawtooth Roof Window Arrangements and Suspended Lighting Fixtures. View toward the northwest.

Image 4. Building 1 Interior, Detail of Window Operating Mechanisms. View toward the west.

Image 5. Interior, with Detail of Underhung Crane and Suspended Hoist Mechanism. View toward the northwest.

Image 6. Building 1 Interior, Third Floor Mezzanine. View toward the west.

Image 7. Building 1 Interior, Crew-operated Cab and Hangar-type Doors. View toward the southeast.

Image 8. Building 1 Interior, Corrugated Two-story Building Roof.
Viewed from the third-floor mezzanine toward the northwest.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D

Other Listings
Review Code Reviewer Date

Page 1 of 5 ***Resource Name or #:** Building 2
P1. Other Identifier: Navy Old Town Campus, Assembly Building 2
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma & La Jolla **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 2 Pacific Highway City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481542.08 mE/ 3623273.28 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Between Building 3 to the northwest and Building 1 to the southeast

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 2 is one of three similar assembly buildings at Navy Old Town Campus (OTC). It is constructed of steel and concrete, with corrugated iron cladding and have overhead crane systems using 10 2.5-ton-capacity and 25-ton-capacity cab hoist units. Pipe tunnels were installed throughout the plant for conveying steam, air, water, and gas between the various buildings, and the roofs were designed to support 5-ton monorail equipment. Pipe downspouts on each of the northwest and southeast façades correspond to the lowest points of the roof. The buildings have two levels of mezzanine floors, in two sections at each level. They are constructed of wood on steel beams supported on steel columns and enclosed by steel and wire mesh guard rails. Five 2-ton hydro-electric freight elevators serve the mezzanine levels and sets of open metal stairs travel between mezzanines. Between the mezzanines, three sections remain open for the full height of the buildings. The building has 31 sawtooth sections and 30 bays between columns on the interior. Each element of the sawtooth is glazed on the north side with multi-light steel windows. A central portion of each sash is connected to an electrical crank system that operates several windows simultaneously. Solar panels are located on the unglazed parts of the sawtooth roofs of the northwest half of Building 2.

(continued on page 2)

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building; HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Northeast Façade.
View toward the west.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus.* Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***P3a. Description** (continued from page 1)**:**

The building has full-height steel hangar-type doors that slide on overhead and in-ground rails. The building has three continuous rows of windows spanning most of the northeast and southwest façades. At the interior, the original multi-light partially operable steel windows are intact. Almost all of the windows have been covered on the exterior with a black opaque film, which emphasizes the horizontal aspect of the continuous rows. The rows of windows correspond to the three levels at the center of the interior, defined by a ground floor and two mezzanines above. The windows are multi-light steel sash with generally three-by-two-light pivoting central sections that are manually operated. Although the windows have been covered with opaque solar sheets on the exterior, the windows remain intact. A truss system immediately above the hangar-type sliding doors connects buildings 1 and 2.

Building 2 is located approximately 350 feet northeast of Pacific Highway and 100 feet southeast of Building 1, to which it is joined by an overhead system of trusses. Building 2 is joined to Building 3 to the northwest with a similar system of trusses. According to property records, Building 2 measures 752 feet by 403 feet. Sliding hangar-type doors extend along the entire northwest façade. There are three sets of hangar-type sliding doors at the northeast façade interrupting the rows of windows. The sawtooth pattern is absent above the doors. At the southeast façade are an exterior steel stairway with landings and doors at levels 2 and 3 and a shed-roofed corrugated metal addition with roll-up vehicle doors and no windows. At the northwest façade is a series of hangar-type doors, along with a single-story corrugated addition and a three-level metal staircase. The single-story Building 30 adjoins Building 2 at the southwest façade. Also, at the southwest façade is a newer central pedestrian entrance composed of a set of double metal doors with sidelights and sheltered by a metal canopy with heavy metal fascia. A concrete walkway forming the approach is bracketed by three concrete planters on each side, each containing a palm tree. A concrete wall creating an enclosure adjoins the building at the north end of the southwest façade.

On the ground floor of the building interior, the central corridor is flanked by fencing. Several “buildings within buildings” have been constructed on the ground floor. In addition to the original mezzanines, newer ones have been added at the ground floor. Much of the ground floor appears to be used for warehousing. The third-floor mezzanine is completely open.

Image 1. Building 2, Exterior of the Northwest and Southwest Façades
View toward the east.

Image 2. Building 2, Southwest Façade. *View toward the north.*

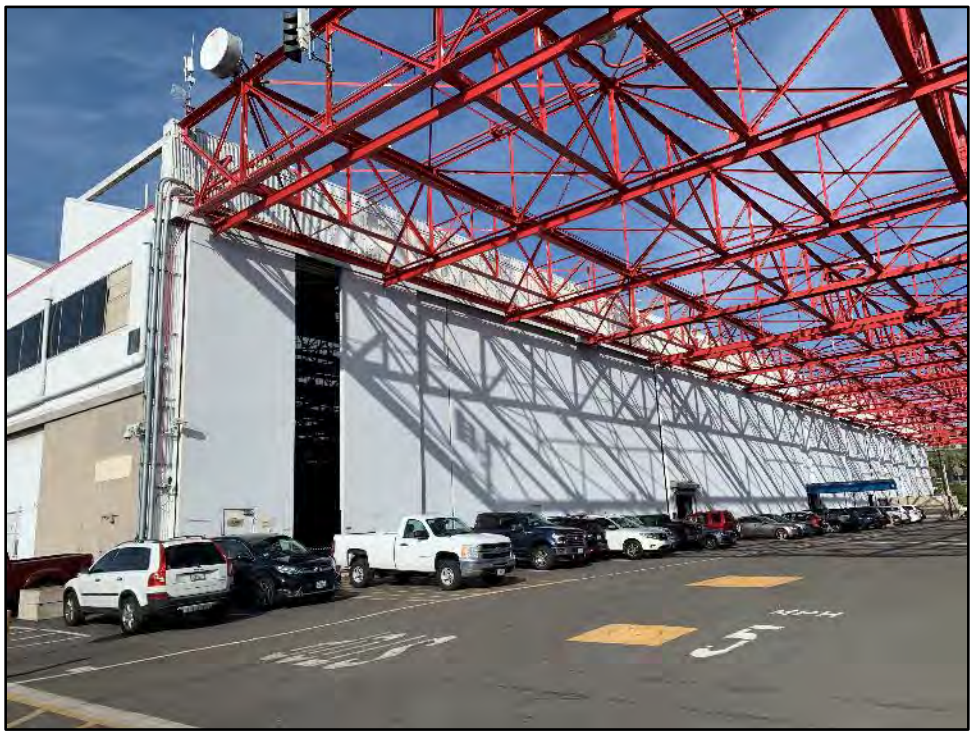


Image 3. Building 2, Southeast Façade.
View toward the north.

Image 4. Building 2, Crane Hoist. View toward the northeast.

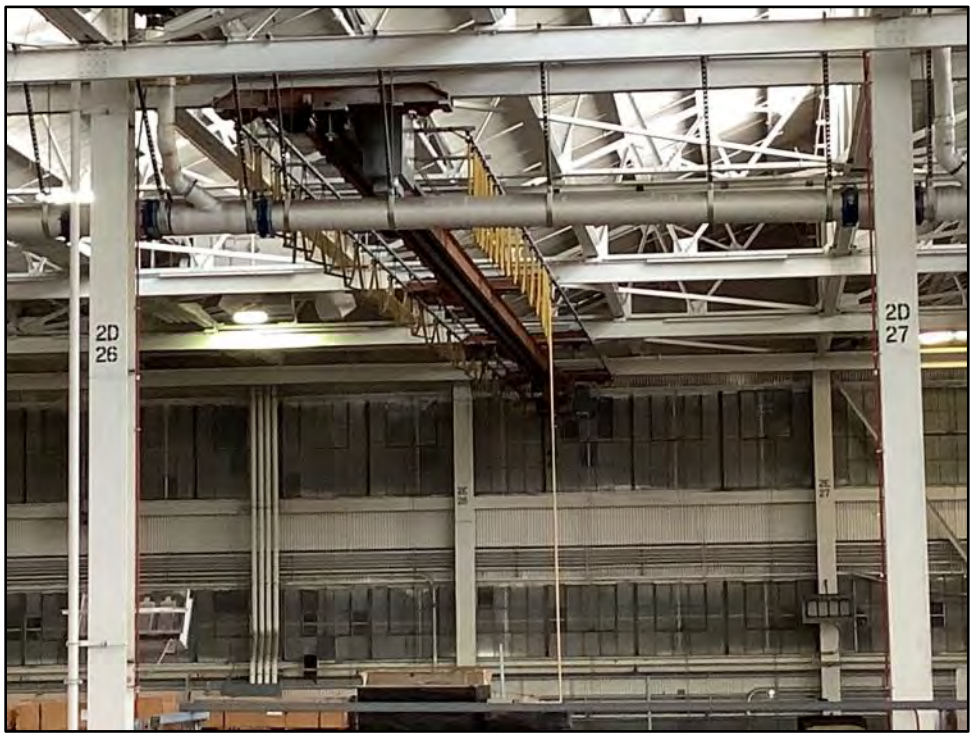


Image 5. Building 2, Intact Typical Side Wall Steel Windows.
View toward the southwest.

Image 6. Building 2 interior, roof of corrugated building within the main building. View toward the southeast from the third-floor mezzanine.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D
Other Listings
Review Code Reviewer Date

Page 1 of 5 ***Resource Name or #:** Building 3
P1. Other Identifier: Navy Old Town Campus, Assembly Building 3
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma & La Jolla **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 3 Pacific Highway City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481389.15 mE/ 3623704.34 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Northwest of Building 2

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 3 is one of three similar assembly buildings at Navy Old Town Campus (OTC). It is constructed of steel and concrete, with corrugated iron cladding and have overhead crane systems using 10 2.5-ton-capacity and 25-ton-capacity cab hoist units. Pipe tunnels were installed throughout the plant for conveying steam, air, water, and gas between the various buildings, and the roofs were designed to support 5-ton monorail equipment. Pipe downspouts on each of the northwest and southeast façades correspond to the lowest points of the roof. The buildings have two levels of mezzanine floors, in two sections at each level. They are constructed of wood on steel beams supported on steel columns and enclosed by steel and wire mesh guard rails. Five 2-ton hydro-electric freight elevators serve the mezzanine levels and sets of open metal stairs travel between mezzanines. Between the mezzanines, three sections remain open for the full height of the buildings. The building has 31 sawtooth sections and 30 bays between columns on the interior. Each element of the sawtooth is glazed on the north side with multi-light steel windows. A central portion of each sash is connected to an electrical crank system that operates several windows simultaneously. Solar panels are located on the unglazed parts of the sawtooth roofs of the northwest half of Building 3.

(continued on page 2)

***P3b. Resource Attributes:** (List attributes and codes) HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Southwest Façade.
View toward the northeast.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus*. Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***P3a. Description** (continued from page 1)**:**

The building has full-height steel hangar-type doors that slide on overhead and in-ground rails. The building has three continuous rows of windows spanning most of the northeast and southwest façades. At the interior, the original multi-light partially operable steel windows are intact. Almost all of the windows have been covered on the exterior with a black opaque film, which emphasizes the horizontal aspect of the continuous rows. The rows of windows correspond to the three levels at the center of the interior, defined by a ground floor and two mezzanines above. The windows are multi-light steel sash with generally three-by-two-light pivoting central sections that are manually operated. Although the windows have been covered with opaque solar sheets on the exterior, the windows remain intact.

The third assembly building is located 100 feet northwest of Building 2, to which it is joined by an overhead system of trusses. According to property records, Building 3 measures 829 feet by 403 feet. Similar to buildings 1 and 2, three sets of hangar-type doors interspersed with continuous rows of windows are on the northeast façade near the railroad easement. Hangar-type doors extend across the full width of the southeast façade. The façade has been altered toward the north by a newer entrance consisting of a double set of glazed doors sheltered by a canvas canopy and a three-level exterior staircase. A painted sign on the canopy reads “Office of the Chief Engineer.” At the northwest façade are two single-story corrugated shed additions, two single-story vehicle doors, and irregular rows of windows. There are no hangar-type doors on the northwest façade.

The configuration of the interior resembles buildings 1 and 2, with mezzanines at two levels. The sawtooth windows and the operating mechanism are clearly visible from the highest mezzanine. Although some of the mezzanines and the ground floor have been filled with offices, much of the space remains open.

Image 1. Building 3, the Northwest Façade
View toward the southeast.

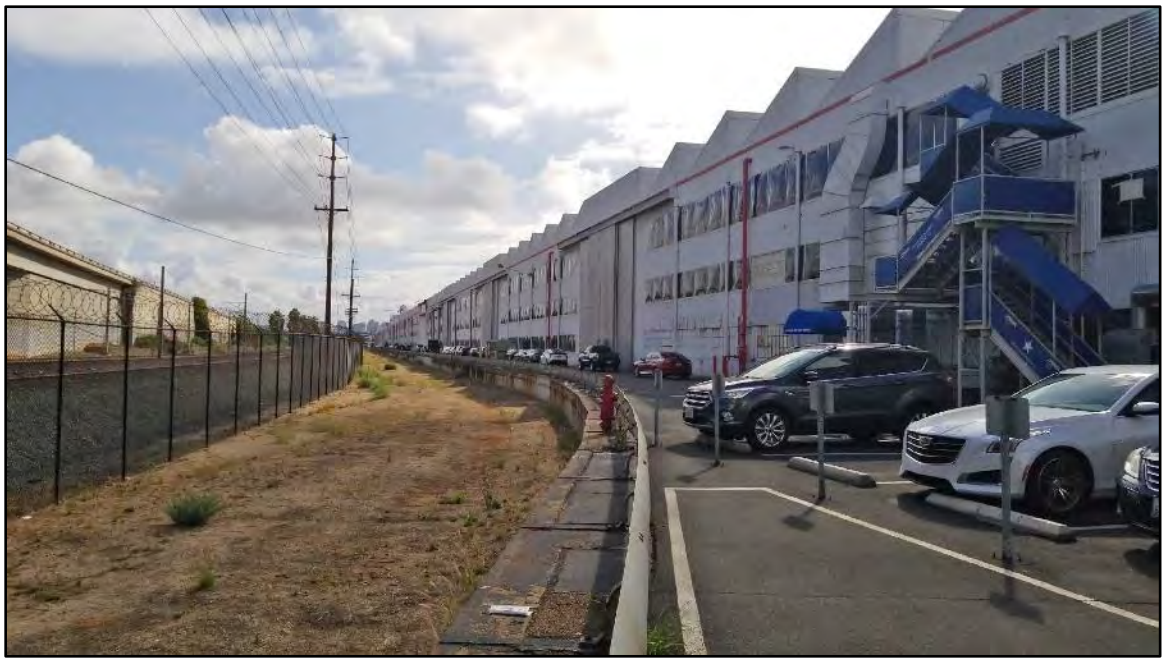


Image 2. Building 3, the Northwest Façade. View toward the south.

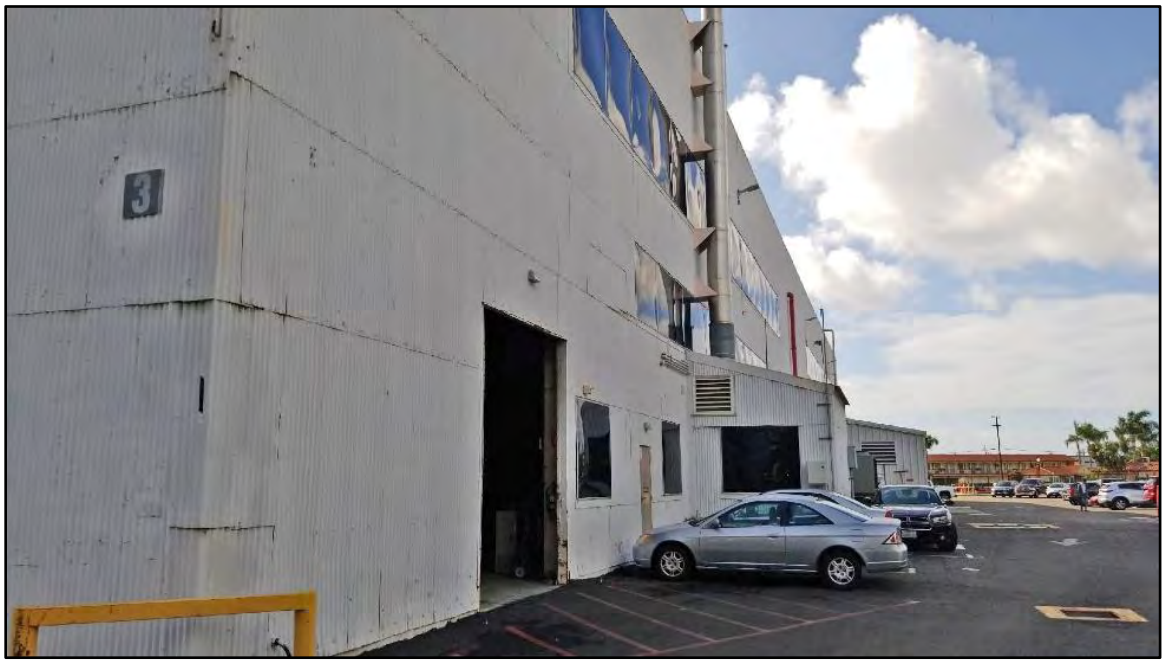


Image 3. Building 3, the Northwest Façade. View toward the west.

Image 4. Building 3 Interior, Showing Sawtooth Windows from the Highest Mezzanine. View toward the northeast.

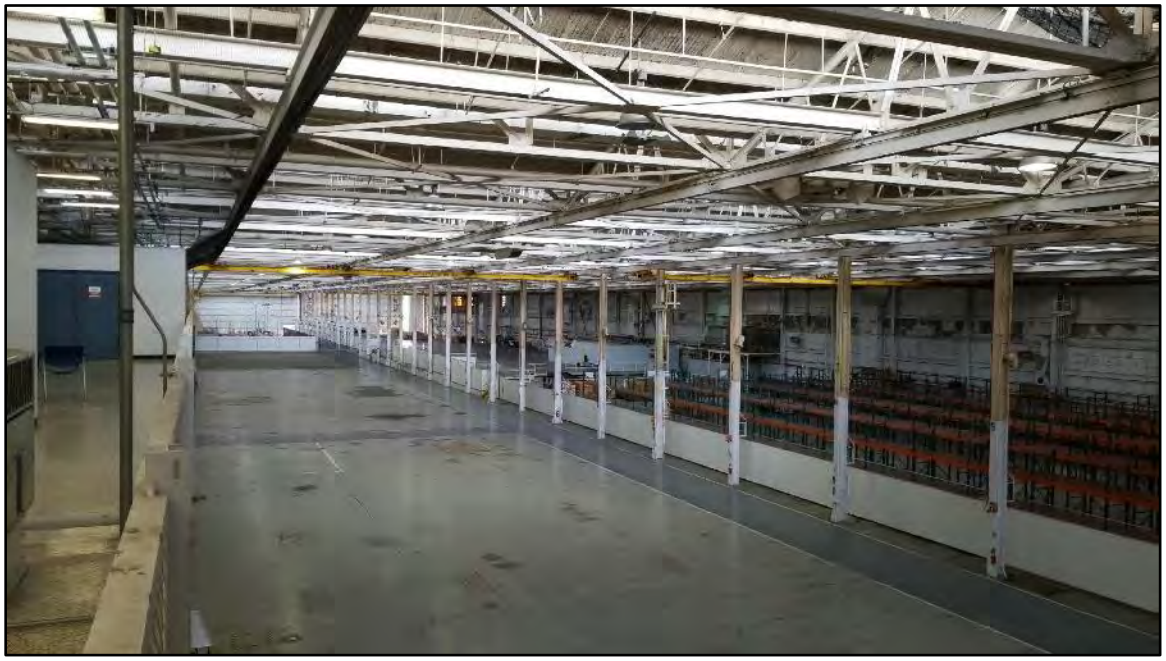


Image 5. Building 3 Interior, Third Mezzanine. View toward the southeast.

Image 6. Building 3 Interior, Middle of the Ground Floor.
View toward the southeast.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D
Other Listings
Review Code Reviewer Date

Page 1 of 4 ***Resource Name or #:** Building 7
P1. Other Identifier: Navy Old Town Campus, Staging Warehouse
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 7 Enterprise Street and Pacific Highway 1 City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481781.33 mE/ 3623704.34 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Southeast of Building 1

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 7 is a three-story steel and corrugated metal building with a mezzanine constructed in 1942. It is located approximately 50 feet southeast of Building 1. According to building records, it measures 402 feet by 104 feet. It is rectangular in plan with a flat roof and sits on a poured-concrete foundation. It has been historically referred to as the Paint Shop or the Camouflage Building. It was designed to accommodate a one-half-ton crane and a 2,000-pound-capacity monorail system, although the system has been partially dismantled (DPC, ca. 1946). It currently serves as a warehouse and is described in property records as a Staging Warehouse. The southeast façade has hangar-type doors running on an overhead track that continues above three continuous rows of windows toward the eastern end of the façade. The southwest façade has three continuous rows of windows covered in opaque solar sheeting. At the northeast façade is an entrance labeled "Paint Shop" that includes a single door with four lights and a row of vents at the third level. A truss is connected to the north corner that appears to be remnants of the monorail that originally connected the assembly buildings. The northwest façade resembles the southeast façade, with a mix of hangar-type doors and rows of windows.

(continued on page 2)

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building; HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Southeast Façade.
View toward the north.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus.* Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***P3a. Description** (continued from page 1)**:**

The interior is mainly one large open space. The ceiling is composed of wood boards crossing rails that span the length of the building, curving at the center and at the ends to allow transport of products. The windows at the interior are visible as the original multi-pane steel windows. There are two small wood mezzanines and a two-flight metal stairway at the northeast end of the building. The stairs lead to a single flat metal door. A row of two-part aluminum windows is located at the third level.

Image 1. Building 7, Northwest and Southwest Façades. View toward the east.

Image 2. Building 7, Southwest Façade. View toward the north.

Image 3. Building 7, Northwest and Northeast Façades
View toward the south.

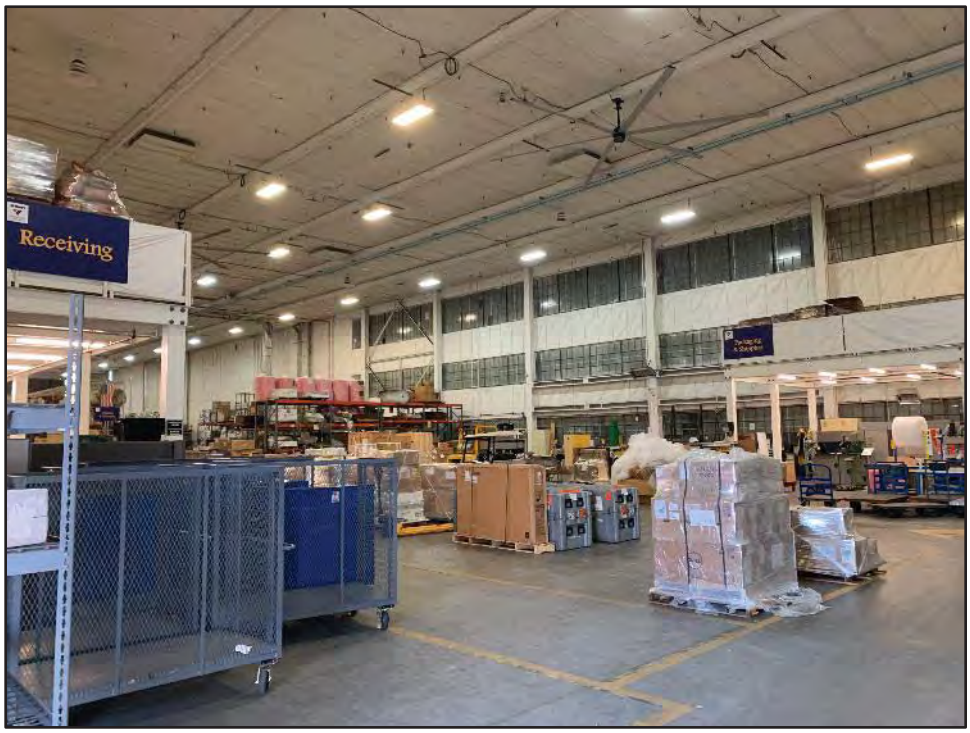


Image 4. Building 7 Interior. View toward the west.

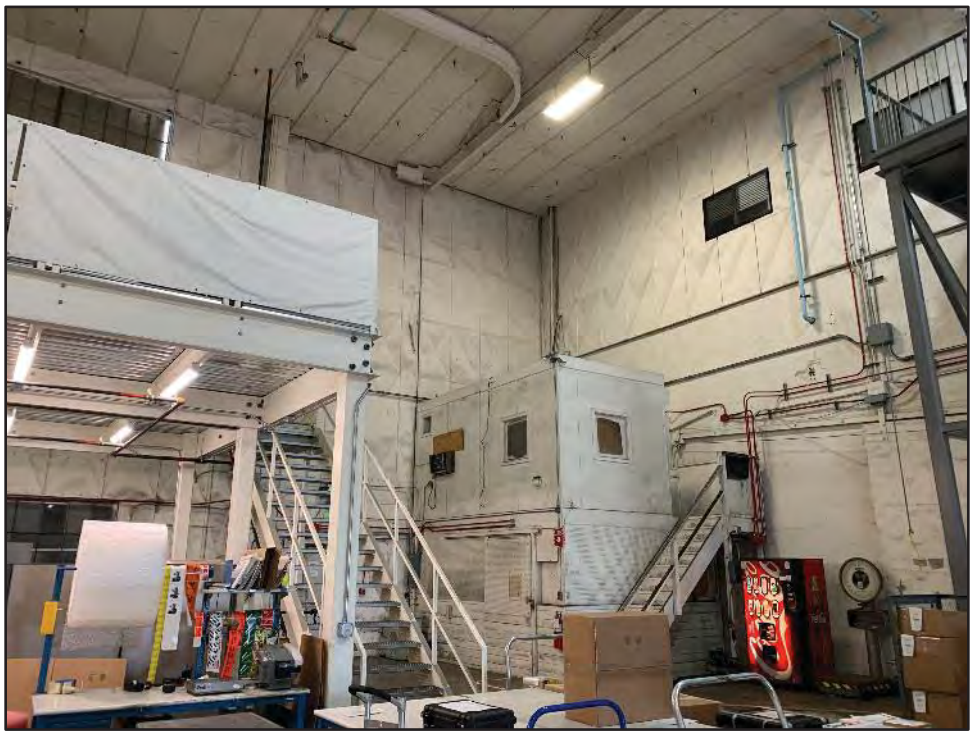


Image 5. Building 7 Interior. *View toward the north.*

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D
Other Listings
Review Code Reviewer Date

Page 1 of 7 ***Resource Name or #:** Building 8
P1. Other Identifier: Navy Old Town Campus, Warehouse
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 4 Sylvester Road City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481905.83 mE/ 3623126.64 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Southeast end of historic district

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 8 is located in the southeast corner of the Plant 2 property. According to building records, it was constructed in 1942 and measures 400 feet by 147 feet. Described in property records as a Warehouse, it was previously referred to as the Drop Hammer Building and the Forge Shop. The main part is a three-story steel and corrugated iron building with a 10-part sawtooth roof resembling those on the three assembly buildings. A single-story flat-roofed wing was added at the northwest façade before 1955, and a single-story corrugated metal gabled roof addition is at the southwest façade. Fenestration is irregular, consisting mainly of two continuous rows of windows at the second and third floors, with those at the third floor shorter than those at the second floor. At the ground floor are deeper multi-pane steel windows and vehicle entrances with roll-up doors.

(continued on page 2)

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building; HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Northwest and Southeast Façades.
View toward the east.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus*. Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***P3a. Description** (continued from page 1)**:**

At the interior, the first floor contains concrete pits and a concrete floor, exposed corrugated metal exterior walls, and steel framing. The second and third floors have wood floors over steel framing. There is one freight elevator. The building originally contained 26 hammers and was said to be the most unique structure in the original plant; it required extensive engineering to address the site's soft mud geology to accommodate the force of the hammers. When constructed, the building housed the largest battery of drop hammers and hydraulic presses under one roof on the Pacific Coast. The building also contained a complete pattern shop, a foundry, and die storage. It originally housed two 5-ton-capacity hoist and monotractor units, as well as a 2,000-pound-capacity monorail.

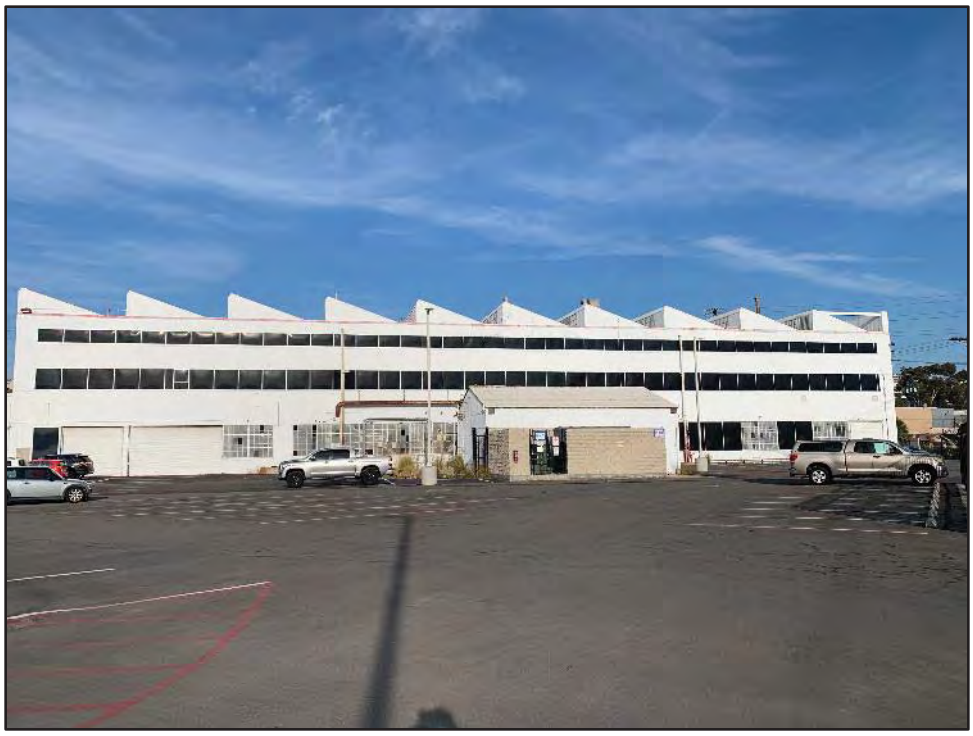


Image 1. Building 8, Southeast End of Southwest Façade
View toward the northeast.

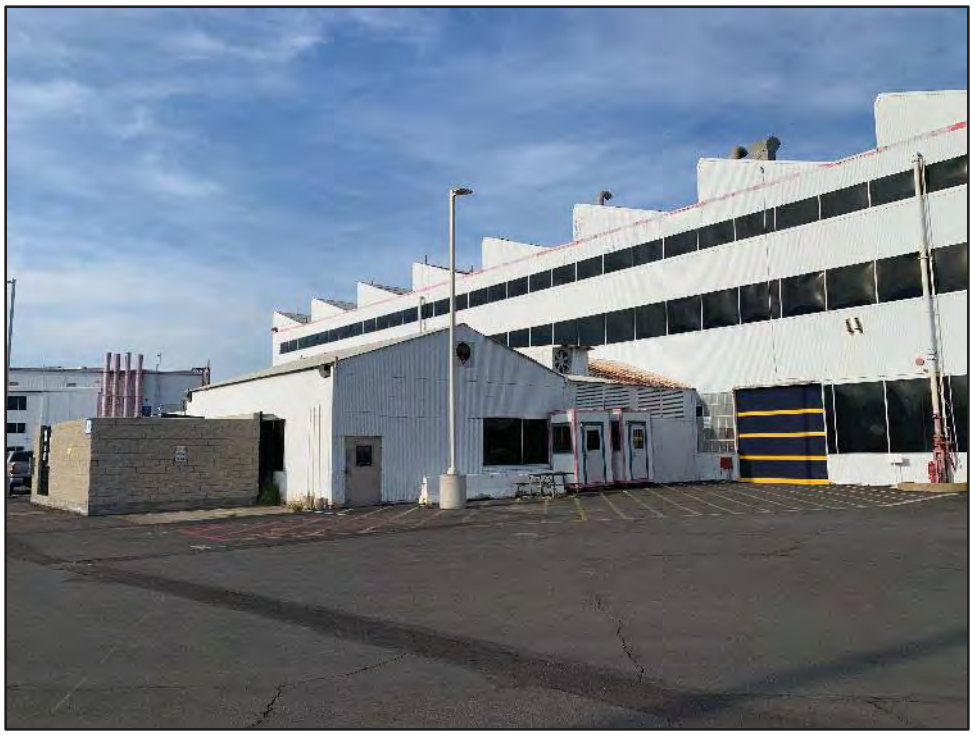


Image 2. Building 8, Addition at Southwest Façade. View toward the north.

Image 3. Building 8, Addition at Southwest Façade. View toward the east.

Image 4. Building 8, Northwest End of Southwest Façade. View toward the north.

Image 5. Building 7 (left) and Building 8 (right). View toward the northeast.

Image 6. Building 8, Northeast Façade with Building 7 to the Right. View toward the west.

Image 7. Building 8, Detail of Window at Southwest Façade.
View toward the northeast.

Image 8. Building 8 Interior, View from Roll-up Door at the Northwest Façade. View toward the southeast.

Image 9. Building 8 Interior, Ground Floor. View toward the north.

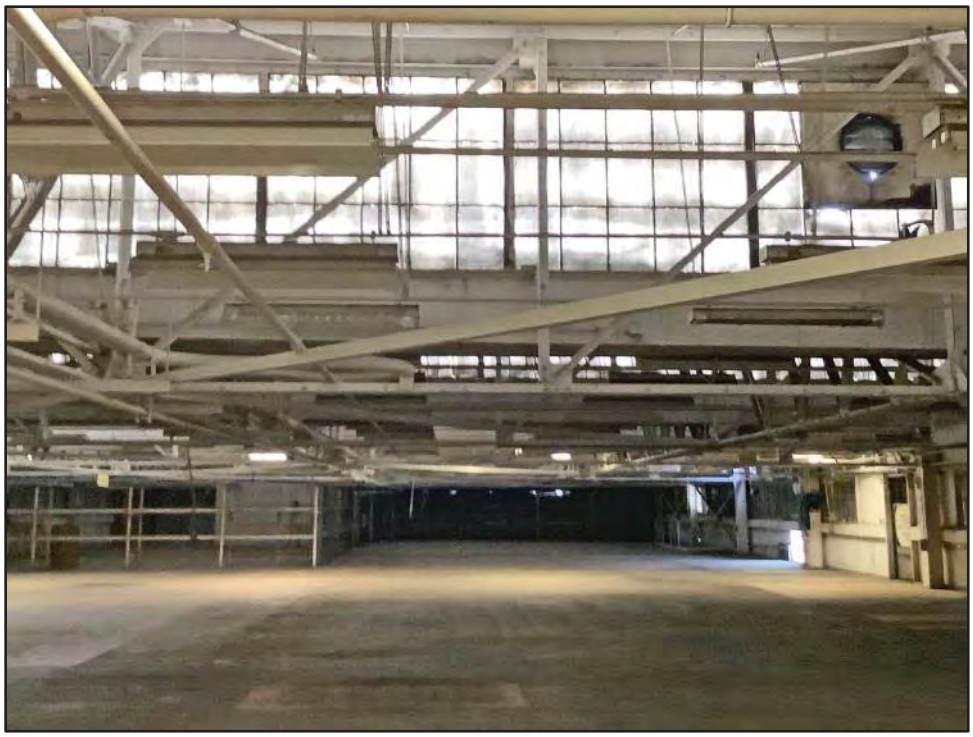


Image 10. Building 8 Interior, Third Floor. View toward the northwest.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D

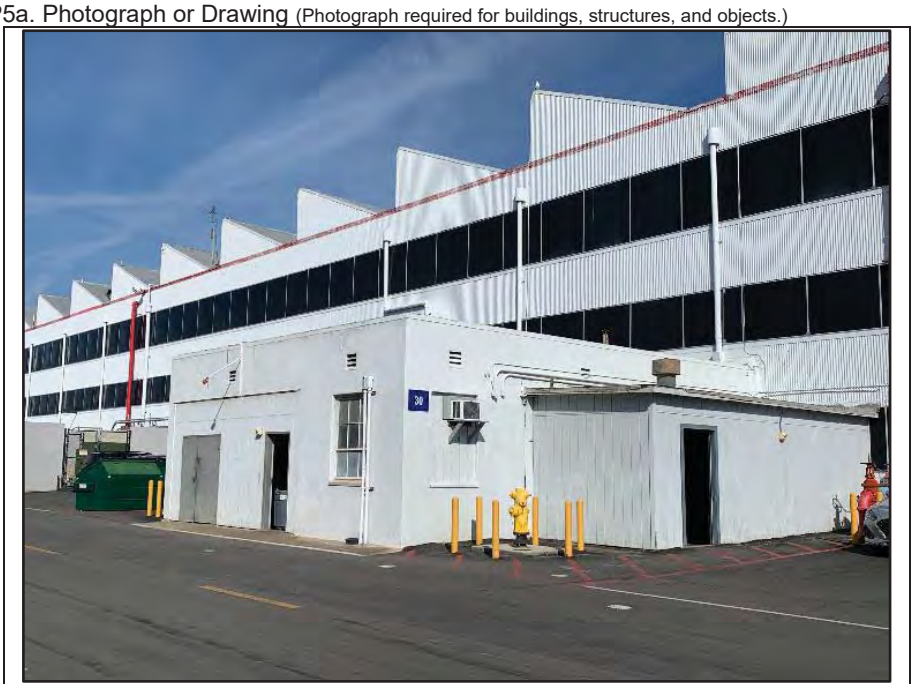
Other Listings
Review Code Reviewer Date

Page 1 of 2 ***Resource Name or #:** Building 30
P1. Other Identifier: Navy Old Town Campus, Storage Facility
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 30 Pacific Highway City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481454.97 mE/ 3623480.69 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Southeast end of historic district

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 30 is a single-story storage/utility building constructed in 1941. According to a 1945 appraisal, the building was a "Lamp Storage Room." The main mass has a square plan measuring 41 feet by 41 feet. The building is 18 feet high and sits on a poured-concrete foundation. It has a flat roof or parapet and is clad in stucco. Approximately 2 feet from the top edge of the walls are regularly spaced vents. The building is connected to the northwest façade of Building 2. The original windows are recessed, with a three-by-three-light configuration and categorized as partially operable awning type with a lever closer. All the windows are the same size; there are two at the northwest façade and one at the southwest façade. The opening for a similar window at the southeast façade is filled in with T1-11 siding, and two more windows at the southeast façade are obscured by a shed-roofed addition to the building, although they are visible from the interior. At the primary (southwest) façade are a double flat metal door and a single door set in an area filled in with T1-11 siding. The addition has one door and is clad in T1-11 plywood siding. Inside, the ceiling is constructed of exposed.

***P3b. Resource Attributes:** (List attributes and codes) HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo: (view, date, accession#)
Southwest and Southeast Façades.
View toward the north.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus.* Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

Image 1. Building 30, the Northwest and Southwest Façades. *View toward the east.*

Image 2. Building 30, Original Steel Windows from the Interior.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3D

Other Listings
Review Code Reviewer Date

Page 1 of 3 ***Resource Name or #:** Facility 69
P1. Other Identifier: Navy Old Town Campus, Pedestrian Bridge
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Diego **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Point Loma **Date** 1996 **T** 16S **R** 3W **¼ of** ¼ **of Sec** 28; S.B. **B.M.**
c. Address 69 Pacific Highway City San Diego Zip 92110
d. UTM: (give more than one for large and/or linear resources) Zone 11 S, 481457.85 mE/ 3623280.94 mN;
e. Other Locational Data: (e.g. parcel#, directions to resource, elevation, etc.) Bridge crosses Pacific Highway

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Pedestrian Bridge is a reinforced concrete overpass crossing Pacific Highway connecting the manufacturing area of Plant 2 on the east side of the highway with the parking lot on the west side. According to property records, it measures 283 feet by 52 feet and is 30 feet high. The bridge is part of the original plan for Plant 2. As such, it was constructed and designed at the same time as buildings 1, 2, 3, 4, 7, 8, 27, 28, 30, and 32, as well as several buildings and structures that have been demolished. In the simple curved lines, the bridge bears some features of the Art Moderne architectural style consistent with the original style of Building 4. The original rails are stucco, flat at the top. Metal tubular handrails have been added to the single wide stairway at the southwest end, and there are indications that side stairways might have been removed from the southwest end. At the entry to the plant (the northeast end), are two narrower stairways and two additional stairways leading from the top of the bridge at right angles. The Pedestrian Bridge was a critical component of the work at Plant 2 during WWII, as it connected the assembly and administrative buildings with the parking areas across Pacific Highway.

***P3b. Resource Attributes:** (List attributes and codes) HP34. Military Property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)
P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession#)
Northwest Side of the Bridge
View toward the southeast.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1941, per Navy records

***P7. Owner and Address:**
U.S. Navy

***P8. Recorded by:** (Name, affiliation, and address)
Sarah Stringer-Bowsher and Marilyn Novell
ASM Affiliates, Inc.
20 N. Raymond Ave., Suite 220
Pasadena, CA 91103

***P9. Date Recorded:** December 11, 2019

***P10. Survey Type:** (Describe) Intensive pedestrian survey

***P11. Report Citation:** (cite survey report and sources, or enter "none.") ASM Affiliates, Inc. (2020). *Draft Evaluation Report for Navy Old Town Campus*. Prepared for Cardno GS, Inc., for delivery to Naval Facilities Engineering Command Southwest.

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☒ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

Image 1. Northwest Side of the Bridge and Side Steps. View toward the east.

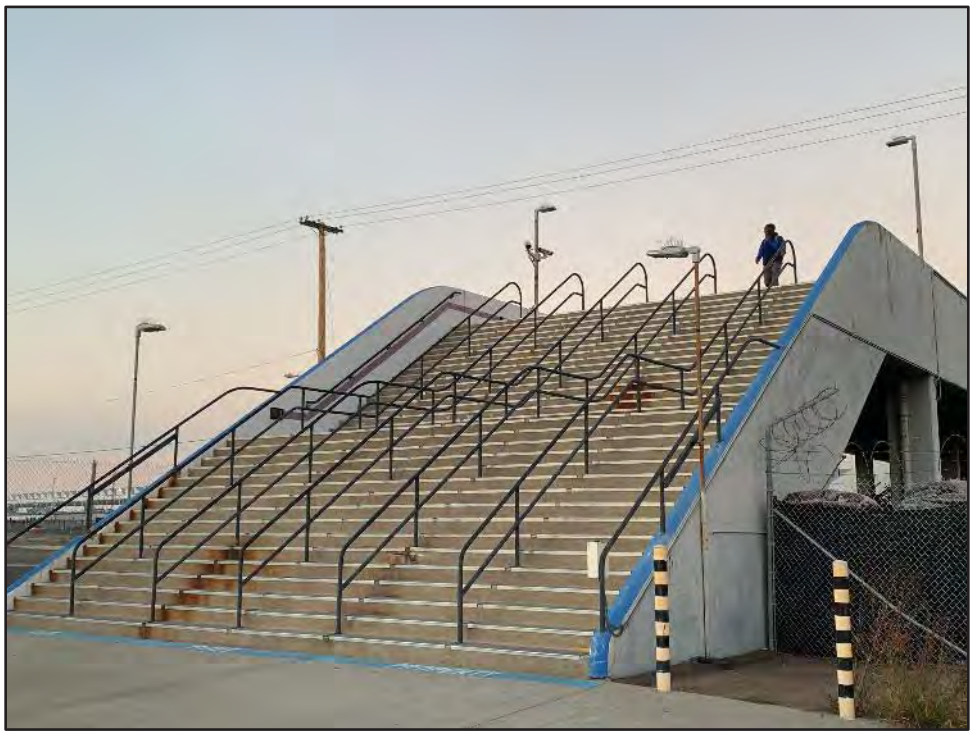


Image 2. The Southwest Side of the Bridge. View toward the northeast.

Image 3. Detail of the Underside of the Deck. View toward the east.

ATTACHMENT D

Resumes

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Shannon Davis, M.A., RPH

Architectural Historian/Historian

Total Years of Experience: 22

Education:

M.A.	1998/Historic Preservation/George Washington University, Washington, D.C.
B.A.	1993/American History/University of Southern California, Los Angeles (Cum laude with honors)

Registrations

2011	Register of Professional Historians

Professional Profile:

Ms. Davis has more than 20 years of experience in the field of historic preservation. She has an MA in Historic Preservation/American Studies from George Washington University, where she wrote her master's thesis on the architectural history of drive-in theaters, and a B.A. in American History from the University of Southern California. As an Architectural Historian at ASM, Ms. Davis has documented and evaluated numerous cultural resources for compliance with local regulations, California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA) throughout California and the west. Experience includes local, state, and National Register of Historic Places (NRHP) evaluations and nominations, Historic American Building Surveys (HABS), Historic Structures Reports (HSRs), large and small-scale historic context statements, city-wide surveys, as well as treatment, maintenance, and interpretation plans. Recent projects include a comprehensive city-wide survey of Monrovia; successfully listing a property in the California Register of Historical Resources (CRHR); nominating the first, and subsequent properties to the LA County register, preparing NRHP nominations for a historic highway and a historic residential district; developing the historic context of Los Angeles military history for Survey LA, and evaluating a WWII “Rosie the Riveter” site.

Before joining ASM, Ms. Davis worked for the National Trust for Historic Preservation as their west-coast representative for heritage tourism. Much of Ms. Davis’s professional experience is with the cultural resources programs of the National Park Service (NPS). For eight years she worked for the NRHP as an Historian. She also worked as a Historic Preservation Specialist and Project Manager for three other NPS programs: American Battlefield Protection Program, NPS History Program and HABS/HAER/HALS/CRGIS. Ms. Davis has experience with the operational requirements of a historic site, through her position as Assistant Site Manager of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Additionally, Ms. Davis served for several years as Chair of a local preservation advocacy group, the Arlington Heritage Alliance, and was one of the founders of the national non-profit Recent Past Preservation Network.

Relevant Project Experience:

Edwards Air Force Base Architectural History Survey and Inventory, Kern County, CA
Project Manager/Architectural Historian
CLIENT: Redhorse Corporation
Directed and collaborated on architectural survey, inventory, and evaluation of historical buildings on Edwards Air Force Base in support of Section 110 of the National Historic Preservation Act (NHPA). In 2018, evaluated 30 individual historic resources constructed between 1943 and 1966 and an additional 25 contributors to potential historic districts. Peer reviewed comprehensive report prepared of all properties and historic districts inventoried and evaluated, including the appropriate CA DPR forms for each resource.

CRTR and HABS Roosevelt High School Historic District, Los Angeles, CA
Project Manager/Architectural Historian
CLIENT: Impact Sciences (original evaluation) and Los Angeles Unified School District (CRTR and HABS)
Directed and collaborated on evaluation memo and later full Cultural Resources Technical Report in support of an Environmental Impact Report (EIR) for a Comprehensive Modernization Project at Roosevelt High School, which involved demolition of multiple buildings within a previously identified historic district. Also prepared Historic American Building Survey (HABS)-like historic documentation in accordance with mitigation stipulated in the EIR. All work was done in accordance with the California Environmental Quality Act (CEQA).

Ontario International Airport Historic Context Statement and Survey, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: City of Ontario, California
Conducted an intensive-level survey and completed documentation for numerous buildings and structures within the Ontario International Airport. Prepared a historic context statement for the Ontario International Airport, informed by extensive background research and an intensive-level survey. Developed themes, contexts, registration requirements, and character-defining features for identification of a range of property types, from World War II aircraft hangars to Cold War-era administration buildings. Conducted interviews for oral histories with individuals associated with the airport and preparation of a short video reviewing the history, findings, and stories gathered for the project. Oversaw the production of a 10-minute video documentary.

Cultural Resource Studies, Muroc Joint Unified School District, Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District
Directed and collaborated on technical report to support CEQA and NHPA requirements for five schools within approximately 110 acres at Edwards Air Force Base. Consulted with SHPO on approach. Received SHPO concurrence.

Mt. San Antonio College Cultural Resources Evaluation Report, Walnut, Los Angeles County, CA,
Project Manager and Senior Architectural Historian
CLIENT: Mt. San Antonio College
On-call historic preservation consultant since 2015. Prepared multiple historic resource evaluation reports, specifically in cultural resources technical report for Supplemental EIRs for the 2015 Facilities Master Plan Update and Physical Education Projects, and 2020 Master Plan Update. The 2015 report evaluated more than 20 historic resources within the school's proposed project area, and to assess potential direct and indirect visual impacts to the Mt. SAC Historic District. Subsequent reports evaluated all resources more than 45 years old. Work included intensive pedestrian-level survey of potentially significant historic buildings on campus, as well as the Wildlife Sanctuary, and archival research. Report prepared in compliance with CEQA.

Inventory and NRHP Evaluation of 17 Potential Historic Resources, Fort Hunter Liggett, Jolon, Monterey County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Gulf South Research Corp.
Surveyed, documented, and evaluated a 17 built environment of early Fort Hunter Liggett. Resources included training facilities and cantonment and infrastructure features built between 1941 and 1951. Researched and developed appropriate historic context. Evaluated within the contexts of Military History (1942-1945) and WWII Army property types. Conducted in compliance with Section 106 and 110/NHPA.

Integrated Cultural Resource Management Plan (ICRMP) for Marine Corps Base Camp Pendleton, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Worked with Marine Corp to establish cultural resource and preservation goals and objectives. Synthesized previous studies to develop an update to the installation's comprehensive planning document.

Maintenance Plan for Naval Postgraduate Engineering Historic District, Monterey County, CA
Project Manager
CLIENT: NAVFAC Southwest
Facilitated and oversaw the condition assessment of five mid-century educational buildings and make prioritized recommendations for their on-going maintenance, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Developed in partnership with historic architects and structural engineers. Prepared in support of Section 106 and 110 of the National Historic Preservation Act (NHPA).

ICRMP for Marine Corps Mountain Warfare Training Center, Mono County, CA
Project Manager and Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Worked with Marine Corp to establish cultural resource and preservation goals and objectives. Synthesized previous studies to develop one comprehensive planning document for installation that had not heretofore had any preservation management plan.

Visual Impacts Assessment on the Marron-Hayes Adobes Historic District for the Quarry Creek Master Plan Environmental Impact Report, San Diego County, CA
Senior Architectural Historian
CLIENT: Corky McMillin Companies
Conducted a visual impacts assessment of the impacts of a housing development project on the Marron-Hayes Adobes Historic District, eligible for the NRHP. Recommended mitigation measures to address adverse indirect visual impact. Attended and testified at series of local planning commission and city council meetings. Conducted in compliance with CEQA and Section 106/NHPA.

Palomar Gateway District Specific Plan Cultural Resources Report, San Diego County, CA
Senior Architectural Historian
CLIENT: Atkins
Conducted constraints level analysis of Palomar Gateway project area in support of an EIR for a proposed Specific Plan. Identified 12 potential historic resources and provided constraint-level analysis of potential impacts on resources that were likely to be historically significant.

Historic American Engineering Record (HAER) Documentation for Jet Propulsion Lab (JPL) Facility, Kern County, CA
Project Manager and Senior Architectural Historian
CLIENT: Edwards Air Force Base
Documented mid-twentieth century aeronautics testing facility through field documentation, review of architectural plans, and archival research. Facilitated recommendations for documentation with west-coast NPS regional staff. Provided HAER Level II and Level III documentation for 40 buildings and structures, including archival photographic documentation, outline and short-form historical reports, and hand-drawn sketch plans or reproduction of architectural plans and drawings.

NRHP Nomination and Historic American Building Survey (HABS) Documentation for Berylwood Historic District, Ventura County, CA
Project Manager and Senior Architectural Historian
CLIENT: San Diego Military Family Housing
Documented, researched, and reevaluated the 10-acre Berylwood Historic District to prepare an amended NHRP nomination and new HABS documentation of the district that included the 1912 Myron Hunt designed mansion built for prominent local developer and U.S. Senator, Thomas Bard, a second home built 1910-1925 for son and local businessman Richard Bard, as well as supporting structures and the cultural landscape associated with the estate. Developed and presented keynote address for centennial celebration of the construction of the house.

Military Context for Survey Los Angeles, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Los Angeles Office of Historic Preservation
Prepared pro-bono historic context statement for military history of Los Angeles in support of ongoing citywide-survey, Survey LA.

ICRMP for Detachment Fallbrook, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: NAVFAC Southwest
Compiled ICRMP in collaboration with installation staff. Advised client on recommended content, synthesized sections, and prepared three iterations of the plan, incorporating comments from client.

Historic Structure Report (HSR) for Building 1133 (1st Marine Corps Division Headquarters), MCB Camp Pendleton, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA).

HSR for Building 51811 (San Onofre Beach Club), San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Prepared HSR to evaluate and assess the architectural and structural state of Building 1133 to establish guidelines and priorities for maintenance and rehabilitation activities. Conducted in compliance with Sections 106 and 110.

Section 106 Review and Recommendations, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Military Family Housing
Annually review multiple undertakings within historic districts at California Naval and Marine Corp Bases. Prepare determinations of effect, in conformance with several Programmatic Agreements (PAs) between the military, CA SHPO, and Advisory Council on Historic Preservation, governing undertakings at the specific military installation as well as *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Conducted more than 100 reviews since 2010.

ICRMP for MCAS Miramar, San Diego County, CA
Senior Architectural Historian
CLIENT: NAVFAC Southwest
Addressed comments and finalized ICRMP for base facilities.

Cold War Historic Context for NAWS China Lake, San Bernardino County, CA
Architectural Historian
CLIENT: Epsilon Systems Solutions
Consulted on and edited historic context (1943-1989) prepared for updated inventory and evaluation of two historic districts listed in the NRHP. Context developed for one of the most significant World War II and Cold War research, development, testing, and evaluation facilities in the country.

Survey Eligibility and Update of NRHP Eligibility of 73 Buildings at Naval Weapons Station Seal Beach, Detachment Corona, Riverside County, CA
Field Director
CLIENT: NAVFAC Southwest
Surveyed 247 acre site to assess NRHP eligibility of 73 buildings, structures, and landscape features, within careful consideration of the site as a cultural landscape. Authored evaluation report, considering potential national, state, and local significance for three distinct periods of significance from 1927 to 1989.

Historic Building Maintenance Plan, Herrmann Hall (Building 220), Naval Postgraduate School, Monterey County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Assisted with preparation of maintenance plan for late nineteenth-century Spanish Mediterranean Revival-style former hotel building.

ICRMP for Naval Base San Diego, San Diego County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Prepared ICRMP for base facilities including Naval Station San Diego, Mission George Recreational Center, and Broadway Complex. Advised client on recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client.

ICRMP for Naval Base Coronado, San Diego County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Prepared ICRMP for base facilities including NAS North Island, Naval Amphibious Base Coronado, Naval Radio Receiving Facility, Outlying Landing Field Imperial Beach, and Special Warfare Mountain Training Center La Posta. Advised client on recommended content, conducted interviews, reviewed and synthesized previous cultural resource studies, and wrote three iterations of the plan, incorporating comments from client.

ICRMP for Naval Base Ventura County, Ventura County, CA
Architectural Historian
CLIENT: NAVFAC Southwest
Assisted with preparation of final drafts of ICRMP for base facilities including NAS Point Mugu, CBC Port Hueneme, Laguna Peak, Catalina Heights housing area, and the Camarillo Airport. Prepared three iterations of the plan, incorporating comments from client.

City of Los Angeles On-Call Section 106 Historic Preservation Services Contract, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Los Angeles Housing and Community Investment Department
Under an on-call contract with the City of Los Angeles Department of Housing and Urban Development (HUD), provided Section 106 historic preservation services to advise and assist the HCIDLA in conducting research, preparing all federal and state required documentation on the extent, condition, and status of potential historically-significant properties, and coordinate with the SHPO, the U.S. HUD and the Advisory

Council, and prepare a work plan and a Programmatic Agreement to fulfill the purposes of the NHPA. Created a database to manage the work, track the status and findings of each project, and assist with the bi-annual reporting required under the PA. Completed Section 106 review for more than 50 projects throughout Los Angeles including an apartment complex set for demolition, the Old Junipero Serra Library, and the Algin Sutton Pool. Recommended revisions/changes to PA, as part of the City's consultation with SHPO on updating that document.

Due Diligence Letter, Nelson Sloan Quarry, San Diego County, California
CLIENT: Petra
Prepared memo confirming no built environment resources located within project area.

Ritz Theater HRER, Escondido, San Diego County, CA
Project Manager/Architectural Historian
CLIENT: Restoration Community Arts, LLC/New Vintage Church
Conducted a historic resource assessment report in compliance with City of Escondido requirements, and CEQA. Conducted site visit, and collaborated on evaluation of eligibility and preparation of report for two commercial buildings. Assessed whether the proposed addition/renovation of these buildings complied with the SOI Standards. Testified at City Preservation Commission hearing regarding our findings.

Mid-Century-Modern Circular Building Historic Context, Mitigation Report for the Bank of Hawaii Waialai-Kahala Branch Demolition Project, Honolulu, HI
Senior Architectural Historian
CLIENT: Bank of Hawaii
Directed and collaborated on historic context study for the Bank of Hawaii Waialae-Kahala branch bank building in the Waialae community. The study was requested by the State Historic Preservation Division of Hawaii as mitigation for the planned demolition of the Mid-Century-Modern circular building. The report includes a comprehensive history of the building and an introduction to the Modern movement in Hawaii. For purposes of mitigation, the study identifies 10 additional extant and demolished circular Modern buildings in Honolulu and provides a brief history of each, including information about the architect, the design concept, character-defining features, and materials and method of construction. Peer reviewed final report.

Historic Properties Inventory Survey for the Whitmore Agricultural Project, Waialua District, Island of Oahu, HI
Senior Architectural Historian
CLIENT: PBR Hawaii & Associates
Directed and collaborated on historic resources evaluation at the Hawaiian Pineapple Company Plantation at Whitmore Village, Oahu. The roughly 37-acre study area is former pineapple plantation land transferred from Dole Corporation to the Agribusiness Development Corporation of Hawaii for development as an agricultural project to benefit the local economy. At the time of survey and evaluation, the property served as a partially unused industrial facility that included warehouse, administrative, and maintenance buildings built over a period of several decades, from 1948 through the 1980s. Evaluation of the historical buildings included identification of historic districts within the project site. Peer reviewed final report.

Assessment Letter for Planned New Construction within the Marconi Telegraphy Historic District, Oahu, HI
Senior Architectural Historian
CLIENT: Department of Land and Natural Resources, State Historic Preservation Division, Hawaii
Directed and collaborated on report to assess conformance with the SOI's Standards for a proposed new residence to be constructed within the Marconi Telegraphy Historic District on the Island of Oahu. The report included a design review of architectural plans to determine whether the new construction would impact the significance of the NRHP-listed historic district. Peer reviewed final report.

Western Mojave Historic Trails Context Study and Historic Properties Treatment Plan, Kern and San Bernardino Counties, CA
Senior Architectural Historian
CLIENT: Bureau of Land Management
Collaborated and directed archival research and synthesis of previous reports, to prepared a historic context for historic-period roads and highways associated with historic trails in the Western Mojave Desert. Provided guidelines for resource specific evaluations within the context. Peer reviewed final report.

Mt. Laguna Cheroske Family Interpretative Signage, San Diego County, CA
Project Manager
CLIENT: Insignia Environmental
Collaborated on content for and peer reviewed set of three interpretive signs providing historical information, maps, photographs, and applicable logos installed by San Diego Gas & Electric Company on United States Forest Service land. The signs explain the history of remnants of a historic lodge, cabin, and the people associated with them.

BOMARC CQM10A/B Target Drone Launch Complex at Vandenberg Air Force Base, Santa Barbara County, CA
Project Manager/Architectural Historian
CLIENT: ManTech SRS Technologies, Inc.
for the BOMARC CQM10A/B Target Drone Launch Complex. Also developed an informational brochure including historic architectural and schematic drawings and photographs, as well as a timeline and specifications combined to explain the history and purpose of the complex.

Hollenbeck Park Lake Rehabilitation and Stormwater Management Project (Project)
The park was recommended as a historical resource/historic property as a result of a survey for the Adelante Eastside Redevelopment Project Area by the Community Redevelopment Agency. Hollenbeck Park was one of the first parks established in Los Angeles in 1892, and its design was influenced by the City Beautiful movement. It is named for one of the prominent local individuals who donated the land, John E. Hollenbeck (PCR 2007, 2008). The park was recommended eligible for the National Register of Historic Places, California Register of Historical Resources, and as a Los Angeles Historic-Cultural Monument for Criterion C/3/3 under the theme of Land Use and Site Development with a period of significance of 1890s through the 1920s (PCR 2007).

Phase 1 1920 North Whitley Avenue Historic Resource Evaluation Report and Impacts Assessment, Los Angeles, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: Private developer
Directed and collaborated on historic resource assessment report for multi-family residential in Hollywood. Complied with City's Phase 1 report requirements and CEQA, including NRHP evaluation. Provided final peer review. Recommended not eligible and approved by City. Provided an addendum that assessed impacts in compliance with CEQA.

Lugo-Victorville (LVRAS) 500k Transmission Line Special Protection Scheme, San Bernardino County, CA and Clark County, Nevada
Project Manager/Architectural Historian
CLIENT: Southern California Edison
Directed and collaborated on historic resource survey, evaluation, and analysis of effects for a fiber optic cable replacement project on a transmission line segment in the Mojave Desert between the SCE Pisgah substation near Newberry Springs, California, and Clark County, Nevada. Resources included transmission lines. Peer reviewed report.

Cabin Evaluations, Mojave National Preserve, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: Mojave National Preserve
Directed and collaborated on historic resources survey and NRHP evaluation for seven mining-related cabins in the Mojave National Preserve. Peer reviewed report.

City of Monrovia Historic Context Statement, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Prepared a historic context statement for the City of Monrovia, based on reconnaissance-level surveys of the city to identify and define potential historic districts within the City. Work included development of themes and identification of associated property types, character-defining features, and registration requirements for historic districts comprising late 19th-century to early 20th-century residential properties, commercial districts, ethnic enclaves, and institutional properties. Organized public outreach and meetings with City personnel.

University of Nevada, Reno, Historic Neighborhoods Historic Context Statement, Washoe County, NV
Architectural Historian
CLIENT: City of Reno
As part of a Certified Local Government (CLG) grant, the City of Reno retained ASM Affiliates, Inc., to prepare a historic context statement for the neighborhoods surrounding the University of Nevada, Reno (UNR). City of Reno staff and the City of Reno Historical Resources Commission were interested in obtaining knowledge of the historical context of the area surrounding UNR, particularly with respect to growth patterns of the surrounding neighborhoods, how that pattern impacted the current neighborhood structure, and how UNR's historic and continued growth has influenced the development of the surrounding neighborhoods. ASM conducted a reconnaissance survey of 1,759 parcels and identified four historic districts that could potentially be eligible to the NRHP. Responsible for all project management tasks, including coordination between City of Reno and Nevada SHPO, and preparing the historic context statement.

Loch Crane Historic Resources Survey, San Diego, San Diego County, CA
Project Manager
CLIENT: Helix and Caltrans
Directed and collaborated on Historic Resources Survey of the Works of Architect Loch Crane in the City of San Diego. Project included a reconnaissance-level survey of 34 buildings and prepared DPR forms for the evaluation of each property. Conducted as mitigation per consultation with SHPO for loss of one of Crane's building in San Diego: Sorrento Valley Industrial Park, where his firm's office was located.

Historic Resource Evaluation Report for Collins Street Elementary School, Woodland Hills, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: Impact Sciences
Directed and collaborated on evaluation report for a Los Angeles Unified School District elementary school in the San Fernando. The report was informed by archival research from LAUSD archives, the LAUSD historic context statement, newspaper databases, and primary sources and an intensive-level pedestrian survey.

Secretary of the Interior's Standards Review for Los Angeles Unified School District Campuses, Los Angeles County, CA
Project Manager
CLIENT: Parsons
Directed and collaborated on project-level reviews for proposed renovations to six LAUSD campuses in compliance with Americans with Disabilities Act (ADA). The campuses are known historical resources

pursuant to the California Environmental Quality Act (CEQA). Renovations were to comply with the *Los Angeles Unified School District Design Guidelines.* Campuses reviewed were Chatsworth High School, Madison Middle School, Marina Del Rey Middle School, Narbonne High School, 10th Street Elementary School, and Dodson Middle School.

HABS Documentation for Anacapa Island Light Station, Channel Islands National Park, Ventura County, CA
Project Manager /Architectural Historian
CLIENT: National Park Service
Directed and collaborated on HABS narrative history for Anacapa Island Light Station Historic District on East Anacapa Island. Project conducted through agreement with CA SHPO and NPS regional office prior to alterations to derrick system used to lift goods and personnel from sea level to the bluff where the light station is located. Conducted survey of all contributing resources to historic district and research in NPS Channel Islands archives.

HPSR, HRER, FNAE, and ASR for the Verde School Bridge Replacement Project, Imperial County, CA
Project Manager and Senior Architectural Historian
CLIENT: Panorama Environmental, Inc.
Managed an HPSR, HRER, FNAE, and ASR in advance of a project proposed by the Imperial County Public Works Department to replace the Verde School Road Bridge in compliance with Caltrans District 11 and the Federal Highway Administration responsibilities under CEQA, NEPA and the NHPA. The project included a 2.9 -acre project site and involved the demolition of the existing County Bridge No. 58C-0115 over the East Highline Canal and the construction of a replacement bridge.

Beckman Instruments Administration Building HABS documentation, Fullerton, Orange County, CA
Project Manager/Architectural Historian
CLIENT: BonTerra Psomas
Directed and collaborated on archival photography, research, and narrative history for NPS Historic American Building Survey (HABS) Level II documentation for rehabilitation of NRHP-eligible corporate headquarters. Peer reviewed final report.

El Camino Community College Administration Building HABS documentation, Torrance, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: El Camino Community College District
Directed and collaborated on archival photography, research, and narrative history for NPS Historic American Building Survey (HABS) Level II documentation prior to demolition of NRHP-eligible Administration Building.

San Pasqual Valley Road Project, San Diego County, CA
Project Manager
CLIENT: Lundstrom Engineering
Directed and collaborated on historical resource survey and technical historical report for the San Pasqual Valley Road Project.

Los Angeles County Landmark Evaluation Report: The Doumakes House, 4918 Angeles Vista Boulevard, View Park, Los Angeles County, California
Project Manager and Senior Architectural Historian
CLIENT: Los Angeles County Department of Regional Planning
Prepared landmark evaluation report for Doumakes House as the first Los Angeles County Register of Landmarks under the new County Historic Preservation Ordinance. Prepared under our on-call contact as the Planning Department's historic preservation consultants. The Doumakes House is single family

residence built in 1928, eligible because of its association with the Doumakes family and as a good example of a typical Spanish Colonial Revival single family residence.

HRER for 880 Stone Canyon, Los Angeles County, CA
Project Manager/Architectural Historian
CLIENT: City of Los Angeles Office Historic Preservation
Surveyed, documented, and evaluated 1936 single-family residence built in the Hollywood Regency style by architect Douglas Honnold for screenwriter Stanley Rauh. Evaluated within the City of Los Angeles's Survey LA historic context statements for Residential Development and Suburbanization, 1850-1980 and Architecture and Engineering, 1850-1980, with the theme/subtheme of the Hollywood Regency, 1850-1980. Conducted in compliance with CEQA by request of the City of Los Angeles's Office of Historic Resources.

Historic Resources Evaluation Report for the Beckman Instruments Administration Building, Fullerton, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: BonTerra Psomas
Prepared evaluation and impact assessments report for development project with the potential to impact the Beckman Instruments Administration Building, a Mid-Century Modern building constructed as the headquarters for, a large scientific instrument research and manufacturing facility. Reviewed the pending National Register nomination, conducted site visit, and assessed direct and indirect impacts. Conducted in compliance with CEQA for the City of Fullerton as the Lead Agency.

Historic Resource Evaluation Report for Woodcrest Park, Fullerton, Orange County, CA
Project Manager
CLIENT: Parks and Recreation Department, City of Fullerton
Directed and collaborated on an evaluation of a city-owned and -operated park in compliance with Section 106 review in advance of renovation of the park. Concurrence from SHPO.

Impacts Assessment Report for Subdivision of Sepulveda Unitarian Universalist Society Sanctuary ("The Onion") Property, North Hills, Los Angeles County, 2016
Project Manager and Senior Architectural Historian
CLIENT: Jag Narayan
Prepared impacts assessment report for parcel subdivision of Sepulveda Unitarian Universalist Society Sanctuary (known as "The Onion") at 9550 N. Haskell, designated City of Los Angeles Historic Cultural Monument (#975). The report, which focused on viewshed impacts to and from the HCM, was prepared pursuant to CEQA at request of LA Office of Historic Resources.

California Department of General Services Weatherization Projects for Homes Statewide Project, State of California
Project Manager
CLIENT: ICF Jones & Stokes, Inc.
Provided on-call review services for proposed weatherization projects of historical buildings. Reviews were performed in accordance with methodologies defined by the SHPO for projects funded by the Low Income Energy Assistance Program and other Department of Energy programs. Conducted in conformance with PA and Section 106.

Mt. San Antonio College HABS documentation, Walnut, Los Angeles County, CA,
Project Manager and Senior Architectural Historian
CLIENT: Mt. San Antonio College
In two phases, prepared HABS level II documentation package for Mt. San Antonio College Historic District, including narrative history, archival prints and negatives, and architectural plans reproduced on Velum.

Historic Resource Assessment Report for the Rossmore Avenue Apartments, Los Angeles, Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: etco Homes, Inc.
Evaluated three 1948 French Revival-style apartment buildings at 535-553 N. Rossmore Avenue in the Hancock Park neighborhood of Los Angeles to determine their historic significance. The three buildings are located within the original boundaries of the Hancock Park Historic Preservation Overlay Zone (HPOZ), a City of Los Angeles-defined zoning district intended to preserve the historic nature of areas within the City. The evaluation included preparation of California DPR forms.

Historic Resource Evaluation Report for 427 Santa Clara Avenue, Los Angeles. Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: Huron Drive LLC
Managed and evaluated a 1912 bungalow located in the Venice area of Los Angeles for CEQA compliance of a proposed project. Conducted a site visit and background research. Prepared documentation for determination of historic significance under NRHP, CRHR, City of Los Angeles Historic Cultural Monument and under contexts and themes defined by SurveyLA. Work was done in compliance with CEQA at request of LA Office of Historic Resources.

HRER for James A. Foshay Learning Center, Los Angeles County, CA
Senior Architectural Historian
CLIENT: Impact Sciences and Los Angeles Unified School District
Completed an HRER for possible eligibility for the CRHR under eligibility criteria established by the LAUSD Historic Context Statement based on closely followed parallel criteria established for NRHP and CRHR significance. Conducted archival research for property information, including the architect, chain of title and history of the property as well as a records search at the local information center (IC). An intensive field survey was then undertaken including photographic documentation of the interior and exterior of the building to document the resources and its setting.

Historic Resource Evaluation Report for 420 Drake Circle, Sacramento, Sacramento County, CA
Project Manager
CLIENT: Kimley-Horn & Associates, Inc.
Completed a Historic Resource Evaluation Report (HRER) for a commercial building in Sacramento prior to proposed renovations. The purpose was to evaluate whether or not the proposed project would affect any identified historic properties within the APE and was completed per Section 106 of the NHPA. Evaluated the historical and architectural significance of the building for eligibility to the NRHP and the CRHR as well as a contributor to a potential early 20th century residential historic district.

Evaluation of Bakersfield High School Water Tower, Bakersfield, Kern County, California
Architectural Historian
CLIENT: Lozano Smith, Attorneys at Law
Project Manager for an intensive-level survey to document the water tower, and a reconnaissance-level survey of the high school to assess the 1933 water tower. Prepared a Historical Resources Evaluation and California Department of Parks and Recreation (DPR) 523 A and B forms to evaluate the structure's eligibility for listing in the CRHR. Recommended that Water Tower as individually eligible for CRHR under Criterion 1 as a visual landmark representing the history and development of Bakersfield High School

Historic Resources Evaluation Report, Department of Conservation Division of Oil and Gas Office, Coalinga, Fresno County, CA
Project Manager
CLIENT: Dudek/California Department of General Services
Directed and collaborated on evaluation of the regional office of the State Mining Bureau Division of Oil and Gas in the City of Coalinga, in advance of the proposed sales of the property. The 1918 building was evaluated for its eligibility as a historic resource in compliance with CEQA.

Historic Resources Evaluation Report, Department of Employment Office, Inglewood, Los Angeles County, CA
Project Manager/Senior Architectural Historian
CLIENT: Dudek/California Department of General Services
Conducted survey, archival research, and evaluation of the regional office of the State Department of Employment in the City of Inglewood, in advance of the renovation of the building. The 1955 building was evaluated for its eligibility as a historic resource in compliance with CEQA.

Cultural Resources Evaluation Report for Point Loma High School Whole Site Modernization, San Diego County, CA
Project Manager
CLIENT: HDR/San Diego Unified School District
Directed and collaborated on historic evaluation of 11 buildings on the Point Loma High School campus in advanced of modernization projects. The evaluation included preparation of California DPR forms. Conducted in compliance with CEQA.

Historic Resources Evaluation Report for Foshay Learning Center, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Surveyed and evaluated the Foshay Learning Center, a Los Angeles Unified School District Campus located in the South Los Angeles Community Plan Area. Core campus was constructed in the 1920s, one of the rare remaining pre-1933 Long Beach earthquake Los Angeles Unified School District (LAUSD) campuses, with buildings added in the 1960s. The evaluation was required in preparation for a project proposing the demolition of several campus buildings and construction of new buildings and landscaping. A historic district was identified and defined, and contributors were identified and recorded according to the LAUSD Historic Context Statement, 1870 to 1969, and LAUSD design guidelines. The project was evaluated for compliance with CEQA.

Lanterman Developmental Center, Pomona, Los Angeles County, CA, 2016
Project Manager and Senior Architectural Historian
CLIENT: Petra Resource Management
Prepared Historic Resources Assessment Report (HRAR) for Lanterman Developmental Center—a state mental developmental center—to clarify NRHP and CRHR eligibility, develop historic context statement, period of significance, and contributing resources. On-site intensive pedestrian survey included photographic documentation of more than 100 buildings (exteriors and public interior spaces). Work included preparation of California DPR forms for historic district and individual eligibility. Prepared under PRC 5024 compliance for transfer of state property, for CA Dept. of General Services, with SHPO concurrence.

Historic Resources Evaluation Report for Academy Road Widening Project, Sanger, Fresno County, CA, 2016
Senior Architectural Historian
CLIENT: Petra Resource Management
Conducted a historic study to address road widening and reconstruction of Academy Avenue in Sanger. Performed intensive field survey and archival research to develop sufficient historic overview and site-specific histories. Made recommendations of eligibility for listing in the NRHP and CRHR for potentially

historic buildings in the APE. Evaluated in compliance with requirements of Section 106 of the National Historic Preservation Act (NHPA), CEQA, and Caltrans guidelines as specified in the agency's Standard Environmental Reference (SER), Volume 2, Cultural Resources.

Cultural Resources Evaluation Reports for the Panattoni Logistics Centers IV and V Project Area, San Bernardino County, CA
Project Manager/Architectural Historian
CLIENT: Kimley-Horn and Associates
Directed and collaborated on cultural resources study as part of an addendum to the Renaissance Specific Plan. The study was conducted in advance of development of the parcels and included both historic and archaeological history surveys. The work was done in compliance with CEQA and included evaluation of two buildings for potential eligibility for listing in the CRHR.

Canyon Creek Resort Project, Norco, CA
Project Manager/Architectural Historian
CLIENT: Lansing Companies
Directed and collaborated on survey of historical resources within the proposed Canyon Creek Resort Project site in compliance with CEQA. Conducted site visit with client and City of Norco. The 430-acre site includes the former facilities of Wyle Laboratories, which operated beginning in 1957 as a commercial testing facility for a number of markets, including defense.

Cultural Resources Evaluation Report for the De Anza School Project, San Diego, CA
Project Manager/Architectural Historian
CLIENT: BRG Consulting
Directed and collaborated on evaluation of historical buildings on the campus of De Anza School. Methodology consisted of archival research and an intensive-level pedestrian survey of the campus.

Maintenance Manual for Milpitas Ranch House/Hacienda, Fort Hunter Liggett, Jolon, Monterey County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Gulf South Research Corp.
Updated maintenance manual for 1930 ranch house designed by noted architect Julia Morgan for newspaper tycoon William Randolph Hearst, concurrent with her design of nearby Hearst's Castle. Conducted site inspection with US Army Corps of Engineers Historic Architect. Prepared manual targeted at maintenance staff audience, included background history of the property, assessment of current conditions, and specific guidance on what needs attention, how to preserve the building, where to acquire replacement materials, and recommended future restoration projects. Manual included quick reference guide to maintenance do's and don'ts, annual checklist, and list of character-defining features with links to online Flicker photo gallery of all such features and inappropriate alterations. Plan developed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* in support of Section 106 and 110 of the National Historic Preservation Act (NHPA) for Army's Fort Hunter Liggett cultural resources staff, stewards of this NRHP listed-resource.

Peer Review of CRHR and NRHP Evaluation of Caltrans District 11 Headquarters, Old Town San Diego, San Diego County, CA, 2014
Senior Architectural Historian
CLIENT: California Department of State Parks
Reviewed prior evaluation for Caltrans district office complex (1947-1967) and concurred with determination of eligibility (as concurred on by SHPO) as a good example of a "Modernist" office building in the local San Diego area, and the best-designed Caltrans district office complex of that period. Preparing peer review letter, assessment of impacts, and proposing mitigation measures for proposed redevelopment of the property.

Bayshore Bikeway Project HPSR, ASR and FNAE, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Association of Governments
In accordance with Caltrans Section 106 PA and CEQA, prepared HPSR and FNAE for bikeway project with the potential to impact the Western Salt Company Salt Works (WSCSW) Historic District. ASM recommended a FNAE without Standard Conditions as none of the character defining features of historic district would be adversely affected as a result of the proposed project activities. Reports prepared following updated Caltrans SER, Volume 2, Cultural Resources.

Historic Resources Report for Two Buildings at Hoover High School, San Diego, San Diego County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: BRG Consulting for San Diego Unified School District
Surveyed, documented, and evaluated two mid-20th century buildings at Hoover High School: a Spanish Colonial Revival 1938-1942 classroom building and 1942-1970s Art Deco/Modern auditorium, built by master architects Kistner and Curtis. Evaluated within the local contexts of education, economics, social history, and architecture. Conducted in compliance with CEQA.

HRER for Vista/Highgrove Substation, Grand Terrace, San Bernardino County, CA, 2014
Senior Architectural Historian
CLIENT: Southern California Edison
Surveyed, documented, and evaluated a mid-20th century vernacular electrical substation complex constructed in 1945. Researched local historic context. Evaluated within the contexts of mid-twentieth century development of Grand Terrace or San Bernardino County and architecture. Conducted in compliance with CEQA.

Verizon St. Clair Wireless Telecommunications Tower FCC 620 Form, Los Angeles, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: Aarcher, Inc.
Surveyed urban project APE to assess direct and indirect impacts from construction of new wireless telecommunications tower. Completed FCC Form 620 in compliance with Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.* Prepared public notice, consulted with local government, tribes, and interested parties. Submitted 620 form electronically through FCC's website, and facilitated consultation on project with CA SHPO.

Verizon Wireless Telecommunications Tower Smart Forms, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: Aarcher, Inc.
Conducted records searches and initial assessment of age of resources that could require assessment of impacts for three Verizon wireless telecommunciaitons tower sites. Conducted in compliance with Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.*

HABS Documentation and Interpretive Signage, Marron-Hayes Adobes Historic District, Carlsbad, San Diego County, CA, 2014
Project Manager and Senior Architectural Historian
CLIENT: Corky McMillin Companies
Conducted official HABS Level II documentation for the Marron-Hayes Adobes Historic District, and coordinated submission with the HABS National Park Service headquarters office. Prepared outline history, large format photography, and sketch drawings. Developed content for interpretive signage including narrative text and historic photographs. Conducted in compliance with CEQA and Section 106 of the NHPA.

LARICS Communications Tower FCC 620 Form Compliance, Los Angeles County, California, 2014
Project Manager and Senior Architectural Historian
CLIENT: UltraSystems Environmental
Surveyed 863 NRHP eligible historic resources to assess direct and indirect impacts from construction of new Los Angeles Regional Interoperable Communications System Authority (LARICS) communication towers at more than 150 locations in Los Angeles County over a period of 6 months. Completed portions of FCC Form 620 for each project and resource in compliance with the Section 106 and the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC)*, *September 2004.*

HRER for Grove Street Bible Church, Pomona, Los Angeles County, CA
Project Manager and Senior Architectural Historian, 2014
CLIENT: Warmington Residential
Surveyed, documented, and evaluated a Mid-Century Modern church constructed in 1961. Researched and developed local historic context. Evaluated within the contexts of mid-twentieth century development of Pomona and architecture. Conducted in compliance with CEQA.

Historic Resources Evaluation Report (HRER) for Imperial Beach Library, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated a Mid-Century Modern library constructed in 1967. Evaluated the building within the contexts of community development, government services, and Modern architecture. Report to be prepared in accordance with CEQA.

Peer Review of Chula Vista Sears Evaluation, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Chula Vista
Reviewed evaluation and recommendation of ineligibility for 1966 commercial building that ASM had previously recommended eligible. Provided additional support for our original recommendation and testimony to the Chula Vista Historic Preservation Commission and City Council.

Impacts Assessment for Construction of Lemon St. Parking Garage, Orange County, CA
Project Manager and Senior Architectural Historian
CILENT: HDR Engineering, Inc.
Assessed and evaluated direct and indirect impacts on the construction of a parking garage on the Old Towne Orange and Plaza historic districts for three project alternatives in support of an Mitigated Negative Declaration. Participated in SHPO consultation process. Conducted in compliance with Section 106 of the NHPA, NEPA, CEQA, and Federal Highway Administration's (FHWA) Section 4(f) regulations.

Historic Resources Evaluation for Ecke Ranch Office Building, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Leichtag Foundation
Surveyed, documented, and evaluated former office building of the Ecke Ranch, Evaluated the building as a contributor to potential Ecke Ranch Historic District for its associations with development of Encinitas, the agricultural industry, and its association with significant individuals Paul Ecke, Sr. and Paul Ecke, Jr.

Cultural and Historical Resources Existing Conditions and Evaluation Report for the Pacific Surfliner Carlsbad Village Double-Track Project, San Diego County, CA
Senior Architectural Historian
CLIENT: BRG Consulting, Inc.
Conducted an intensive level survey and evaluation of more than 60 potential historic resources, including residential, commercial, and transportation property types. Considered direct and indirect impacts from railroad improvements on eligible historic resources and recommended mitigation for adverse impacts. Conducted in compliance with Section 106 of the NHPA and NEPA.

Historic Resources Technical Report (HRTR) for Hillside Receiving Home, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated a government residential facility for children, consisting of two Mid-Century Modern buildings constructed in 1955 and 1963. Evaluated within the contexts of San Diego County Public Welfare services and Modern architecture. Report prepared in accordance with CEQA.

Impacts Assessment for Renovation of AMK Ranch Historic District, Teton County, WY
Project Manager and Senior Architectural Historian
CLIENT: University of Wyoming and Walsh Environmental
Assessed and evaluated direct and indirect impacts on the historic AMK Ranch Historic District for three project alternatives for their renovation and expansion, in support of an Environmental Assessment (EA). Conducted on-site survey with National Park Service's Cultural Resources Specialist to identify potential areas of impact. Coordinating consultation with the Wyoming State Historic Preservation Office (SHPO).

Historic American Landscape Survey (HALS) Documentation for Arden, Helena Modjeska Historic House and Gardens, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: Orange County Parks and Recreation
Documented 14.4-acre gardens and residential complex of Madame Helena Modjeska, famous late 19th-century Shakespearean actresses. Arden was Modejeska's primary residence from 1888 until 1905. Field survey included detailed field notes and digital photography. Prepared HALS Short Form. Landscape features include gardens with exotic and native plant species, cobble flowerbed garden borders, a well, fountains, pool/plunge, rock monument, meadow of grasses and native wildflowers, Santiago Creek and its associated wetland, and surrounding oak woodlands.

Henderson Historic Preservation Plan, Clark County, NV
Project Manager and Senior Architectural Historian
CLIENT: City of Henderson
Conducted community outreach and codified the steps needed to develop a Historic Preservation Plan for the City of Henderson. Worked with City staff, public officials, and members of the public to discuss the city's historic and cultural resources and foster community engagement/interest in the historic preservation process. Conducted a citywide reconnaissance survey of all buildings constructed prior to 1970. Made recommendations for the next steps in the Historic Preservation Plan process, and then through a subsequent contract developed the Historic Preservation Plan for the City, which was adopted by the City Council. Identified prioritized areas in the city for future intensive survey to identify historic resources.

HRER for St. Martha's Episcopal Church, Dove Residence, and Day School, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Warmington Residential
Surveyed, documented, and evaluated a Mid-Century Modern church complex, school, and Ranch house constructed between 1954 and 1965. Researched and developed local historic context. Evaluated within the contexts of mid-twentieth century development of West Covina and architecture. Conducted in compliance with CEQA.

Eligibility Consultation, Orange County, CA
Project Manager and Senior Architectural Historian
CLIENT: Sempra Utilities
Provided guidance to TRC and SDG&E on their consultation with the California State Historic Preservation Office (SHPO) regarding the eligibility of the Capistrano Utility Building. Helped draft a consultation letter to the SHPO, and recommended that the draft National Register of Historic Places (NRHP) nomination did not support an argument of eligibility.

HRER, Historical Resources Compliance Report (HRCR), and Treatment Plan for the Rancho Lilac Historic District, San Diego County, CA
Senior Architectural Historian
CLIENT: Caltrans
Evaluated the eligibility of 27 built environment resources for the NRHP and as California Historic Landmarks prior to transfer of ownership. Recommended an eligible historic district with three periods of significance: the pioneer homesteading period (1880s-1900), early community and ranching period (1900-1945), and Irving Salomon's association with the property (1945 to 1966). Also prepared Treatment Plan recommending protective easements and covenants to ensure preservation of the district after transfer of ownership. Recommended *Rehabilitation* as the appropriate treatment standard and adherence to the Secretary of the Interior's (SOI) *Standards for the Treatment of Historic Properties*. Project conducted to comply with Public Resources Code (PRC) 5024.

HRER for Garfield Reservoir, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Helix Environmental Planning, Inc.
Surveyed, documented, and evaluated public water storage reservoir constructed in 1924. Evaluated within the contexts of community planning and development and architecture. Conducted in compliance with CEQA and NHPA.

Cultural Resources Survey for the Metrolink CTO-31 Project, Los Angeles County, CA
Senior Architectural Historian
CLIENT: HDR Engineering
Conducted windshield survey to identify potential historic resources within the project area, to provide baseline data for preliminary assessment of adverse impacts in compliance with NHPA and NEPA.

Citywide Historic Resources Survey, San Diego County, CA
Senior Architectural Historian
CLIENT: City of Chula Vista
Conducted a reconnaissance survey of more than 12,000 parcels and intensive survey of more the 350 parcels, based on a historic context developed as part of the project for the City of Chula Vista. Solicited public input on and presented findings of the survey in a series of public meetings. Made recommendations of local, state, and national eligibility. In addition to a final survey report, prepared a comprehensive survey database as well as web-based interactive photograph and maps.

NRHP Nomination for U.S. Highway 80 in California, San Diego and Imperial counties, CA
Senior Architectural Historian
CLIENT: San Diego Gas & Electric
Evaluated the 186 –mile California segment of U.S. Highway 80, one of the earliest all-weather coast-to-coast highways in the United States. Developed NRHP nomination and supporting materials. Recommended an eligible historic district with contributing constructed during the period of significance (1926-1964) that include 42 bridges and culverts and 186 miles of the road from San Diego to Yuma (both current and abandoned segments of the road).

HABS, HRCR, and FAE for Sorrento Valley Industrial Park, San Diego County, CA
Senior Architectural Historian
CLIENT: Caltrans
Prepared Caltrans specific compliance for the proposed demolition of the Sorrento Valley Industrial Park Historic District. Summarized identification efforts and resources eligible for the NRHP, identified the effect of the project upon those resources, and prepared mitigation plan in compliance with CEQA and Public Resources Code (PRC) §5024. Prepared HABS Level II documentation (Caltrans Heritage documentation equivalent) as well as Finding of Adverse Effect (FAE) per Caltrans format.

Evaluation of Banning Mine, Riverside County, CA
Senior Architectural Historian
CLIENT: Southern California Edison Company
Researched, documented, and evaluated a 1940s mine. Evaluated within the contexts of community planning and development, industry, or engineering. Conducted in compliance with CEQA.

HRTR for Padre Trail Inn, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: HELIX Environmental
Surveyed, documented, and evaluated a 1965 motel. Evaluated within the contexts of the tourism industry in San Diego and architecture. Report prepared in accordance with CEQA.

HRER for Fenton Dairy Houses and Office, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Dudek
Surveyed, documented, and evaluated four workers' houses and one office constructed between 1940 and 1945. Evaluated within the contexts of settlement and agriculture/ranching. Conducted in compliance with CEQA.

Historic Resource Analysis for Five Buildings at Mount San Antonio College, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: Mount San Antonio College
Surveyed, documented, and evaluated five recreational college buildings constructed between 1958 and 1972. Evaluated as contributors to a potential historic district within the contexts of education and architecture. Conducted in compliance with CEQA.

HRER for 8048-8050-8052 Comstock Avenue in Whittier, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: City of Whittier
Surveyed, documented, and evaluated two residential buildings constructed between 1927 and 1929. Evaluated within the contexts of Community Planning and Development, Whittier Thrives in the Early Twentieth Century, Whittier in the 1920s, Oil Industry in Whittier, and architecture. Conducted in compliance with CEQA.

Impacts Assessment for the SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Sunrise Powerlink
Analyzed potential for adverse effects from proposed SDG&E East County Substation Project. Provided recommendations for NRHP and CRHR eligibility for an approximate 14-mile (mi.) segment of Old Highway 80 within the APE, determined in consultation with BLM. Conducted in compliance with NHPA and CEQA.

Highway 80 Interpretive Signage Recommendations for the SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Sunrise Powerlink
Surveyed historic Highway 80 to make recommendations for placement of interpretive signs. Recommendations for signs were made based on integrity of Highway 80 at specific locations, character of specific sections of the highway, and demarkation at regular intervals. a Conducted in compliance with NHPA and CEQA.

Advanced Summary Report for the Historical Resources Evaluation of Hamlet Parcel for the Sunrise Powerlink Phase I ESA, San Diego County, CA
Senior Architectural Historian
CLIENT: San Diego Gas & Electric
Conducted an on-site survey and provided summary report of five buildings within project area that were 45 years old and older. Conducted in compliance with CEQA to be incorporated into the Environmental Site Assessment (ESA).

Inventory, Evaluation and Analysis of Effects on Historic Resources for the Campo Verde Solar Project, Imperial County, CA
Senior Architectural Historian
CLIENT: KP Environmental, LLC
Conducted intensive survey within a 1,990 acre project area for proposed solar field and transmission line in Imperial County. Documented and evaluated 20 potential historic resources and analyzed the effects of the project on those resources recommended as historically significant.

HABS Documentation for the Cienega Elementary School, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: PMC World
Documented 1923 elementary school, with features of the Classical Revival and Spanish Colonial Revival styles. Field survey included sketch plan, detailed field notes, and archival research. Documentation prepared to HABS Level II standards.

HRER for Collier Park, San Diego County, CA
Project Manager and Senior Architectural Historian
CLIENT: Atkins
Surveyed, documented, and evaluated 7.7-acre park, portions of which were established in 1910. Report prepared in accordance with CEQA and Section 106 of NHPA prior to the park's redevelopment.

Built Environment Assessment for Gregory Canyon Landfill Project, San Diego County, CA
Senior Architectural Historian
CLIENT: PCR Services
Surveyed, documented, and evaluated two dairy complexes and associated buildings, of which one complex was recommended eligible. Report prepared in accordance with CEQA and Section 106 of the NHPA prior to the parcel's redevelopment.

Treatment Plan for 918 Discovery Street, San Diego County, CA
Senior Architectural Historian
CLIENT: City of San Marcos
Surveyed, documented, and evaluated residential building prior to its proposed relocation. Made recommendations for project preparation and execution, and future rehabilitation of the building with specific treatment recommendations for the building's character-defining features.

HRER for the California Valley Solar Ranch Project, San Luis Obispo County, CA
Senior Architectural Historian
CLIENT: Ecology and Environment
Consulted on and edited evaluation of a four-mi. segment of Highway 58, and two gypsum strip mines for a solar project in the California Valley for Sunpower.

HRER for 6940 Otay Mesa Road, Rabago Otay Technical Business Park, San Diego County, CA
Senior Architectural Historian
CLIENT: RBF Consulting
Documented and evaluated mid-20th-century farmstead including ranch house and barns for eligibility for NRHP, CRHR, San Diego County Local Register of Historical Resources, and the County of San Diego Resource Protection Ordinance (RPO) in accordance with CEQA.

Impacts Assessment for SDG&E East County Substation Project, San Diego County, CA
Senior Architectural Historian
CLIENT: Insignia Environmental
Consulted on and edited an evaluation and visual impacts assessment of a 13-mi. segment of historic Old Highway 80. Insignia Environmental requested this assessment for their powerline project in east San Diego County.

Inventory, Evaluation, and Analysis of Effects on Historic Built-Environment Properties, Imperial County, CA
Senior Architectural Historian
CLIENT: LS Power Development
Evaluated 16 resources within a solar project area in Imperial County and assessed the effects of the project on those resources recommended as historically significant.

Inventory, Evaluation and Analysis of Effects on Historic Built Environment Properties for the Imperial Solar Energy Center West and South Projects, Imperial County, CA
Senior Architectural Historian
CLIENT: LightSource, LLC
Surveyed, documented, and evaluated resources within a solar project area in Imperial County and analyzed the effects of the project on those resources recommended as historically significant for CSolar Development, LLC.

Documenting the Colorado River Front Work and Levee System (CRFWLS): A Historic Context and Inventory, San Bernadino, Riverside, and Imperial counties, CA and Yuma, La Paz, and Mojave counties, AZ
Historical Consultant
Consulted on, reviewed, and edited, report providing context for and documenting the CRFWLS.

HSR, Maravilla Handball Court and Market, LA Conservancy, Los Angeles County, CA
Project Manager and Senior Architectural Historian
CLIENT: LA Conservancy
Surveyed, evaluated, researched, and prepared HSR and California Register of Historical Resources (CRHR) nomination for a 1928 handball court and associated commercial and residential building as a pro-bono project for Los Angeles Conservancy. Evaluated for eligibility for CRHR and NRHP. Property was successfully designated on CRHR in 2012. Report prepared to assist with preservation efforts for neighborhood recreation and community center.

Convair Lagoon Alternative Analysis of Historic Resources, San Diego County, CA
Senior Architectural Historian
CLIENT: Atkins
Consulted on, reviewed, and edited evaluation of seaplane ramp and pier located in a lagoon formerly owned by the now defunct aircraft manufacturer Convair in the San Diego Bay. Atkins requested a historic built environment study for the proposed demolition of both structures for future redevelopment project.

Historic Context and Eligibility Criteria for Puget Sound Dikes, Multiple Counties in Puget Sound, WA
Senior Architectural Historian
CLIENT: U.S. Fish and Wildlife Service
Assisted with research to develop historic context for late-nineteenth- and early-twentieth-century dikes that contributed to the agricultural development of the Puget Sound region of northwestern Washington. Developed NRHP eligibility criteria as a management tool for USFWS for future compliance with Section 106 of the NHPA.

HRER for Fort Yuma Healthcare Center, Imperial County, CA
Senior Architectural Historian
CLIENT: HKM Dowd
Surveyed, evaluated, and edited report for nine buildings on the 1.9 acres at Fort Yuma. Field survey included consultation with Quechan tribe. HSR prepared in support of an Environmental Assessment (EA) for potential demolition, including one contributing building to the Yuma Crossing National Historic Landmark (NHL) historic district.

Due Diligence Report for the Renovation of the Imperial Beach Library, San Diego County, CA
Architectural Historian
CLIENT: RBF Consulting
Evaluated the potential for historical significance of the subject property by conducting a constraints analysis to provide baseline information on the architect of record, date of construction, and potential eligibility to the CRHR.

Cultural Resources Survey for 203 E. Olive St., San Diego County, CA
Architectural Historian
CLIENT: The Planning Center
Evaluated and prepared survey report for one-acre parcel with three agricultural buildings, including 1898 farm house. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource.

HABS Documentation for the American Legion Hall, San Diego County, CA
Architectural Historian
CLIENT: City of Vista
Documented art deco American Legion Hall to HABS Level III standards. Field survey included photography, sketch plan, detailed field notes, and archival research. Edited survey report, including historical and architectural information prepared to HABS Level II standards.

HSR for Palomar College, San Diego County, CA
Architectural Historian
CLIENT: Palomar College
Consulted on and reviewed HSR for seven buildings at Palomar College. In compliance with CEQA, each building was evaluated for eligibility for the NRHP, CRHR, and as a CEQA historic resource.

Tenth Avenue Marine Terminal Historical Assessment, San Diego County, CA
Architectural Historian
CLIENT: Atkins
Evaluated mid-twentieth century maritime industrial buildings that served as transit sheds and warehouses. Conducted research and fieldwork to determine the buildings' architectural significance and eligibility for the CRHR.

2345 S. Gaffey Historic Resources Report, 2345 Gaffey Avenue, Los Angeles County, CA
Architectural Historian
CLIENT: LLC/Netarq Design Group
Assisted with the preparation of a report to private property owner for CEQA compliance. Conducted research and prepared written report detailing the building's architectural significance and eligibility for the NRHP, CRHR, Los Angeles Historic-Cultural Monument, and a Historic Preservation Overlay Zone.

National Trust for Historic Preservation

Heritage Travel, National Trust for Historic Preservation, Los Angeles, California, 2008-2009. As Senior Account Executive, worked with west-coast communities and destinations to improve their marketing efforts to heritage and cultural travelers through new website, Gozaic.com. Working from Los Angeles office, participated in developing and executing marketing strategies both for the company and our clients. Represented company at professional conferences. Utilized Salesforce database to ensure timely communication with clients.

American Battlefield Protection Program, National Park Service
NPS Grants Administration, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, evaluated applications, monitored projects, coordinated reporting and organized workshops for grant recipients for $1.5 million annual grant program. Reviewed deliverables such as NRHP nominations, easements, cultural resource inventories and management plans.
Section 106 Review, National Park Service Headquarters, 2007-2008. As Historic Preservation Specialist, reviewed projects potentially effecting historic battlefields for which the American Battlefield Protection party was a consulting party. Prepared comments to consultants evaluating projects and their potential effects on historic resources, and made recommendations for mitigation of projects adversely effecting historic battlefields.

Update of Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields, National Park Service Headquarters, 2007-2008. Conducted onsite evaluation and boundary determinations for Civil War battlefields in Charleston, South Carolina, and Leesburg, Virginia. Coordinated national survey of preservation activities at 384 Civil War battlefields for report to Congress. Indentified changes in condition and threats, as well as preservation opportunities.

National Park Service History Program and HABS/HAER/HALS/CRGIS

HABS/HAER/HALS/CRGIS Online Publications, National Park Service Headquarters, 2006-2007. As Project Manager, redesigned navigation, content and design of HABS/HAER/HALS/CRGIS website and NPS History Program website. Created online publications for NPS History including Abraham Lincoln web feature, Teaching with Historic Places Lesson Plan on lighthouses, and Maritime Resources of Massachusetts travel itinerary.

Maritime Heritage Program, National Park Service Headquarters, 2006-2007. As Historian, maintained national inventory of historic lighthouses and ships for Maritime Heritage Program. Reviewed applications for the transfer of federally-owned historic light stations, under the National Historic Lighthouse Preservation Act of 2000.

National Park Service Cultural Resources Web Team, 1999-2008. As Team Member, assessed popularity and usability of web materials, and established guidance to achieve increased visibility. Served on subcommittee for website redesign, participated in focus group and usability testing.

National Register of Historic Places, National Park Service

Consultation on Review of National Register of Historic Places and National Historic Landmark Nominations, 1998-2006. As Historian, contributed to peer review of multiple nominations. Edited NHL nomination for Ryman Auditorium, Nashville, Tennessee. Wrote comments for return of Spud Drive-in Theater nomination, Driggs, Idaho to SHPO. Developed presentation for national conference: "America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places."

Public Outreach for NRHP, 1998-2006. As Historian, contributed to publication of printed and online materials to increase awareness of and understanding of NRHP. Provided guidance on listing properties, benefits of listing, and pertinent laws and regulations. Assisted with development of public workshops, production of brochures, bulletins, power point presentations and exhibits. Assisted with the final editing and printing of two NRHP bulletins: "Telling the Stories Planning Effective Interpretive Programs for Properties Listed in the National Register of Historic Places" and "Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places." Helped monitor the reprinting of several other NR technical bulletins, which provide standards and guidelines for evaluating historic properties.

Discover our Shared Heritage Travel Itineraries, 1998-2006. As Historian and Team Leader, coordinated the production of 38 travel itineraries developed in partnership with state and local governments, and private organizations, Each travel itinerary was created to highlight historic sites listed in the NRHP, increase awareness of the diverse and representative historic places across the United States, encourage heritage tourism, and provide a valuable educational resource. Managed project development and supervised team members, evaluated new proposals, established work plans, coordinated launch and press releases, researched, wrote and edited historical descriptions, essays and program talking points, created graphics, web pages and PowerPoint presentations.

Development of Thematic Features, NRHP, National Park Service Headquarters, 1999-2006. As Historian, designed, researched and wrote content for periodic thematic features, highlighting the diversity of historic sites listed in the NRHP. Themes included African American History, Asian Pacific Heritage, Hispanic Heritage, Women's History, American Indian Heritage, Preservation Month, Veterans Day, National Park Week, and Family History Month.

Arlington Heritage Alliance

Chair and Board Member of Arlington Heritage Alliance, Arlington, Virginia, 2000-2008. As Chair, determined and guided the initiatives of local historic preservation non-profit organization. Developed projects and publications to broaden local preservation constituency
Developed and facilitated numerous small and large meetings of preservation constituents, including community-wide preservation planning committee. Represented organization at public meetings and in communication with local and national elected officials. Evaluated local development and preservation plans. Developed "My Historic House" program to encourage sensitive renovations and additions. Judged Arlington Historic Preservation Design Awards.

Recent Past Preservation Network

Founder, Recent Past Preservation Network, 2000-2006. As one of the founders, and inaugural Board Member, of a new national preservation non-profit, guided the organization's direction and initiatives, helped develop short- and long-term goals and objectives. Developed and facilitated annual membership meetings. Worked with legal council to file incorporation paperwork and secured 501(c)3 status with the IRS. As Treasurer, prepared and monitored five-year projected budget, filed annual reports, and analyzed fiscal feasibility of proposed projects.

Marietta Manor, Prince George's County, Maryland
Building Restoration, 1996. As Assistant Site Manager, contributed to final stages of restoration of the 1812 Federal home of Supreme Court Justice Gabriel Duvall. Developed and helped implement an interior paint plan based on paint analysis.

Museum Operations, 1996. As Assistant Site Manager, lead interpretative tours for school groups and the general public. Assisted with event planning for on-site programs and the County's Tri-centennial Celebration.

Publications:

2006 *"America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places,"* Preserve and Play: Preserving Historic Recreation and Entertainment Sites. Washington, District of Columbia: National Park Service.

2003 "*From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Constructing Image, Identity, and Place: Perspectives in Vernacular Architecture, Vol. IX.* Knoxville, TN: University of Tennessee Press.

Presentations:

2013 "Current Trends in Historic Resource Surveys for Preservation Planning," Session moderator and presenter of "Chula Vista Comprehensive Historic Resources Survey," American Planning Association California Chapter Annual Conference, Valencia, California.

2012 "Documentation & Evaluation of Berylwood Historic District," Keynote address for Friends of the Bard Mansion Centennial Celebration, Port Hueneme, California.

2005 "America at Play: Documenting and Evaluating Recreational Resources with the National Register of Historic Places," Preserve and Play National Conference, sponsored by National Park Service, Chicago, Illinois.

2000 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Arlington Heritage Alliance Annual Meeting, Arlington, Virginia.

1998 "From Ticket Booth-To Screen Tower: An Architectural Study of Drive-in Theaters in the Baltimore-Washington-Richmond Corridor," Vernacular Architecture Forum Conference, Annapolis, Maryland.

1997 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant." Marriott International 70th Anniversary Celebration, Bethesda, Maryland.

1995 "Hot Shoppes: 'Food for the Whole Family' at the Local Chain Restaurant." Annual Conference on Washington, DC, Historical Studies, Washington, District of Columbia.

Sarah Stringer-Bowsher, M.A., RPH

Senior Historian

Total Years of Experience: 13

Education:

M.A.	2007/History/ Public History Program/Arizona State University, Tempe
B.A.	2000/History/University of Arizona, Tucson

Registrations

2009	Register of Professional Historians, No. 602, California Council for the Promotion of History (CCPH)

Professional Profile:

Ms. Stringer-Bowsher has thirteen years of professional experience as a historian. She earned her M.A. through public history course work in historical research methods, applied history, museology, and historic preservation. Ms. Stringer-Bowsher's thesis was an original case study of Arizona's first female Civil Engineer who worked as a sanitarian at the state laboratory and was also a director of the women's projects of the Works Progress Administration during the Great Depression. Ms. Stringer-Bowsher's thesis, now archived at the Arizona State Library, required research at local, state, and national repositories, including extensive research at the National Archives and Records Administration (NARA) in College Park, MD. As the Senior Historian for ASM, Ms. Stringer-Bowsher focuses on developing research-based historic contexts; the foundation for both architectural history and historical archeology site assessments and evaluations. Ms. Stringer-Bowsher also prepares historic resource evaluations of buildings, structures, and objects in compliance with CEQA, NEPA, Section 106, and local registers. Ms. Stringer-Bowsher has completed archival research in repositories across California, Arizona, Washington, and Nevada. Ms. Stringer-Bowsher's work products have included: land use histories and ESA Phase I site assessment reports; heritage projects for a water and power company in Arizona; HAERs, HABS, and HALS with HAERs submitted to the Library of Congress; prepared numerous papers and reports for a variety of private and public clients; and public interpretation for federal and commercial clients, such as signage, brochures, and an interpretation plan. Each deliverable required that she create or implement a project design, collect pertinent primary and secondary sources, and analyze and synthesize the information into relevant and evidential products that adhere to regulations, standards, and best practices.

Relevant Project Experience:

Historic Properties Evaluation of the BOMARC CQM10A/B Target Drone Launch Complex at Vandenberg Air Force Base, Santa Barbara County, CA
Senior Historian
CLIENT: ManTech SRS Technologies, Inc.
Conducted additional primary research at facilities across the United States to gather additional information on the inner workings of the facility. Collected data and co-designed an interpretive brochure for the public that illustrated and described the operations and function of the facility.

Cultural Resources Study for the Murai Subdivision Environmental Impact Report Project, San Marcos, San Diego County, CA
Senior Historian
CLIENT: Sophia Mitchell & Associates, LLC
Conducted research on the Natwick Dam, Robin Hood Ranch, and potentially significant figures associated with those potential resources by contacting the local irrigation district and historical society as well as

consulting historical topographic maps and historic aerials. Prepared a brief land use history of the project area.

Ontario International Airport Historic Context Statement, Oral History Project, and Oral History Narrative Video, Ontario, San Bernardino County, CA
Senior Historian
CLIENT: The City of Ontario
Provided research guidance at the outset of the project and intermittently, as needed. Prepared and conducted a one-day oral history training session for City of Ontario officials and potential volunteer interviewers. Transcribed l oral histories.

Peer Review, Naval Air Station North Island, Naval Base Coronado, San Diego County, CA
Senior Historian
CLIENT: UltraSystems Environmental
As the author of the Comprehensive Interpretive Plan and Signage, provided peer review of proposed signage written by UltraSystems. Specific recommendations were given on the intended outcome of the tour per NAVFAC, guidance based on best practices in interpretive signage, and examples of recommendations for rewriting their signs.

Archaeological and Historical Survey and Recordation of a Portion of Border Field State Park, San Diego County, CA
Senior Historian
CLIENT: California Department of Parks and Recreation
Provided initial direction of the research endeavor. ASM recorded the historic/archaeological features related to the military activities within BFSP, especially those associated with the Border Field Auxiliary Naval Air Station (BFANAS), performed historic archival research, and synthesized the historic research to better understand the historic/archaeological features identified during the survey, including their location and the function of the features.

Norco Landscape Management Plan for the Lake Norconian Club Historic District at Naval Weapons Station Seal Beach (NAVWPNSTA), Detachment Corona (Det. Corona) located in Norco, Riverside County, CA
Senior Historian
CLIENT: Tetra Tech
Contributed to this largely biological landscape management plan by assessing extant resources and procuring appropriate resources to identify how the property's landscape has changed over time.

Cultural and Historical Resource Survey and Evaluation Report for the Valley Center-Pauma Unified School District EIR, Valley Center, San Diego County, CA
Senior Historian
CLIENT: KLR Panning
Contributed to the cultural and historical resource survey and evaluation report by conducting extensive research on Camp Roe, a Civilian Conservation Camp (CCC) site and California Department of Forestry (CDF) facility. Prepared a detailed land-use history of the project area from 1875 until 1947. Provided assistance in preparing the evaluation.

NBC Naval Air Station North Island, Comprehensive Interpretive Plan, Coronado, San Diego County, CA
Senior Historian
CLIENT: Naval Facilities Engineering Command, Southwest
Authored report that provided a comprehensive approach to interpretation on the installation. Also authored the main deliverables that included: two narrated walking tours of the two National Register of Historic Places (NRHP) districts; recommendations for types, locations, and themes for the interpretive signage

including street sign styles and locations within the district; and a working document that identified the history behind names of places, streets, etc. on NASNI.

Integrated Cultural Resources Management Plan Update for Marine Corps Base Camp Pendleton, San Diego County, CA
Senior Historian
CLIENT: Marine Corps Base Camp Pendleton/Naval Facilities Engineering Command, Southwest
Collected data for updating the ICRMP and summarized extant historic contexts, including ASM's master historic context of the base (prepared by Sarah Stringer-Bowsher and Dan Killoren) and El Camino Real context (Sarah Stringer-Bowsher).

Historical Resource Reconnaissance Survey in support of Grantville EIR, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
Identified potential historic resources as a requirement for the preparation of the EIR, in compliance with CEQA. Conducted research and prepared the historic context statement for the city-wide survey of the Grantville area.

Cultural and Historical Resource Survey and Evaluation Report for the Valley Center-Pauma Unified School District EIR, San Diego County, CA
Senior Historian
CLIENT: KLR Planning
Supported the archeological survey and evaluation by preparing a land use history of the property. Particular attention was paid to research on an early homesteader and the potential existence of an early adobe on the property as well as the use of the property by the California Department of Fire (CDF) and the Civilian Conservation Corps (CCC) in the 1930s.

Historic American Engineering Report Documentation, Kern County, CA
Senior Historian
CLIENT: Edwards Air Force Base
Collected pertinent documents and historic photos primarily at various offices at the EAFB, including civil engineering, and the Jet Propulsion Laboratory (JPL). Authored some of Part I, and all of Part III and Part IV.

Camp Pendleton Historic Context Study, San Diego County, CA
Senior Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Shaped a master context that is used as the base pre-installation context from 1769 to 1942. Three historical time periods (Spanish, Mexican, and American) will be developed with specific attention to three important themes on the base: transportation (trails, roads, and railroads), settlement (camps, squatters, ranch house, estancia), and land use (fishing, ranching, farming). Archival research answered questions posed by management. This context was created to aid in future compliance projects in support of Section 110 responsibilities.

Camp Pendleton Survey and Evaluation of El Camino Real, San Diego County, CA
Senior Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Created a context for "El Camino Real" showing its evolution and changes through three historical time periods (Spanish, Mexican, and American). Archival research yielded maps, insights through diaries, and other documentary materials.

Cultural Resource Assessment at Marine Corps Logistics Base (MCLB), San Bernardino County, CA
Senior Historian
CLIENT: NAVFAC Southwest
Prepared a site-appropriate historic context for two water features by answering specific questions posed by the base regarding potential eligibility. This context explained the development of the Minneola Canal/Daggett Ditch, which confirmed that the two water features were not associated with that historic water system.

Historic Context of China Lake Propulsion Laboratories, San Bernardino County, CA
Author
CLIENT: Epsilon Systems Solutions
Prepared a historic context of China Lake Propulsion Laboratories (CLPL), comprised of two operational areas historically known as China Lake Pilot Plant (CLPP) and Salt Well Pilot Plant (SWPP). These plants first produced propellants and explosives during World War II, and then, during the Cold War, advanced them and began a new focus on propulsion systems and explosives applications.

DET. Corona Historic Resources Survey, Evaluation, and Update, Riverside County, CA
Senior Historian
CLIENT: NAVFAC Southwest, NWS Seal Beach
Prepared three historic contexts for three periods of significance that included a 1920s resort period, a 1940s-1950s Naval hospital period, and a Cold War period, and prepared a land use history to explain the general development of the property and reuse trends. The report focused on the Cold War period because potential historic resources from that time had not been evaluated. The historic contexts for the 1920s resort period and 1940s-1950s Naval hospital period were minimally updated per NAVFAC direction. The report discussed the national trends for missile development; the Navy's role in research, development, testing, and evaluation (RDT&E); and how the installation contributed to RDT&E during the Cold War period.

Historic Documentation Package Wullenweber Antenna Array (AN/FRD 10) and Building 1, San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest
Authored the historical documentation package for the Navy's antenna array at Naval Radio Receiving Facility (NRRF), Imperial Beach as mitigation for its demolition. Historic documentation package included creating a HAER-like document and broadened an existing historic context for the Cold War era technology with appropriate historic photographs and drawings.

Herrmann Hall Maintenance Plan, Monterey County, CA
Project Historian
CLIENT: NAVFAC Southwest
Prepared a brief historic context for a historically significant building, Herrmann Hall, located on the campus of the Naval Postgraduate School.

Twentynine Palms Historic Resources Context, San Bernardino County, CA
Project Historian
CLIENT: MCAGCC Twentynine Palms
Prepared a segment of a Historic Resources Context on settlement in the project area and provided oversight on the preparation of the military segment.

Historic Resources Survey and Evaluation of Naval Security Group Activity Skaggs Island, Sonoma County, CA
Cultural Resources Field Supervisor and Research Director
CLIENT: NAVFAC Southwest
Researched the historic contexts of the World War II and Cold War eras installation as well as the buildings, structures, and objects for a survey and evaluation of its Cold War-era usage. Co-authored the report and created the historic Cold War-era context for Skaggs Island.

O'Neill Ditch Historic Evaluation, Proposed Santa Margarita River Conjunctive Use Project (SMRCUP), San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Responded to an urgent research request and evaluated the historic integrity of an 1883-era ditch associated with the Santa Margarita Ranch.

Gheen and Martin Reservoirs Historic Evaluation, Proposed Santa Margarita River Conjunctive Use Project (SMR CUP), San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Responded to a research request on the historicity of Gheen and Martin reservoirs as part of the Fallbrook Public Utility District's water operations. Authored a response to the inquiry pertaining to the Martin Reservoir as a possible WPA-era reservoir built between 1939 and 1943, respectively.

Green Beach Historic Context Study, San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Created a historic context of the construction of two bridges built during the 1920s, one was a Santa Fe Railway bridge and the other was a bridge built as part of a Highway 101 project. Co-author of the historic evaluation report.

Poway Site Land Use History, San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Researched the land use of a parcel in Poway, California to determine when known foundations may have been constructed on the land. Authored a section of the report detailing findings.

Edwards Phase I Cultural Resources Survey of 2,500 Acres and Phase II Evaluation of Selected Archaeological Sites, Kern and Los Angeles counties, CA
Project Historian
CLIENT: JT3
Authored segments of site forms regarding homesteads. Research focused on Land Patent Files obtained from the National Archives and Records Administration (NARA) in College Park, Maryland.

Edwards Phase I Cultural Resources Survey of 8,100 Acres, EAFB, Kern and Los Angeles counties, CA
Project Historian
CLIENT: JT3
Authored segments of site forms regarding homesteads. Research focused on Land Patent Files obtained from the National Archives and Records Administration (NARA) in College Park, Maryland.

Land Use Study for the San Mateo Agricultural Fields, San Diego County, CA
Project Historian
CLIENT: NAVFAC Southwest, MCB Camp Pendleton
Researched the land use history of a portion of Camp Pendleton. Research determined when land use changed from cattle ranching to agricultural production and determined the possibility of San Diegan Japanese leasing a portion of Camp Pendleton land for agricultural production. Conducted literature surveys, collection of current and historic maps, and gathered other primary and secondary materials. Authored the historical context.

Evaluation of 17 Sites at MCAS Miramar, San Diego County, CA
Project Historian
CLIENT: MCAS Miramar
Researched the settlement of the area in an effort to determine the significance of several structures on the property. Conducted surveys of literature, current and historic maps, land patent files, and other primary and secondary materials. Authored historic context section of the report.

Brochures for San Diego Family Housing, San Diego County, CA
Associate Historian
CLIENT: San Diego Military Family Housing, LLC
Assisted with deliverables in facilitating appropriate use of Naval housing facilities according to the established Programmatic Agreement for private operation and maintenance. Assisted the architectural historian in fashioning informational brochures for the occupants of the housing facilities detailing the history of the facility, responsibilities of SDFH and the occupants, and information outlining the NHPA as it applies to SDFH and the occupants of its facilities.

Historical Resources Technical Report for Riverwalk Golf Course, 1150 Fashion Valley Road, San Diego, San Diego County, CA
Senior Historian
CLIENT: SD Riverwalk, LLC and Hines
Authored the report. Photodocumented its current condition and assessed the golf course Conducted primary and secondary research for developing a historic context for the Ted Robinson, Sr. and Jr. designed golf course in Mission Valley as well as comparable Robinson, Sr. golf courses and golf courses throughout Southern California. Evaluated the golf course for its historical significance within two construction periods: the original construction and a redesign. Both were independently considered as potentially eligible to the national, state, and local register.

Class III Cultural Resources Survey for the East Columbia Basin Irrigation District Conservation Pipelines 2018-2019 Water SMART Project, Adams and Grant Counties, WA
Senior Historian
CLIENT: East Columbia Basin Irrigation District
Identified and collected as-built drawings, construction data, and historic photographs. Authored the site-specific context, evaluation, and project impact analysis and recommendations of the East Low Canal laterals (EL16, EL16B, EL20N, EL20P EL68T4, EK68T5, EL85C9) and one lateral associated with the Potholes East Canal (PE20C).

Cultural Resources Assessment for the South Columbia Basin Irrigation District Potholes East 38.9B5 Wasteway Bypass Project, Franklin County, WA
Senior Historian
Identified and collected as-built drawings, construction data, and historic photographs. Authored the site-specific context, evaluation, and project impact analysis and recommendations of Potholes East 38.9B5 Wasteway (PE38.9B5WW).

Historical Resource Evaluation Report for the Proposed Alternatives for the Pipeline Safety and Reliability Project, San Diego County, CA
Senior Historian
CLIENT: Insignia Environmental and San Diego Gas and Electric
Conducted research to prepare historic contexts for towns within the Project Area as well as for U.S. Highway 395 from downtown San Diego to the San Diego County line. Collected primary and secondary data, including contacting a local U.S. Highway 395 advocacy group. Considered the historical significance for the entire roadbed throughout San Diego County and evaluated the sections within the project area as contributing or non-contributing segments to two periods of significance: 1935-1947 and 1948-1968.

Historical Resource Evaluation Report for the Proposed Pipeline Safety and Reliability Project San Diego County, CA
Senior Historian
CLIENT: Insignia Environmental and San Diego Gas and Electric
Conducted research to prepare historic contexts for towns within the Project Area as well as for U.S. Highway 395 from downtown San Diego to Temecula. Collected primary and secondary data, including contacting a local U.S. Highway 395 advocacy group. Considered the historical significance for the entire roadbed throughout San Diego County from 1935 to 1968.

Section 106 Evaluation and Eligibility Investigations for the Doble 33kV Distribution Line Rebuild Project, San Bernardino County, CA
Senior Historian
CLIENT: Petra Resource Management and United States Forest Service, San Bernardino National Forest
Conducted primary and secondary research to prepare and update historic contexts as well as to identify the boundaries of the Holcomb Valley Mining District. Mining log books from the 1870s forward as well as historic maps and newspaper articles provided information necessary for recommending two historic mining districts: Holcomb Valley Mining District Historic District and Bear Valley Mining District Historic District.

Addendum to Historic American Buildings Survey Anacapa Island Light Station, HABS CA-2335, Ventura County, CA
Senior Historian
CLIENT: National Park Service
Conducted the initial assessment of the historical data already procured and information needed. Participated in the preliminary conversations for expected outcomes at the outset of the project and provided research guidance.

Historic Resource Evaluation Letter Report for San Elijo Outfall, Encinitas and Solana Beach, San Diego County, CA
Senior Historian
CLIENT: HELIX Environmental Planning, Inc.
Conducted research for the local historic context and site-specific historic context that included wastewater, San Elijo Lagoon, and construction of the 50-year old asphaltic concrete pipeline. Gathered drawings and information on the designers and contributed to its evaluation as potentially eligible on a national, state, and/or local level.

Cultural Resource Survey Findings Memo for the Canyon Creek Resort Project, Norco, Riverside County, CA
Senior Historian
CLIENT: Lansing Companies
Conducted research on the Stringfellow Quarry and Wyle Laboratories, including contacting the City of Norco, gathering documents from the Corona Public Library Heritage Room and those available from the companies online, and utilizing historic aerials to confirm the approximate years of construction. Prepared preliminary site histories of the quarry and laboratory.

Historic Resources Survey of the Works of Architect Loch Crane, City of San Diego, San Diego County, CA
Senior Historian
CLIENT: HELIX Environmental Planning, Inc. and Caltrans District 11 – San Diego
Conducted the initial identification and communication with Crane family members.

Cultural Resources Assessment for the Quincy-Columbia Basin Irrigation District W53.1E Lateral Lining Project, Grant County, WA
Senior Historian
CLIENT: Quincy-Columbia Basin Irrigation
Identified and collected as-built drawings, construction data, and historic photographs. Authored the site-specific context, evaluation, and project impact analysis and recommendations of the W53.1E Lateral.

Cultural Resources Assessment for the Quincy-Columbia Basin Irrigation District Automation of W3 Lateral Turnout of the West Canal, Grant County, WA
Senior Historian
CLIENT: Quincy-Columbia Basin Irrigation
Identified and collected as-built drawings, construction data, and historic photographs. Authored the site-specific context, evaluation, and project impact analysis and recommendations of the W3 Lateral Turnout.

Class III Cultural Resources Survey for the South Columbia Basin Irrigation District's Canal Improvements – Pasco Wasteway Rehabilitation Project, Franklin County, WA
Senior Historian
CLIENT: HDR, South Columbia Basin Irrigation District
Identified and collected as-built drawings, construction data, and historic photographs. Authored the site-specific context, evaluation, and project impact analysis and recommendations of the Pasco Wasteway chute.

United States Forest Service, Cleveland National Forest Evaluation of 99 Residences Within Seven Tracts at Mount Laguna, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas and Electric (SDG&E) and United States Forest Service, Cleveland National Forest
Conducting a survey and evaluation of 99 residential cabins within the Project Area as potentially contributing to historic districts of residential cabin tracts. Gathered and compiled historic data on the individual properties, including year built, permitees, and builders. Utilized GIS data layers for the survey and evaluation to identify authentic information and provide interactive information as well as collect georeferenced photographs. Data maps clearly identify those residences that are contributing and non-contributing as well as any recommended tracts as historic districts.

United States Forest Service, Cleveland National Forest Service Signage, Mount Laguna, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas and Electric (SDG&E) and United States Forest Service, Cleveland National Forest
Conducted primary research, including oral histories, of the site-specific property of the Morris' and Cheroskes. Authored the text of interpretive signage and co-designed the interpretive signs that provide information on the Native Americans in the area and two families who lived in the area.

Historic Resource Document Research for 232 West Ash St., San Diego, San Diego County, CA
Senior Historian
CLIENT: Fred Caminite
Gathered documents from the San Diego County Assessor's Office, City of San Diego Water Department, City of San Diego Business Development Services, and produced photodocumentation of the site for a historic review completed by the City of San Diego.

Philadelphia Canyon Mining Subdistrict: A Historical Guide, Battle Mountain, Lander County, NV
Senior Historian
CLIENT: Newmont Mining Corporation
Designed a quad-fold brochure for the Bureau of Land Management that depicted information about the Battle Mountain Mining District, and more specifically Philadelphia Canyon, through text, historic maps, and historic and contemporary photographs.

Historic American Engineering Record for the Rainbow Compressor Station, San Diego Gas and Electric Facility, Rainbow, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas and Electric (SDG&E)
Co-authored the HAER and provided secondary research. ASM prepared the HAER as mitigation for the NRHP-eligible Rainbow Compressor Station. It was the first of its kind in San Diego County, constructed to increase the Company's ability to store and deliver many additional millions of cubic feet of natural gas. The report will be housed in the Library of Congress.

Historical Resources Evaluation Report for the Verde School Road Bridge Replacement Project, Imperial County, CA
Senior Historian
CLIENT: Panorama Environmental, Inc.
Conducted archival research and wrote a historic overview and site-specific history for evaluating the Verde School Road Bridge across the East Highline Canal (P-13-008333; CA-IMP-7835), which was constructed prior to 1914.

Historic Resources Evaluation Report for the Sunrise Highway, San Diego County, CA
Senior Historian
CLIENT: Cleveland National Forest, USDA Forest Service; California Public Utilities Commission, Infrastructure Permitting & CEQA; and County of San Diego, Project Planning
Evaluated the Sunrise Highway for eligibility to the NRHP, CRHR, San Diego County Local Register of Historical Resources (Local Register), and the County of San Diego Resource Protection Ordinance. As the primary author, conducted research and prepared historic context for the development of the forest and the highway. Photodocumented and evaluated the 12.36 miles of highway within the project area and provided management recommendations.

Historic Resource Document Research for 210 West Ash St./1400 Front Street, San Diego, San Diego County, CA
Senior Historian
CLIENT: Irene Borevitz
Gathered documents from the San Diego County Assessor's Office, City of San Diego Water Department, City of San Diego Business Development Services, and photodocumented the site for a historic review completed by the City of San Diego.

Cultural Resources Survey and Evaluation of Built Environment for the Bear Valley Parkway Development, Escondido, San Diego County, CA
Senior Historian
CLIENT: Harris & Associates
Conducted research and prepared historic context and site history. Photodocumented and evaluated the significance of the built environment on the property for the NRHP, the CRHR, and the City of Escondido Local Register of Historic Places or as a Local Historic Landmark.

Cultural Resources Inventory and Evaluation for the Fuerte Ranch Estates Project, El Cajon, San Diego County, CA
Senior Historian
CLIENT: REC Consultants, Inc.
Conducted research and prepared historic context and site specific history for a 1950s poultry farm. Photodocumented and evaluated the residence associated with the poultry farm that operated on the site for its potential eligibility to the NRHP and provided management recommendations.

Archaeological and Architectural Review for the Oak Parc Apartments Project, Moreno Valley, Riverside County, CA
Senior Historian
CLIENT: United States Army Corps of Engineers, Riverside Field Office and Wermers Properties
Conducted research and prepared a context for Moreno Valley and site-specific history for the project area. ASM inventoried the proposed project area and assessed whether the scope had the potential to cause adverse impacts to resources eligible for the NRHP located within or near the project area.

Historic Resource Document Research for 232 West Ash St., San Diego, San Diego County, CA
Senior Historian
CLIENT: Wells Fargo
Gathered documents from the San Diego County Assessor's Office, City of San Diego Water Department, City of San Diego Business Development Services, and produced photodocumentation of the site for a historic review completed by the City of San Diego.

An Archaeological Survey, Extended Phase I, and Historical Resources Evaluation Report for the Carroll Creek Road Realignment and Bridge Replacement Near Grant, Inyo County, CA
Senior Historian
CLIENT: Caltrans District 9
Conducted limited research and prepared historic context for the Los Angeles Aqueduct. ASM evaluated the bridge in compliance with Section 106 of the NRHP and CEQA.

An Archaeological Survey, Extended Phase I, and Historical Resources Evaluation Report for the Walker Creek Road Realignment and Bridge Replacement Near Grant, Inyo County, CA
Senior Historian
CLIENT: Caltrans District 9
Conducted limited research and prepared historic context for the Los Angeles Aqueduct. ASM evaluated the bridge in compliance with Section 106 of the NRHP and CEQA.

An Archaeological Survey, Extended Phase I, and Historical Resources Evaluation Report for the Walker Creek Road Realignment and Bridge Replacement Near Grant, Inyo County, CA
Senior Historian
CLIENT: Caltrans District 9
Conducted limited research and prepared historic context for the Los Angeles Aqueduct. ASM evaluated the bridge in compliance with Section 106 of the NRHP and CEQA.

Historic Resources Evaluation Report Department of Conservation Division of Oil and Gas Office Coalinga, Fresno County, CA.
Senior Historian
CLIENT: Dudek
Conducted primary and secondary research, and prepared historic context for oil and gas in California. ASM evaluated the Coalinga Division of Oil and Gas Office in compliance with CEQA.

Results of Archaeological Monitoring, Testing, and Data Recovery for the Cedar and Kettner Development Project, San Diego, San Diego County, CA
Senior Historian
CLIENT: RBF Consulting
Conducted research for and prepared the historic context and land use history of Block 428 in downtown San Diego's Little Italy neighborhood, which was used to associate findings within the site.

Archaeological Assessment for the Quincy-Columbia Basin Irrigation District W81G Wasteway Pipeline Project, Grant County, WA
Senior Historian
CLIENT: Quincy-Columbia Basin Irrigation District
Prepared the site history, gathered drawings and specification, evaluated the Crab Creek Lateral and W81G Wasteway on the West Canal of Columbia Basin Project, and prepared the project analysis as well as provided management recommendations in compliance with the WA State Department of Archaeology and Historic Preservation (DAHP) and Section 106 of the NRHP.

Cultural Resources Evaluation Report Point Loma High School Whole Site Modernization, San Diego, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
Conducted research on the school and the architect. Prepared site history for school and historical narrative for the architects. ASM evaluated eight buildings in compliance with CEQA.

Historic Property Survey Report for Academy Avenue Reconstruction Project City of Sanger, Fresno County, CA
Senior Historian
CLIENT: Caltrans District 6, Fresno, California
Conducted research for the locally iconic Chuck Wagon property.

Archaeological Testing of 45WH1004 at 439 Marine Drive, Point Roberts, Whatcom County, WA
Senior Historian
CLIENT: Steve Power
Conducted research and prepared a historic context to associate site findings. Located historic documents to confirm that the area did not have any built structures that may have housed Chinese laborers who worked in the local Salmon caning industries in Point Roberts.

Class III Cultural Resources Survey for the East Columbia Basin Irrigation District Installation of Conservation Pipelines – Block 47 Project, Adams County, WA
Senior Historian
CLIENT: East Columbia Basin Irrigation District
Evaluated approximately 25,783 linear feet (ft.) of earth-lined open ditches in compliance with the WA State Department of Archaeology and Historic Preservation (DAHP) and Section 106 of the NRHP. Conducted research to collect as-built drawings, construction specifications, and site- specific history. Prepared context, evaluated ditches, and provided impact analysis from piping the ditch with approximately 17,645 linear ft. of pipe and management recommendations.

Historic Resource Evaluation Report of the Akin-Moore Anchorage Building, 2353 Shelter Island Drive, San Diego, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
Evaluated the Akin-Moore (Gold Coast) Anchorage Building and associated dock (a commercial property) in compliance with CEQA. Conducted research and prepared historic contexts for yachting in San Diego Bay and the creation of Shelter Island, site specific history, and the building's architect.

Historic Resource Assessment Report for Lanterman Developmental Center, Pomona, Los Angeles County, CA
Senior Historian
CLIENT: Dudek
On behalf of the Department of Developmental Services (DDS), revised a Historic Resources Assessment Report (HRAR) for the former Lanterman Developmental Center (LDC) for the State of California Department of General Services (DGS). ASM fully evaluated all buildings and structures associated with the LDC campus, originally called the Pacific Colony and later the Pacific State Hospital. Conducted research and prepared historic contexts for Mental Health Institutions in California (1880s-1969) and a History of the Pacific State Hospital (1920-present).

Final Historic Properties Treatment Plan for Dry Lake SEZ, Clark County, NV
Senior Historian
CLIENT: Bureau of Land Management, Southern Nevada District, Las Vegas Field Office
Developed an appropriate historic properties treatment plan (HPTP) as defined in the Secretary on Interior's Standards for Historic Documentation. The plan provided the layout for an interpretive wayside to interpret three transportation sites visually effected by the Dry Lake projects: the Old Spanish Trail/Mormon Wagon Road, Arrowhead Trail/Arrowhead Highway/US Highway 91, and the Union Pacific Railroad. As the primary author, collected historical data, presented the historical significance of the resources, and offered recommendations on themes and potential uses of historical information in the interpretive signage.

Archaeological Survey Report for Segment 8B of the Bayshore Bikeway Project, San Diego County, CA
Senior Historian
CLIENT: Quality Infrastructure Corporation
ASM completed a Phase I archaeological survey for the proposed construction of a Class I bikeway facility as part of a gap closure for the Bayshore Bikeway in the cities of San Diego and Chula Vista. Conducted research to identify the potential association of a historic pre-1928 ditch with the functionality of the Western Salt Company Salt Works Historic District. Prepared a brief site-specific context to explain the function and association of the ditch.

Historic Resources Technical Report for 3574 Hollyberry Drive, Vista, San Diego County, CA
Senior Historian
CLIENT: BHA, Inc.
Evaluated a single-family residential property for eligibility for listing in the CRHR, City of Vista Register (Local Register), San Diego County Local Register of Historical Resources (San Diego County Register), and the County of San Diego Resource Protection Ordinance and as a historic resource under CEQA. Conducted site assessment, research, prepared context, and site-specific history.

Historical Resource Evaluation Report for Pacific Beach Middle School, San Diego, San Diego County, CA
Senior Historian
CLIENT: Westberg + White, Inc
The evaluation assessed potential historical resources for their eligibility for listing in the CRHR and as historic resources under CEQA, and assessed the potential impact of the project on those resources. Conducted site specific research and prepared historical context for the school and architect.

Historic Resource Evaluation for the Auditorium Building at Hoover High School, San Diego, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
The evaluation assessed potential historical resources for their eligibility for listing in the CRHR and as historic resources under CEQA, and assessed the potential impact of the project on those resources. Conducted site visit, conducted research on the school and architect, and prepared the historic context.

Historical Context, Archaeological Research Design for the Treatment of Inadvertent Discoveries, and Mitigation Monitoring Plan for the Demolition of the Former Caltrans District 11 Office Complex, 2829 Juan St., Old Town State Historic Park, San Diego, San Diego County, CA
Senior Historian
CLIENT: California State Parks, Southern Service Center
Conducted research and prepared historic context for Caltrans District 11 Office Complex property historically located in Old Town. The project required extensive historic research of primary records to determine the long-term land use of the property.

Historic Resources Survey and Evaluation Report for the Mission 316 Project, San Marcos, San Diego County, CA
Senior Historian
CLIENT: City of San Marcos
Conducted research, including the procurement of a chain of title, contacted the San Marcos Historical Society regarding information on the property and previous owners, and gathered building records from the San Diego County Assessor's Office to better understand the previous use of the buildings for potential association with important people or events in the history of San Marcos.

Historical Context, Archaeological Research Design, and Mitigation Monitoring and Discovery Plan for the River Station, Los Angeles State Historical Park, Los Angeles, Los Angeles County, CA
Senior Historian
CLIENT: California State Parks, Southern Service Center
Completed research on the Southern Pacific Railroad Station in Los Angeles and synthesized historical data, drawings, photographs, etc. into historical contexts for the Zanja Madre, the establishment of the Southern Pacific Railroad's Los Angeles Division, San Fernando Street Depot: 1875-1882, River Station Depot: 1883-1888, River Station Yard: 1889-1923, and River Station Yard: 1923-1960. Information provided was meant to inform archeological monitoring and be utilized for future interpretation of the park.

Negative Cultural Survey Report Form (Appendix D) for Black Mountain Access Road Repair Project, San Diego, San Diego County, CA
Senior Historian
CLIENT: Atkins North America, Inc.
Compiled and prepared information on the San Diego County Water Authority (SDCWA) and its eligibility.

Division of Gas and Oil Reserve Research, Cypress, Orange County, CA
Senior Historian
CLIENT: Shelley Bookspan.
Conducted archival research at the Division of Oil & Gas Archives, District 1 in Cypress, California.

Historic Resource Evaluation Report for the Imperial Beach Library, Imperial Beach, San Diego County, CA
Senior Historian
CLIENT: DUDEK
Conducted research on the Modern/International style building and the architect, Delmar S. Mitchell of Paderewski, Mitchell & Dean, and prepared historic context.

Historic Resource Evaluation Report for the San Dieguito River Bridge Replacement and Second Main Track Project and the Camino Del Mar Bridge No. 57C-0209, Replacement Project, Del Mar, San Diego County, CA
Senior Historian
CLIENT: David Evans and Associates
Primary author. Conducted extensive research on the Sante Fe Railway system and bridges. Formally evaluated the railroad and associated railroad structures, including Bridge 243.0, for eligibility to the NRHP, the CRHR, and under local ordinances, for compliance with Section 106 of the NRHP and Department of Transportation Section 4(f). Formally evaluated the eligibility of Bridge No. 57C-0209 under CEQA and local preservation requirements.

Results of Archaeological Monitoring for the Harbor View Hotel Project, San Diego, San Diego County, CA
Senior Historian
CLIENT: Construction Testing & Engineering, Inc.
Contributed to research and writing a land-use history for the monitoring report submitted to the City of San Diego.

Cultural Resources Study for the San Marcos Highlands Project, San Marcos, San Diego County, CA
Senior Historian
CLIENT: Sophia Mitchell & Associates, LLC
Contributed to the cultural resources inventory and evaluation report by researching and evaluating a dam (constructed sometime between 1938 and 1947) in compliance with CEQA.

Marrón-Hayes Adobes Historic District Interpretive Signage, Carlsbad, San Diego County, CA
Senior Historian
CLIENT: McMillian Homes Construction, Inc
Prepared the text and selected photographs for interpretive panels produced as part of mitigation for the incoming housing project.

Marrón-Hayes Adobes Historic District, HABS No. CA-2900, Carlsbad, San Diego County, CA
Senior Historian
CLIENT: McMillian Homes Construction, Inc.
Primary author of the HABS that required extensive primary research, including gathering documents and photographs at repositories, such as Huntington Library; Autry National Center; San Diego History Center; and University of California at Berkeley, Bancroft Library as well as a chain of title for the property. This document required a detailed historic context and land-use history that covered the *Californio* period to 1971.

Historical Resources Technical Report for Torrey Pines Golf Course, 11480 North Torrey Pines Road San Diego, San Diego County, California
Senior Historian
CLIENT: Schmidt Design Group, Inc.
Authored the report that required extensive archival research and a survey of the entire golf property that included the North Course and South Course. Evaluated the historical significance of the North Course by establishing appropriate criteria for a rarely evaluated resource, developed a history of the game and golf designers play intentions, documented changes to the course over time, and identified comparable golf courses in Southern California.

Archaeological Initial Assessment for 1453 Imperial Avenue, San Diego, San Diego County, CA
Senior Historian
CLIENT: Affirmed Housing
Collected historical data (Sanborns, aerials, etc.) for the preparation of a brief land-use history of the property and its location within the block. Prepared the memo for the client.

Results of Archaeological Monitoring, Testing, and Data Recovery for the Cedar and Kettner Development Project, San Diego, San Diego County, CA
Senior Historian
CLIENT: RBF Consulting
Completed site-specific research and prepared land-use history of property in downtown San Diego. Completed research and prepared historic context for the Little Italy neighborhood. Report was submitted to the City of San Diego for a commercial development project.

Cultural Resources Study for the San Marcos Highlands Project, San Diego County, CA
Senior Historian
CLIENT: Sophia Mitchell & Associates
Completed research on the potential homestead property as well as an earthen dam and reservoir. Prepared a historical evaluation of the dam and reservoir in compliance with CEQA.

Historic Resources Evaluation Report for American Legion Post 282, San Diego County, CA
Senior Historian
CLIENT: Dudek
Completed research for the property that considered the significance of social clubs that served the community, a general historical context, and data on the building. As the building was constructed in 1947, its potential for historical significance was evaluated in compliance with CEQA and local historic preservation requirements.

Historic Resource Evaluation for Industrial Buildings at 12423 Whittier Blvd., Los Angeles County, CA
Senior Historian
CLIENT: Warmington Residential
Conducted a site visit, photographed the extant buildings and surrounding area, conducted research, and prepared a city-appropriate context on manufacturing from the 1950s-1970s. As buildings constructed in 1953, their potential for historical significance was evaluated in compliance with CEQA and local historic preservation requirements.

Historical Resources Survey Report for the Imperial Beach Library, San Diego County, CA
Senior Historian
CLIENT: Dudek
Conducted research for the property and the building's historical context. Since the building was constructed in 1967, its potential for historical significance was evaluated in compliance with CEQA and local historic preservation requirements.

Historical Resources Letter Report for Building 1200 at Hoover High School, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
Conducted research for the property with specific attention to architectural data and the building's potential construction with the Works Progress Administration (WPA). As a building constructed in 1938, its potential for historical significance was evaluated in compliance with CEQA and local historic preservation requirements.

Historic Resource Evaluation for the Ecke Ranch Administration Building, San Diego County, CA
Senior Historian
CLIENT: KLR Planning
Conducted a preliminary survey for the property owner, Leichtag Foundation, for determining whether or not this building was historically significant and/or eligible for historic designation, in advance of making a decision about its future use and/or development of the property.

Archeological Initial Assessment for the Property at 860 W. E Street, San Diego County, CA
Senior Historian
CLIENT: Sophia Mitchell & Associates
Conducted preliminary research, prepared a brief historical context, and co-authored the report prepared in compliance with the City of San Diego's Initial Evaluating, Testing, and Monitoring requirements.

Cultural and Historical Resources Existing Conditions and Evaluation Report for the Pacific Surfliner Carlsbad Village Double-track Project, Carlsbad, San Diego County, CA
Senior Historian
CLIENT: BRG Consulting
Prepared the historic resource evaluation and assessment of indirect effects report. Conducted research and prepared the historic context that considered community development, including the significance of the railroad.

Historical Resources Technical Report for 4307 Third Street, San Diego County, CA
Senior Historian
CLIENT: Dudek
Conducted research and prepared the historical context of the Hillcrest Receiving Home as part of the Historical Resources Technical Report (HRTR) for the City of San Diego in compliance with CEQA and the local preservation requirements.

Class III Cultural Resources Survey for the East Columbia Basin Irrigation District East Low Canal Lind Coulee Siphon No.1 to Scooteney Wasteway Project, Adams and Grant counties, WA
Senior Historian
CLIENT: ECBID
Prepared the survey and evaluation in compliance with Section 106 of the NRHP and the WA State Department of Archaeology and Historic Preservation (DAHP). Conducted research, prepared the historic context, and evaluated historic features associated with the project including bridges and waters structures.

Historic American Landscapes Survey, Arden: Helena Modjeska Historic House and Gardens, Orange County, CA
Senior Historian
CLIENT: Orange County Parks
Conducted research and prepared the history of the property for consideration of the national contest for HALS completed for women's historical sites.

Addendum to the Class III Cultural Resources Survey for the East Columbia Basin Irrigation District Proposed Expansion of the East Low Canal, Adams and Grant counties, WA
Senior Historian
CLIENT: ECBID
Prepared the survey and evaluation of 850 ft. of the Lind Coulee in compliance with Section 106 of the NRHP and the WA State Department of Archaeology and Historic Preservation (DAHP). Conducted research, prepared the historic context, and evaluated historic features associated with the project.

Highway 80 website for the Bureau of Land Management, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas and Electric
Prepared the text and graphics for the Highway 80 website based on the research completed and historic context written by Stringer-Bowsher for the National Register of Historic Places Nomination.

Cultural Resource Survey for the Metrolink CTO-31 Project, Los Angeles County, CA
Senior Historian
CLIENT: HDR Engineering
Conducted research and prepared brief context on the Southern Pacific Railroad operations in Northridge.

Cultural Resources Study for the Lindley Tank Replacement Project, San Diego County, CA
Senior Historian
CLIENT: Helix Environmental
Completed a site assessment, conducted research, and evaluated the 1951 water tank and system in Escondido for in compliance with Section 106 of the NRHP and CEQA.

Archaeological Survey and Evaluation for the Tierra del Sol LLC Project, San Diego County, CA
Senior Historian
CLIENT: Dudek
Conducted research on two extant buildings including gathering land patent file information from the National Archives and Records Administration (NARA) in College Park, MD. Prepared both a local and site-specific context for the greater Campo area and the land use of the property. Worked with one of ASM's architectural historians on the evaluation of the two extant homestead buildings, one 1930s and the other circa early 1940s.

Archaeological Evaluation for the Rugged Solar Project, San Diego County, CA
Senior Historian
CLIENT: Dudek
Conducted research on the extant building including gathering land patent file information from the National Archives and Records Administration (NARA) in College Park, MD. Prepared both a local and site-specific context for the greater Campo area and the land use of the property. Worked with one of ASM's architectural historians on the evaluation of the extant homestead building that consisted of two nineteenth century buildings that were interconnected and utilized as one building.

Historic Resources Survey Chula Vista, San Diego County, CA
Senior Historian
CLIENT: City of Chula Vista
Conducted limited research defined by the scope and prepared a city-wide context that focused on the project area. The context considered agricultural development, city incorporation, industrial and military development, and commercial expansion that replaced agriculture as a primary economy. Limited research was also conducted on potentially eligible buildings and their potential association with significant persons in the community.

Cultural Resources Survey for the 2012/2013 Construction Season of the East Columbia Basin Irrigation District Water SMART Grant Project, Adams, Franklin, and Grant counties, WA
Senior Historian
CLIENT: USDI Bureau of Reclamation
Researched and evaluated laterals associated with the NRHP-eligible East Low Canal and the Potholes East Canal of the Columbia Basin Project (CBP). Research included gathering primary documents on file with the BOR and the ECBID, and secondary materials available in universities and other repositories. The historic context prepared considered the regional significance of the CBP and evaluated the laterals for their eligibility to the NRHP based on that context and familiarity with water projects throughout the west.

National Register of Historic Places Nomination for Highway 80 in California, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas and Electric Company (SDG&E)
Prepared a historic context that considered the national, state, and local significance of Highway 80 that originally stretched from the Pacific to the Atlantic, from San Diego, CA to Savannah, GA. The historic context considers the national and state road movements, construction methods, and social and political changes that impacted the highway over time from the late nineteenth century of the Good Roads movement to the incoming federal freeway system funded by the 1956 Federal Aid Highway Act.

Archaeological Survey Report for the Stoneridge Preserve, San Diego County, CA
Senior Historian
CLIENT: County of San Diego Department of Parks and Recreation
Conducted research and prepared a local context and land use history of the Preserve. The context considered settlement, mining, transportation corridors, and general development. The land use history specifically considered the changes to the Preserve over time from settlement to the present day.

Archaeological Survey Report for the Potrero-Mason Property, San Diego County, CA
Senior Historian
CLIENT: County of San Diego Department of Parks and Recreation
Conducted research and prepared a local context and land use history of the Preserve. The context considered settlement, mining, transportation corridors, and general development. The land use history specifically considered the changes to the Preserve over time from settlement to the present day.

Archaeological Survey Report for the Hagey and Sycamore South Properties, Additions to the Sycamore Canyon and Goodan Ranch Preserves, San Diego County, CA
Senior Historian
CLIENT: County of San Diego Department of Parks and Recreation
Conducted research and prepared a local context and land use history of the Preserve. The context considered settlement, mining, transportation corridors, and general development. The land use history specifically considered the changes to the Preserve over time from settlement to the present day.

Historic Resources Evaluation Report, San Diego County, CA
Senior Historian
CLIENT: County of San Diego Department of Parks and Recreation
Conducted research on the land owners and land use of the property over time. Research focused on dairy development in the local area and on the property.

Cultural Resource Survey Report for the Recht Property, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas & Electric Company
Researched and prepared a land use history of the parcel.

Summary Report for the Historical Resources Evaluation of Oak Ridge Ranch Parcels for the Sunrise Powerlink Phase I ESA, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas & Electric Company
Researched and prepared a land use history of the parcels.

Historical Resource Evaluation Report for the Jeff Valley Parcels, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas & Electric Company
Researched and prepared a land use history of the parcels.

Historical Resources Evaluation Report for Rancho Lilac, San Diego County, CA
Senior Historian
Conducted all necessary research regarding the development of Rancho Lilac from early settlement of the area, potential mining, the schools and post office to the various occupants and uses of the Rancho Lilac over time.

Historic Resource Evaluation Report for the Pine Valley Bath House, San Diego County, CA
Senior Historian
CLIENT: RBF Consulting
Conducted all research for a 1920s-era bath house originally part of a larger resort complex of historic Highway 80 in Pine Valley.

Historic Resources Evaluation of a Mining Site, Riverside County, CA
Senior Historian
CLIENT: Southern California Edison
Worked collaboratively with ASM's Architectural Historian in evaluating the historical significance of a 1942-era small mine for its eligibility to the NRHP and CRHR. Research efforts focused on creating a context of mining in the region, the identification of the type of mining potentially conducted on the site, and considered potentially significant local persons associated with the site.

Palomar Gateway District Specific Plan Cultural Resources Report, San Diego County, CA
Senior Historian
CLIENT: Atkins
Completed a brief context and land use history of the project area to show changes over time.

Cultural Resource Evaluation Report for Alternative 1C and 6, Sorrento to Miramar Curve Straightening and Double Track Project, San Diego County, CA
Senior Historian
CLIENT: David Evans and Associates
Conducted preliminary research on the Pierre Bovet adobe and prepared a brief site-specific context for the property.

Historic Resource Evaluation Report for the Santa Ysabel Barn, San Diego County, CA
Senior Historian
CLIENT: PMC
Conducted research on a nineteenth century barn at local repositories.

Historic Context of Ranching in Northeastern Nevada for Projects in Long Canyon, Elko County, NV
Senior Historian
CLIENT: Newmont Mining Corporation
Conducted research on and prepared a context for ranching in northeastern Nevada in the nineteenth and twentieth century. Additional research interests for the project included Chinese immigrants and a site-specific context.

Evaluation of SDI-13,077H and Data Recovery at SDI-13,078 for the Rhodes Crossing Project, San Diego County, CA
Senior Historian
CLIENT: RBF Consulting
Conducted research for a local and site-specific contexts. Resources gathered included land patent file records from the National Archives and Records Administration (NARA) in College Park, MD; a chain of title; and other primary and secondary sources.

Inventory and Preliminary Evaluations of Archeological and Historical Resources within Selected PSNERP Project Areas, Whatcom, Skagit, Snohomish counties, WA
Senior Historian
CLIENT: U.S. Fish and Wildlife Service (FWS) Puget Sound
Researched and analyzed agricultural dikes for their potential eligibility to the NRHP and the WA Heritage Register.

Inventory, Evaluation and Analysis of Impacts on Historic Resources on Private Lands Within the Area of Potential Effect of the Campo Verde Solar Project, Imperial County, CA
Senior Historian
CLIENT: KP Environmental
Researched the development of the area and created an area-specific context for the evaluation of resources and potential associations with historical events, trends, and individuals.

Historical Evaluation of the Hamlet Parcel, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas & Electric (SDG&E)
Researched and prepared a land use history of the parcel.

First San Diego Aqueduct Evaluation, San Diego County, CA
Senior Historian
CLIENT: San Diego Gas & Electric (SDG&E)
Researched and prepared the context and evaluation for the First San Diego Aqueduct, which supplied the first dependable and consistent water supply to San Diego County and facilitated post-World War II growth.

Phase I Cultural Resource Survey for Furby-North Property for County of San Diego Department of Parks and Recreation, San Diego County, CA
Senior Historian
CLIENT: TAIC
Prepared a site-appropriate historic context for the property. The historic context provided a snapshot of general development in the area.

Cultural and Historical Resources Survey and Evaluation Report for the San Luis Rey Indian Water Rights Settlement Agreement, San Diego County, CA
Senior Historian
CLIENT: Atkins
Authored the context of water development in the Escondido area and the role the Escondido Canal played in local development. Evaluated two segments of the canal, one of which included the Rincon Penstock, constructed circa 1915, for their eligibility to the CRHR and NRHP.

Cultural Resources Study for the Rodriquez Solar Project, King County, CA
Senior Historian
CLIENT: Iberdrola Renewables
Prepared a brief historic context of water development in the area.

Cultural Resources Survey and Historic Assessment of the Escondido Canal Undergrounding Project, San Diego County, CA
Senior Historian
CLIENT: Atkins
Prepared a site-specific historic context and evaluated the Escondido Canal and Rincon Penstock for their eligibility to the CRHR and NRHP.

Cultural Resources Assessment of the Puget Sound Nearshore Ecosystem Restoration Project, Island County, Jefferson County, King County, Kitsap County, Mason County, Pierce County, Skagit County, and Snohomish County, WA
Senior Historian and Project Manager
CLIENT: U.S. Fish and Wildlife Service
Prepared the stand-alone historic context for agricultural levee development in the Puget Sound during the late nineteenth and early twentieth centuries and developed criterion for evaluating such resources to the NRHP.

Phase I Cultural Resource Survey for Escondido Creek Properties for County of San Diego Department of Parks and Recreation, Escondido, San Diego County, CA.
Senior Historian
CLIENT: Dudek
Prepared a site-appropriate historic context for properties near Harmony Grove. The historic context provided a snapshot of the general development in the area.

Phase I Cultural Resource Survey of an Additional 100 Acres for Pascoe and Helix-Lambron Parcels for County of San Diego Department of Parks and Recreation, San Diego County, CA
Senior Historian
CLIENT: Dudek
Prepared a site-appropriate historic context for properties near Del Dios. The historic context provided a snapshot of the general development in the area.

Phase I Cultural Resource Survey for San Luis Rey River Park for County of San Diego Department of Parks and Recreation, San Diego County, CA
Senior Historian
CLIENT: Dudek
Prepared a site-appropriate historic context for properties near Bonsall. The historic context provided a snapshot of general development in the area.

Class III Intensive Cultural Resources Inventory near Mountain Pass, San Bernardino County, CA
Senior Historian
CLIENT: Ecology and Environment, Inc. (E&E)
Prepared a brief historical narrative on the Desert Antimony Mine.

Sunrise Survey and Evaluation for Indirect Impacts to the Sunrise Powerlink Project, Imperial and San Diego counties, CA
Project Historian
CLIENT: SDG&E
Prepared a broad historic context for portions of San Diego County that would be potentially impacted by visual effects of the planned power line. Prepared resource-specific contexts for identified historic resources that could be affected by the project. This portion of the power line project stretches from Plaster City in Imperial County to Beeler Canyon in Poway.

Simon Open-Space Preserve Historic Research Project, San Diego, San Diego County, CA
Project Historian
CLIENT: Dudek for County of San Diego Parks and Recreation
Prepared a historic research report based on the client's need to interpret the county preserve. Themes researched included: early ranchos, ranching, farming, mining, and general development of the San Diego Country Estates. Offered recommendations for interpreting the site based on the historic evidence.

Evaluation of a Southern California Edison (SCE) 33kV Transmission Line, San Bernardino County, CA
Project Historian
CLIENT: TEC, Inc.
Prepared an evaluation of the 33kV transmission line in compliance with Section 106 of the NRHP and CEQA.

Cultural Resource Survey, Los Angeles County, CA
Project Historian
CLIENT: Harvey Meyerhoff Group
Prepared a brief context of the United Concrete Pipe Corporation and its use of the industrial site.

Yuima Historic Road Evaluation, San Diego County, CA
Project Historian
CLIENT: Atkins
Authored an evaluation of a road associated with Stewart Mine within the Pauma/Yuima Indian Reservation in compliance with Section 106 of the NRHP and CEQA.

Yuma Main Canal and Yuma Valley Railroad HAER, Yuma County, AZ
Project Historian
CLIENT: Principle Engineering Group, Inc.
Prepared document based on Level II HAER documentation standards for a portion of the Yuma Main Canal and the Yuma Valley Railroad that would be impacted by a proposed bikeway project. Bureau of Reclamation required the mitigation document and final review as the original owner and constructor of the two resources.

Preserving a Record of the Coachella Canal: Documents Data Recovery for the Concrete-Lined Reach between Siphon 32 and Lake, Riverside County, CA
Project Historian
CLIENT: Coachella Valley Water District and USDI Bureau of Reclamation
Co-authored the HAER-like report for data recovery for the final reaches of the 123-mile Coachella Canal and its unique underground piped irrigation system. Co-author of the HAER-like report that details the construction phases of the project, including specifications, description of unique features, construction, building materials, and responsible contractors.

Colorado River Programmatic Agreement, Yuma County, AZ
Project Historian
CLIENT: USDI Bureau of Reclamation
Researched the histories of various Reclamation-managed projects on the Colorado River in support of establishing a Programmatic Agreement for maintaining historical resources. Prepared historical contexts and gathered research materials.

Documenting the Colorado River Front Work and Levee System (CRFWLS): A Historic Context and Inventory, Yuma County, AZ
Project Historian and Primary Author
CLIENT: USDI Bureau of Reclamation
Prepared documentation of the protective works system of the Lower Colorado River stretching nearly 253 miles. This protective works program includes levees, channel stabilization, settling basins, inlet and outlet works, maintenance roads, improved backwater areas for fish and wildlife and recreation, drainage and pumping plants, a reservoir and dam, and other smaller features. Gathered pertinent literature and primary sources for a historical context and explanation of the system, and conducted an aerial photographic inventory of the features of the CRFWLS.

San Marcos Elementary School and Mary Young Connor Hall Historic Context and Eligibility, San Diego County, CA
Project Historian
CLIENT: Helix Environmental
Conducted research for the elementary school designed by a master architect and the WPA-constructed Mary Young Connor Hall building as potentially eligible historic resources. Co-authored the report that included creating separate, but associated, historic contexts for the elementary school and the WPA building, and assessed the significance of the WPA building based on the historic context.

San Ysidro Land Point of Entry (LPOE) Historic Context Study, San Diego County, CA
Project Historian
CLIENT: Helix Environmental
Researched 12 buildings near the border surrounding the San Ysidro LPOE and crafted a concise historic context for evaluation of the buildings.

Yokohl Ranch Historic Evaluation, Tulare County, CA
Project Historian
CLIENT: Atkins
Extended previous research efforts and focused on land settlement and mining by gathering historical documentation through Land Patent Files obtained from the National Archives and Records Administration (NARA) in College Park, Maryland, and in local libraries, the historical society, and the Tulare County Assessor and Recorder's Offices. Co-author of the final report.

Palmdale Ditch Historic Context Study, Los Angeles County, CA
Project Historian
CLIENT: P&D Consultants
Conducted research at the Palmdale Water District office and local repositories. Crafted a historical context of the ditch for a letter report.

Caretaker's Residence HABS, Yuma County, AZ
Project Historian
CLIENT: USDI Bureau of Reclamation
Visited the site, crafted the historic context, and updated the information made available in the DPR 523. Co-author of the HABS-like report.

111 Calexico Place Historic Resource Inventory and Evaluation, Imperial County, CA
Project Historian and Co-Author
CLIENT: City of Calexico
Assessed the possible impacts of a new bridge and the expansion of an existing bridge to the Central Main and Dogwood canals.

Johnson Valley Historic Evaluation, San Bernardino County, CA
Project Historian and Author
CLIENT: MCAGCC Twentynine Palms
Researched the history of mining in a large expanse near 29 Palms, specifically in the Johnson Valley area. Gathered information from various sources such as the Register of Mines and Minerals for San Bernardino County and bulletins, reports, and journals produced by the California Journal of Mines and Geology and the California State Mining Bureau/Division of Mines. Created historical context for mining in this area of the Western Mojave Desert.

Sweetwater Union High School District Cultural Resources Inventory and Assessment, San Diego County, CA
Project Historian
CLIENT: National City
Authored the historic context for the developing Sweetwater Union High School District in National City and Chula Vista. Conducted limited research on specific school buildings selected for alterations or demolition.

Sonny Bono Salton Sea National Wildlife Refuge and Coachella Valley National Wildlife Refuge Historic Overview, Riverside County, CA
Project Historian
CLIENT: San Diego Wildlife Refuge Complex
Conducted research for an introductory history of the Coachella Valley, the Salton Sea, and the two National Refuges. Authored introductory history section.

Historic Context Study for the North County Transit District Eight Bridges Project, San Diego County, CA
Project Historian
CLIENT: BRG Consulting
Researched the historical context of transportation development prior to the United States' entrance into World War II and the early 1940s to explain the interaction of the 8 bridges with war-prompted changes and other pertinent historical changes in the general vicinity. Responsible for the historical context section of the report.

Historic Context Study for the Bridge 207.6 Project, San Diego County, CA
Project Historian
CLIENT: BRG Consulting for North County Transit Department
Researched the historical context of transportation development prior to the United States' entrance into World War II and identified whether or not a bridge in the project area was essential to early military mobilization in the 1940s. Authored the historical context section of the report.

Historic Context Study for the Madison Street Bridge Project, Coachella Canal Evaluation, Clark County, NV
Associate Historian
CLIENT: USDI Bureau of Reclamation
Researched the history of Coachella Valley. Identified and collected the research materials. Authored the Coachella Valley portion of the report.

Historic Evaluation for the Padre Dam, San Diego County, CA
Associate Historian
CLIENT: Padre Dam Municipal Water District
Researched the land use of the area to understand local development by using readily-available primary source documents. Findings in the field indicated the possibility of a historic structure that prompted the research. Provided information on the dates of possible construction for the Senior Archaeologist to determine the site's eligibility. Authored a portion of the report.

Historic Context Study for the Yokohl Ranch Project, Tulare County, CA
Associate Historian
CLIENT: Atkins
Conducted an initial research phase for an introductory survey of 36,000 acres in the greater Yokohl Valley area in Tulare County. Collected appropriate materials to formulate a background history of the settlement patterns of the Yokohl Valley area in connection with the surrounding towns. Authored the historical section of the preliminary report.

Historical Survey for the Mohave Mine Project, Maricopa County, AZ
Associate Historian
CLIENT: Fisher Sand and Gravel
Conducted a brief survey of resources for previous mining operations within an initial survey of 80 acres. Located initial information on the unknown mine in a timely resource search.

Yaqui Pass/Viking Farm Project Assessment, San Diego County, CA
Associate Historian
CLIENT: BRG Consulting for the San Diego County Department of Planning and Land Use
Participated in the initial assessment of lands near Yaqui Pass by researching the early land use after the preliminary survey in the Anza Borrego State Park indicated possible early 1900s settlement. Researched the general history of the area, found historical information on previous owners, and retrieved land patent file information from the NARA in Washington, D.C. Authored a portion of the historical section of the report based on findings.

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Marilyn Novell, M.S.

Architectural Historian

Total Years of Experience: 9

Education:

M.S.	2010/History of Architecture and Urbanism, University of California, Berkeley
B.A.	2008/American Studies, concentration in Cultural Landscapes, University of California, Berkeley

Professional Profile:

Ms. Novell has nine years of professional and academic experience in historic preservation, cultural resources documentation, and architectural history and meets the Secretary of the Interior's Professional Qualification Standards for Architectural History and History.

She has worked on historic and cultural resource assessments for projects throughout Los Angeles County and in Berkeley, Palm Springs, Sanger, Bakersfield, Coalinga, and the Klamath River basin in California. She contributed to the City of Los Angeles Historic Resources Survey project (SurveyLA), both in the City Office of Historic Resources and for consultant firms conducting the survey for the City. Ms. Novell has experience in developing historical and cultural resources reports and in evaluating properties under federal, state, and local criteria, including National Register of Historic Places (NRHP), Section 106, California Register of Historical Resources (CRHR), and California Environmental Quality Act (CEQA) compliance.

Ms. Novell's professional background includes management and contributions to projects concentrating on the evaluation of historic properties and districts. She served as project manager for open-end historic preservation services for the City of Long Beach and served as the assistant project manager for the historic context for the Los Angeles Unified School District, which received preservation awards from the California Preservation Foundation and the L.A. Conservancy. Her responsibilities included conducting background research, writing summary reports, conducting large-scale surveys, and compiling evaluations and significance statements for California Department of Parks and Recreation (DPR) historic resources forms.

Relevant Project Experience:

Ontario International Airport Historic Context Statement and Survey, San Bernardino County, CA
Architectural Historian
CLIENT: City of Ontario, California
Prepared a historic context statement for the Ontario International Airport, informed by extensive background research and an intensive-level survey. Developed themes, contexts, registration requirements, and character-defining features for identification of a range of property types, from World War II aircraft hangars to Cold War-era administration buildings. Assisted in conducting interviews for oral histories with individuals associated with the airport and preparation of a short video reviewing the history, findings, and stories gathered for the project.

Edwards Air Force Base Architectural History Survey and Inventory, Kern County, CA
Architectural Historian
CLIENT: Redhorse Corporation
After preparing a work plan, conducted an architectural survey and prepared an inventory of historical buildings on Edwards Air Force Base in support of Section 110 of the National Historic Preservation Act (NHPA). During the survey, multiple photographs and extensive notes were taken of each historical resource, and archival research was performed at the base History Office and Real Property Office. The evaluation process included an intensive-level survey of 30 individual historic resources constructed between 1943 and 1966. An additional 25 properties were inventoried and considered as elements or

contributors to potential historic districts. A comprehensive report was prepared of all properties and historic districts inventoried and evaluated, including the appropriate California Department of Parks and Recreation forms for each resource.

Roosevelt High School Historic District, Los Angeles County, CA
Architectural Historian and Photographer
CLIENT: Los Angeles Unified School District
Prepared a Cultural Resources Technical Report in support of an Environmental Impact Report (EIR) for a Comprehensive Modernization Project at Roosevelt High School, which involves demolition of multiple buildings within a previously identified historic district. Also prepared Historic American Building Survey (HABS)-like historic documentation in accordance with mitigation stipulated in the EIR. All work was done in accordance with the California Environmental Quality Act (CEQA).

Brochure for BOMARC CQM10A/B Target Drone Launch Complex at Vandenberg Air Force Base, Santa Barbara County, CA
Graphic Designer
CLIENT: ManTech SRS Technologies, Inc.
Designed a three-panel, two-sided informational brochure for the BOMARC CQM10A/B Target Drone Launch Complex. Elements included historic architectural and schematic drawings and photographs, as well as a timeline and specifications combined to explain the history and purpose of the complex.

Cultural Resource Studies, Muroc Joint Unified School District, Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District
Prepared a technical report to support CEQA requirements for five schools within approximately 110 acres at Edwards Air Force Base. Photographed interiors and exteriors of the five schools and conducted background research to place the schools and buildings within the appropriate local historic context.

Mt. San Antonio College Cultural Resources Evaluation Report, Los Angeles County, CA
Architectural Historian
CLIENT: Mt. San Antonio College
Assisted in the preparation of a cultural resources evaluation report as part of a Supplemental EIR for the 2015 Facilities Master Plan Update and Physical Education Projects. The report was prepared to record and assess historic resources within the school's proposed project area, and to assess potential direct and indirect visual impacts to the Mt. SAC Historic District. Work included intensive pedestrian-level survey of potentially significant historic buildings on campus, as well as the Wildlife Sanctuary. The report was prepared to ensure the proposed projects are in compliance with CEQA and Secretary of the Interior's Standards.

Review of Vibration Monitoring Plan for Los Angeles Metro construction at Walt Disney Concert Hall, Los Angeles County, CA
Architectural Historian
CLIENT: AECOM
Reviewed the Vibration Monitoring Plan for the Regional Connector Transit Corridor Project as a means of avoiding impacts to 12 historic structures, as well as the Walt Disney Concert Hall and REDCAT theater. Although the Walt Disney Concert Hall and REDCAT are not historic buildings, they were treated as such in the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) in acknowledgment of their significance and were included in the review.

City of Monrovia Historic Context Statement, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Prepared a historic context statement for the City of Monrovia, based on reconnaissance-level surveys of the city to identify and define potential historic districts within the City. Work included development of themes and identification of associated property types, character-defining features, and registration requirements for historic districts comprising late 19th-century to early 20th-century residential properties, commercial districts, ethnic enclaves, and institutional properties. Work included participation in public outreach and meetings with City personnel.

Historic Properties Inventory Survey for the Whitmore Agricultural Project, Waialua District, Island of Oahu, HI
Architectural Historian
CLIENT: PBR Hawaii & Associates
Surveyed and evaluated historic resources at the Hawaiian Pineapple Company Plantation at Whitmore Village, Oahu. The roughly 37-acre study area is former pineapple plantation land transferred from Dole Corporation to the Agribusiness Development Corporation of Hawaii for development as an agricultural project to benefit the local economy. At the time of survey and evaluation, the property served as a partially unused industrial facility that included warehouse, administrative, and maintenance buildings built over a period of several decades, from 1948 through the 1980s. Evaluation of the historical buildings included identification of historic districts within the project site.

Mitigation Report for the Bank of Hawaii Waialai-Kahala Branch Demolition Project, Honolulu, HI
Architectural Historian
CLIENT: Bank of Hawaii
Architectural Historian
Developed a historic context study for the Bank of Hawaii Waialae-Kahala branch bank building in the Waialae community. The study was requested by the State Historic Preservation Division of Hawaii as mitigation for the planned demolition of the Mid-Century-Modern circular building. The report includes a comprehensive history of the building and an introduction to the Modern movement in Hawaii. For purposes of mitigation, the study identifies 10 additional extant and demolished circular Modern buildings in Honolulu and provides a brief history of each, including information about the architect, the design concept, character-defining features, and materials and method of construction.

Assessment Letter for Planned New Construction within the Marconi Telegraphy Historic District, Oahu, HI
Architectural Historian
CLIENT: Department of Land and Natural Resources, State Historic Preservation Division, Hawaii
Prepared a report to assess conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties regarding a proposed new residence to be constructed within the Marconi Telegraphy Historic District on the Island of Oahu. The report included a design review of architectural plans to determine whether the new construction would impact the significance of the National Register-listed historic district.

YWCA Glendale Historical Resource Assessment Report, Los Angeles County, CA
Architectural Historian
CLIENT: Glendale YWCA
Surveyed and documented the Mediterranean-Revival-style YWCA facilities, consisting of three distinct phases constructed in 1938/1939, 1948/1949, and 1955/1956. Prepared a report detailing and evaluating the building, including impacts analysis for proposed project. Evaluation included research at the YWCA archives and consideration of the role of the national and local YWCA in advocacy for women's education, spirituality, and recreation, and the ways in which the Y's mission evolved over time.

Calico Early Man Site Documentation, San Bernardino County, CA
Architectural Historian
CLIENT: Bureau of Land Management
Surveyed and documented built-environment resources at Calico Early Man Site in the Mojave Desert. The site is notable for the participation of renown archaeologist and paleoanthropologist Dr. Louis Leakey, whose work was important in investigating the presence of early man in Africa. The project included evaluation of significance for buildings and structures associated with the site.

Peer Review of Historical Resources Evaluation Report and Preparation of Landmark Nomination for Chester Washington Golf Course, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Reviewed evaluation of the Chester Washington Golf Course in South Los Angeles and presented the landmark nomination to the Los Angeles County Historical Landmarks and Records Commission. As the first golf course integrated in Los Angeles, the property was recommended eligible for landmark status for its association with African-American social history in Los Angeles.

Mills Act Reviews of Los Angeles County Properties, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Considered work items for properties under the California Mills Act property tax relief program. Items were reviewed for compliance with the Secretary of the Interior's Standards, and specific recommendations were accordingly made to property owners.

Historical Resources Evaluation Report for Sears Auto Center, San Diego County, CA
Architectural Historian
CLIENT: DLR Group
Surveyed and documented the Sears Auto Center, constructed in 1968/1969. Evaluated the property for significance and prepared a Historical Resources Evaluation Report.

Mt. Laguna Cheroske Family Interpretative Signage, San Diego County, CA
Graphic Designer
CLIENT: Insignia Environmental
Designed a set of three interpretive signs providing historical information, maps, photographs, and applicable logos installed by San Diego Gas & Electric Company on United States Forest Service land. The signs explain the history of remnants of a historic lodge, cabin, and the people associated with them.

Technical Reports for the Evaluation of Historic Properties, Mojave National Preserve, San Bernardino County, CA
Architectural Historian
CLIENT: Mojave National Preserve
Conducted intensive-level surveys and prepared Determinations of Eligibility for seven historic properties in Mojave National Preserve. Most of these properties are remote abandoned mining-associated cabins accessed only from ungraded roads in rugged environments that have never been assessed. Methodology included archival research, interviews with persons associated with the properties, and intensive-level pedestrian surveys.

Historic Trails Context Study, West Mojave Route Management Plan, Historic Properties Treatment Plan, Kern and San Bernardino counties, CA
Architectural Historian
CLIENT: United States Bureau of Land Management
Based on archival research and previous historic contexts and reports, prepared a historic context for historic-period roads and highways associated with historic trails in the Western Mojave Desert. Work

included literature review, review of historic maps and images, and guidelines for using the study for future evaluations.

Section 106 Evaluations, Los Angeles County, CA
Architectural Historian
CLIENT: City of Los Angeles
On-call historic resources services for the City of Los Angeles, primarily related to historic properties affected by use of community development block grants, including programs to provide housing and shelter for homeless populations. Projects included the assessment of potential development along the South Vermont Avenue commercial corridor and the Hollywood Boulevard Commercial and Entertainment Historic District.

Loch Crane Survey, San Diego County, CA
Architectural Historian
CLIENT: Helix Caltrans
Participated in preparation of a Historic Resources Survey of the Works of Architect Loch Crane in the City of San Diego. Conducted a reconnaissance-level survey of 34 buildings and prepared DPR forms for the evaluation of each property.

Section 106 Reviews for FCC Projects Within the State of Hawaii, HI
Architectural Historian
CLIENT: EnviroWest
Reviewed potential impacts of proposed FCC antenna installations on historical buildings. Evaluated the proposed sites for significance under both National Register of Historic Places and Hawaii Register of Historic Places criteria.

Supplemental Historic Resources Evaluation Report for Roosevelt Senior High School, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Reviewed previous evaluations of the Roosevelt Senior High School campus and prepared a Supplemental HRER addressing Criteria A/1 and B/2 for its association with the Chicano Civil Rights Movement in 1968 and Sal Castro, a teacher who was a leader in the movement. Defined a historic district comprising all the extant buildings on campus at the time of student protests that spread through schools in East L.A.

Historic Resource Evaluation Report for Collins Street Elementary School, Woodland Hills, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Prepared an evaluation report for a Los Angeles Unified School District elementary school in the San Fernando. The report was informed by archival research from LAUSD archives, the LAUSD historic context statement, newspaper databases, and primary sources and an intensive-level pedestrian survey.

Secretary of the Interior's Standards Review for Los Angeles Unified School District Campuses, Los Angeles County, CA
Architectural Historian
CLIENT: Parsons
Project-level reviews for proposed renovations to six LAUSD campuses in compliance with Americans with Disabilities Act (ADA). The campuses are known historical resources pursuant to the California Environmental Quality Act (CEQA). Renovations were to comply with the *Los Angeles Unified School District Design Guidelines.* Campuses reviewed were Chatsworth High School, Madison Middle School, Marina Del Rey Middle School, Narbonne High School, 10th Street Elementary School, and Dodson Middle School.

HABS Documentation for Anacapa Island Light Station, Channel Islands National Park, Ventura County, CA
Architectural Historian
CLIENT: National Park Service
Surveyed the Anacapa Island Light Station Historic District on East Anacapa Island to record the derrick system that is used to lift goods and personnel from sea level to the bluff where the light station is located. Documentation was prepared in advance of replacement of the derrick system, parts of which are contributors to the existing historic district.

Historic Resources Evaluation Report for the Beckman Instruments Administration Building, Los Angeles County, CA
Architectural Historian
CLIENT: BonTerra Psomas
Reviewed previous evaluations including a National Register nomination and prepared an evaluation report of the building at 4300 North Harbor Boulevard, a Mid-Century Modern building constructed as the headquarters for Beckman Instruments, a large scientific instrument research and manufacturing facility. Character-defining features were identified, and direct and indirect impacts were addressed in advance of development of the adjacent land on the parcel.

Historic Resource Evaluation Report for Woodcrest Park, Orange County, CA
Architectural Historian
CLIENT: Parks and Recreation Department, City of Fullerton
Prepared an evaluation of a city-owned and -operated park in compliance with Section 106 review in advance of renovation of the park.

Impacts Assessment Report for Subdivision of Sepulveda Unitarian Universalist Society Sanctuary ("The Onion") Property, Los Angeles County, CA
Architectural Historian
CLIENT: Jag Narayan
Prepared an impacts assessment report of a proposed project to subdivide the parcel occupied the Sepulveda Unitarian Universalist Society Sanctuary (known as "The Onion") at 9550 N. Haskell, which is a designated City of Los Angeles Historic Cultural Monument (#975). The report, which focused on impacts to the viewshed to and from the HCM, was prepared pursuant to CEQA prior to the City's permitting process for the proposed project.

California Department of General Services Weatherization Projects for Homes Statewide Project, CA
Architectural Historian
CLIENT: ICF Jones & Stokes, Inc.
Provided on-call review services for proposed weatherization projects of historical buildings. Reviews were performed in accordance with methodologies defined by the State Historic Preservation Officer for projects funded by the Low Income Energy Assistance Program and other Department of Energy programs.

Historic Resource Assessment Report for the Rossmore Avenue Apartments, Los Angeles County, CA
Architectural Historian
CLIENT: etco Homes, Inc.
Evaluated three 1948 French Revival-style apartment buildings at 535-553 N. Rossmore Avenue in the Hancock Park neighborhood of Los Angeles to determine their historic significance. The three buildings are located within the original boundaries of the Hancock Park Historic Preservation Overlay Zone (HPOZ), a City of Los Angeles-defined zoning district intended to preserve the historic nature of areas within the City. The evaluation included preparation of California DPR forms.

Historic Resource Evaluation Report for 427 Santa Clara Avenue, Los Angeles. Los Angeles County, CA
Architectural Historian
CLIENT: Huron Drive LLC
Evaluated a 1912 bungalow located in the Venice area of Los Angeles for CEQA compliance of a proposed project. Conducted a site visit and background research. Prepared documentation for determination of historic significance under NRHP, CRHR, City of Los Angeles Historic Cultural Monument and under contexts and themes defined by SurveyLA.

Los Angeles County Landmark Evaluation Report: The Doumakes House, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Prepared a historic evaluation report of a house at 4918 Angeles Vista Boulevard for submission to the County of Los Angeles as part of the County's first application for landmark status. The evaluation considered NRHP, CRHR, and local criteria for significance of a 1928 Spanish Colonial Revival house in the View Park neighborhood of Los Angeles County. Conducted a site visit and background research and prepared the evaluation report, finding the house significant under Criteria A and C.

Historic Resource Evaluation Memo for the Bakersfield High School Water Tower, Kern County, CA
Architectural Historian
CLIENT: Kern High School District
Evaluated a 1933 water tower on the campus of Bakersfield High School in advance of planned relocation of the tower to an off-site location. The tower was evaluated for its eligibility for listing as an individual resource in the CRHR and as a potential contributor to a historic district comprising the campus.

Historic Resources Evaluation Report, Department of Conservation Division of Oil and Gas Office, Fresno County, CA
Architectural Historian
CLIENT: California Department of General Services
Evaluated the regional office of the State Mining Bureau Division of Oil and Gas in the City of Coalinga, in advance of the proposed sales of the property. The 1918 building was evaluated for its eligibility as a historic resource in compliance with CEQA. Conducted a site visit and background research, and prepared documentation summarizing findings.

Cultural Resources Evaluation Report for Point Loma High School Whole Site Modernization, San Diego County, CA
Architectural Historian
CLIENT: San Diego Unified School District
Prepared a historic evaluation report for eleven buildings on the Point Loma High School campus in advanced of modernization projects. Efforts included a site visit, photographic documentation of the buildings, and archival research. The evaluation included preparation of California DPR forms.

Historic Resources Evaluation Report for Foshay Learning Center, Los Angeles County, CA
Architectural Historian
CLIENT: Impact Sciences
Surveyed, researched, documented, and evaluated Foshay Learning Center, a Los Angeles Unified School District Campus located in the South Los Angeles Community Plan Area. Core campus was constructed in the 1920s, one of the rare remaining pre-1933 Long Beach earthquake Los Angeles Unified School District (LAUSD) campuses, with buildings added in the 1960s. The evaluation was required in preparation for a project proposing the demolition of several campus buildings and construction of new buildings and landscaping. A historic district was identified and defined, and contributors were identified and recorded according to the LAUSD Historic Context Statement, 1870 to 1969, and LAUSD design guidelines. The project was evaluated for compliance with CEQA.

HRER for the Verde School Bridge Replacement Project, Imperial County, CA
Architectural Historian
CLIENT: Panorama Environmental, Inc.
In order to comply with Caltrans responsibilities under CEQA, CRHR and the NHPA, ASM completed an HRER in advance of a project proposed by the Imperial County Public Works Department to replace the Verde School Road Bridge. Conducted archival research to identify resources potentially eligible for the NRHP and CRHR. A final report was prepared following Caltrans guidelines as specified in the agency's SER, Volume 2, Cultural Resources.

Historic Resources Evaluation Report for Academy Road Widening Project, Fresno County, CA
Architectural Historian
CLIENT: Petra Resource Management
Surveyed, researched, documented, and evaluated properties adjacent to Academy Avenue, located in Sanger, California, in the County of Fresno, in preparation for a Caltrans road widening project. Services involved completing a cultural resources inventory of the project area. Evaluated in compliance with requirements of Section 106 of the National Historic Preservation Act (NHPA) and Caltrans guidelines as specified in the agency's Standard Environmental Reference (SER), Volume 2, Cultural Resources.

Lanterman Developmental Center, Los Angeles County, CA
Architectural Historian
CLIENT: Petra Resource Management
Surveyed and contributed to preparation of a revised Historic Resources Assessment Report (HRAR), based on a prior report prepared by Heritage Architecture. On-site intensive pedestrian survey included photographic documentation of more than 100 buildings (exteriors and public interior spaces) and taking detailed field notes. Work included preparation of California DPR forms for historic district and individual eligibility.

Historic Resources Evaluation for Pedestrian Safety Improvement Project for Colorado Boulevard and Fair Oaks Intersection, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Reviewed historic resources adjacent to a proposed Caltrans project in the Old Pasadena Historic District to improve pedestrian safety at the intersection of Colorado and Fair Oaks by creating curb bulb-outs and relocating street lights. Prepared documentation in the form of a Historic Resources Standards Evaluation Report and presented the project to the City of Pasadena Design Commission to ensure compliance with Secretary of the Interior's Standards and Section 106 for a project involving federal funds.

Cultural Resources Evaluation Reports for the Panattoni Logistics Centers IV and V Project Area, San Bernardino County, CA
Architectural Historian
CLIENT: Kimley-Horn and Associates
Prepared a cultural resources study as part of an addendum to the Renaissance Specific Plan. The study was conducted in advance of development of the parcels and included both historic and archaeological history surveys. The work was done in compliance with CEQA and included evaluation of two buildings for potential eligibility for listing in the CRHR.

Mountain Meadows Golf Course Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Los Angeles County-owned Mountain Meadows Golf Course for CEQA compliance of a project to improve the Club House and Pro Shop. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Wilshire Country Club Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Wilshire Country Club located in Hancock Park, in the City of Los Angeles, for CEQA compliance of a project by the County of Los Angeles to improve drainage through the privately owned country club property. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Knollwood Country Club and Golf Course, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Conducted research, field survey, and historic evaluation of the Los Angeles County-owned Knollwood Country Club for CEQA compliance of a project to replace the golf cart barn, which had been destroyed by fire. Included on-site intensive pedestrian survey, research, and preparation of an assessment report.

Historic Structures Report and Design Reviews, Sierra Madre, Los Angeles County, CA
Architectural Historian
CLIENT: Cett Corporation
Prepared a Historic Structures Report for two nineteenth-century agricultural buildings at the Stonegate residential development. Work consisted of intensive pedestrian survey and on-site photographic documentation of the Carter Barn and the Macomber Cabin, properties that were constructed by pioneer settlers to the San Gabriel Valley. Proposed residential development for each of 21 parcels of the subdivision were reviewed for compliance with Secretary of the Interior's Standards.

Canyon Creek Resort Project, Norco, CA
Architectural Historian
CLIENT: Lansing Companies
Conducted an intensive pedestrian-level survey of historical resources within the proposed Canyon Creek Resort Project site in compliance with CEQA. The 430-acre site includes the former facilities of Wyle Laboratories, which operated beginning in 1957 as a commercial testing facility for a number of markets, including defense.

Cultural Resources Evaluation Report for the De Anza School Project, San Diego, CA
Architectural Historian
CLIENT: BRG Consulting
Surveyed and evaluated historical buildings on the campus of De Anza School. Methodology consisted of archival research and an intensive-level pedestrian survey of the campus.

177 Colorado Boulevard Fountain Historic Resource Assessment, Los Angeles County, CA
Architectural Historian
CLIENT: Arroyo Colorado LLC
Prepared a historic resource evaluation of a fountain designed as an integral element of the Pacific Bell Telephone complex at 177 E. Colorado Boulevard constructed 1971-1974. The complex is made up of a corporate office tower, parking structure, and landscaping including two plazas, requiring that the fountain be evaluated in the context of the complex and not as an individual element. The evaluation was conducted in advance of a project to demolish the Howard E. Troller-designed fountain in order to develop the plaza in compliance with CEQA. Conducted background research and site reconnaissance, and prepared an evaluation report and DPR forms.

Palm Springs Spa Hotel Historic Properties Inventory Report, Riverside County, CA
Architectural Historian
CLIENT: Agua Caliente Band of Cahuilla Indians
Documented and evaluated the Palm Springs Spa Hotel, a mid-century modern spa and hotel complex built on the site of the original Palm Springs hot mineral spring on lands owned by the Agua Caliente Band of

Cahuilla Indians. The evaluation included development of a site-specific historic context statement, in-depth research and documentation of the property, and HABS-like photographic recordation.

Los Angeles Unified School District Historic Context Statement and Survey, Los Angeles County, CA
Architectural Historian
CLIENT: LAUSD Office of Environmental Health and Safety
Served as assistant project manager for the historic context for the Los Angeles Unified School District, which recently received preservation awards from the California Preservation Foundation and the L.A. Conservancy. Responsibilities included conducting background research, writing summary reports, contributing to intensive-level surveys of 56 post-war LAUSD campuses, and compiling evaluations and significance statements for California DPR forms for CEQA compliance.

Highlander Elementary School Historic Resources Evaluation, Los Angeles County, CA
Architectural Historian
CLIENT: LAUSD Office of Environmental Health and Safety
Conducted an intensive-level survey and prepared a historic resources evaluation for Highlander Elementary School, a postwar LAUSD campus located in the San Fernando Valley, in advance of demolition of the campus.

Historic Designed Gardens of Pasadena Historic Context, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Researched and wrote portions of historic context and contributed to the creation of National Register Multiple Property Documentation for Historic Designed Gardens in Pasadena, 1873-1975. Contexts developed include Gardens of Health and Pleasure: Early Resorts and Estate Gardens in Pasadena, 1873-1929; Bring the Outside Inside and the Inside Outside: Residential Garden Design in Pasadena,1905-1968; Non-Residential Gardens in Pasadena, 1913-1989; and Municipal Parks and Recreational Facilities in Pasadena, 1902-1975. The historic context statement includes biographies of landscape architects known to have worked in the City of Pasadena during the periods of significance and documentation of both residential and non-residential properties.

SurveyLA, Los Angeles County, CA
Preservation Intern
CLIENT: City of Los Angeles
Contributed to writing the Historic Context Statement, significance statements, and survey reports for the Los Angeles Historic Resource Survey Project (SurveyLA), a citywide, multi-year initiative partially funded by the J.Paul Getty Trust with guidance from the Getty Conservation Institute, to survey more than 800,000 parcels in the City of Los Angeles. Conducted field surveys of two Community Plan Areas (CPA) within the City of Los Angeles: the West Los Angeles CPA and the South Los Angeles CPA.

Application for Landmark Status for the University Young Women's Christian Association, Alameda County, CA
Architectural Historian
CLIENT: Berkeley Architectural Heritage Association
Prepared a successful application for presentation to the City of Berkeley Landmarks Preservation Commission for landmark status of the University YWCA building. Designed by master architect Joseph Esherick, the building is a merging of two Bay Area architectural traditions: Arts and Crafts that thrived in the late nineteenth and early twentieth centuries, and Bay Area Modern, a form of Mid-Century Modernism particular to the region.

Laura Taylor Kung, M.A.

Architectural Historian

Total Years of Experience: 11

Education:

M.F.A.	2011/Fiction and Literature/Bennington College
M.A.	1998/Historic Preservation Planning/Cornell University
B.A.	1993/Art History/DePaul University

Professional Profile:

Ms. Kung has 11 years of experience in historic preservation and planning, including the completion of local and state building surveys, Historic Building Inventory and Evaluation documents, National Register nominations, Historic American Building Survey (HABS) submissions, Historic Structure Reports and Cultural Resources management plans.

Relevant Project Experience:

Architectural History Technical Report for Muroc Joint United School District Facilities at Edwards Air Force Base, Kern County, CA
Architectural Historian
CLIENT: Muroc Joint Unified School District (MJUSD)
Prepared a technical report as part of a cultural resources study of five MJUSD campuses located on Edwards Air Force Base, based on an intensive-level pedestrian survey of the five schools and archival research. Included in the work effect was preparation of Department of Parks and Recreation (DPR) district and primary forms. The report was prepared in compliance with Section 106 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA).

Historic American Building Survey, Kelly Air Force Base, Bexar County, TX
Architectural Historian
CLIENT: U.S. Air Force
Conducted field research and completed HABS Level II documentaries for four buildings scheduled for re-use.

Historic Building Inventory and Evaluation for 18 Radar Sites, AK
Historian
CLIENT: U.S. Air Force
Evaluated findings from field research to determine Cold War significance of buildings and structures. Prepared report outlining findings and provided descriptions of both contributing and non-contributing buildings.

Cultural Resources Management Plan, Lajes Air Force Base, Azores, Portugal
Historian
CLIENT: U.S. Air Force
Prepared cultural resources plan to assist in management decision of the Portuguese-owned, United States-operated Air Force Base.

Historic Context Statement for the City of Monrovia, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
Assisted in the development a citywide historic context statement for Monrovia, including recommendations for historic districts. Contexts and themes were identified and defined based on a windshield survey of the city, archival research using primary and secondary resources, and review of previous evaluations.

Historic Resources Survey of the Works of Architect Loch Crane, San Diego County, CA
Architectural Historian
CLIENT: HELIX Environmental Planning
Researched and surveyed the work of San Diego architect Loch Crane. Developed a context based on survey findings, archival research of reviews of previous evaluations. The report included Department of Parks and Recreation (DPR) primary forms for 30 identified properties.

Cultural Resources Evaluation Report Clairemont High School Whole Site Modernization, San Diego County, CA
Architectural Historian
CLIENT: BRG Consulting
Prepared a historic evaluation report for eight buildings on the Clairemont High School campus in advance of modernization projects. Efforts included a site visit, photographic documentation of the buildings, and archival research. The evaluation included preparation of California DPR forms

Historic Resource Evaluation Memo for 110 and 132 East Crowther Avenue, Orange County, CA
Architectural Historian
CLIENT: HELIX Environmental Planning
Prepared an evaluation for two industrial properties located in the City of Placentia. Reviewed previous surveys, assessor's building records, and chain of ownership for the properties. Conducted an intensive pedestrian survey of the properties and a reconnaissance survey of the neighborhood to consider a potential historic district. The evaluation was conducted to consider the eligibility of the properties under NRHP, CRHR, and City of Placentia eligibility criteria and in compliance with CEQA.

Historic Resource Evaluation Memo for 1019 North Orange Grove Avenue, Los Angeles County, CA
Architectural Historian
CLIENT: 1019 North Orange Grove, LLC
Prepared an evaluation for a property located in the City of West Hollywood. Reviewed previous surveys, assessor's building records, and chain of ownership for the properties. Conducted an intensive pedestrian survey of the property and a reconnaissance survey of the neighborhood to consider a potential historic district. The evaluation was conducted to consider the eligibility of the properties under NRHP, CRHR, and City of West Hollywood eligibility criteria and in compliance with CEQA

On-Call Preservation Services for County of Los Angeles, Los Angeles County, CA
Architectural Historian
CLIENT: County of Los Angeles
Currently working with the County under its new Preservation Ordinance to review of proposed projects at specific residential sites. Work is performed to ensure compliance with the Secretary of the Interior's Standards for property owners to determine eligibility for Mills Act tax credits. Several of the properties reviewed are in the County's first designated historic district, the View Park Historic District.

Historic Context Report, San Bernardino County, CA
Historian
CLIENT: BNSF Railway Company
At a previous firm, wrote detailed history and significance of railroad construction.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of Monrovia
At a previous firm, wrote building descriptions for 150 domestic and commercial buildings.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of South Pasadena
At a previous firm, conducted field research, took photographs and wrote descriptions for 300 properties.

Historic American Building Survey, Los Angeles County, CA
Architectural Historian
CLIENT: Walt Disney Company
Research and wrote descriptive section of submission for Grand Central Terminal building.

State Inventory and Evaluation Forms, Riverside County, CA
Architectural Historian
CLIENT: City of Riverside
Wrote building descriptions and significance for over 1,500 domestic and commercial buildings.

State Inventory and Evaluation Forms, Los Angeles County, CA
Architectural Historian
CLIENT: City of Pasadena
Conducted field research and wrote building descriptions for 175 domestic and commercial buildings. Researched history and significance of 100 buildings.

National Register Nomination, Lexington Blue Grass Army Depot, Madison County, KY
Architectural Historian
CLIENT: U.S. Army
Prepared ten individual forms to accompany multiple property nomination.

Historic Building Inventory and Evaluation, Air Force Plant 42, Los Angeles County, CA
Historian
CLIENT: U.S. Air Force
Conducted an evaluation of World War II and Cold War facilities.

New York State Historic Building Inventory, Madison County, NY
Architectural Historian
CLIENT: City of Morrisville
Conducted historic research of ten Main Street buildings. Prepared inventory forms for submission to state historic preservation office.

National Register Nomination, Lincoln Park, Cook County, IL
Intern
CLIENT: Chicago Park District
Research history of major city park. Organized data gathered from volunteer surveys to determine possible significance. Wrote description section of nomination as part of multiple property nomination.

Historic Preservation Teaching Assistance, Tompkins County, NY
Teaching Assistant
CLIENT: Cornell University
Provided lecture assistance and reviewed student work for Building Materials Conservation and Twentieth Century Building Materials courses. Conducted lectures and provided student assistance for Preservation Workshop.

Historic American Building Survey, Ontario County, NY
Architectural Historian
CLIENT: Cornell University
Conducted historic research and completed measured drawing of one evaluation of a deteriorated Italianate Style house. Completed drawings were submitted to HABS.

Historic Structures Report for Heacock House, Mahoning County, OH
Architectural Historian
CLIENT: Cornell University
Responsible for researching the complete history and physical evaluation of a structure. Provided recommendations and cost estimates for three possible restoration plans.

ATTACHMENT E

Photographs (DVD)

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ATTACHMENT F

Historic Photographs and Drawings (DVD)

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Appendix J
National Historic Preservation Act Section 106 Documentation

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DEPARTMENT OF THE NAVY
NAVAL BASE POINT LOMA
140 SYLVESTER ROAD
SAN DIEGO, CALIFORNIA 92106-3521

IN REPLY REFER TO:
5090
Ser N00/117
March 17, 2020

Ms. Julianne Polanco
State Historic Preservation Officer
California Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Dear Ms. Polanco:

This letter follows up on the Navy's recent communication with your office regarding public scoping for the proposed revitalization of Naval Information Warfare System Command's (NAVWAR) facilities on the Old Town Campus (OTC), Naval Base Point Loma (NBPL), in San Diego, California. As outlined in the notice of public scoping, the proposed revitalization is needed to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements (enclosure 1). The Navy plans to satisfy its responsibilities under Section 106 of the National Historic Preservation Act (NHPA) for the proposed revitalization through implementation of the 2014 NBPL Programmatic Agreement (PA), which established standard procedures for the review and analysis of potential effects to historic properties within NBPL.

The Navy intends to implement the PA in close coordination with an Environmental Impact Statement (EIS), being prepared pursuant to the National Environmental Policy Act (NEPA), to evaluate environmental impacts associated with the proposed revitalization of the OTC. The public will be notified of opportunities to be informed and comment consistent with NHPA in conjunction with public participation in the Draft EIS. The Navy recognizes that alternatives currently under consideration involve actions that may affect historic properties, and additional study will be required to evaluate the alternatives, which may include: the consolidation of NAVWAR operations into existing OTC buildings; mixed use revitalization of the site, including construction of new NAVWAR facilities and private development projects through a public-private partnership; and mixed-use revitalization of the site that also incorporates development of a transit center.

In coordination with the NEPA process, the Navy will conduct preliminary analysis of potential impacts to all cultural resources and report them in the DEIS. Once a preferred alternative is identified, the Navy will apply procedures Stipulations VI-VIII in the PA to determine the area of potential effects (APE), identify historic properties, and assess effects. If, through application of these steps, the Navy determines that proposed revitalization will have no adverse effect on historic properties, the Navy will document this finding and notify your office, all interested parties, and the public through the NEPA process.

If the Navy determines that the preferred alternative may adversely affect historic properties, the Navy will initiate consultation, pursuant to Stipulation VIII.C of the PA, with

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your office, the Advisory Council on Historic Preservation (ACHP), all parties to the PA, and any other interested parties to resolve the effects in compliance with the process set forth in 36 CFR 800.6.

In closing, I thank you for your attention to this important project. My contact for this review is Dr. David Sproul. He can be reached at 619-532-2819, or via email at david.sproul@navy.mil, for any questions or comments about this plan for NHPA compliance.

Sincerely,

B. W. DICKSON
Captain, U.S. Navy
Commanding Officer

Enclosure: 1. Copy of the Notice of Public Scoping

equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support.

(iv) *Military Department*: Navy (AR-P-GVQ)

(v) *Prior Related Cases, if any*: AR-P-SSA, AR-P-GSH, AR-P-GSI, AR-P-GSJ

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold*: None

(viii) Date Report Delivered to Congress: December 19, 2019

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Argentina – Support for EDA P-3C Aircraft

The Government of Argentina has requested a possible sale of equipment, support and services in support of Argentina's EDA purchase of four (4) P-3C aircraft, including four (4) turboprop engines on each airframe and an additional four (4) turboprop engines. The proposed sale will include communications equipment; radar equipment; Infrared /Electro-optic equipment; aircraft depot maintenance; depopulation and repopulation; supply support/spares and repair of repairables; support equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support. The total estimated program cost is $78.032 million.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of a partner in South America.

Argentina's existing P-3B patrol aircraft have reached the end of their operational service life. To maintain maritime security, Argentina acquired four EDA P-3C aircraft to replace its older aircraft. These EDA aircraft need this refurbishment and equipment to be fully operational. It is vital to the U.S. national interest to assist Argentina in developing and maintaining a strong and ready self-defense maritime patrol aircraft capability. Argentina will have no difficulty absorbing these aircraft into its armed forces.

The proposed sale of this equipment will not alter the basic military balance in the region.

The prime contractors will be Logistic Services International, Jacksonville, FL; Lockheed Martin Aircraft Center, Greenville, SC; Eagle Systems, Jacksonville, FL; and Rockwell Collins, Cedar Rapids, IA. There are no known offset agreements in connection with this potential sale.

Implementation of this proposed sale will require the temporary assignment of approximately 12 U.S. contractor representatives to Argentina to support the program.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2020-01130 Filed 1-23-20; 8:45 am]
BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Navy

Certificate of Alternate Compliance for USS OAKLAND (LCS 24)

AGENCY: Department of the Navy, DoD.

ACTION: Notice of issuance of Certificate of Alternate Compliance.

SUMMARY: The U.S. Navy hereby announces that a Certificate of Alternate Compliance has been issued for USS OAKLAND (LCS 24). Due to the special construction and purpose of this vessel, the Deputy Assistant Judge Advocate General (DAJAG)(Admiralty and Maritime Law) has determined it is a vessel of the Navy which, due to its special construction and purpose, cannot comply fully with the navigation lights provisions of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) without interfering with its special function as a naval ship. The intended effect of this notice is to warn mariners in waters where 72 COLREGS apply.

DATES: This Certificate of Alternate Compliance is effective January 24, 2020 and is applicable beginning January 10, 2020.

FOR FURTHER INFORMATION CONTACT: Lieutenant Tom Bright, JAGC, U.S. Navy, Admiralty Attorney, Office of the Judge Advocate General, Admiralty and Maritime Law Division (Code 11), 1322 Patterson Ave. SE, Suite 3000, Washington Navy Yard, DC 20374-5066, 202-685-5040, or *admiralty@navy.mil*.

SUPPLEMENTARY INFORMATION: Background and Purpose. Executive Order 11964 of January 19, 1977 and 33 U.S.C. 1605 provide that the requirements of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), as to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, shall not apply to a vessel or class of vessels of the Navy where the Secretary of the Navy shall find and certify that, by reason of special construction or purpose, it is not possible for such vessel(s) to comply fully with the provisions without interfering with the special function of the vessel(s). Notice of issuance of a Certificate of Alternate Compliance must be made in the **Federal Register.**

In accordance with 33 U.S.C. 1605, the DAJAG (Admiralty and Maritime Law), under authority delegated by the Secretary of the Navy, hereby finds and certifies that USS OAKLAND (LCS 24) is a vessel of special construction or purpose, and that, with respect to the position of the following navigational lights, it is not possible to comply fully with the requirements of the provisions enumerated in the 72 COLREGS without interfering with the special function of the vessel:

Annex I, paragraph 2(a)(i), pertaining to the vertical position of the forward masthead light; Annex I, paragraph 3(a), pertaining to the horizontal position of the forward masthead light; Rule 21(a) and Annex I, paragraph 2(f)(i), pertaining to the aft masthead light being clear of obstructions; Annex I, paragraph 3(a), pertaining to the horizontal separation between the forward and aft masthead lights; Annex I, paragraph 2(f)(ii), pertaining to the vertical and horizontal spacing of task lights; and Rule 27(b)(i) and Annex I, paragraph 9(b), pertaining to task light obstructions.

The DAJAG (Admiralty and Maritime Law) further finds and certifies that these navigational lights are in closest possible compliance with the applicable provision of the 72 COLREGS.

Authority: 33 U.S.C. 1605(c), E.O. 11964

Approved: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020-01143 Filed 1-23-20; 8:45 am]
BILLING CODE 3810-FF-P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Navy Old Town Campus Revitalization at Naval Base Point Loma, California, and To Announce Public Scoping Meetings

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality Regulations, the Department of the Navy (Navy) announces its intent to prepare an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Navy Old Town Campus (OTC) to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address provisions of the California Environmental Quality Act (CEQA) as it relates to non-federal development within the proposed alternatives. An EIS is considered the appropriate document for comprehensively analyzing the proposed action to demolish and construct buildings, utilities, and infrastructure at the OTC, Naval Base Point Loma, California. Specific proposed actions within the OTC proposal could include Navy recapitalization of the site or redevelopment through a public-private partnership.

DATES: The Navy is initiating a 30-day public scoping process to identify community interests and specific issues for analysis in the EIS. This public scoping process starts with the publication of this Notice of Intent. The Navy is planning two public scoping meetings to receive written comments on issues for analysis in the EIS. All public comments are due by February 24, 2020.

ADDRESSES: The meetings will be held in the following locations (all times local):

1. February 13, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.
2. February 19, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.

Additional information concerning meeting times and locations is available on the EIS website at *www.navwar-revitalization.com*. The Navy will announce public scoping meeting dates, times, and locations in the local news media.

Public scoping meetings will include open house sessions, with information stations staffed by Navy representatives. The Navy will collect comments during each of the two public scoping meetings. Written comments can also be made electronically on the project website.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101; telephone: 619–379–3860.

SUPPLEMENTARY INFORMATION: The U.S. Army Air Corps first used the OTC site in 1940. Use of the site transitioned to the United States Air Force in 1947. General Dynamics Corporation operated the facility, known as Air Force Plant 19, from approximately 1940 to the mid-1970s, using it primarily for aircraft production. Beginning in the late 1970s, subassembly activities for various missile production programs replaced aircraft assembly as the primary function of the facility. In 1994, the Air Force transferred ownership of the property to the U.S. Navy (with oversight given to Naval Base Point Loma) and manufacturing activities focused on space launch vehicle assembly as conducted by various military contractors.

NAVWAR established the OTC site as their headquarters in 1996, with a mission focus of naval communications and space programs. Site activities have since grown to include development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs.

The existing OTC facilities are beyond their useful life and their degradation is affecting NAVWAR's cyber warfare mission, security, and workforce safety. The Navy requires secure, safe, modern state-of-the-art space to support NAVWAR's mission requirements. NAVWAR proposes to revitalize the OTC, which would include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR on OTC.

NAVWAR's mission requirements include 1,064,268 square feet (SF) of space, as follows:

845,326 SF of office space;

29,156 SF of secure conference and auditorium space;

24,172 SF of warehouse/storage space; and

165,614 SF of lab space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

During development of the NAVWAR's mission requirements, the Navy identified a portion of the existing OTC facilities, primarily open storage/laydown and warehouse space, could be accommodated at an off-site location. This EIS does not address the potential NAVWAR off-site facilities relocation. Therefore, subsequent NEPA may be required if alternative selection results in utilization of an off-site location.

The purpose of and need for the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements. Current facilities are beyond their useful life and negatively affect NAVWAR's cyber warfare mission, security, and workforce safety. NAVWAR requires secure, safe, efficient, modern, state-of-the-art facilities to meet information technology, artificial intelligence, and cyber warfare operational needs as a central component to NAVWAR's mission in defense of our Nation.

In September 2018, the Navy issued a Request for Interest (RFI) to evaluate the availability and adequacy of potential business sources to revitalize the OTC site through a public-private partnership. In November 2018, the Navy held an industry day to solicit responses to the RFI and highlight the Navy's willingness to consider all types of concepts to achieve Navy goals for revitalizing the OTC, including long-term leases, a land exchange, or sale. The RFI process resulted in twelve responses, four of which contained substantive market research. After considering the proposals received on the RFI, feedback received at industry day, and subsequent discussions with internal and external stakeholders, the Navy entered into an agreement with the San Diego Association of Governments (SANDAG) on September 19, 2019, to conduct a planning process intended to lead to the redevelopment of the OTC, to include a potential Transit Center and the redevelopment of NAVWAR facilities. SANDAG's proposed Transit Center would improve multimodal regional transportation efficiency for the residents and visitors of the greater San Diego area, and would support NAVWAR's mission by providing access that is more efficient to industry partners and transportation. SANDAG is considering various conceptual transportation solutions for improved regional airport connectivity; some of the concepts under consideration include possible construction at the NAVWAR facility, others do not. In consideration of the fact that Navy may proceed without SANDAG if SANDAG and the Navy do not agree to move forward with redevelopment of the site to include a Transit Center, the Navy has developed

five preliminary alternatives in addition to the No Action alternative for revitalizing the OTC.

Alternative 1 (Navy Recapitalization at OTC) would consist of revitalization of the OTC to meet NAVWAR's facility requirements with Navy-funded capital improvements only. This would potentially include consolidating NAVWAR operations into two of the existing 310,000 SF buildings (Buildings 2 and 3) on OTC Site 1.

Alternative 2 (High-Density Mixed Use Revitalization) would consist of construction of new Navy facilities for NAVWAR on the OTC site through an agreement with a public-private partner, and the relocation of some warehouse functions to a separate off-site location.

Alternative 3 (Low-Density Mixed Use Revitalization) would be similar to Alternative 2, but the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 4 (High-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 5 (Low-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center and the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 6 (No Action Alternative) would be no change from status quo. The Navy would continue to maintain and repair the existing facilities, and NAVWAR would continue to operate at the OTC site as is.

Environmental issues and resources to be examined and addressed in the EIS include, but are not limited to: Air Quality (including environmental effects analyses pursuant to CEQA for greenhouse gases/Climate Change and Odor), Transportation, Visual Resources, Land Use (including Agricultural Resources for CEQA), Socioeconomics (including Growth Inducing Impacts for CEQA), Cultural Resources (including Paleontology for CEQA), Hazardous Materials and Waste, Public Health and Safety (including Wildfire for CEQA), Environmental Justice, Infrastructure (including Schools, Utilities and Energy Consumption for CEQA), Airspace, Noise, Geology (including Mineral Resources for CEQA), Water Resources, and Biological Resources. The EIS will also analyze measures that would avoid or mitigate environmental effects. Additionally, the Navy will undertake any coordination and consultation activities required by the National Historic Preservation Act.

The Navy encourages interested persons to submit comments concerning the alternatives proposed for study, and environmental issues for analysis in the EIS. Federal, State, local, and Tribal agencies, and interested persons are encouraged to provide comments to the Navy to identify specific environmental issues or topics of environmental concern that the Navy should consider when developing the Draft EIS. The Navy will prepare the Draft EIS, incorporating issues identified by the commenting public. All comments received during the public scoping period will receive consideration during EIS preparation.

Mailed comments on the scope of the EIS should be postmarked no later than February 24, 2020. Comments may be mailed to: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101. Interested parties can also submit comments via the EIS website at *www.navwar-revitalization.com.*

Dated: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020–01144 Filed 1–23–20; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

Application Deadline for Fiscal Year 2020; Small, Rural School Achievement Program

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

SUMMARY: Under the Small, Rural School Achievement (SRSA) program, Catalog of Federal Domestic Assistance (CDFA) number 84.358A, the U.S. Department of Education (Department) awards grants on a formula basis to eligible local educational agencies (LEAs) to address the unique needs of rural school districts. In this notice, we establish the deadline and describe the submission procedures for fiscal year (FY) 2020 SRSA grant applications. All LEAs eligible for FY 2020 SRSA funds must submit an application electronically via the process described in this notice by the deadline in this notice.

DATES:

Applications Available: February 3, 2020.

Deadline for Transmittal of Applications: April 17, 2020.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Hitchcock, U.S. Department of Education, 400 Maryland Avenue SW, Room 3E–218, Washington, DC 20202. Telephone: (202) 260–1472. Email: *reup@ed.gov.*

If you use a telecommunications device for the deaf or a text telephone, call the Federal Relay Service, toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION:

I. Award Information

Type of Award: Formula grant.

Available Funds: The Administration has requested $90,420,000 for SRSA in FY 2020. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Estimated Range of Awards: $0–$60,000.

Note: Depending on the number of eligible LEAs identified in a given year and the amount appropriated by Congress for the program, some eligible LEAs may receive an SRSA allocation of $0 under the statutory funding formula.

Estimated Number of Awards: 4,000.

II. Program Authority and Eligibility Information

Under what statutory authority will FY 2020 SRSA grant awards be made?

The FY 2020 SRSA grant awards will be made under title V, part B, subpart 1 of the Elementary and Secondary Education Act of 1965, as amended (ESEA).

Which LEAs are eligible for an award under the SRSA program?

For FY 2020, an LEA (including a public charter school that meets the definition of LEA in section 8101(30) of the ESEA) is eligible for an award under the SRSA program if it meets one of the following criteria:

(a)(1) The total number of students in average daily attendance at all of the schools served by the LEA is fewer than 600; or each county in which a school served by the LEA is located has a total population density of fewer than 10 persons per square mile; and

(2) All of the schools served by the LEA are designated with a school locale

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DEPARTMENT OF THE NAVY
NAVAL BASE POINT LOMA
140 SYLVESTER ROAD
SAN DIEGO, CALIFORNIA 92106-3521

IN REPLY REFER TO:
5090
N00/118
March 20, 2020

Advisory Council on Historic Preservation
Office of Federal Agency Programs
C/O: Katherine Kerr
40 I F Street NW, Suite 308
Washington, DC 20001-2637

Attention: Mr. John Fowler, Director

Ladies and Gentelmen:

This letter follows up on the Navy's recent communication with your office regarding public scoping for the proposed revitalization of Naval Information Warfare System Command's (NAVWAR) facilities on the Old Town Campus (OTC), Naval Base Point Loma (NBPL), in San Diego, California. As outlined in the notice of public scoping, the proposed revitalization is needed to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements (enclosure 1). The Navy plans to satisfy its responsibilities under Section 106 of the National Historic Preservation Act (NHPA) for the proposed revitalization through implementation of the 2014 NBPL Programmatic Agreement (PA), which established standard procedures for the review and analysis of potential effects to historic properties within NBPL.

The Navy intends to implement the PA in close coordination with an Environmental Impact Statement (EIS), being prepared pursuant to the National Environmental Policy Act (NEPA), to evaluate environmental impacts associated with the proposed revitalization of the OTC. The public will be notified of opportunities to be informed and comment consistent with NHPA in conjunction with public participation in the Draft EIS. The Navy recognizes that alternatives currently under consideration involve actions that may affect historic properties, and additional study will be required to evaluate the alternatives, which may include: the consolidation of NAVWAR operations into existing OTC buildings; mixed use revitalization of the site, including construction of new NAVWAR facilities and private development projects through a public-private partnership; and mixed-use revitalization of the site that also incorporates development of a transit center.

In coordination with the NEPA process, the Navy will conduct preliminary analysis of potential impacts to all cultural resources and report them in the DEIS. Once a preferred alternative is identified, the Navy will apply procedures Stipulations VI-VIII in the PA to determine the area of potential effects (APE), identify historic properties, and assess effects. If, through application of these steps, the Navy determines that proposed revitalization will have no adverse effect on historic properties, the Navy will document this finding and notify your office, all interested parties, and the public through the NEPA process.

5090
Ser N00/118
March 17, 2020

If the Navy determines that the preferred alternative may adversely affect historic properties, the Navy will initiate consultation, pursuant to Stipulation VIII.C of the PA, with your office, the California State Historic Preservation Officer (SHPO), all parties to the PA, and any other interested parties to resolve the effects in compliance with the process set forth in 36 CFR 800.6.

In closing, I thank you for your attention to this important project. My contact for this review is Dr. David Sproul. He can be reached at 619-532-2819, or via email at david.sproul@navy.mil, for any questions or comments about this plan for NHPA compliance.

Sincerely,

B. W. DICKSON
Captain, U.S. Navy
Commanding Officer

Enclosure: 1. Copy of the Notice of Public Scoping

equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support.

(iv) *Military Department:* Navy (AR-P-GVQ)

(v) *Prior Related Cases, if any:* AR-P-SSA, AR-P-GSH, AR-P-GSI, AR-P-GSJ

(vi) *Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid:* None

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold:* None

(viii) *Date Report Delivered to Congress:* December 19, 2019

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Argentina – Support for EDA P-3C Aircraft

The Government of Argentina has requested a possible sale of equipment, support and services in support of Argentina's EDA purchase of four (4) P-3C aircraft, including four (4) turboprop engines on each airframe and an additional four (4) turboprop engines. The proposed sale will include communications equipment; radar equipment; Infrared /Electro-optic equipment; aircraft depot maintenance; depopulation and repopulation; supply support/spares and repair of repairables; support equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support. The total estimated program cost is $78.032 million.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of a partner in South America.

Argentina's existing P-3B patrol aircraft have reached the end of their operational service life. To maintain maritime security, Argentina acquired four EDA P-3C aircraft to replace its older aircraft. These EDA aircraft need this refurbishment and equipment to be fully operational. It is vital to the U.S. national interest to assist Argentina in developing and maintaining a strong and ready self-defense maritime patrol aircraft capability. Argentina will have no difficulty absorbing these aircraft into its armed forces.

The proposed sale of this equipment will not alter the basic military balance in the region.

The prime contractors will be Logistic Services International; Jacksonville, FL; Lockheed Martin Aircraft Center, Greenville, SC; Eagle Systems, Jacksonville, FL; and Rockwell Collins, Cedar Rapids, IA. There are no known offset agreements in connection with this potential sale.

Implementation of this proposed sale will require the temporary assignment of approximately 12 U.S. contractor representatives to Argentina to support the program.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2020-01130 Filed 1-23-20; 8:45 am]
BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Navy

Certificate of Alternate Compliance for USS OAKLAND (LCS 24)

AGENCY: Department of the Navy, DoD.

ACTION: Notice of issuance of Certificate of Alternate Compliance.

SUMMARY: The U.S. Navy hereby announces that a Certificate of Alternate Compliance has been issued for USS OAKLAND (LCS 24). Due to the special construction and purpose of this vessel, the Deputy Assistant Judge Advocate General (DAJAG)(Admiralty and Maritime Law) has determined it is a vessel of the Navy which, due to its special construction and purpose, cannot comply fully with the navigation lights provisions of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) without interfering with its special function as a naval ship. The intended effect of this notice is to warn mariners in waters where 72 COLREGS apply.

DATES: This Certificate of Alternate Compliance is effective January 24, 2020 and is applicable beginning January 10, 2020.

FOR FURTHER INFORMATION CONTACT: Lieutenant Tom Bright, JAGC, U.S. Navy, Admiralty Attorney, Office of the Judge Advocate General, Admiralty and Maritime Law Division (Code 11), 1322 Patterson Ave. SE, Suite 3000, Washington Navy Yard, DC 20374-5066, 202-685-5040, or *admiralty@navy.mil.*

SUPPLEMENTARY INFORMATION: Background and Purpose. Executive Order 11964 of January 19, 1977 and 33 U.S.C. 1605 provide that the requirements of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), as to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, shall not apply to a vessel or class of vessels of the Navy where the Secretary of the Navy shall find and certify that, by reason of special construction or purpose, it is not possible for such vessel(s) to comply fully with the provisions without interfering with the special function of the vessel(s). Notice of issuance of a Certificate of Alternate Compliance must be made in the **Federal Register.**

In accordance with 33 U.S.C. 1605, the DAJAG (Admiralty and Maritime Law), under authority delegated by the Secretary of the Navy, hereby finds and certifies that USS OAKLAND (LCS 24) is a vessel of special construction or purpose, and that, with respect to the position of the following navigational lights, it is not possible to comply fully with the requirements of the provisions enumerated in the 72 COLREGS without interfering with the special function of the vessel:

Annex I, paragraph 2(a)(i), pertaining to the vertical position of the forward masthead light; Annex I, paragraph 3(a), pertaining to the horizontal position of the forward masthead light; Rule 21(a) and Annex I, paragraph 2(f)(i), pertaining to the aft masthead light being clear of obstructions; Annex I, paragraph 3(a), pertaining to the horizontal separation between the forward and aft masthead lights; Annex I, paragraph 2(f)(ii), pertaining to the vertical and horizontal spacing of task lights; and Rule 27(b)(i) and Annex I, paragraph 9(b), pertaining to task light obstructions.

The DAJAG (Admiralty and Maritime Law) further finds and certifies that these navigational lights are in closest possible compliance with the applicable provision of the 72 COLREGS.

Authority: 33 U.S.C. 1605(c), E.O. 11964

Approved: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020-01143 Filed 1-23-20; 8:45 am]
BILLING CODE 3810-FF-P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Navy Old Town Campus Revitalization at Naval Base Point Loma, California, and To Announce Public Scoping Meetings

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality Regulations, the Department of the Navy (Navy) announces its intent to prepare an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Navy Old Town Campus (OTC) to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address provisions of the California Environmental Quality Act (CEQA) as it relates to non-federal development within the proposed alternatives. An EIS is considered the appropriate document for comprehensively analyzing the proposed action to demolish and construct buildings, utilities, and infrastructure at the OTC, Naval Base Point Loma, California. Specific proposed actions within the OTC proposal could include Navy recapitalization of the site or redevelopment through a public-private partnership.

DATES: The Navy is initiating a 30-day public scoping process to identify community interests and specific issues for analysis in the EIS. This public scoping process starts with the publication of this Notice of Intent. The Navy is planning two public scoping meetings to receive written comments on issues for analysis in the EIS. All public comments are due by February 24, 2020.

ADDRESSES: The meetings will be held in the following locations (all times local):

1. February 13, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.
2. February 19, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.

Additional information concerning meeting times and locations is available on the EIS website at *www.navwar-revitalization.com*. The Navy will announce public scoping meeting dates, times, and locations in the local news media.

Public scoping meetings will include open house sessions, with information stations staffed by Navy representatives. The Navy will collect comments during each of the two public scoping meetings. Written comments can also be made electronically on the project website.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101; telephone: 619–379–3860.

SUPPLEMENTARY INFORMATION: The U.S. Army Air Corps first used the OTC site in 1940. Use of the site transitioned to the United States Air Force in 1947. General Dynamics Corporation operated the facility, known as Air Force Plant 19, from approximately 1940 to the mid-1970s, using it primarily for aircraft production. Beginning in the late 1970s, subassembly activities for various missile production programs replaced aircraft assembly as the primary function of the facility. In 1994, the Air Force transferred ownership of the property to the U.S. Navy (with oversight given to Naval Base Point Loma) and manufacturing activities focused on space launch vehicle assembly as conducted by various military contractors.

NAVWAR established the OTC site as their headquarters in 1996, with a mission focus of naval communications and space programs. Site activities have since grown to include development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs.

The existing OTC facilities are beyond their useful life and their degradation is affecting NAVWAR's cyber warfare mission, security, and workforce safety. The Navy requires secure, safe, modern state-of-the-art space to support NAVWAR's mission requirements. NAVWAR proposes to revitalize the OTC, which would include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR on OTC.

NAVWAR's mission requirements include 1,064,268 square feet (SF) of space, as follows:

845,326 SF of office space;

29,156 SF of secure conference and auditorium space;

24,172 SF of warehouse/storage space; and

165,614 SF of lab space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

During development of the NAVWAR's mission requirements, the Navy identified a portion of the existing OTC facilities, primarily open storage/laydown and warehouse space, could be accommodated at an off-site location. This EIS does not address the potential NAVWAR off-site facilities relocation. Therefore, subsequent NEPA may be required if alternative selection results in utilization of an off-site location.

The purpose of and need for the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements. Current facilities are beyond their useful life and negatively affect NAVWAR's cyber warfare mission, security, and workforce safety. NAVWAR requires secure, safe, efficient, modern, state-of-the-art facilities to meet information technology, artificial intelligence, and cyber warfare operational needs as a central component to NAVWAR's mission in defense of our Nation.

In September 2018, the Navy issued a Request for Interest (RFI) to evaluate the availability and adequacy of potential business sources to revitalize the OTC site through a public-private partnership. In November 2018, the Navy held an industry day to solicit responses to the RFI and highlight the Navy's willingness to consider all types of concepts to achieve Navy goals for revitalizing the OTC, including long-term leases, a land exchange, or sale. The RFI process resulted in twelve responses, four of which contained substantive market research. After considering the proposals received on the RFI, feedback received at industry day, and subsequent discussions with internal and external stakeholders, the Navy entered into an agreement with the San Diego Association of Governments (SANDAG) on September 19, 2019, to conduct a planning process intended to lead to the redevelopment of the OTC, to include a potential Transit Center and the redevelopment of NAVWAR facilities. SANDAG's proposed Transit Center would improve multimodal regional transportation efficiency for the residents and visitors of the greater San Diego area, and would support NAVWAR's mission by providing access that is more efficient to industry partners and transportation. SANDAG is considering various conceptual transportation solutions for improved regional airport connectivity; some of the concepts under consideration include possible construction at the NAVWAR facility, others do not. In consideration of the fact that Navy may proceed without SANDAG if SANDAG and the Navy do not agree to move forward with redevelopment of the site to include a Transit Center, the Navy has developed

five preliminary alternatives in addition to the No Action alternative for revitalizing the OTC.

Alternative 1 (Navy Recapitalization at OTC) would consist of revitalization of the OTC to meet NAVWAR's facility requirements with Navy-funded capital improvements only. This would potentially include consolidating NAVWAR operations into two of the existing 310,000 SF buildings (Buildings 2 and 3) on OTC Site 1.

Alternative 2 (High-Density Mixed Use Revitalization) would consist of construction of new Navy facilities for NAVWAR on the OTC site through an agreement with a public-private partner, and the relocation of some warehouse functions to a separate off-site location.

Alternative 3 (Low-Density Mixed Use Revitalization) would be similar to Alternative 2, but the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 4 (High-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 5 (Low-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center and the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 6 (No Action Alternative) would be no change from status quo. The Navy would continue to maintain and repair the existing facilities, and NAVWAR would continue to operate at the OTC site as is.

Environmental issues and resources to be examined and addressed in the EIS include, but are not limited to: Air Quality (including environmental effects analyses pursuant to CEQA for greenhouse gases/Climate Change and Odor), Transportation, Visual Resources, Land Use (including Agricultural Resources for CEQA), Socioeconomics (including Growth Inducing Impacts for CEQA), Cultural Resources (including Paleontology for CEQA), Hazardous Materials and Waste, Public Health and Safety (including Wildfire for CEQA), Environmental Justice, Infrastructure (including Schools, Utilities and Energy Consumption for CEQA), Airspace, Noise, Geology (including Mineral Resources for CEQA), Water Resources, and Biological Resources. The EIS will also analyze measures that would avoid or mitigate environmental effects. Additionally, the Navy will undertake any coordination and consultation activities required by the National Historic Preservation Act.

The Navy encourages interested persons to submit comments concerning the alternatives proposed for study, and environmental issues for analysis in the EIS. Federal, State, local, and Tribal agencies, and interested persons are encouraged to provide comments to the Navy to identify specific environmental issues or topics of environmental concern that the Navy should consider when developing the Draft EIS. The Navy will prepare the Draft EIS, incorporating issues identified by the commenting public. All comments received during the public scoping period will receive consideration during EIS preparation.

Mailed comments on the scope of the EIS should be postmarked no later than February 24, 2020. Comments may be mailed to: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101. Interested parties can also submit comments via the EIS website at *www.navwar-revitalization.com.*

Dated: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020–01144 Filed 1–23–20; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

Application Deadline for Fiscal Year 2020; Small, Rural School Achievement Program

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

SUMMARY: Under the Small, Rural School Achievement (SRSA) program, Catalog of Federal Domestic Assistance (CDFA) number 84.358A, the U.S. Department of Education (Department) awards grants on a formula basis to eligible local educational agencies (LEAs) to address the unique needs of rural school districts. In this notice, we establish the deadline and describe the submission procedures for fiscal year (FY) 2020 SRSA grant applications. All LEAs eligible for FY 2020 SRSA funds must submit an application electronically via the process described in this notice by the deadline in this notice.

DATES:

Applications Available: February 3, 2020.

Deadline for Transmittal of Applications: April 17, 2020.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Hitchcock, U.S. Department of Education, 400 Maryland Avenue SW, Room 3E–218, Washington, DC 20202. Telephone: (202) 260–1472. Email: *reap@ed.gov.*

If you use a telecommunications device for the deaf or a text telephone, call the Federal Relay Service, toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION:

I. Award Information

Type of Award: Formula grant.

Available Funds: The Administration has requested $90,420,000 for SRSA in FY 2020. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Estimated Range of Awards: $0–$60,000.

Note: Depending on the number of eligible LEAs identified in a given year and the amount appropriated by Congress for the program, some eligible LEAs may receive an SRSA allocation of $0 under the statutory funding formula.

Estimated Number of Awards: 4,000.

II. Program Authority and Eligibility Information

Under what statutory authority will FY 2020 SRSA grant awards be made?

The FY 2020 SRSA grant awards will be made under title V, part B, subpart 1 of the Elementary and Secondary Education Act of 1965, as amended (ESEA).

Which LEAs are eligible for an award under the SRSA program?

For FY 2020, an LEA (including a public charter school that meets the definition of LEA in section 8101(30) of the ESEA) is eligible for an award under the SRSA program if it meets one of the following criteria:

(a)(1) The total number of students in average daily attendance at all of the schools served by the LEA is fewer than 600; or each county in which a school served by the LEA is located has a total population density of fewer than 10 persons per square mile; and

(2) All of the schools served by the LEA are designated with a school locale

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Appendix K

Tribal Documentation

Note: No Tribal Government-to-Government correspondence was received during the preparation of the Draft EIS.

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Appendix L
Infrastructure Calculations

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Acronyms and Abbreviations

C&D	construction and demolition
LEED	Leadership in Energy and Environmental Design
MSW	municipal solid waste
NAVWAR	Naval Information Warfare Systems Command
OTC	Old Town Campus

1 Utility Demand Calculations

1.1 Water

To calculate water utility demand for the Proposed Action alternatives, this analysis uses representative demand factors published by the San Diego Public Utilities Department and San Diego County Public Works for each of the types of uses included in the project description. The demand factors are applied based on either square footage by development type (e.g., office, auditorium, warehouse), per capita or per unit, depending on the specifications of the demand factor.

The City of San Diego Public Utilities Department applies daily consumption rates for water usage by land use categories. The unit water demand for the Naval Information Warfare Systems Command (NAVWAR) component of the action alternatives was calculated by applying use factors from the average unit water demand criteria listed in the San Diego Public Utilities Department's Water Design Criteria (San Diego Public Utilities Department, 2020), as shown below, to the square footage of each use type represented in the project alternatives. Table L-1 shows water demand factors by land use category.

Table L-1 San Diego Public Utilities Department Water Demand Factors

Land Use Category	*Unit Water Demand (Gal/SF/Day)*
Office	0.1315427
Lab/Industrial	0.143480257
Auditorium	0.114784206
Conference Rooms	0.11478420
Warehouse	0.114784206
Storage	0.114784206
Hotel	0.150482094
Retail	0.137741047
Transit Center	0.137741047

Legend: Gal/SF = gallons per square foot.

The unit water demand for residential units used for this analysis is equal to the current per capita use of 123 gallons per day, as published by the San Diego Public Utilities Department (San Diego County Water Authority, 2016). The demand factor published in the San Diego Public Utilities Department water design guide (150 gallons per capita, per day) is related more to historic demand levels and also does not distinguish between single and multi-family residence function. Current water efficiency standards have reduced residential water use per capita in recent years. Additionally, the Alternatives 2 through 5 include only apartment residences, justifying the lower level of use estimation, since typical residential uses such as watering of lawns or washing vehicles will not occur. The demand was calculated by using the development details for each alternative (see Section 2.5) and was applied based on an occupancy factor of 0.798 with an assumed density of 1.8 people per residential unit of the proposed alternative.

Fire demand flows estimates are based on the City of San Diego Water Design Standards and the Unified Facilities Criteria Fire Protection Engineering for Facilities (DoD, 2016). The maximum fire demand of 6,000 gallons per minute was applied to the analysis. Table L-2 shows the fire demand flow rate for each development type.

Table L-2 Fire Demand Flow Rate

Development Type	*Fire Demand (GPM)*
Condominiums and apartments	3,000
Commercial	4,000
Industrial	6,000

Legend: GPM = gallons per minute.

A Water Supply Assessment is required by California Water Code Sections 10910-10915 for projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project if they were not accounted for in the current Urban Water Management Plan. A Water Supply Assessment may need to be prepared prior to project implementation to address the current and planned future water demand of the water supplier versus the projected demand of a proposed project. It would then make a determination of the sufficiency of its water supplies for the project, in addition to the existing and planned future uses.

Table L-3 shows estimated water demand by alternative. The demand for water usage for the No Action Alternative is based on the current estimation factors.

Table L-3 Estimated Daily Water Demand by Alternative

Alternative	*NAVWAR Estimated Daily Water Requirements (GPD)*	*Public-Private Estimated Daily Water Requirements (GPD)*	*Combined – Estimated Daily Water Requirements (GPD)*	*Peak Hour Demand (GPD)*	*Maximum Daily Demand (GPD)*
No Action	159,835	0	159,835	36,629	372,415
Alternative 1	159,835	0	159,835	36,629	372,415
Alternative 2	141,080	1,361,531	1,502,611	234,783	2,494,334
Alternative 3	141,080	904,866	1,045,946	174,324	1,830,405
Alternative 4	141,080	2,041,713	2,182,793	318,324	3,274,190
Alternative 5	141,080	1,615,701	1,756,781	267,909	2,810,849

Legend: GPD = gallons per day.
Note: Calculations are based on demand factors applied by land use type and square feet of alternatives.

1.2 Wastewater

Wastewater demand was estimated by comparing historic water demand to wastewater generation and creating a ratio that was applied to the water demand for the project. Specifically, wastewater was estimated by applying the ratio of 0.65 to water demand for all uses for each alternative. This represents the ratio of average residential water use according to the San Diego Public Utilities Department to the wastewater demand factor for residences published in the San Diego Public Utilities Department Sewer Design Guide. Table L-4 shows estimated wastewater generation by alternative. The demand for water usage for the No Action Alternative is based on current estimation factors.

Table L-4 Estimated Daily Wastewater by Alternative

Alternative	*Navy - Estimated Daily Wastewater Requirements (GPD)*	*Private – Estimated Daily Wastewater Requirements (GPD)*	*Combined – Estimated Daily Wastewater Requirements (GPD)*	*Maximum Daily Demand (GPD)*
No Action	103,893	0	103,893	242,070
Alternative 1	103,893	0	103,893	242,070
Alternative 2	91,702	884,995	976,697	1,621,317
Alternative 3	91,702	588,163	679,865	1,189,763
Alternative 4	91,702	1,327113	1,418,815	2,128,224
Alternative 5	91,702	1,050,206	1,141,907.65	1,827,052

Legend: GPD = gallons per day.

1.3 Solid Waste

Construction, renovation, and demolition activities associated with the Proposed Action would generate construction and demolition (C&D) debris. Buildings would be constructed primarily of masonry and steel construction or be of a prefabricated design over a concrete slab-type foundation, while resulting debris would include wood, drywall, plastic, steel, masonry, etc. C&D debris would also be generated during the demolition of existing paved surfaces and construction of new paved surfaces (e.g., parking areas, sidewalks). As an example, in the case of constructing paved surfaces, debris would likely consist mostly of wooden forms (used for shaping the paved surface area) that could be recycled. Also, durable modular metal form systems for use in concrete construction may be selected based on being readily demountable and reusable on other projects, thus eliminating wood waste associated with formwork fabricated of plywood and dimensional lumber. Any suitable substitute for aggregate (e.g., recovered masonry, concrete, and asphalt rubble) may be recycled into new aggregate or asphalt and would be considered during construction. Some building-related waste can also be minimized. For example, construction products can be selected based on its being designed and manufactured to be shipped with minimal packaging. Soil excavated during construction activities would be stockpiled for construction and landscaping uses, while woody debris from land-clearing activities could also be chipped or mulched onsite and used for landscaping. New materials, such as asphalt and concrete, would not be expected to generate significant waste because they are produced in the needed quantities and can be recycled if the material or its placement does not meet specifications. Additional municipal solid waste (MSW) (general refuse) diversion measures, including recycling of office waste, beverage containers, cardboard, plastics, and scrap metal would further limit any potential adverse impacts on landfill capacity.

Construction projects would incorporate Leadership in Energy and Environmental Design, commonly referred to as Leadership in Energy and Environmental Design (LEED), and sustainable development concepts to achieve optimum resource efficiency, sustainability, and energy conservation. Other non-hazardous waste generated would be the result of construction site operations (e.g., food waste, office waste, empty containers, and packaging materials). The quantity of this type of waste would be minor when compared to the volume of C&D debris expected to be generated. Construction activities at Old Town Campus (OTC) would occur over multiple years, further limiting the quantity of debris generated at any one time. Additionally, all feasible waste recycling and management measures would be implemented through the enforcement of contract specifications to further minimize the quantity of C&D debris generated. Construction waste recycling and management involve the process and separation of salvaging the recoverable waste materials for recycling and reuse.

To evaluate the maximum impact scenario, the analysis assumes that all construction activities would be completed, and all C&D generated, within a single year. The Proposed Action would also generate MSW annually from operational activities based on proposed land uses. The Proposed Action includes the implementation of a strategy to meet the City of San Diego diversion goal of 50 percent. The MSW generated by the Navy Development for Alternative 2 would be equivalent to all other considered alternatives.

Tables L-5 through L-16 show the estimated C&D debris and MSW from each of the alternatives.

Table L-5 Total C&D Debris Resulting from Alternative 1 Construction Activities

Construction Activity	*Total SF*	*Generation Factor (LB/SF)[1]*	*Generated Debris (Tons)*	*Landfill Disposal Qty (@35% Disposal Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Building 1 (Demolition)	310,000	158	24,490	8,572	0.94
Building 2 (Renovation)	930,000	4.34	2,018	706	0.08
Building 3 (Renovation)	930,000	4.34	2,018	706	0.08
Parking (Construction)[4]	472,000	-	-	-	-
NA	NA	**Total**	**28,526**	**9,984**	**1.10**

Legend: @ = at; % = percent; LB = pound(s); NA = not applicable; Qty = quantity; SF = square feet.

Notes: [1.] USEPA, 2003.

[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by City of San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-6 Annual MSW Resulting from Alternative 1 Operations

Construction Activity	*Total SF*	*MSW Generation Factor (LB/SF/Day)[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Office	1,019,364	0.032	5,953	2,977	**0.33**
Laboratory	174,865	0.007	223	112	**0.01**
Conference/Auditorium	26,156	0.007	33	17	**0.00**
Warehouse	481,941	0.0142	1,249	624	**0.07**
Open Storage	174,267	-	-	-	-
Parking	1,430,415	-	-	-	-
-	-	**Total**	**7,459**	**3,729**	**0.41**

Legend: @ = at; % = percent; LB = pound; - = not applicable; Qty = quantity; SF = square feet.

Notes: [1.] California Recycle, 2020.

[2.] Quantity assumes that 50% of MSW debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-7 Total C&D Debris Resulting from Construction for Alternatives 2 Navy Development

Use Type	*Total SF*	*C&D Generation Factor (LB/SF)[1]*	*Total Generated C&D Debris (Tons)*	*Landfill Disposal Qty (@65% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Office	845,326	4.34	1,834	**642**	**0.07**
Laboratory	165,614	4.34	359	**126**	**0.01**
Conference/Auditorium	29,156	4.34	63	**22**	**0.00**
Warehouse	24,172	4.34	52	**18**	**0.00**
Parking[4]	630,000	0	-	**-**	**-**
-	-	**Total**	**2,309**	**808**	**0.09**

Legend: @ = at; % = percent; LB = pound; - = not applicable; Qty = quantity; SF = square feet.

Notes: [1.] USEPA, 2003.

[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

[4.] Assumes C&D debris from paved surfaces (i.e., parking lots) would primarily consist of wooden forms that would be recycled.

Table L-8 Annual MSW Resulting from Land Uses for Alternative 2 Navy Development

Use Type	*Total SF*	*MSW Generation Factor[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Office	845,326	0.032	4,937	2,468	**0.27**
Laboratory	165,614	0.007	212	106	**0.01**
Conference/Auditorium	29,156	0.007	37	19	**0.00**
Warehouse	24,172	0.0142	63	31	**0.00**
Parking	630,000	-	-	-	-
-	-	**Total**	**5,249**	**2,624**	**0.28**

Legend: @ = at; % = percent; % = percent; - = not applicable.

Notes: [1.] Generation factors for residential and hotel land uses are in the form of pounds/no. of units/day. Generation factors for the office and retail land uses are in the form of pounds/square feet/day (CalRecycle, 2020).

[2.] Quantity assumes that 50% of MSW debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-9 Total C&D Debris Resulting from Construction for Alternative 2 Private Development

Use Type	*Total SF*	*C&D Generation Factor (LB/SF)[1]*	*Total Generated C&D Debris (Tons)*	*Landfill Disposal Qty (@65% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	6,336,000	4.39	13,908	**4,868**	**0.53**
Office	1,000,000	4.34	2,170	**760**	**0.08**
Hotel	260,000	4.34	564	**197**	**0.02**
Retail	180,000	4.34	391	**137**	**0.02**
Parking[4]	4,123,700	0	-	**-**	**-**
-	-	**Total**	**17,032**	**5,961**	**0.66**

Legend: - = not applicable; @ = at; % = percent; LB = pound; Qty = quantity; SF = square feet.

Notes: [1.] USEPA, 2003.

[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

[4.] Assumes C&D debris from paved surfaces (i.e., parking lots) would primarily consist of wooden forms that would be recycled.

Table L-10 Annual MSW from Land Uses for Alternative 2 Private Development

Use Type	*No. of Units or SF*	*MSW Generation Factor[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	6,600 (U)	10.46	12,599	6,300	**0.69**
Office	1,000,000 (SF)	0.032	5,840	2,920	**0.32**
Hotel	400 (U)	2.7	197	99	**0.01**
Retail	180,000 (SF)	0.018	591	296	**0.03**
Parking	-	-	-		
-	-	**Total**	**19,227**	**9,614**	**1.06**

Legend: @ = at; % = percent; - = not applicable; Qty = quantity; SF = square feet; U = No. of Units.

Notes: [1.] Generation factors for residential and hotel land uses are in the form of pounds/no. of units/day. Generation factors for the office and retail land uses are in the form of pounds/square feet/day (CalRecycle, 2020).

[2.] Quantity assumes that 50% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-11 Total C&D Debris Resulting from Construction for Alternatives 3 Private Development

Use Type	*Total SF*	*C&D Generation Factor (LB/SF)[1]*	*Total Generated C&D Debris (Tons)*	*Landfill Disposal Qty (@65% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	4,224,000	4.39	9,272	**3,245**	**0.36**
Office	650,000	4.34	1,411	**494**	**0.05**
Hotel	160,000	4.34	347	**122**	**0.01**
Retail	130,000	4.34	282	**99**	**0.01**
Parking[4]	2,741,900	0	-	**-**	**-**
-	-	**Total**	**11,311**	**3,959**	**0.44**

Legend: @ = at; % = percent; LB = pound; Qty = quantity; SF = square feet.

Notes: [1.] USEPA, 2003.

[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

[4.] Assumes C&D debris from paved surfaces (i.e., parking lots) would primarily consist of wooden forms that would be recycled.

Table L-12 Annual MSW from Land Uses for Alternative 3 Private Development

	No. of Units or SF	*MSW Generation Factor[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	4,400 (U)	10.46	8,399	4,200	**0.46**
Office	650,000 (SF)	0.032	3,796	1,898	**0.21**
Hotel	250 (U)	2.7	123	62	**0.01**
Retail	130,000 (SF)	0.018	427	214	**0.02**
Parking	-	-	-	-	-
-	-	**Total**	**12,746**	**6,373**	**0.70**

Legend: @ = at; % = percent; - = not applicable; Qty = quantity; SF = square feet; U = No. of Units.

Notes: [1.] Generation factors for residential and hotel land uses are in the form of pounds/no. of units/day. Generation factors for the office and retail land uses are in the form of pounds/square feet/day (CalRecycle, 2020).

[2.] Quantity assumes that 50% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-13 Total C&D Debris Resulting from Construction for Alternative 4 Private Development

Use Type	*Total SF*	*C&D Generation Factor (LB/SF)[1]*	*Total Generated C&D Debris (Tons)*	*Landfill Disposal Qty (@65% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	9,600,000	4.39	21,072	**7,375**	**0.81**
Office	1,350,000	4.34	2,930	**1,025**	**0.11**
Hotel	290,000	4.34	629	**220**	**0.02**
Retail	250,000	4.34	543	**190**	**0.02**
Transit Center	140,000	4.34	304	**106**	**0.01**
Parking[4]	6,487,600	-	-	**-**	**-**
-	-	-	**25,477**	**8,917**	**0.98**

Legend: @ = at; % = percent; LB = pound; - = not applicable; Qty = quantity; SF = square feet.

Notes: [1.] USEPA, 2003.

[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

[4.] Assumes C&D debris from paved surfaces (i.e., parking lots) would primarily consist of wooden forms that would be recycled.

Table L-14 Annual MSW from Land Uses for Alternative 4 Private Development

Use Type	*No. of Units or SF*	*MSW Generation Factor[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	10,000 (U)	10.46	19,090	9,545	**1.05**
Office	1,350,000 (SF)	0.032	7,884	3,942	**0.43**
Hotel	450 (U)	2.7	222	111	**0.01**
Retail	250,000 (SF)	0.018	821	411	**0.05**
Transit Center	140,000 (SF)	0.007	179	89	**0.01**
Parking	-	-	-	**-**	**-**
-	-	**Total**	**28,195**	**14,098**	**1.55**

Legend: @ = at; % = percent; - = not applicable; Qty = quantity; SF = square feet; U = No. of Units.

Notes: [1.] Generation factors for residential and hotel land uses are in the form of pounds/no. of units/day. Generation factors for the office, retail, and transit center land uses are in the form of pounds/square feet/day (CalRecycle, 2020).

[2.] Quantity assumes that 50% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.

[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

Table L-15 Total C&D Debris Resulting from Activities for Alternatives 5 Private Development

Use Type	*Total SF*	*C&D Generation Factor (LB/SF)[1]*	*Total Generated C&D Debris (Tons)*	*Landfill Disposal Qty (@65% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	7,680,000	4.39	16,858	**5,900**	**0.65**
Office	850,000	4.34	1,845	**646**	**0.07**
Hotel	290,000	4.34	629	**220**	**0.02**
Retail	200,000	4.34	434	**152**	**0.02**
Transit Center	140,000	4.34	304	**106**	**0.01**
Parking[4]	5,180,350	0	-	**-**	**-**
-	-	**Total**	**20,069**	**7,024**	**0.77**

Legend: @ = at; % = percent; LB = pound(s); - = not applicable; Qty = quantity; SF = square foot.
Notes: [1.] USEPA, 2003.
[2.] Quantity assumes that 65% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.
[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).
[4.] Assumes C&D debris from paved surfaces (i.e., parking lots) would primarily consist of wooden forms that would be recycled.

Table L-16 Annual MSW from Land Uses for Alternative 5 Private Development

Use Type	*No. of Units or SF*	*MSW Generation Factor[1]*	*Annual MSW Generated (Tons)*	*Landfill Disposal Qty (@50% Diversion Rate) (Tons)[2]*	*% of Total Annual Landfill Disposal[3]*
Residential	8,000(U)	10.46	15,272	7,636	**0.84**
Office	850,000 (SF)	0.032	4,964	2,482	**0.27**
Hotel	450 (U)	2.7	222	111	**0.01**
Retail	200,000 (SF)	0.018	657	329	**0.04**
Transit Center	140,000 (SF)	0.007	179	89	**0.01**
Parking	-	-	-	**-**	**-**
-	-	-	**21,293**	**10,647**	**1.17**

Legend: @ = at; % = percent; - = not applicable; Qty = quantity; SF = square feet; U = No. of Units.
Notes: [1.] Generation factors for residential and hotel land uses are in the form of pounds/number of units/days. Generation factors for the office, retail, and transit center land uses are in the form of pounds/square feet/day (CalRecycle, 2020).
[2.] Quantity assumes that 50% of C&D debris would be recycled and/or diverted from landfill, as required by San Diego regulations.
[3.] Quantity represents percentage of C&D debris generated when compared to average annual solid waste disposal quantity at the Miramar Landfill (i.e., 910,000 tons) (City of San Diego, 2020).

1.4 Electricity and Natural Gas

The estimates for electricity and natural gas demand are based on the factors in the California Emissions Estimator Model in the User's Guide, Appendix D, Default Data Tables (California Air Pollution Officers Association, 2016). The model is a comprehensive tool that estimates air quality emissions from both direct and indirect sources, such as energy use, and has been developed for the California Air Pollution

Officers Association with input from the California Air Districts. Table L-17 shows estimated electricity and natural gas demand by alternative. The estimated demand for Alternative 1 is less than current operational usage estimates due to anticipated gains in efficiency by modern best management practices, construction techniques, fixtures, and appliances.

Table L-17 Electricity and Natural Gas Demand Factors

Land Use Type	*Electricity kWh/SF or per unit*	*Natural Gas cf/SF or per unit*
Office	13.76	20.00
Laboratory	8.45	11.00
Auditorium	13.76	20.00
Conference Rooms	13.76	20.00
Warehouse	3.73	2.00
Open Storage	0.88	0.00
Parking	0.88	0.00
Residential[7]	4265.43	8868.00
Office[8]	13.76	20.00
Hotel[9]	13.29	59.00
Retail[10]	12.89	2.00
Transit Center[11]	8.45	11.00

Legend: % = percent; cf = cubic feet; kWh = kilowatt hours; SF = square feet.

Table L-18 Estimated Yearly Electricity Demand by Alternative

Alternative	*Navy- Estimated Yearly Electricity Requirements (MWhr)*	*Private – Estimated Yearly Electricity Requirements (MWhr)*	*Combined – Estimated Yearly Electricity Requirements (MWhr)*
No Action Alternative	11,143	0	11,143
Alternative 1	11,143	0	11,143
Alternative 2	14,077	47,687	61,764
Alternative 3	14,077	31,514	45,591
Alternative 4	14,077	68,307	82,384
Alternative 5	14,077	53,435	67,511

Legend: MWhr = megawatts per hour.

Table L-19 Estimated Yearly Natural Gas Demand by Alternative

Alternative	*Navy- Estimated Yearly Natural Gas Requirements (MMBtu)*	*Private – Estimated Yearly Natural Gas Requirements (MMBtu)*	*Combined – Estimated Natural Gas Requirements (MMBtu)*	*Combined – Estimated Natural Gas Requirements (mcf)*
No Action Alternative	14,422	0	14,422	13,921
Alternative 1	14,422	0	14,422	13,921
Alternative 2	19,360	94,349	113,709	109,758
Alternative 3	19,360	61,719	81,079	78,262
Alternative 4	19,360	134,830	154,190	148,832
Alternative 5	19,360	106,994	126,354	121,963

Legend: MMBtu = million metric British Thermal Units; mcf = thousand cubic feet.

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Appendix M

Discussion of Noise and Its Effects on the Environment

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Acknowledgements

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Abbreviations and Acronyms

Acronym	Definition
AGL	Above Ground Level
ANSI	American National Standards Institute
CHABA	Committee on Hearing, Bioacoustics, and Biomechanics
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA or dB(A)	A-Weighted Decibel
DLR	German Aerospace Center (*Deutsches Zentrum für Luft- und Raumfahrt e.V.*)
DNL	Day-Night Average Sound Level
DNWG	Defense Noise Working Group
DoD	Department of Defense
EU	European Union
FAA	(U.S.) Federal Aviation Administration
FICAN	Federal Interagency Committee on Aviation Noise
FICON	Federal Interagency Committee on Noise
HYENA	Hypertension and Exposure to Noise near Airports
Hz	Hertz
IHD	Ischemic heart disease
IRR	Incidence Rate Ratio
ISO	International Organization for Standardization
L	Sound Level
LAX	Los Angeles International Airport
L_{ct}	Community Tolerance Level
L_{dn}	Day-Night Average Sound Level
L_{dnmr}	Onset-Rate Adjusted Monthly Day-Night Average Sound Level
L_{eq}	Equivalent Sound Level
$L_{eq(24)}$	Equivalent Sound Level over 24 hours
$L_{eq(30min)}$	Equivalent Sound Level over 30 minutes
$L_{eq(8)}$	Equivalent Sound Level over 8 hours
$L_{eq(h)}$	Hourly Equivalent Sound Level
L_{max}	Maximum Sound Level
L_{pk}	Peak Sound Pressure Level
mmHg	millimeters of mercury
NA	Number of Events Above
NAL	Number of Events Above a Threshold Level
NDI	Noise Depreciation Index
NIPTS	Noise-induced Permanent Threshold Shift

Acronym	Definition
NORAH	Noise-Related Annoyance, Cognition, and Health
OSHA	United States Occupational Safety and Health Administration
PHL	Potential Hearing Loss
PTS	Permanent Threshold Shift
RANCH	Road Traffic and Aircraft Noise Exposure and Children's Cognition and Health
SEL	Sound Exposure Level
SIL	Speech Interference Level
SUA	Special Use Airspace
TA	Time Above
TTS	Temporary Threshold Shift
U.S.	United States
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WHO	World Health Organization

1 Discussion of Noise and its Effects on the Environment

This appendix discusses sound and noise, and the potential effects of noise, particularly aircraft noise, on the human and natural environment. Section 1.1 provides an overview of the basics of sound and noise. Section 1.2 defines and describes the various metrics used to describe noise. Section 1.3 reviews the potential effects of aircraft noise, focusing on effects on humans but also addressing effects on property values, terrain, structures, and animals.

1.1 Basics of Sound

Section 1.1 describes sound waves and decibels, and Section 1.2 describes sound levels and types of sounds.

1.1.1 Sound Waves and Decibels

Sound consists of minute vibrations that travel through the air and are sensed by the human ear. Figure 1 depicts how sound waves emanate from a tuning fork. As shown, the waves move outward as a series of crests, in which the air is compressed, and troughs, in which the air is expanded. The height of the crests and the depth of the troughs determines the *amplitude* of the wave. The sound *pressure* determines the sound wave's energy, or intensity. The number of crests or troughs that pass a given point each second is called the *frequency* of the sound wave.

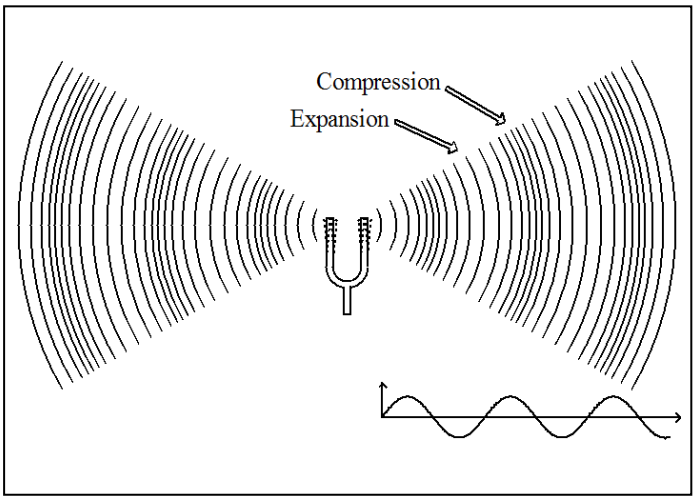


Figure M-1 Sound Waves from a Vibrating Tuning Fork

The measurement and human perception of sound involves three basic physical characteristics: intensity, frequency, and duration.

- *Intensity* is a measure of the acoustic energy of a sound and is related to sound pressure. The greater the sound pressure, the more energy is carried by the sound and the louder the perception of that sound will be.
- *Frequency* determines how the pitch of a sound is perceived. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are often described as sounding like sirens or screeches.

- *Duration* is the length of time a sound can be detected.

The loudest sounds that can be comfortably heard by the human ear have intensities a trillion times higher than those of sounds barely heard. Because of this vast range, it is unwieldy to use a linear scale to represent the intensity of sound. As a result, a logarithmic unit known as the decibel (dB) is used to represent the intensity of a sound. Such a representation is called a sound level and is abbreviated as L. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above 120 dB would be uncomfortable for the average person, and levels of 130 to 140 dB would start to be felt as pain (Berglund and Lindvall, 1995). It is important to realize some people will be more sensitive to sound and some less sensitive; therefore, the level at which sound becomes uncomfortable or painful will vary across the population.

As shown in Figure M-1, the sound from a tuning fork spreads out uniformly as it travels from its source. This spreading causes the sound's intensity to decrease with distance from the source. For a point source of a sound, such as an air conditioning unit, the sound level will decrease by about 6 dB for every doubling of its distance from a receptor. For a busy highway, which creates a linear distribution of noise sources, the sound level will decrease by 3 to 4.5 dB for every doubling of distance.

As sound travels from its source, it is also absorbed by the air. The amount of absorption depends on the frequency composition of the sound and the temperature and humidity of the air. Sound with high-frequency content, such as a human voice, gets absorbed by the air more readily than sound with low-frequency content, such as a military jet. More sound is absorbed in colder and drier air than in hot and wet air. Sound is also affected by wind and temperature gradients, terrain (elevation and ground cover), and structures.

Because of the logarithmic nature of the dB unit, sound levels cannot simply be added or subtracted and are somewhat cumbersome to handle mathematically. However, some simple rules are useful in understanding sound levels.

First, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. For example:

60 dB + 60 dB = 63 dB, and

80 dB + 80 dB = 83 dB.

Second, the total sound level produced by two sounds of different levels is usually only slightly greater than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB.

Because the addition of sounds of differing levels is different than that of simply adding numbers, this process is often referred to as "decibel addition."

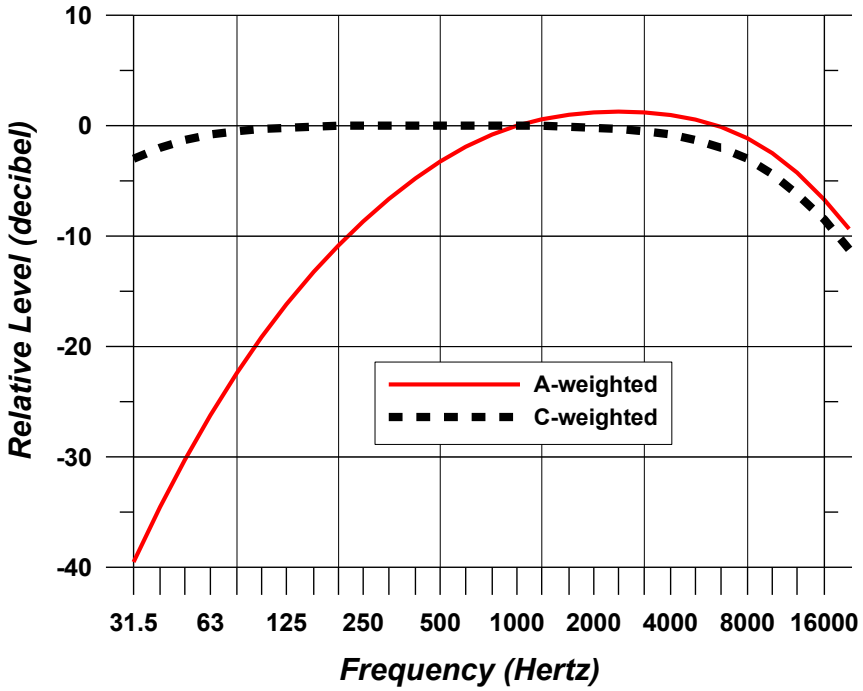
The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB. On average, a person perceives a change in sound level of about 10 dB as a doubling (or halving) of that sound's loudness. This relation holds true for both loud and quiet sounds. A decrease in sound level of 10 dB actually represents a 90-percent decrease in sound intensity but only a 50-percent decrease in perceived loudness because the human ear does not respond to sound linearly. Intensity of

a sound is the physical measure of the stimulus, and loudness of a sound is the perceptual measure of a listener's response to it.

Sound frequency is measured in terms of cycles per second, or hertz (Hz). The normal ear of a young person can detect sounds that range in frequency from about 20 Hz to 20,000 Hz. Not all sounds in this wide range of frequencies are heard equally. Human hearing is most sensitive to frequencies in the 1,000 to 4,000 Hz range, and as we get older, we lose the ability to hear high-frequency sounds. The notes on a piano range in frequency from just over 27 Hz to 4,186 Hz, with middle C equal to 261.6 Hz. Most sounds (including a single note on a piano) are not simply pure tones like those produced by the tuning fork in Figure M-1 but instead contain a mix, or spectrum, of many frequencies.

Sounds with different frequency spectra are perceived differently even if the sound levels are the same. Weighting curves have been developed to correspond to the sensitivity and perception of different frequencies of sound. A-weighting and C-weighting are the two most common frequency weightings.

These two curves, shown in Figure M-2, are adequate to quantify most environmental sounds. A-weighting puts emphasis on the 1,000 to 4,000 Hz frequency range.



Source: ANSI S1.4A -1985 "Specification of Sound Level Meters".

Figure M-2 Frequency Characteristics of A- and C-Weighting

Very loud or impulsive sounds, such as explosions or sonic booms, can sometimes be felt and can cause secondary effects, such as shaking of a structure or rattling of windows. These types of sounds can add to annoyance and are best measured by C-weighted sound levels, denoted dBC. C-weighting is nearly flat throughout the audible frequency range and includes low frequencies that may not be heard but cause shaking or rattling. C-weighting approximates the human ear's sensitivity to higher intensity sounds. For example, using the A-weighted curve, a 125 Hz tone at moderate sound levels (around 50 dB) is perceived to be about 17 dB lower than a 1,000 Hz tone. However, using the C-weighted curve, if

the sound level is increased to 100 dB, the two tones are perceived to be the same level.

1.1.2 Sound Levels and Types of Sounds

Most environmental sounds are measured and described as A-weighted sound levels, and they may be labeled as dBA or dB(A) rather than dB. When the use of A-weighting is understood, the term "A-weighted" is often omitted, and the unit dB is used. Unless otherwise stated, dB units refer to

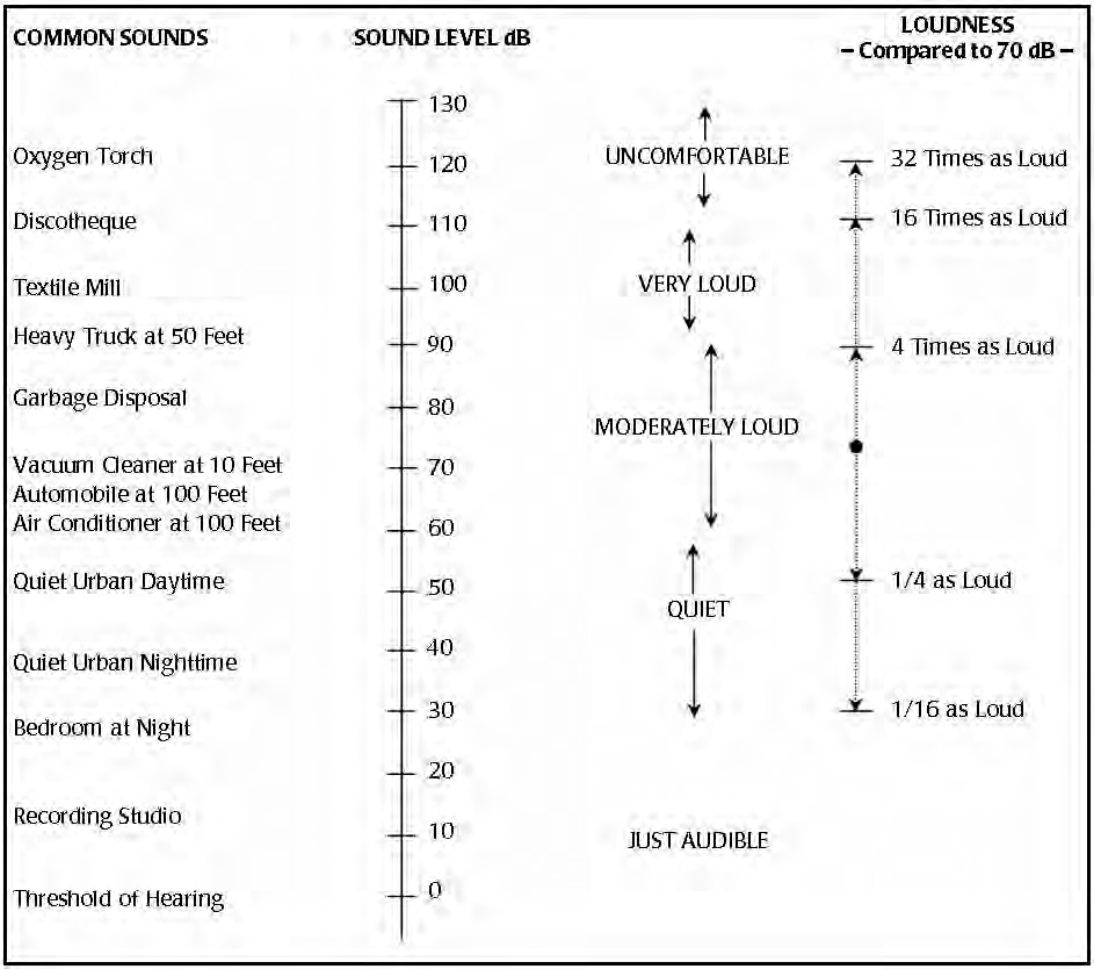
A-weighted sound levels.

Sound becomes noise when it is unwelcome and interferes with normal activities, such as sleep or conversation. Noise is unwanted sound and can become an issue when its level exceeds the ambient or background sound level. Ambient sound levels in urban areas typically vary from 60 to 70 dB but can be as high as 80 dB in the center of a large city. Quiet suburban neighborhoods experience ambient sound levels around 45 to 50 dB (USEPA [U.S. Environmental Protection Agency], 1978).

Figure M-3 is a chart of dBA sound levels emitted from common sources. For some sources depicted on the figure, such as the air conditioner and vacuum cleaner, the sound levels shown are continuous sounds, and these sound levels are constant for some time. For other sources depicted on the figure, such as the automobile and heavy truck, the sound levels shown are the maximum sound level emitted during an intermittent event such as a vehicle pass-by. Some sound levels shown, for sources such as "urban daytime" and "urban nighttime," are average sound levels over extended periods. A variety of noise metrics have been developed to describe noise over different time periods. These are discussed in detail in Section 1.2.

Aircraft noise consists of two major types of sound events: flight (including takeoffs, landings, and flyovers) and stationary, such as engine maintenance run-ups. The former is intermittent and the latter primarily continuous. Noise from aircraft overflights typically occurs beneath main approach and departure paths at an airfield, in local air traffic patterns around the airfield, and in areas near aircraft parking ramps and staging areas. As aircraft climb, the noise received on the ground drops to lower levels, eventually fading into the background or ambient levels.

Impulsive noises are generally short, loud events, with a single-event duration that is usually less than 1 second. Examples of impulsive noises are small-arms gunfire, hammering, pile driving, metal impacts during rail-yard shunting operations, and riveting. Examples of high-energy impulsive sounds are explosions associated with quarrying or mining operations; sonic booms; demolition explosions; and industrial processes that use high explosives; military ordnance use (e.g., armor, artillery, and mortar fire, and bomb detonation); explosive ignition of rockets and missiles; and any other explosive source where the equivalent mass of dynamite exceeds 25 grams (ANSI [American National Standards Institute], 1996).



Source: Harris 1979.

Figure M-3 Typical A-weighted Sound Levels of Common Sounds

1.1.3 Low-Frequency Noise

Normally, the components of a structure most sensitive to airborne noise are the windows and, infrequently, the plastered walls and ceilings. An evaluation of the sound pressures impinging on the structure may be used to assess the risk for damage. In general, sound pressure levels below 130 dB (unweighted) are unlikely to pose a risk to structures. While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies, conservatively, only sounds lasting more than one second and at a sound pressure level above 130 dB (unweighted) are potentially damaging to structural components (CHABA [Committee on Hearing, Bioacoustics, and Biomechanics] 1977).

Noise-induced structural vibration may result from aircraft operating at low altitudes, which would occur during takeoff and landing operations. Such vibrations are likely to cause annoyance to dwelling occupants because of induced secondary vibrations or rattling of objects within the dwelling such as hanging pictures, dishes, plaques, and bric-a-brac. Windowpanes may also vibrate noticeably when exposed to high levels of airborne noise. In general, such noise-induced vibrations occur at sound pressure levels of 110 dB (unweighted) or greater.

Aside from concerns about potential structural damage from low-frequency noise, the perception of low-frequency sound may differ considerably when compared with mid- or high-frequency sound.

Laboratory measurements of annoyance from low-frequency noise each use different spectra and levels, making comparisons difficult, but the majority share the same conclusion that annoyance caused by

low-frequency sound increases rapidly with level and that dBA sound level alone can underestimate the effects of low-frequency noises (Leventhall, 2004). The most recent update to the International Organization for Standardization (ISO) standard (ISO 1996:1 [2016]) describes the main causes for these differences as:

- a weakening of pitch sensation as the frequency of the sound decreases below 60 Hz
- a perception of sounds as pulsations and fluctuations
- a much more rapid increase in loudness and annoyance with increasing sound pressure levels at low frequencies than at middle or high frequencies
- complaints about feelings of ear pressure
- an annoyance caused by secondary effects such as rattling of buildings elements, windows, and doors, or the tinkling of bric-a-brac
- less building sound-transmission loss at low frequencies than at middle or high frequencies.

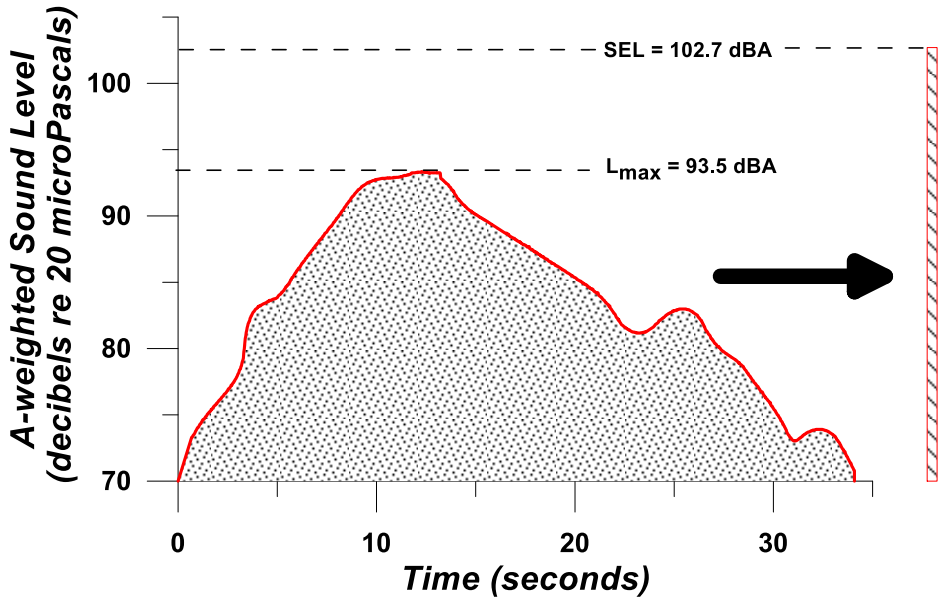
While the Federal Interagency Committee of Noise (FICON) recommends the use of the dBA Day-Night Average Sound Level (DNL) metric as the primary basis of both commercial and military aircraft noise impacts (FICON, 1992), in a recent update to a research needs statement, the Federal Interagency Committee on Aviation Noise (FICAN) stated the following for low-frequency noise concerns:

> FICAN finds that additional research needs to be conducted before a [low-frequency noise] metric and an associated dose-response relationship can be recommended. For airports with low-frequency noise concerns, supplemental noise analysis--possibly including vibration measurements--should be considered (FICAN, 2018).

1.2 Noise Metrics

Noise metrics quantify sounds so they can be compared with each other, and with their effects, in a standard way. The simplest metric is the overall dBA sound level, which is appropriate by itself for quantifying constant noise such as that generated by an air conditioner. However, unlike noise from an air conditioning unit, aircraft flyover noise varies with time. During an aircraft overflight, noise starts at the background level, rises to a maximum level as the aircraft flies close to the receptor, and then returns to the background as the aircraft recedes into the distance. An example graph of the resulting sound levels from a flyover is provided in Figure M-4, which also indicates two metrics (Maximum Sound Level [L_{max}] and Sound Exposure Level [SEL]), that are described in Section 1.2.1 below.

A number of metrics can be used to describe a range of situations--from the effect of a particular individual noise event to the cumulative effect of all noise events over a long time. This section describes the metrics relevant to environmental noise analysis of aircraft operations.



Source: Wyle Laboratories

Figure M-4 Example Time History of Aircraft Noise Flyover

1.2.1 Maximum Sound Level (L_{max})

The highest dBA sound level measured during a single event in which the sound changes with time, such as a flyover, is called the maximum dBA sound level, or Maximum Sound Level, and is abbreviated L_{max}. The L_{max} is depicted for a sample event in Figure M-4.

L_{max} is the maximum sound level that occurs over a fraction of a second. For aircraft noise, this "fraction of a second" is one-eighth of a second, denoted as "fast" response on a sound-level measurement meter (ANSI, 1988). Slowly varying or steady sounds are generally measured over 1 second and denoted as "slow" response. L_{max} is important in determining whether a noise event will interfere with conversation, television or radio listening, or other common activities. Although L_{max} provides some measure of a given sound event, it does not fully describe the noise because it does not account for how long the sound is heard.

1.2.2 Peak Sound Pressure Level

The Peak Sound Pressure Level (L_{pk}) is the highest instantaneous level measured by a sound-level measurement meter. L_{pk} is typically measured every 20 microseconds, and it is usually based on unweighted or linear response of the meter. L_{pk} is used to describe individual impulsive events, such as blast noise. Because blast noise varies from explosion to explosion and with meteorological (weather) conditions, the United States (U.S.) Department of Defense (DoD) usually characterizes L_{pk} by the metric PK 15(met), which is the L_{pk} that is exceeded 15 percent of the time. The "met" notation refers to the metric accounting for varied meteorological or weather conditions.

1.2.3 Sound Exposure Level

SEL combines both the intensity of a sound and its duration. For an aircraft flyover, SEL includes the maximum and all lower noise levels produced as part of the overflight, together with how long each part

lasts. SEL represents the total sound energy in the event. Figure M-4 indicates the SEL for a sample flyover event, representing it as if all the sound energy were contained within 1 second.

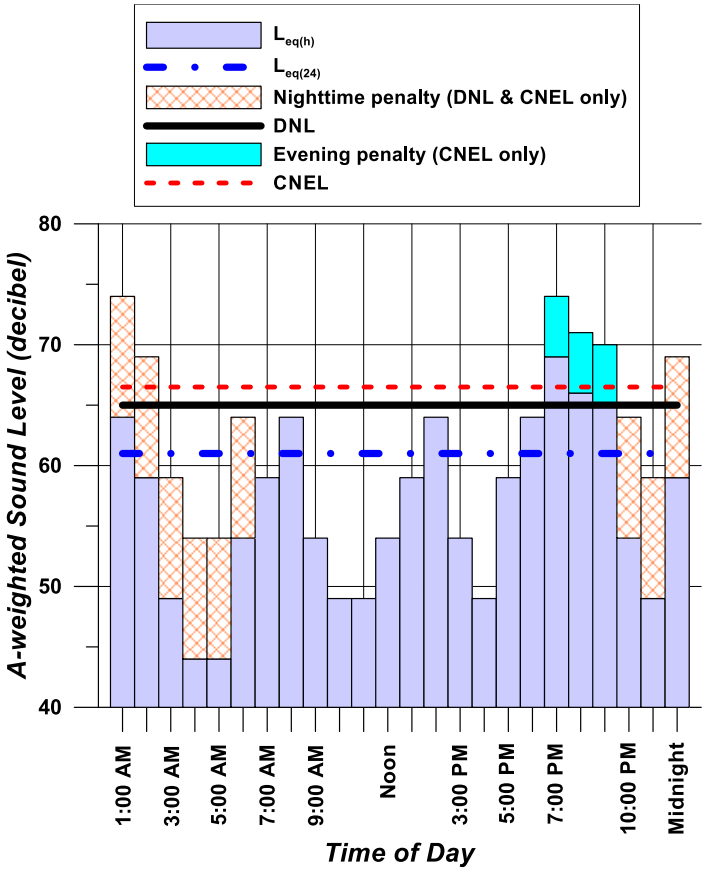
Because aircraft noise events last more than a few seconds, the SEL value is larger than L_{max}. SEL does not directly represent the sound level heard at any given time during the event but rather during the entire event. SEL provides a much better measure of aircraft flyover noise exposure than L_{max} alone.

1.2.4 Cumulative Events Equivalent Sound Level

Equivalent Sound Level (L_{eq}) is a "cumulative" metric that combines a series of noise events, such as aircraft operations, over a period of time. L_{eq} is the sound level that represents the dB average SEL of all sounds in a specific time period. Just as SEL has proven to be a good measure of a single event, L_{eq} has proven to be a good measure of a series of events during a given time period.

The time period of an L_{eq} measurement is usually related to some activity and is given along with the value. The time period is often shown in parenthesis (e.g., $L_{eq(24)}$, or the equivalent sound level for 24 hours). The L_{eq} from 7:00 A.M. to 3:00 P.M. may give exposure of noise for a school day and would be represented as $L_{eq(8)}$, or the equivalent sound level for 8 hours.

Figure M-5 provides an example of $L_{eq(24)}$ using notional hourly equivalent sound levels ($L_{eq(h)}$) for each hour of the day as an example. The $L_{eq(24)}$ for this example is 61 dB.



Source: Wyle Laboratories.

Figure M-5 Example of $L_{eq(24)}$, DNL and CNEL Computed from Hourly Equivalent Sound Levels

1.2.5 Day-Night Average Sound Level and Community Noise Equivalent Level

DNL, or L_{dn}, is a cumulative metric that accounts for all noise events, such as aircraft operations, in a 24-hour period. However, unlike $L_{eq(24)}$, DNL contains a nighttime noise adjustment. To account for humans' increased sensitivity to noise at night, DNL applies a 10 dB adjustment to noise events that occur during the nighttime period, defined as 10:00 P.M. to 7:00 A.M. The notations DNL and L_{dn} are both used for Day-Night Average Sound Level and are equivalent.

Community Noise Equivalent Level (CNEL) is a variation of DNL specified by law in California (California Code of Regulations Title 21, *Public Works*) (Wyle Laboratories, 1970). CNEL has the 10 dB nighttime adjustment for noise events that occur between 10:00 P.M. and 7:00 A.M. but also includes a 4.8 dB adjustment for events occurring during the evening period of 7:00 P.M. to 10:00 P.M. This evening adjustment included in CNEL accounts for the added intrusiveness of sounds occurring during that period.

For airports and military airfields, DNL and CNEL represent the average sound level for an average annual day.

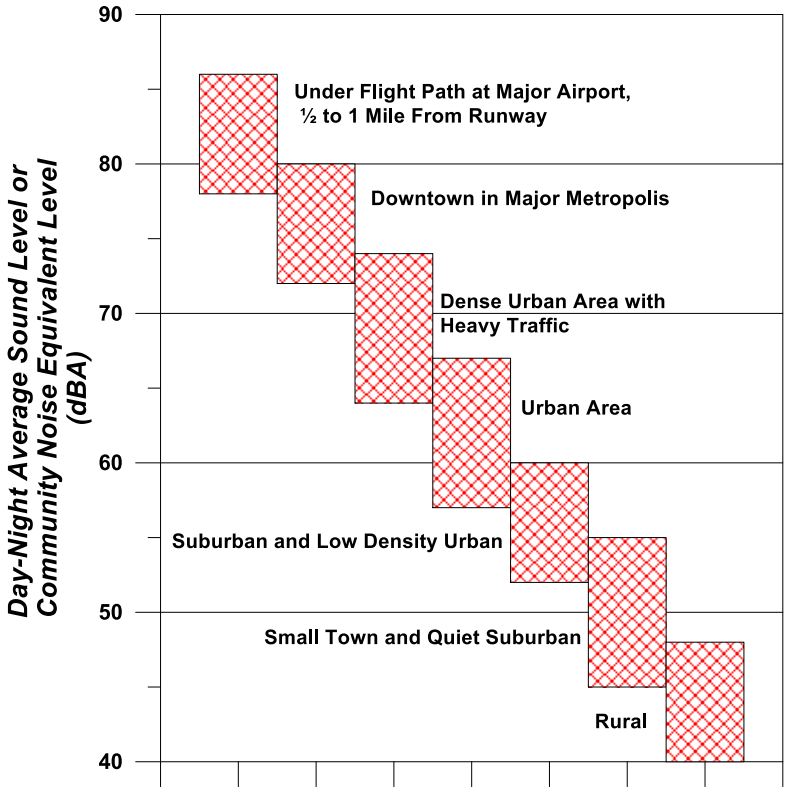
Figure M-5 provides an example of DNL and CNEL using notional $L_{eq(h)}$ for each hour of the day. Note the $L_{eq(h)}$ for the hours between 10:00 P.M. and 7:00 A.M. have a 10 dB adjustment assigned. For CNEL, the hours between 7:00 P.M. and 10:00 P.M. have a 4.8 dB adjustment assigned. The DNL for this example is 65 dB and the CNEL is 66 dB.

The dB summation nature of these metrics causes the noise levels of the loudest events to control the 24-hour average. As a simple example, consider a case in which only one aircraft overflight occurs during the daytime over a 24-hour period, creating a sound level of 100 dB for 30 seconds. During the remaining 23 hours, 59 minutes, and 30 seconds of that day, the ambient sound level is 50 dB. The DNL for this 24-hour period is 65.9 dB. Assume, as a second example, that 10 such 30-second overflights occur during daytime hours during the next 24-hour period and with the same ambient sound level of 50 dB during the remaining 23 hours and 55 minutes of the day. The DNL for this 24-hour period is 75.5 dB. Clearly, the averaging of noise over a 24-hour period does not ignore the louder single events and tends to emphasize both the sound levels and number of those events.

A feature of the DNL metric is that a given DNL value could result from a very few noisy events or a large number of quieter events. For example, a single overflight at 90 dB creates the same DNL as 10 overflights at 80 dB.

DNL or CNEL do not represent a sound level heard at any given time, but they represent long-term sound exposure. Scientific studies have found good correlation between the percentages of groups of people highly annoyed by noise and their level of average noise exposure measured in DNL (Schultz, 1978; USEPA, 1978).

DNL or CNEL can be used to measure sound levels in a variety of types of communities. Figure M-6 shows the ranges of DNL or CNEL that occur in various types of communities. For example, under a flight path at a major airport, the DNL may exceed 80 dB, while rural areas not near a major airport may experience DNL less than 45 dB. Sound levels in a downtown area of a major metropolis may be equivalent to the sound levels under a flight path of a major airport.



Source: DOD 1978.

Figure M-6 Typical DNL or CNEL Ranges in Various Types of Communities

1.2.6 Onset-Rate Adjusted Monthly Day-Night Average Sound Level (L_{dnmr}) and Onset-Rate Adjusted Monthly Community Noise Equivalent Level

Military aircraft utilizing Special Use Airspace (SUA), such as Military Training Routes, Military Operations Areas, and Restricted Areas/Ranges, generate a noise environment that is somewhat different from that generated around airfields. Rather than regularly occurring operations such as those conducted at airfields, activity in SUAs is highly sporadic. SUA activity is often seasonal, ranging from 10 operations per hour to less than one per week. Individual military overflight events also differ from typical community noise events in that noise from a low-altitude, high-airspeed flyover can have a rather sudden onset, with rates of up to 150 dB per second.

The cumulative daily noise metric devised to account for the "surprise" effect of the sudden onset of aircraft noise events on humans and the sporadic nature of SUA activity is L_{dnmr}. Onset rates between 15 and 150 dB per second require an adjustment of 0 to 11 dB to the event's SEL, while onset rates below 15 dB per second require no adjustment to the event's SEL (Stusnick et al., 1992). The term "monthly" in

L_{dnmr} refers to the noise assessment being conducted for the month with the most operations or sorties--the so-called "busiest month."

In California, a variant of L_{dnmr} includes an adjustment for evening operations (7:00 P.M. to 10:00 P.M.) and is referred to as the Onset-Rate Adjusted Monthly CNEL.

1.2.7 Supplemental Metrics

1.2.7.1 Number of Events Above a Threshold Level

The Number of Events Above (NA) metric gives the total number of events that exceed a noise threshold level (L) during a specified period of time. Combined with the selected threshold, the metric is denoted NAL. The threshold can be either SEL or L_{max}, and it is important that this selection is shown in the nomenclature. When labeling a contour line or point of interest, NAL is followed by the number of events in parentheses. For example, where 10 events exceed an SEL of 90 dB over a given period of time, the nomenclature would be NA90SEL(10). Similarly, for L_{max} it would be NA90L_{max}(10). The period of time can be an average 24-hour day, daytime, nighttime, school day, or any other time period appropriate to the nature and application of the analysis.

NA is a supplemental metric. It is not supported by the amount of science behind DNL or CNEL, but it is valuable in helping to describe the number of noise events the community may hear. A threshold level and metric are selected that best meet the need for each situation. An L_{max} threshold is normally selected to analyze speech interference, while an SEL threshold is normally selected for analysis of sleep disturbance.

The NA metric is the only supplemental metric that combines single-event noise levels with the number of aircraft operations. In essence, it answers the question of how many aircraft (or range of aircraft) flyover events will occur on average at a given location or area at or above a selected threshold noise level.

1.2.7.2 Time Above a Specified Level

The Time Above (TA) metric is the total time, in minutes, that the dBA noise level is at or above a threshold. Combined with the threshold L, it is denoted TAL. TA can be calculated over a full 24-hour average annual day, the 15-hour daytime and 9-hour nighttime periods, a school day, or any other time period of interest, provided there are operational data for that time.

TA is a supplemental metric, used to help understand noise exposure. It is useful for describing the noise environment in schools, particularly when assessing classroom or other noise-sensitive areas for various scenarios.

TA helps describe the noise exposure of an individual event or many events occurring over a given time period. When computed for a full day, the TA can be compared alongside the DNL in order to determine the sound levels and total duration of events that contribute to the DNL. TA analysis is usually conducted along with NA analysis, so the results show not only how many events occur but also the total duration of those events above the threshold.

1.3 Noise Effects

Noise is of concern because of potential adverse effects. The following subsections describe how noise can affect communities and the environment, and how those effects are quantified. The specific topics discussed are:

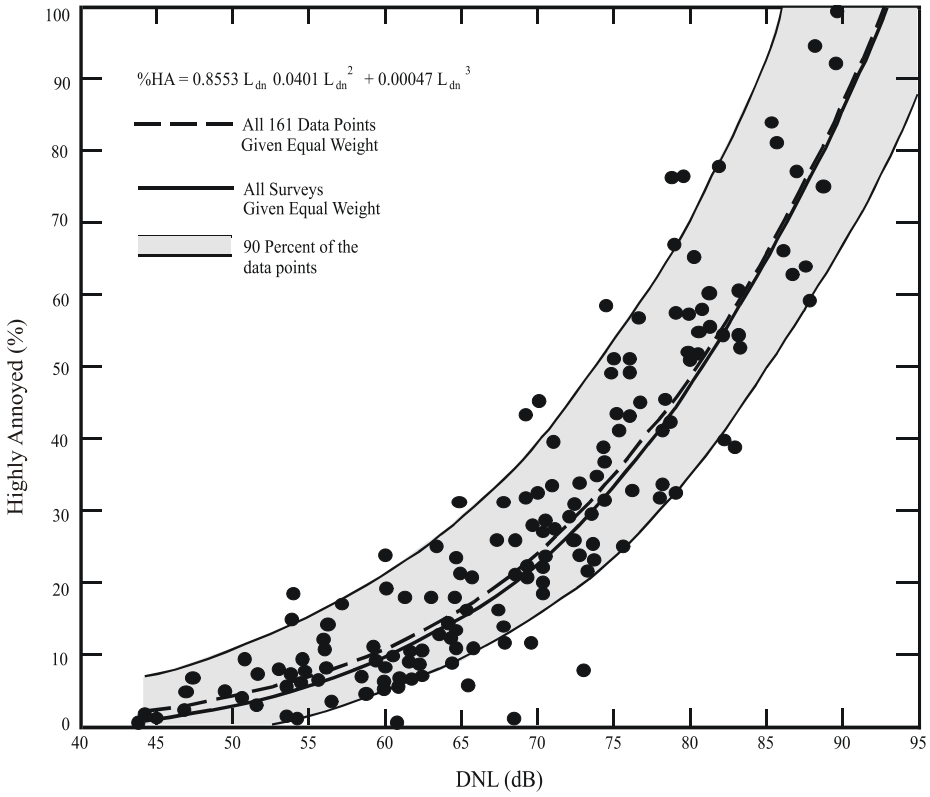
- annoyance
- speech interference
- sleep disturbance
- noise-induced hearing impairment
- non-auditory health effects
- performance effects
- noise effects on children
- property values
- noise-induced vibration effects on structures and humans
- noise effects on terrain
- noise effects on historical and archaeological sites
- noise effects on domestic animals and wildlife

1.3.1 Annoyance

With the introduction of jet aircraft in the 1950s, it became clear that aircraft noise annoyed people and was a significant problem around airports. Early studies, such as those of Rosenblith et al. (1953) and Stevens et al. (1953), showed that effects depended on the quality of the sound, its level, and the number of flights. Over the next 20 years, considerable research was performed refining this understanding and setting guidelines for noise exposure. In the early 1970s, the USEPA published its "Levels Document" (USEPA, 1974), which reviewed the noise factors that affected communities. DNL (or L_{dn}) was identified as an appropriate noise metric, and threshold criteria were recommended.

Threshold criteria for annoyance were identified from social surveys, in which people exposed to noise were asked how noise affected them. Surveys provide direct real-world data on how noise affects actual residents.

Surveys in the early years had a range of designs and formats, and they needed some interpretation to find common ground. In 1978, Schultz showed that the common ground was the number of people "highly annoyed," defined as the upper 28-percent range of whatever response scale a survey used (Schultz, 1978). With that definition, Schultz was able to show a remarkable consistency among the majority of the surveys for which data were available. Figure M-7 shows the result of his study relating DNL to individual annoyance as measured by percent highly annoyed.



Source: Schultz 1978.

Figure M-7 Schultz Curve Relating Noise Annoyance to DNL

Schultz's original synthesis included 161 data points. Figure M-8 compares revised fits of the Schultz data set with an expanded set of 400 data points collected through 1989 (Finegold et al., 1994). The new form of the curve is the preferred form in the U.S., endorsed by FICAN (1997). Other forms have been proposed, such as that of Fidell and Silvati (2004), but these have not gained widespread acceptance.

When the goodness of fit of the Schultz curve is examined, the correlation between groups of people is high, in the range of 85 to 90 percent. However, the correlation between individuals is much lower, at 50 percent or less. This finding is not surprising, given the personal differences between individuals, with some people more sensitive to noise than others. The surveys underlying the Schultz curve include results that show that annoyance from noise is also affected by non-acoustical factors. The influence of non-acoustical factors is a complex interaction influencing an individual's annoyance response to noise (Brisbane Airport Corporation, 2007). Newman and Beattie (1985) divided the non-acoustic factors into the emotional and physical variables shown in Table M-1.

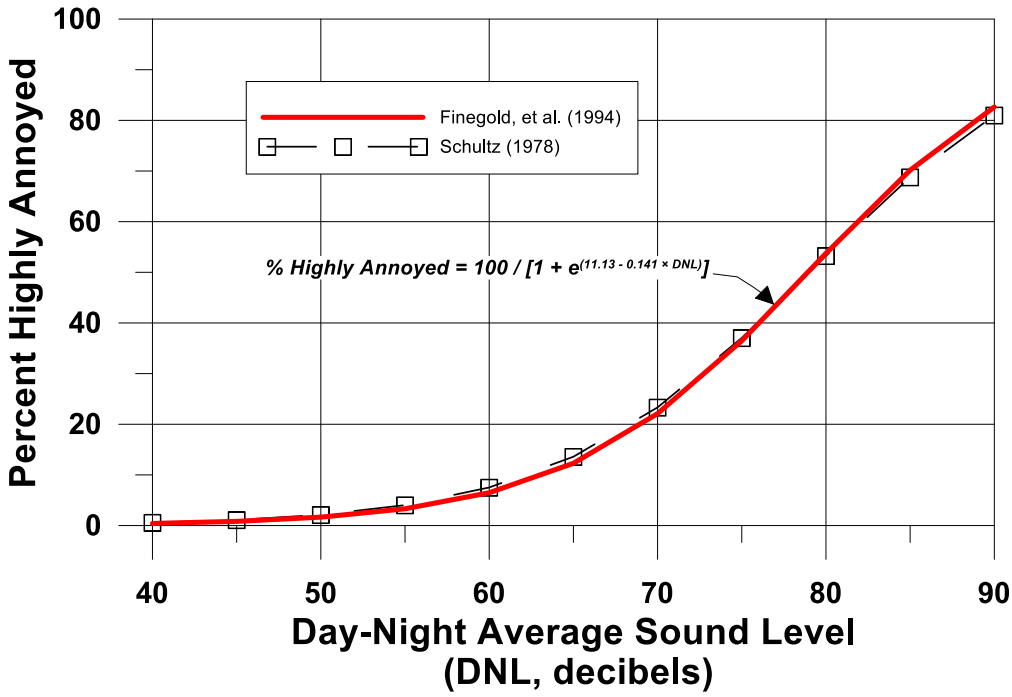


Figure M-8 Response of Communities to Noise: A Comparison of Original Schultz (1978) Curve to Finegold et al (1994) Curve

Table M-1 Non-Acoustic Variables Influencing Aircraft Noise Annoyance

Emotional Variables	*Physical Variables*
Feeling about the necessity or preventability of the noise	Type of neighborhood
Judgement of the importance and value of the activity that is producing the noise	Time of day
Activity at the time an individual hears the noise	Season
Attitude about the environment	Predictability of the noise
General sensitivity to noise	Control over the noise source
Belief about the effect of noise on one's health	Length of time an individual is exposed to a noise
Feeling of fear associated with the noise	

Schreckenberg and Schuemer (2010) and Laszlo et al. (2012) examined the importance of some of these factors on short-term annoyance. Attitudinal factors were identified as having an effect on annoyance. In formal regression analysis, however, L_{eq} was found to be more important than attitude. Similarly, a series of studies conducted by Marki (2013) at three European airports showed that less than 20 percent of the variance in annoyance can be explained by noise alone (Marki, 2013). Miedema and Voss (1998) found that fear and noise sensitivity have a significant influence on an individual annoyance response.

Moreover, in another study, they demonstrated that noise sensitivity is not a function of noise exposure and that noise-sensitive individuals have a steeper annoyance response to increasing noise levels compared to people who are not noise sensitive (Miedema and Vos, 2003).

A study by Plotkin et al. (2011) examined updating DNL to account for these non-acoustic variables. Plotkin et al. (2011) concluded that the data requirements for a general analysis were much greater than are available from most existing studies. It was noted that the most significant issue with DNL is that the metric is not readily understood by the public and that supplemental metrics such as TA and NA were valuable in addressing attitude when communicating noise analysis to communities (DoD, 2009a).

A factor that is partially non-acoustical is the source of the noise. Miedema and Vos (1998) presented synthesis curves for the relationship between DNL and percentage "annoyed" and percentage "highly annoyed" for three transportation-noise sources. Different curves were found for aircraft, road traffic, and railway noise. Table M-2 summarizes their results. Comparing the updated Schultz curve to these results suggests that the percentage of people highly annoyed by aircraft noise may be higher than previously thought. Authors Miedema and Oudshoorn (2001) supplemented that investigation with further derivation of percentage of population highly annoyed as a function of either DNL or DENL[1], along with the corresponding 95-percent confidence intervals, and obtained similar results.

Table M-2 Percent Highly Annoyed by Different Transportation-Noise Sources

DNL (dB)	*Air*	*Road*	*Rail*	*Schultz Combined*
55	12	7	4	3
60	19	12	7	6
65	28	18	11	12
70	37	29	16	22
75	48	40	22	36

Source: Miedema and Vos, 1998.

As noted by the World Health Organization (WHO), however, even though aircraft noise seems to produce a stronger annoyance response than road traffic noise, caution should be exercised when interpreting synthesized data from different studies (WHO, 1999).

Consistent with the WHO's recommendations, FICON considered the Schultz curve to be the best source of dose information to predict community response to noise but recommended further research to investigate the differences in perception of noise from different sources (FICON, 1992).

The ISO update (ISO 1996-1 [2016]) introduced the concept of Community Tolerance Level (L_{ct}) as the DNL at which 50 percent of the people in a particular community are predicted to be highly annoyed by noise exposure. L_{ct} accounts for differences between sources and/or communities when predicting the percentage highly annoyed by noise exposure. ISO also recommended a change to the adjustment range used when comparing aircraft noise to road traffic noise. The previous edition suggested a +3 dB to +6 dB adjustment range for aircraft noise relative to road traffic noise, while the latest edition recommends

[1] DENL is the Day-Evening-Night Average Sound Level, which is similar to CNEL except it has a 5.0 dB adjustment to the evening period. DENL is not used in the U.S.

an adjustment range of +5 dB to +8 dB. This adjustment range allows DNL to be correlated to consistent annoyance rates when originating from different noise sources (i.e., road traffic, aircraft, or railroad).

This change to the adjustment range would increase the calculated percent highly annoyed at 65 dB DNL by approximately 2 percent to 5 percent greater than the previous ISO definition. Figure M-9 depicts the estimated percentage of people highly annoyed for a given DNL using both the ISO 1996-1 and FICON 1992 estimation methods. DENL is the Day-Evening-Night Average Sound Level, which is similar to CNEL except it has a 5.0 dB adjustment to the evening period. DENL is not used in the U.S. and the older FICON 1992 method. The results suggest that the percentage of people highly annoyed may be greater for aircraft noise than previously thought.

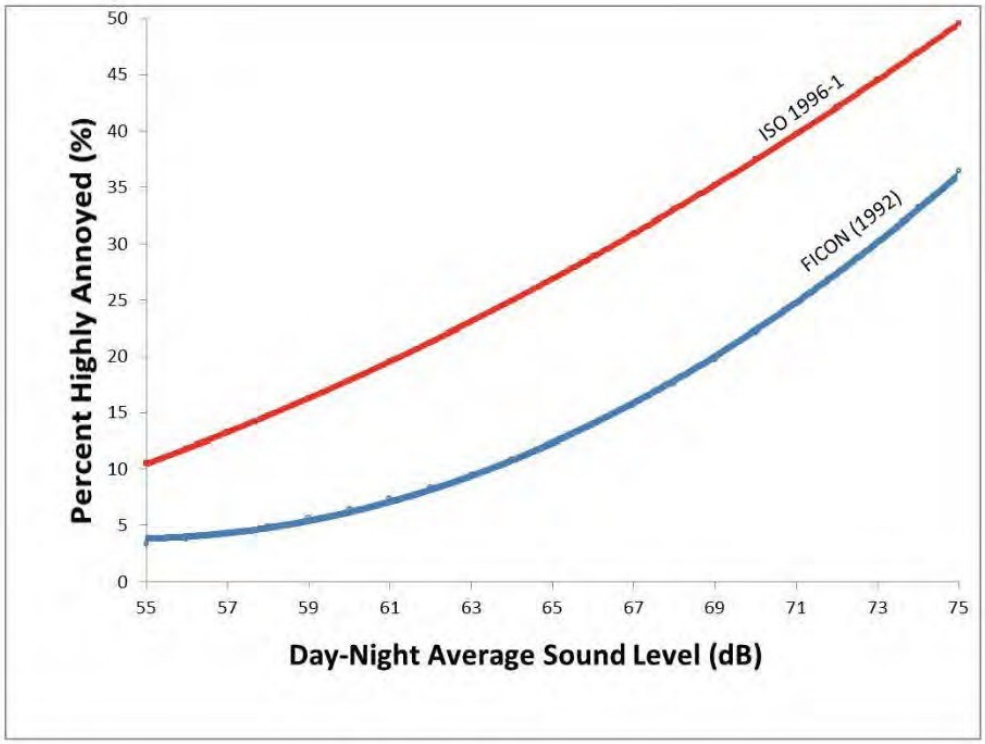


Figure M-9 Percent Highly Annoyed: A Comparison of ISO 1996-1 to FICON 1992

In the 2008 Hypertension and Exposure to Noise near Airports (HYENA) study, annoyance levels due to aircraft noise and road traffic noise were assessed in subjects who lived in the vicinity of six major European airports using the 11-point International Commission on Biological Effects of Noise scale.

Exposure-response curves for road noise were congruent with the European Union (EU) standard curves used for predicting the number of highly noise-annoyed subjects, but ratings of annoyance due to aircraft noise were higher than predicted. The study supports findings that people's attitude toward aircraft noise has changed over the years and that the EU standard curve for aircraft noise should be modified (Babisch et al., 2009).

The U.S. Federal Aviation Administration (FAA) is currently conducting a major airport community noise survey at approximately 20 U.S. airports in order to update the relationship between aircraft noise and annoyance (Miller et al., 2014). Results from this study are expected to be released in late 2018.

In a study related to assessing aircraft noise exposure for people in the surrounding community, the Brisbane Airport in Queensland, Australia, assembled a Health Impact Assessment (Volume D7), which discussed, among other noise effects, annoyance and human response to changes in noise exposure versus steady-state response (Section 7.9 of the report) (Brisbane Airport Corporation, 2007). The authors suggest there is a difference between the gradual increase in noise exposure and the additive property of increasing noise levels from a particular event. The latter is called a "step change." The Brisbane Health Impact Assessment references Brown and Kamp (2005), who have reviewed the literature available on human response to such changes. They observe:

> "Most information on the relationship between transport noise exposure and subjective reaction (annoyance/dissatisfaction) comes from steady state surveys at sites where there have not been step changes in noise exposure. Environmental appraisals often need to assess the effects of such step changes in exposure and there is growing evidence that when noise exposure is changed, annoyance-ratings may change more than would be predicted from steady state relationships.
>
> "Conventional wisdom is that human response to a step change in exposure to transport noise can be predicted from exposure-response curves that have been derived from studies where human response has been assessed over a range of steady-state noise conditions. However, in situations where a step change in transport noise exposure has occurred, various surveys suggest that human response may be different, usually greater, as a result of the increase/decrease in noise, to what would be predicted from exposure-response curves derived under steady-state conditions. Further, there are suggestions that such (over)reaction may be more than a short-term effect. (Brown and Kamp, 2005)."

Guski (2004) describes this change effect in a hypothetical model and also notes that where the noise situation is permanently changed, the annoyance of residents usually changes in a way that cannot be predicted by steady-state dose/response relationships. Most studies show an "over reaction" of the residents: with increasing noise levels, people are much more annoyed than would be predicted by steady-state curves, and, with a decrease of noise levels, people are much less annoyed. Guski also notes that the annoyance may change prematurely before the change of levels, with residents expecting an increase in noise levels reacting more annoyed, and residents expecting a decrease in noise levels less annoyed than would be predicted in the steady-state condition. Brown and Kamp (2005) conclude:

> "Our review of the literature on response to changes in noise leads us to the conclusion that we cannot discount the possibility that overreaction to a step change in transport noise may occur, and that this effect may not attenuate over time. However, evidence is still inconclusive and based on limited studies that tend not to be comparable in terms of method, size, design and context. Further, our view is that most explanations given in the literature for an overreaction are only partly supported, in some cases not at all, and generally there is conflicting evidence for them. There is still also no accepted view on the mechanism by which annoyance changes in response to a change in exposure. In particular, most explanations are usually post-hoc and the noise change studies have not been designed to test them. (Brown and Kamp, 2005)."

The Brisbane Airport Corporation Health Impact Assessment suggests that the potential for "over-reaction" to stepped changes in noise exists and needs to be recognized; people subject to an increase

in noise may experience more annoyance than predicted, while people subject to a decrease in noise may experience less annoyance than predicted. Further, any such over-reaction should not necessarily be assumed to be a temporary phenomenon; evidence from existing studies suggests that it could persist for years after the exposure changes (Brisbane Airport Corporation, 2007).

An individual with an increased sensitivity to sounds may have hyperacusis, which results in a lower tolerance of everyday sound (Aazh et al., 2018). A person with hyperacusis reacts differently to sounds due to reactions of increased distress and discomfort from everyday sounds. This condition arises from a problem with the auditory processes within an afflicted individual's brain. The causes and diagnosis are not well understood (Aazh et al., 2018). Physical causes of hyperacusis may range from head injury, ear damage, or viral diseases, to temporomandibular joint disorders (TMJ). Neurologic causes may range from Post-Traumatic Stress Disorder (PTSD), chronic fatigue syndrome, depression, to migraine headaches (American Academy of Otolaryngology--Head and Neck Surgery, 2018). An individual with hyperacusis will also likely have tinnitus, which may lead to further discomfort. Hyperacusis can lead to misophonia, which may cause an individual to react with abnormally strong emotions and behaviors to specific sounds, but hyperacusis does not cause this reaction. Studies of misophonia are very limited at this time.

Another condition that falls under the condition of hyperacusis is noise sensitivity (Aazh et al., 2018). A noise-sensitive individual is characteristically more prone to being annoyed by environmental noise compared to a non-noise-sensitive person regardless of the overall noise exposure (Kishikawa et al., 2006). This result indicates that the annoyance response for noise-sensitive people is not a direct function of noise exposure levels.

1.3.2 Speech Interference

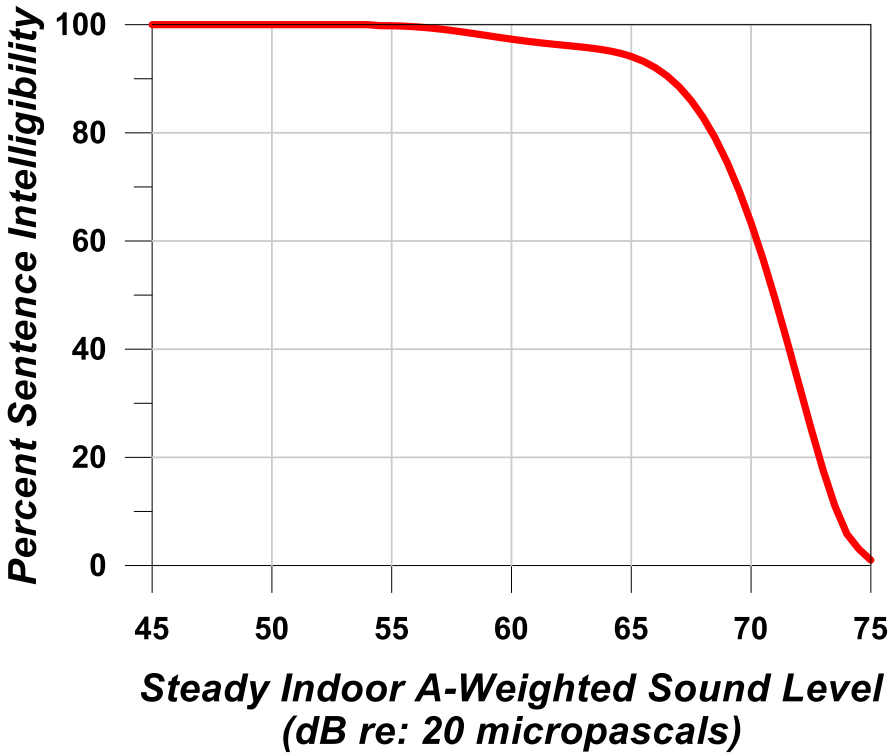
Speech interference from noise is a primary cause of annoyance for communities. Disruption of routine activities such as radio or television listening, telephone use, or conversation leads to frustration and annoyance. The quality of speech communication is also important in classrooms and offices. In the workplace, speech interference from noise can cause fatigue and vocal strain in those who attempt to talk over the noise. In schools it can impair learning.

Speech comprehension is measured in two ways:

1. *Word Intelligibility,* or the percentage of words spoken and understood. This might be especially important for students in the lower grades who are learning the English language and particularly important for students who are studying English as a Second Language.
2. *Sentence Intelligibility*, or the percentage of sentences spoken and understood. This might be especially important for high-school students and adults who are familiar with the language and who do not necessarily have to understand each word spoken in order to understand sentences.

1.3.2.1 U.S. Federal Criteria for Interior Noise

In 1974, the USEPA identified a goal of an indoor $L_{eq(24)}$ of 45 dB to minimize speech interference based on sentence intelligibility and the presence of steady noise (USEPA, 1974). Figure M-10 shows the effect of steady indoor background sound levels on sentence intelligibility. For an average adult with normal hearing and fluency in the language, steady background indoor sound levels of less than 45 dB L_{eq} are expected to allow 100-percent sentence intelligibility.



Source: USEPA, 1974.

Figure M-10 Speech Intelligibility Curve

The curve in Figure M-10 shows 99-percent intelligibility at L_{eq} below 54 dB and less than 10 percent above 73 dB. Recalling that L_{eq} is dominated by louder noise events, the USEPA $L_{eq(24)}$ goal of 45 dB generally ensures that sentence intelligibility will be high most of the time.

1.3.2.2 Classroom Criteria

For teachers to be understood, their regular voice must be clear and uninterrupted. Background noise must be below the teacher's voice level. Intermittent noise events that momentarily drown out the teacher's voice need to be kept to a minimum. It is therefore important to evaluate the steady background noise level, the level of voice communication, and the single-event noise level from aircraft overflights that might interfere with speech.

Lazarus (1990) found that for listeners with normal hearing and fluency in the language, complete sentence intelligibility can be achieved when the signal-to-noise ratio (i.e., a comparison of the level of the sound to the level of background noise) is in the range of 15 to 18 dB. The initial American National Standards Institute (ANSI) classroom noise standard (ANSI, 2010) and American Speech-Language-Hearing Association (American Speech-Language-Hearing Association, 2005) guidelines concur, recommending at least a 15 dB signal-to-noise ratio in classrooms. If the teacher's voice level is at least 50 dB, the background noise level must not exceed an average of 35 dB. The National Research Council of Canada (Bradley, 1993) and the WHO (1999) agree with this criterion for background noise.

For eligibility for noise insulation funding, the FAA guidelines state that the design objective for a classroom environment is 45 dB L_{eq} during normal school hours (FAA, 1985).

Most aircraft noise is not continuous. Instead, it consists of individual events like the one depicted by the graph in Figure M-4. Since speech interference in the presence of aircraft noise is caused by individual aircraft flyover events, a time-averaged metric alone, such as L_{eq}, is not necessarily appropriate. In addition to the background level criteria described above, single-event criteria that account for those noisy events are also needed.

A 1984 study for the Port Authority of New York and New Jersey recommended using Speech Interference Level (SIL) for classroom noise criteria (Sharp and Plotkin, 1984). SIL is based on the maximum sound levels in the frequency range that most affects speech communication (500 to 2,000 Hz). The study identified an SIL of 45 dB as the goal, a level that would provide 90-percent word intelligibility for the short time periods during aircraft overflights. While SIL is technically the best metric for measuring speech interference, it can be approximated by an L_{max} value. An SIL of 45 dB is equivalent to an L_{max} of 50 dBA for aircraft noise (Wesler, 1986).

Lind et al. (1998) also concluded that an L_{max} criterion of 50 dB would result in 90-percent word intelligibility. Bradley (1985) recommends SEL as a better indicator. His work indicates that 95-percent word intelligibility would be achieved when indoor SEL did not exceed 60 dB. For a typical single aircraft overflight, this corresponds to an L_{max} of 50 dB. While the WHO (1999) only specifies a background L_{max} criterion, the organization also notes the SIL frequencies and that interference can begin at around 50 dB.

The Airport Cooperative Research Program (ACRP) conducted a study to assess aircraft noise conditions affecting student learning by analyzing the interior and exterior sound levels while observing students and teachers at 11 schools surrounding Los Angeles International Airport (LAX). The five schools located under the LAX flight paths experienced frequent overflight events, while the six schools further south of the airport experienced minimal LAX aircraft noise exposure events. The study found a positive correlation between teacher voice-masking or voice-raising and fluctuations in interior noise events. A majority of teachers reported that they felt aircraft noise interfered with teacher-student communication and caused students to lose concentration. However, the student observations were unable to identify any aircraft-noise-related events that caused a distraction in a child. Other students caused the majority of distractions while playing with various items and daydreaming and were found to be the significant sources of distractions. The authors, as well as the teachers' opinions gathered in the teacher surveys, concluded that even moderate levels of aircraft noise exposure can impact children's learning due to the correlation between voice-masking events and measured interior sound events (National Academies of Sciences, Engineering, and Medicine, 2017).

The United Kingdom Department for Education and Skills established in its classroom acoustics guide a 30-minute time-averaged metric of $L_{eq(30min)}$ for background levels and the metric of $L_{A1,30min}$ for intermittent noises, at thresholds of 30 to 35 dB and 55 dB, respectively. $L_{A1,30min}$ represents the dBA sound level that is exceeded 1 percent of the time (in this case, during a 30-minute teaching session) and is generally equivalent to the L_{max} metric (United Kingdom Department for Education and Skills, 2003).

Table M-3 summarizes the criteria discussed. Other than the FAA (1985) 45 dB L_{max} criterion, the criteria are consistent with a limit on indoor background noise of 35 to 40 dB L_{eq} and a single-event limit of 50 dB L_{max}. It should be noted that the limits listed in Table M-3 were set based on students with normal

hearing capability and no special needs. At-risk students may be adversely affected at lower sound levels.

Table M-3 Indoor Noise Level Criteria Based on Speech Intelligibility

Source	*Metric/Level (dB)*	*Effects and Notes*
U.S. FAA (1985)	$L_{eq(during\ school\ hours)}$ = 45 dB	Federal assistance criteria for school sound insulation; supplemental single-event criteria may be used.
Lind et al. (1998), Sharp and Plotkin (1984), Wesler (1986)	L_{max} = 50 dB / SIL 45	Single-event level permissible in the classroom.
WHO (1999)	L_{eq} = 35 dB L_{max} = 50 dB	Assumes average speech level of 50 dB and recommends signal-to-noise ratio of 15 dB.
U.S. ANSI (2010)	L_{eq} = 35 dB, based on Room Volume (e.g., cubic feet)	Acceptable background level for continuous and intermittent noise.
United Kingdom Department for Education and Skills (2003)	$L_{eq(30min)}$ = 30-35 dB L_{max} = 55 dB	Minimum acceptable in classroom and most other learning environs.

1.3.3 Sleep Disturbance

Sleep disturbance is a major concern for communities exposed to aircraft noise at night. A large amount of research developed in the laboratory during the past 30 years has produced variable results, suggesting a complex interaction of factors including the noise characteristics and individual sensitivity, rather than a clear dose-effect relationship (Muzet, 2007; Kwak et al., 2016). Sleep disorders may cause negative health effects such as cardiovascular problems, neuroendocrine abnormalities, and changes in cognition, mood, and memory. The causal relationships between noise exposure, effects on sleep, and contribution to health disturbances, both behavioral and physical, are not yet firmly established (Zaharna, 2010; Perron et al., 2012). A number of studies have attempted to quantify the effects of noise on sleep. This section provides an overview of the major noise-induced sleep disturbance studies. Emphasis is on studies that have influenced U.S. federal noise policy. The studies have been separated into two groups:

1. Initial studies, conducted in the 1960s and 1970s, in which the research was focused on sleep observations performed under laboratory conditions.
2. Later studies, conducted from the 1990s up to the present, in which the research was focused on field observations.

1.3.3.1 Initial Studies

The relationship between noise and sleep disturbance is complex and not fully understood. The disturbance depends not only on the depth of sleep and the noise level but also on the non-acoustic factors cited for annoyance. The easiest effect to measure is the number of arousals or awakenings caused by noise events. Much of the literature has therefore focused on predicting the percentage of the population that will be awakened at various noise levels.

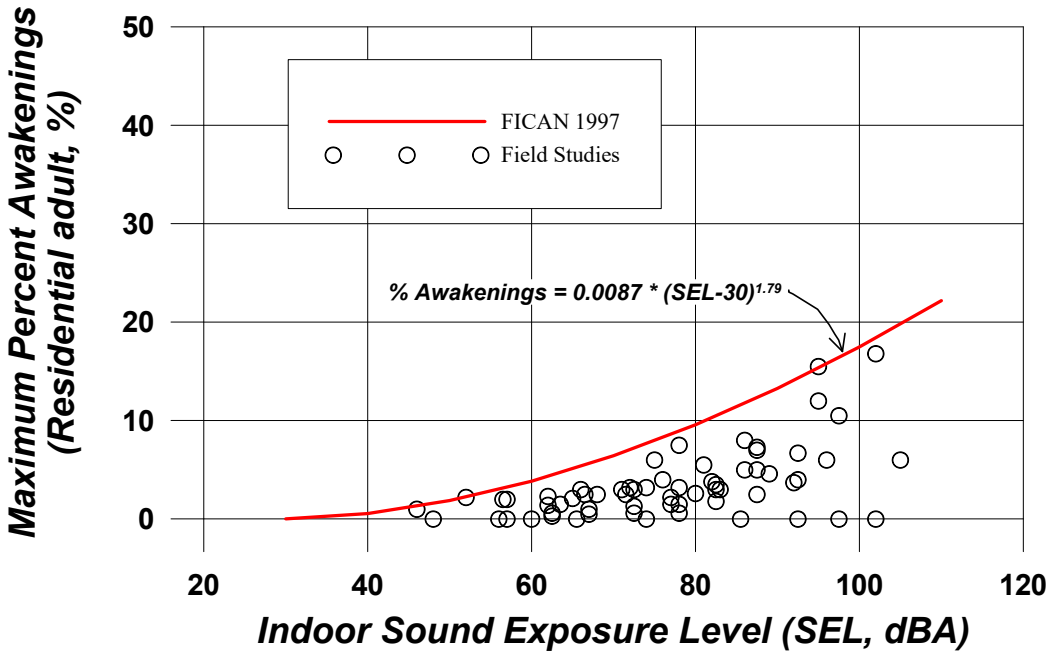
FICON's 1992 review of airport noise issues (FICON, 1992) included an overview of relevant research conducted through the 1970s. Literature reviews and analyses were conducted from 1978 through 1989 using existing data (Griefahn, 1978; Griefahn and Muzet, 1978; Lukas, 1978; Pearsons et. al., 1989).

Because of large variability in the data, FICON did not endorse the reliability of those results. FICON did, however, recommend an interim dose-response curve, awaiting future research. That curve predicted the percentage of the population expected to be awakened as a function of the exposure to SEL. This curve was based on research conducted for the U.S. Air Force (Finegold et al., 1994). The data included most of the research performed up to that point and predicted a 10-percent probability of awakening when exposed to an interior SEL of 58 dB. The data used to derive this curve were primarily from controlled laboratory studies.

1.3.3.2 Recent Sleep Disturbance Research: Field and Laboratory Studies

As noted above, early sleep laboratory studies did not account for some important factors, including habituation to the laboratory, previous exposure to noise, and awakenings from noise other than aircraft. In the early 1990s, field studies in people's homes were conducted to validate the earlier laboratory work conducted in the 1960s and 1970s. The field studies of the 1990s (e.g., Horne et al., 1994) found that 80 to 90 percent of sleep disturbances were not related to outdoor noise events but rather to indoor noises and non-noise factors. The results showed that, in real life conditions, noise had less of an effect on sleep than had been previously reported from laboratory studies. Laboratory sleep studies tend to show more sleep disturbance than field studies show because people who sleep in their own homes are accustomed to their environment and, therefore, do not wake up as easily (FICAN, 1997).

Based on this new information, FICAN in 1997 recommended a dose-response curve to use instead of the earlier 1992 FICON curve (FICAN, 1997). Figure M-11 shows FICAN's curve, the red line, which is based on the results of three field studies, which are also shown in the figure (Ollerhead et al., 1992; Fidell et al., 1994; Fidell et al., 1995a; Fidell et al., 1995b) along with the data from six previous field studies.



Source: FICAN 1997

Figure M-11 FICAN 1997 Recommended Sleep Disturbance Dose- Response Relationship

1.3.3.3 Number of Events and Awakenings

It is reasonable to expect that sleep disturbance is affected by the number of events. The German Aerospace Center (DLR) conducted an extensive study focused on the effects of nighttime aircraft noise on sleep and related factors (Basner et al., 2004). The DLR study was one of the largest studies to examine the link between aircraft noise and sleep disturbance, and it involved both laboratory and in-home field research phases. The DLR investigators developed a dose-response curve that predicts the number of aircraft events at various values of L_{max} expected to produce one additional awakening over the course of a night. The dose-effect curve was based on the relationships found in the field studies.

Later studies by DLR conducted in the laboratory comparing the probability of awakenings from noise generated by different modes of transportation showed that aircraft noise led to significantly lower awakening probabilities than either road traffic or rail noise (Basner et al., 2011). Furthermore, it was noted that the probability of awakening, per noise event, decreased as the number of noise events increased. The authors concluded that by far the majority of awakenings from noise events merely replaced awakenings that would have occurred spontaneously anyway.

A different approach was taken by an ANSI standards committee (ANSI, 2008), which used the average of the data on field studies shown in Figure M-11 rather than the upper envelope (i.e., the red line), to predict average probability of awakening from one event. Probability theory is then used to project the awakening from multiple noise events.

Currently, there are no established criteria for evaluating sleep disturbance from aircraft noise, although recent studies have suggested a benchmark of an outdoor SEL of 90 dB as an appropriate tentative criterion when comparing the effects of different operational alternatives. The corresponding indoor SEL would be approximately 25 dB lower (at 65 dB) with doors and windows closed, and approximately 15

dB lower (at 75 dB) with doors and windows open. According to the ANSI (2008) standard, the probability of awakening from a single aircraft event at this level is between 1 and 2 percent for people habituated to the noise and sleeping in bedrooms with their windows closed, and 2 to 3 percent for those sleeping in bedrooms with their windows open. The probability of the exposed population awakening at least once from multiple aircraft events at noise levels of 90 dB SEL is shown in Table M-4.

Table M-4 Probability of Awakening from NA90SEL

Number of Aircraft Events at 90 dB SEL for Average 9-Hour Night	*Minimum Probability of Awakening at Least Once with Windows Closed*	*Minimum Probability of Awakening at Least Once with Windows Open*
1	1%	2%
3	4%	6%
5	7%	10%
9 (1 per hour)	12%	18%
18 (2 per hour)	22%	33%
27 (3 per hour)	32%	45%

Source: DoD, 2009b.

In December 2008, FICAN recommended the use of this standard. FICAN also recognized that more research is underway by various organizations and that work may result in changes to FICAN's position.

FICAN reaffirmed its recommendation for the use of the ANSI (2008) standard (FICAN, 2008). However, it is noted that this standard has been withdrawn, but it will be used until further recommendations are made by FICAN.

A recent study further examined the relationship between self-reported sleep insufficiency and airport noise using the U.S. Behavioral Risk Factor Surveillance System data and DNL contours generated by the FAA's Integrated Noise Model software for 95 airports (Holt et al., 2015). The survey data comprise the results of a random-digit-dialed telephone survey of non-institutionalized U.S. civilians 18 years or older covering all 50 states. Responses that included sleep insufficiency questions were included in this study totaling more than 700,000 respondents for 2008 and 2009 year datasets. The authors found that, once controlled for individual sociodemographic characteristics and ZIP Code-level socioeconomic status, there were no significant associations between airport noise exposure levels and self-reported sleep insufficiency. These results are consistent with a study that found aircraft-noise-induced awakening are more reasonably predicted from relative rather than absolute SELs (Fidell et al., 2013). However, Kim et al. (2014) found a response relationship between aircraft noise and sleep quality in a community-based cross-sectional study when controlling for a mental health condition (Kim et al., 2014).

The WHO recommends the use of the dBA long-term average sound level L_{night}, measured outside the home, for sleep disturbance and related effects, with an interim target of 55 dB $L_{night, outside}$ and a night noise guideline of 40 dB (WHO, 2009).

The choice of a noise metric for policy-making purposes depends on both the particular type of noise source and the particular effect being studied. Even for sleep disturbance caused by aircraft noise, there is no single noise exposure metric or measurement approach that is generally agreed upon (Finegold, 2010).

1.3.3.4 Summary

Sleep disturbance research still lacks the details to accurately estimate the population awakened for a given noise exposure. The procedure described in the ANSI (2008) standard and endorsed by FICAN is based on probability calculations that have not yet been scientifically validated. While this procedure certainly provides a much better method for evaluating sleep awakenings from multiple aircraft noise events, the estimated probability of awakenings can only be considered approximate.

1.3.4 Noise-Induced Hearing Impairment

Residents in communities surrounding airfields express concerns regarding the effects of aircraft noise on hearing. This section provides a brief overview of hearing loss caused by noise exposure. The goal is to provide a sense of perspective as to how aircraft noise (as experienced on the ground) compares to other activities that are often linked with hearing loss.

The *Noise-Induced Hearing Impairment* bulletin is one of a series of technical bulletins issued by the DoD Defense Noise Working Group (DNWG) under the initiative to educate and train DoD military, civilian, and contractor personnel, and the public on noise issues. "The ability to convey the effects of military aircraft noise exposure should facilitate both the public discussions and the environmental assessment process," according to DNWG (2013). In its background discussion on the topic of noise-induced hearing impairment, DNWG (2013) states:

> "Considerable data have been collected and analyzed by the scientific/medical community on the effects of noise on workers in industrial settings, and it has been well established that continuous exposure to high noise levels from any source will damage human hearing and result in noise induced hearing loss (USEPA, 1974). The scientific community has concluded that there is little likelihood of hearing damage resulting from exposure to aircraft noise at commercial airports. Until recently, the same was thought true for military airbases, but the introduction of new generation fighter aircraft with high thrust to weight ratio and correspondingly high noise levels has required a re-analysis of the risk of hearing damage for those communities close to military airbases. Residents in surrounding communities are expressing concerns regarding the effects of these new aircraft on hearing."

DNWG goes on to define the major components of hearing loss, temporary versus permanent loss, and threshold shift in hearing, and how they can be differentiated:

> "Hearing loss is generally interpreted as a decrease in the ear's sensitivity or acuity to perceive sound, i.e. a shift in the hearing threshold to a higher level. This change can either be a Temporary Threshold Shift or a Permanent Threshold Shift.
>
> "A Temporary Threshold Shift (TTS) can result from exposure to loud noise over a given amount of time, yet the hearing loss is not necessarily permanent. An example of TTS might be a person attending a loud music concert. After the concert is over, the person may experience a threshold shift that may last several hours, depending upon the level and duration of exposure. While experiencing TTS, the person becomes less sensitive to low-level sounds, particularly at certain frequencies in the speech range (typically near 2,000 and 4,000 Hertz). Normal hearing ability eventually returns, as long as the person has enough time to recover in a relatively quiet environment.

> "A Permanent Threshold Shift (PTS) usually results from repeated exposure to high noise levels, where the ears are not given adequate time to recover from the strain and fatigue of exposure. A common example of PTS is the result of working in a very noisy environment such as a factory. It is important to note that TTS can eventually become PTS over time. Thus, even if the ear is given time to recover from TTS, repeated occurrence of TTS may eventually lead to permanent hearing loss. The point at which a Temporary Threshold Shift results in a Permanent Threshold Shift is difficult to identify and varies with a person's sensitivity. In general, hearing loss (be it TTS or PTS) is determined by the duration and level of the sound exposure (DNWG, 2013)."

On the topic of noise-induced hearing loss and its specific components, DNWG (2013) provides the following overview:

> "The 1982 EPA Guidelines for Noise Impact Analysis presents the risk of hearing loss from exposure to noise in the workplace in terms of the Noise-Induced Permanent Threshold Shift (NIPTS), a quantity that defines the permanent change in hearing level, or threshold, caused by exposure to noise (USEPA, 1982). It represents the difference in PTS between workers exposed to noise and those who are not exposed. Numerically, the NIPTS is the change in threshold averaged over the frequencies 0.5, 1, 2, and 4 kHz that can be expected from daily exposure to noise over a normal working lifetime of 40 years, with the exposure beginning at an age of 20 years. A grand average of the NIPTS over time (40 years) and hearing sensitivity (10 to 90 percentiles of the exposed population) is termed the Average NIPTS, or Ave. NIPTS for short. The Ave. NIPTS that can be expected for noise exposure as measured by the 24-hour average noise level, Leq24, is given in Table M-5 (USEPA, 1982).
>
> "Thus, for a noise exposure of 80 Leq24, the expected lifetime average value of NIPTS is 3 dB. The Ave. NIPTS is estimated as an average over all people exposed to the noise. The actual value of NIPTS for any given person will depend on their physical sensitivity to noise – some will experience more hearing loss than others. The EPA Guidelines provide information on this variation in sensitivity in the form of the NIPTS exceeded by 10 percent of the population, which is included in Table M-5 in the '10th Percentile NIPTS' column (USEPA, 1982). As in the example above, for individuals exposed to 80 Leq24, the most sensitive of the population would be expected to show a degradation to their hearing of 7 dB over time. To put these numbers in perspective, changes in hearing level of less than 5 dB are generally not considered noticeable or significant. Furthermore, there is no known evidence that a NIPTS of 5 dB is perceptible or has any practical significance for the individual. Lastly, the variability in audiometric testing is generally assumed to be ±5 dB (USEPA, 1974). (DNWG, 2013)."

Table M-5 Average (Ave.) NIPTS and 10th Percentile NIPTS as a Function of $L_{eq(24)}$

$L_{eq(24)}$	*Ave. NIPTS (dB)**	*10th Percentile NIPTS (dB)**
75-76	1.0	4.0
76-77	1.0	4.5
77-78	1.6	5.0
78-79	2.0	5.5
79-80	2.5	6.0
80-81	3.0	7.0

$L_{eq(24)}$	Ave. NIPTS (dB)*	10^{th} Percentile NIPTS (dB)*
81-82	3.5	8.0
82-83	4.0	9.0
83-84	4.5	10.0
84-85	5.5	11.0
85-86	6.0	12.0
86-87	7.0	13.5
87-88	7.5	15.0
88-89	8.5	16.5
89-90	9.5	18.0

Note: * rounded to the nearest 0.5 dB
Source: DoD, 2012.

According to DNWG, applying these measurement tools for NIPTS to a specific population is the next step in the process of fully understanding noise impacts on a community (DNWG, 2013):

> "In order to quantify the overall impact of noise on a community it is necessary to include the numbers of people who are exposed. This is accomplished by calculating the population average value of Ave. NIPTS, known as the Potential Hearing Loss (PHL), using the following equation:

$$\mathrm{PHL} = \frac{\sum_i NIPTS_i \times P_i}{\sum_i P_i} \qquad (1)$$

> where NIPTSi is the Ave. NIPTS for people within the *ith* noise level band (see Table M-5), and Pi is the total population living within the *ith* noise level band. The quantity PHL represents the average change in hearing threshold, or the average hearing loss, for the local community exposed to the noise.
>
> The actual noise exposure is determined by the portion of the time the population is outdoors and the outdoor noise levels to which they are exposed. The EPA Guidelines allows for calculating the exposure taking into account the length of time the population is indoors and exposed to lower levels. If the outdoor exposure exceeds 3 hours per day, the contribution of the indoor levels can usually be neglected. (DNWG, 2013)."

The criteria for measuring permanent hearing loss in the workplace are similar but more complex, according to DNWG (2013):

> "The database from which the risk of hearing loss in Table M-5 was developed is based almost entirely on extensive audiometric measurements of workers in industrial settings. A considerable amount of hearing loss data have been collected and analyzed, including measurements of hearing loss in people with known histories of noise exposure. The available evidence consists of statistical distributions of hearing levels for populations at various exposure levels. Much of the analysis consists of grouping these measurements into populations of the same age with the same history of noise exposure and determining the percentile distribution of hearing loss for populations with the same noise exposure. Thus, the evidence for noise-induced permanent threshold shift can be clearly seen by comparing the distribution of a noise-exposed

population with that of a relatively non-noise-exposed population (USEPA, 1974).

"Most of these data are drawn from cross-sectional rather than longitudinal studies. That is, individuals or populations have been tested at only one point in time. Because complete noise exposure histories do not exist, many conclusions are limited by the need to make certain assumptions about the onset and progression of noise-induced hearing loss. (DNWG, 2013)."

The USEPA, National Academy of Sciences, WHO, the Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety and Health, and DoD have each established their own criteria for measuring hearing loss within the workplace, according to DNWG (2013):

"Using this database, the EPA established 75 dB for an 8-hour exposure and 70 dB for a 24-hour exposure as the average noise level standard requisite to protect the most sensitive (approximately 1 percent) of the population from greater than a 5 dB permanent threshold shift in hearing. The EPA document explains that the requirement for an adequate margin of safety necessitates a highly conservative approach which dictates the prevention of any effect on hearing, defined here as an essentially insignificant and not measurable NIPTS of less than 5 dB. (USEPA, 1974).

"The National Academy of Sciences Committee on Hearing, Bioacoustics, and Biomechanics (CHABA) identified 75 dB as the minimum level at which hearing loss may occur from continuous, long-term (40 years) exposure (CHABA, 1965).

"The World Health Organization has concluded that environmental and leisure-time noise below a Leq24 value of 70 dB 'will not cause hearing loss in the large majority of the population, even after a lifetime of exposure (WHO, 2000).'"

"The OSHA regulation of 1971 standardizes the limits on workplace noise exposure for protection from hearing loss as an average level of 90 dB over an 8-hour work period, or 85 dB over a 16-hour period (U.S. Department of Labor, 1971). The standard is based on a 5 dB decrease in allowable noise level per doubling of exposure time. Exposure at levels greater than this require a hearing conservation program to be implemented. The maximum level for workplace exposure to continuous noise is 115 dB, and exposure to this level is limited to 15 minutes. A maximum level of 140 dB is specified for impulsive noise."

"The National Institute for Occupational Safety and Health recommends a maximum exposure of 85 dB for a period of 8 hours, with a recommended exchange rate of 3 dB per doubling of exposure time (NIOSH, 1998). The maximum allowable exposure level is 140 dB for both continuous and impulsive noise."

"The Department of Defense requirements for hearing conservation specify that a hearing conservation program should be implemented if the 8-hour average noise level (Leq8) is greater than 85 decibels (DoD, 2004). The recommended exchange rate is a decrease of 3 dB per doubling of exposure time, although an alternative rate of 4 dB is allowed. (DNWG, 2013)."

The DoD has issued guidelines for hearing risk assessment in local communities, according to DNWG (2013):

"The current DoD policy for assessing hearing loss risk as part of the EIS process is stated in the June 16, 2009 memorandum "Methodology for Assessing Hearing Loss Risk and Impacts in DoD Environmental Impact Analysis" issued by the Under Secretary of Defense (DoD, 2009c). The memorandum defines the conditions under which assessments are required, references the methodology from the 1982 EPA report, and describes how the assessments are to be calculated.

> 'Current and future high performance aircraft create a noise environment in which the current impact analysis based primarily on annoyance may be insufficient to capture the full range of impacts on humans. As part of the noise analysis in all future environmental impact statements, DoD components will use the 80 Day-Night A-Weighted (DNL) noise contour to identify populations at the most risk of potential hearing loss. DoD components will use as part of the analysis, as appropriate, a calculation of the Potential Hearing Loss (PHL) of the at-risk population. The PHL (sometimes referred to as Population Hearing Loss) methodology is defined in EPA Report No. 550/9-82-105, *Guidelines for Noise Impact Analysis* (USEPA, 1982).' (DoD, 2009c).

"The 2009 DoD policy directive requires that hearing loss risk be estimated for the population most at risk, defined as the population exposed to a Day-Night Average Noise Level (DNL) greater than or equal to 80 dB, including residents of on-base housing. Limiting the analysis to the 80 DNL contour area does not necessarily imply that populations outside this contour, i.e. at lower exposure levels, are not at some degree of risk of hearing loss, but it is generally considered that this risk is small. The exposure of workers inside the base boundary area should be considered occupational and evaluated using the appropriate DoD component regulations for occupational noise exposure.

"Environmental noise assessments normally estimate the number of people exposed to noise expressed in terms of the DNL noise metric, which contains a 10 dB weighting factor for aircraft operations occurring between the hours of 2200 and 0700 to account for people's increased sensitivity to noise during the normal sleeping period. However, the mechanism by which high noise levels may cause hearing impairment is physical in nature (by damaging the hair cells in the cochlear) and has no such temporal effects – noise is noise as far as the potential for hearing loss is concerned, regardless of the time of day the exposure occurs. Thus, even though the population most at risk is identified in terms of the 80 DNL contour, it is not appropriate to estimate risk using the DNL metric. The actual assessment of hearing loss risk should be conducted using 24-hour average noise levels (Leq24). (DNWG, 2013)."

Regarding community hearing loss and aircraft noise, DNWG (2013) provides this overview:

"The preponderance of available information on hearing loss risk upon which Table M-5 is based is from the workplace with continuous exposure throughout the day for many years. Community exposure to aircraft noise is not continuous but consists of individual events where the sound level exceeds the background level for a limited time period as the aircraft flies past the observer. The maximum noise levels experienced from military aircraft may be very high, and the exposure could result in a temporary threshold shift (TTS). But unless the flights are

continuous, the ear may have adequate time to recover from the strain and fatigue of individual exposures, and normal hearing ability may eventually return.

"There is very limited data on the effect of aircraft noise on hearing. From a civilian airport perspective, the scientific community has concluded that there is little likelihood that the resulting noise exposure from aircraft noise could result in either a temporary or permanent hearing loss (Newman and Beattie, 1985). The EPA criterion (Leq24 = 70 dB) can be exceeded in some areas located near airports, but that is only the case outdoors. Inside a building, where people are more likely to spend most of their time, the average noise level will be much less than 70 dB (Eldred and von Gierke, 1993). Eldred and von Gierke (1993) also report that 'several studies in the U.S., Japan, and the U.K. have confirmed the predictions that the possibility for permanent hearing loss in communities, even under the most intense commercial take-off and landing patterns, is remote.' (DNWG, 2013)."

DNWG (2013) then provides a closer look at military aircraft noise specifically:

"Military aircraft are in general much noisier than their civilian counterparts, but the available data, while sometimes contradictory, appears to indicate a similar lack of significant effects of noise on hearing. A laboratory study (Nixon et al., 1993) measured changes in human hearing from noise representative of low-flying aircraft on Military Training Routes (MTRs). The potential effects of aircraft flying along MTRs are of particular concern as the maximum overflight noise levels can exceed 115 dB, with a rapid increase in noise level exceeding 30 dB/sec. In this study, participants were first subjected to four overflight noise exposures at A-weighted levels of 115 dB to 130 dB. One-half of the subjects showed no change in hearing levels, one-fourth had a temporary 5 dB increase in sensitivity, and one-fourth had a temporary 5 dB decrease in sensitivity. In the next phase, participants were subjected to up to eight successive overflights, separated by 90 second intervals, at a maximum level of 130 dB until a temporary shift in hearing was observed. The temporary hearing threshold shift showed a decrease in sensitivity of up to 10 dB.

"In another study of 115 test subjects between 18 and 50 years old, TTSs were measured after laboratory exposure to military low-altitude flight (MLAF) noise (Ising et al., 1999). The results indicate that repeated exposure to MLAF noise with maximum noise levels greater than 114 dB, may have the potential to cause permanent noise induced hearing loss, especially if the noise level increases rapidly (Ising et al., 1999).

"A report prepared by researchers at the University of Southampton (Lawton and Robinson, 1991) summarized the state of knowledge as of 1991. Their review of the literature indicated that the main body of information with which comparisons can be made of the hearing damage risk from military overflight noise is to be found in standards and regulatory documents published by various organizations. It was concluded that the risk of hearing loss due to a single event of 125 dB maximum level and equivalent duration of the order 0.5 seconds is small, even after repeated daily occurrences over several years. Supplementary experimental evidence, involving TTS, showed that a small amount of TTS might be engendered by military overflight noise at the levels in question, but that this would have no significant long-term effect even on the more susceptible ears. The literature search did uncover a small number of population

surveys of hearing loss related to noise, but the quantitative results were rare and only one investigation produced audiometric results linked to noise measurements.

"The report concluded that there is little evidence of hearing loss risk from military overflights, either for adults or children. 'Whether in the case of TTS or PTS, laboratory or field studies, adults or children, there appear to be no reports of significant hearing damage attributable to the noise of aircraft overflights (Lawton and Robinson, 1991).'

"In Japan, audiological tests were conducted on a sample of residents who had lived near Kadena Air Base for periods ranging from 19 to 43 years (Yamamoto, 1999). The sample had been exposed (not necessarily continuously) to noise levels ranging from DNL 75 to 88 dB. Examinations showed that there was a one in ten chance of a NIPTS of 20 dB at 4 kHz. However, the NIPTS at 2 kHz and lower was much less, so that the value of Ave. NIPTS was on the order of 10 dB or so. These results are consistent with the '10th Percentile NIPTS' figures in Table M-5.

"Ludlow and Sixsmith (Ludlow and Sixsmith, 1999) conducted a cross-sectional pilot study to examine the hypothesis that military jet noise exposure early in life is associated with raised hearing thresholds. The authors concluded that there were no significant differences in audiometric test results between military personnel who as children had lived in or near stations where fast jet operations were based, and a similar group who had no such exposure as children. (DNWG, 2013)."

According to DNWG's (2013) conclusions, noise levels at commercial and military airfields have important distinguishing characteristics:

"Aviation noise levels near commercial airports are not comparable to the occupational or recreational noise exposures associated with hearing loss, and studies of aircraft noise levels have not definitively correlated permanent hearing impairment with aircraft activity. It is unlikely that airport neighbors will remain outside their homes 24 hours per day, so there is little likelihood of hearing loss below an average sound level of 75 dB.

"Near military airbases, average noise levels above 75 dB may occur, and while new DoD policy dictates that NIPTS should be evaluated, research results to date have not found a definitive relationship between significant permanent hearing impairment (greater than 10 dB) and prolonged exposure to aviation noise. (DNWG, 2013)."

1.3.5 Nonauditory Health Effects

The general understanding of the possible effects of aircraft noise has been hindered by the publication of overly sensational and misleading articles in the popular press and by similarly sensational statements from reputed scientists, who are calling attention to their work. These statements have proven less than useful in the research and understanding of potential health effects from aircraft noise exposures.

Moreover, the sensational statements have disturbing consequences because they provide misleading information, create unfounded worry and negative bias, distort certain facts, and add to a growing mistrust of science. These sensational statements have been firmly criticized by other researchers as lacking in rigor because they do not consider other known factors that cause health problems and because they analyze only a selection of the available data (ANR, 2010). The following discussion attempts to summarize the research into the possible nonauditory effects of aircraft noise based on a

review of peer-reviewed research. The research reviewed ranges from general stress-related effects on health to specific individual studies on effects such as heart disease and stroke. In addition to these individual studies, there are summaries of meta-analyses of pooled results from individual studies addressing the same issue. The meta-analyses evaluate the studies for consistent results among the smaller individual studies, and they derive effect estimates from the different studies for a quantitative risk assessment (Babisch, 2013). Meta-analysis is an analytical technique designed to summarize the results of multiple smaller studies in order to increase the sample size and to identify patterns among the several smaller studies. The validity of meta-analysis is highly dependent on the quality of the included smaller studies because it cannot correct the poor design and/or bias of the original studies. Because of these limitations, a meta-analysis of several smaller studies cannot predict the results of a single large study and may result in misleading information for the general public.

1.3.5.1 Overview

The potential for aircraft noise to impair one's health deserves special attention and accordingly has been the subject of numerous epidemiological studies and meta-analyses of the gathered data. The basic premise is that noise can cause annoyance, annoyance can cause stress, and prolonged stress is known to be a contributor to a number of health disorders, such as hypertension, myocardial infarction (heart attack), cardiovascular disease, and stroke (Munzel et al., 2014). According to Kryter and Poza (1980), "It is more likely that noise-related general ill-health effects are due to the psychological annoyance from the noise interfering with normal everyday behavior than it is from the noise eliciting, because of its intensity, reflexive response in the autonomic or other physiological systems of the body."

The connection between annoyance and stress and health issues requires careful experimental design because of the large number of confounding issues, such as heredity, medical history, smoking, diet, lack of exercise, and air pollution. Some highly publicized reports on health effects have, in fact, been rooted in poor science. Meecham and Shaw (1979) apparently found a relation between noise levels and mortality rates in neighborhoods located under the approach path to LAX. When the same data were analyzed by others (Frerichs et al., 1980), no relationship was found. Jones and Tauscher (1978) found a high rate of birth defects for the same neighborhoods. But when the Centers for Disease Control performed a more thorough study near Atlanta's Hartsfield International Airport, no relationships were found for DNL greater than 65 dB (Edmonds et al., 1979).

To put the Odds Ratio (OR) number in context, an OR of 1.5 would be considered a weak relationship between noise and health; 3.5 would be a moderate relationship; 9.0 would be a strong relationship; and 32 a very strong relationship (Cohen, 1988).

An early study by Cantrell (1974) confirmed that noise can provoke stress, but it noted that results on its effect on cardiovascular health were contradictory. Some studies in the 1990s found a connection between aircraft noise and increased blood pressure (Michalak et al., 1990; Ising et al., 1990; Rosenlund et al., 2001), while others did not (Pulles et al., 1990). This inconsistency in results led the WHO in 2000 to conclude that there was only a weak association between long-term noise exposure and hypertension and cardiovascular effects, and that a dose-response relationship could not be established (WHO, 2000).

Later, van Kempen concluded that "Whereas noise exposure can contribute to the prevalence of cardiovascular disease, the evidence for a relation between noise exposure and ischemic heart disease is still inconclusive" (van Kempen et al., 2002).

More recently, major studies have been conducted in an attempt to identify an association between noise and health effects, develop a dose-response relationship, and identify a threshold below which the effects are minimal. The most important of these are briefly described below. In these studies, researchers usually present their results in terms of the OR, which is the ratio of the odds that health will be impaired by an increase in noise level of 10 dB to the odds that health would be impaired without any noise exposure. An OR of 1.25 means that there is a 25-percent increase in likelihood that noise will impair health. To put the OR number in context, an OR of 1.5 would be considered a weak relationship between noise and health; 3.5 would be a moderate relationship; 9.0 would be a strong relationship; and 32 a very strong relationship (Cohen, 1988). For examples, the OR for the relationship between obesity and hypertension is 3.4 (Pikilidou et al., 2013), and the OR for the relationship between smoking and coronary heart disease is 4.4 (Rosengren et al., 1992). The summary of these studies shows that the relationship between noise and impaired health is a very weak one because none of the statistically significant ORs were greater than 1.5. Most of the ORs were less than 1.2.

1.3.5.2 Blood Pressure and Hypertension

The carefully designed HYENA study was conducted around six European airports from 2002 through 2006 (Jarup et al., 2005, 2007, 2008; Babisch et al., 2008). The study covered 4,861 subjects, aged between 45 and 70. Blood pressure was measured, and questionnaires were administered for health, socioeconomic, and lifestyle factors, including diet and physical exercise. Noise from aircraft and highways was predicted from models.

HYENA study results showed an OR less than 1 for the association between daytime aircraft noise and hypertension, which was not statistically significant[2] and indicated no positive association. The OR for the relationship between nighttime aircraft noise and hypertension was 1.14--a result that was marginally significant statistically. For daytime road traffic noise, the OR was 1.1 and not significant. The measured effects were small and not necessarily distinct from other events. A close review of the data for nighttime aircraft noise raised some questions about the data and the methods employed (ACRP, 2008). Using data from the HYENA study, Haralabidis et al. (2008) reported an increase in systolic blood pressure of 6.2 millimeters of mercury (mmHg) for aircraft noise events (about 6 percent) and an increase of 7.4 mmHg (about 7 percent) for other indoor noises, such as snoring; a snoring partner and road traffic had similar impacts on blood pressure.

[2] In many of the studies reported above, the researchers use the word "significant" to describe a relationship between noise and health, conjuring up the idea that the relationship is strong and that the effect is large. But this is an inappropriate and misleading use of the word in statistical analysis. What the researchers really mean is that the relationship is "statistically significant" in that they are sure that it is real. It does not mean that the effect is large or important, or that it has any decision-making utility. A relationship can be statistically significant, i.e. real, while being weak, or small and insignificant.

Ancona et al. (2010) reported a study on a randomly selected sample of subjects aged 45 to 70 years who had lived in the study area for at least 5 years. Personal data were collected via interview, and blood pressure measurements were taken for a study population of 578 subjects. No statistically significant association was found between aircraft noise levels and hypertension for noise levels above 75 dB $L_{eq(24)}$ compared to levels below 65 dB. However, there was an increase in nocturnal systolic pressure of 5.4 mmHg (about 5 percent) for subjects in the highest exposure category (greater than or equal to 75 dB).

Eriksson et al. (2007) found that for subjects exposed to energy-averaged levels above 50 dBA, the adjusted relative risk for hypertension was 1.19 (95-percent CI = 1.03 to 1.37). Maximum aircraft noise levels presented similar results, with a relative risk of 1.20 (1.03 to 1.40) for those exposed above 70 dBA. Stronger associations were suggested among older subjects, those with a normal glucose tolerance, nonsmokers, and subjects not annoyed by noise from other sources. The study comprised a cohort of 2,754 men in four municipalities around Stockholm Arlanda airport who were followed from 1992 to 1994 and 2002 to 2004.

Matsui et al. (2008) reported higher OR for noise levels greater than L_{den} 70 dB, but not altogether statistically significant, for hypertension from the effects of military aircraft noise at Kadena Air Base in Okinawa, Japan. The study was conducted in 1995 and 1996 but used older noise data that were not necessarily appropriate for the same time period.

A study of Noise-Related Annoyance, Cognition and Health (NORAH), designed to identify transportation noise effects in communities around German airports, has reported results of self-monitoring of blood pressure of approximately 2,000 residents near Frankfurt Airport exposed to aircraft $L_{eq(24)}$ in the range of 40 to 65 dB during the period 2012 to 2014 after the opening of a new runway (Shreckenberg and Guski, 2015). The results showed small positive effects of noise on blood pressure without statistical significance. No statistically significant effect was determined between aircraft noise and hypertension as defined by the WHO.

A meta-analysis of Huang el al. (2015) examined four research studies comprising a total of 16,784 residents. The overall OR for hypertension in residents with aircraft noise exposure was 1.36 for men and statistically significant, and 1.31 and not statistically significant for women. No account was taken for any confounding factors. The meta-analysis suggests that aircraft noise could contribute to the prevalence of hypertension, but the evidence for a relationship between aircraft noise exposure and hypertension is still inconclusive because of limitations in study populations, exposure characterization, and adjustment for important confounders.

The four studies in Huang's meta-analysis include one by Black et al. (2007) that purports to show relatively high OR values for self-reported hypertension, but these results only applied to a select subset of those surveyed that reported high noise stress. When this data set is excluded, Huang's meta-analysis yields results similar to those obtained in the HYENA and NORAH studies. Furthermore, the longitudinal study included in the analysis that followed 4,721 people for 8 years (Eriksson et al., 2010) reported an OR of 1.02, which was not statistically significant.

Rhee et al. (2008) found that subjects exposed to helicopter noise had a significantly higher prevalence of hypertension than the unexposed control group. Although a source-specific difference in the risk of cardiovascular disease by environmental noise exposure is suggested, no other study has evaluated

whether or not exposure to noise from helicopters differs from exposure to noise from fighter jets in their influence on the prevalence of hypertension.

Hwang et al. (2012) conducted a 20-year prospective cohort study of 1,301 aviation workers in Taiwan to follow AGT genotypes (TT, TM, and MM) across four exposure categories according to the levels of noise representing high (>80 dBA), medium (80-65 dBA), and low exposure (64-50 dBA) and the reference level (49-40 dBA). AGT (TT vs MM adjusted incidence rate ratio [IRR] 1.77, 95-percent CI 1.24 to 2.51) and noise exposure (high and medium combined) during 3 to 15 years (adjusted IRR 2.35, 95-percent CI 1.42 to 3.88) were independent determinants of hypertension. Furthermore, the risk of hypertension increased with noise exposure (adjusted IRR 3.73, 95-percent CI 1.84 to 7.56) among TT homozygotes but not among those with at least one M allele (Rothman synergy index = 1.05).

Haralabidis et al. (2011) studied the association between exposure to transportation noise and blood pressure reduction during nighttime sleep utilizing 24-hour ambulatory blood pressure measurements at 15-minute intervals carried out on 149 persons living near four major European airports. Although road traffic noise exposure was found to decrease blood pressure dipping in diastolic blood pressure, no associated decrease in dipping was found for aircraft noise exposure.

1.3.5.3 Heart Disease and Stroke

Huss et al. (2010) examined the risk of mortality from myocardial infarction (heart attack) resulting from exposure to aircraft noise using the Swiss National database of mortality records for the period 2000 to 2005. The analysis was conducted on a total of 4.6 million people, with 15,500 deaths from acute myocardial infarction. The results showed that the risk of death from all circulatory diseases combined was not associated with aircraft noise, and there was not any association between noise and the risk of death from stroke. The overall risk of death from myocardial infarction alone was 1.07 and not statistically significant, but it was higher (OR = 1.3 and not statistically significant) in people exposed to aircraft noise of 60 dB DNL or greater for 15 years or more. The risk of death from myocardial infarction was also higher (OR = 1.10), and statistically significant, for those living near a major road. Cardiovascular risk factors, such as smoking, were not directly taken into account in this study.

Floud (2013) used the HYENA data to examine the relationship between noise levels and self- reported heart disease and stroke. There was no association for daytime noise and no statistically significant association for nighttime noise. However, for those exposed to nighttime aircraft noise for more than 20 years, the OR was 1.25 per 10 dB increase in noise (L_{night}) and marginally significant.

Correia et al. (2013) evaluated the risk of hospitalization for cardiovascular diseases in older people (65 years of age and older) residing in areas exposed to a DNL of at least 45 dB around U.S. airports. Health insurance data from 2009 Medicare records were examined for approximately 6 million people living in neighborhoods around 89 airports in the U.S. The potential confounding effect of socioeconomic status was extracted from several zip-code-level variables from the 2000 U.S. Census. No controls were included for smoking or diet, both of which are strong risk factors for cardiovascular disease. Noise levels were calculated at census block centroids. Taking into account the potential effects of air pollution, they report an OR of 1.035, which was marginally significant statistically. While the overall results show a link between increased noise and increased health risk, some of the individual airport data show a decreased health risk with increased aircraft noise exposure.

Hansell et al. (2013) investigated the association of aircraft noise with risk of hospital admission for, and mortality from, stroke, coronary heart disease, and cardiovascular disease in neighborhoods around London's Heathrow airport exposed to an equivalent sound level over 16 hours of at least 50 dB. The data were adjusted for age, sex, ethnicity, deprivation, and a smoking proxy (lung cancer mortality) at the census area level but not at the individual level. It was important to consider the effect of ethnicity (in particular, South Asian ethnicity, which is itself strongly associated with risk of coronary heart disease). The reported ORs for stroke, heart disease, and cardiovascular disease were 1.24, 1.21, and 1.14, respectively. Similar results were reported for mortality. The results suggest a higher risk of mortality from coronary heart disease than cardiovascular disease, which seems counter-intuitive given that cardiovascular disease encompasses all the diseases of the heart and circulation, including coronary heart disease and stroke along with heart failure and congenital heart disease (ERCD, 2014).

Evrard et al. (2015) studied mortality rates for 1.9 million residents living in 161 communes near three major French airports (Paris-Charles de Gaulle, Lyon Saint-Exupéry, and Toulouse-Blagnac) for the period 2007 to 2010. Noise levels in the communes ranged from 42 to 64 dB L_{den}. Lung cancer mortality at the commune level was used as a proxy measure for smoking because data on individual smoking or smoking prevalence were not available. Noise exposure was expressed in terms of a population-weighted level for each commune. After adjustment for concentration of nitrogen dioxide, Risk Ratios (similar to Odds Ratios) per 10 dB increase in noise were found to be 1.18 for mortality from cardiovascular disease, 1.23 for mortality from coronary heart disease, and 1.31 for mortality from myocardial infarction. There was no association between mortality from stroke and aircraft noise. As the author notes, results at the commune level may not be applicable to the individual level.

Seidler et al. (2016) found a statistically significant linear exposure-risk relationship with heart failure or hypertensive heart disease for aircraft traffic noise (1.6-percent risk increase per 10 dB increase in the 24-hour continuous noise level; 95-percent CI 0.3 to 3.0 percent), road traffic noise (2.4 percent per 10 dB; 95-percent CI 1.6 to 3.2 percent), and railway noise (3.1 percent per 10 dB; 95-percent CI 2.2 to 4.1 percent). For individuals with 24-hour continuous aircraft noise levels less than 40 dB and nightly maximum aircraft noise levels exceeding 50 dB six or more times, a significantly increased risk was observed. In general, risks of hypertensive heart disease were considerably higher than the risks of heart failure.

The NORAH study also included an examination of the effect of aircraft noise on cardiovascular disease (heart attack and stroke) based on examination of health insurance data between 2006 and 2010 for approximately 1 million people over the age of 40 exposed to aircraft $L_{eq(24)}$ in the range of 40 to 65 dB (Shreckenberg and Guski, 2015). A questionnaire was used to obtain information on confounding factors. The results showed a non-statistically significant increase in risk for heart attack and stroke, and there was no apparent linear relationship between noise level and either effect. There was, however, a marginally significant but small increase in risk for heart failure (OR of 1.016). The risk of cardiovascular disease was found to be greater for road and rail noise than for aircraft noise.

Meta-analyses from Babisch and Kamp (2009), Babisch et al. (2013), and Babisch (2013) focused on epidemiological studies or surveys directly related to associations between aircraft noise and cardiovascular disease outcomes. Considering studies at 10 airports covering over 45,000 people, the pooled effect estimate of the relative risk for hypertension was 1.13 per 10 dBA and only marginally significant (WHO, 2011). One of the studies included in the analysis was for military aircraft noise at

Okinawa (see Matsui et al., 2008) for which the OR was 1.27 but not statistically significant. The authors conclude that "No single, generalized and empirically supported exposure-response relationship can be established yet for the association between aircraft noise and cardiovascular risk due to methodological differences between studies." The pooled results show different slopes from different studies with different noise level ranges and methods being used.

A meta-analysis of 11 studies on road and aircraft noise exposure in relation to incident cases of ischemic heart disease (IHD) was transformed into risk estimates per 10 dB increase in exposure by Vienneau et al. (2013). Pooled relative risk for IHD was 1.08 (1.03 to 1.14) per 10 dB increase in noise exposure, with the linear exposure-response starting at 50 dB.

Passchier-Vermeer and Passchier (2000) reviewed studies on noise exposure and health effects and found sufficient evidence to support observation thresholds for hearing impairment, hypertension, IHD, annoyance, performance, and sleep disturbance due to noise exposure. The intent of the article was not to quantify impacts necessarily but instead to show that noise exposure can have a major effect in industrial societies in general, and it should be up to policy- makers and regulators to address this potential public health problem. In addition, the article recommended prioritizing additional study in two topic areas: 1) cardiovascular effects, and 2) the underlying mechanisms and the study of the effects of noise on children.

Seidler et al. (2016) studied myocardial infarction risk due to aircraft, rail, and road noise by investigating patients of the Rhine-Main region of Germany who were diagnosed with myocardial infarction in the years 2006 through 2010. The linear model revealed a statistically significant risk increase due to road noise (2.8 percent per 10 dB rise, 95-percent CI [1.2; 4.5]) and railroad noise (2.3 percent per 10 dB rise [0.5; 4.2]) but not airplane noise. Airplane noise levels of 60 dB and above were associated with a higher risk of myocardial infarction (OR 1.42 [0.62; 3.25]). This higher risk is statistically significant if the analysis is restricted to patients who had died of myocardial infarction by 2014/2015 (OR 2.70 [1.08; 6.74]. In this subgroup, the risk estimators for all three types of traffic noise were of comparable magnitude (3.2 percent to 3.9 percent per 10 dB rise in noise level).

Floud et al. (2011) examined the health effects of aircraft and road traffic noise exposure and the association with medication use. The cross-sectional study measured the use of prescribed antihypertensives, antacids, anxiolytics, hypnotics, antidepressants, and antiasthmatics in 4,861 persons living near seven airports in six European countries. Differences were found between countries in the effect of aircraft noise on antihypertensive use; for nighttime aircraft noise, a 10 dB increase in exposure was associated with ORs of 1.34 (95-percent CI, 1.14 to 1.57) for the UK and 1.19 (1.02 to 1.38) for the Netherlands, but no significant associations were found for other countries. For daytime aircraft noise, excess risks were found for the UK (OR 1.35; CI: 1.13 to 1.60), but a risk deficit was found for Italy (OR 0.82; CI: 0.71 to 0.96). There was an excess risk of taking anxiolytic medication in relation to aircraft noise (OR 1.28; CI: 1.04 to 1.57 for daytime and OR 1.27; CI: 1.01 to 1.59 for nighttime) that held across countries. The authors also found an association between exposure to 24-hour road traffic noise and the use of antacids by men (OR 1.39; CI 1.11 to 1.74).

1.3.5.4 Mental Health Issues

The NORAH study found a risk for unipolar depression to increase with exposure to aircraft noise (OR of 1.09), but the relationship was not linear, with the risk decreasing at the higher noise levels, so this result was not considered reliable (Schreckenberg and Guski, 2015).

A survey study around Frankfurt Airport explored the relationship between aircraft, road traffic, and railway noise with Quality-of-Life (QoL) concerns for both health and environmental views (Schreckenberg et al., 2010). Aircraft noise affected environmental QoL and, to a lesser extent, health QoL. However, one of the study's observations concerned vulnerable groups, such as people with pre-existing illness and/or high noise sensitivities. This group may have limited resources to deal with noise, which can result in increased health problems.

A study of the effect of aircraft noise around a large international airport, Schiphol Airport, near Amsterdam, found an association between the use of non-prescribed sleep medication or sedatives with aircraft noise during the late evening (10:00 P.M. to 11:00 P.M.). However, the correlation between L_{den} and L_{eq} (10:00 P.M. to 11:00 P.M.) to sleep aids (ORs 1.25 and 1.26, respectively) was not statistically significant (Franssen et al., 2004).

Beutel et al. (2016) assessed the association of day and night noise annoyance from road traffic, aircraft, railways, industrial, and neighborhood indoor and outdoor noise to anxiety and depression in 15,000 people ages 35 to 74 living in the Rhein-Main Region of Germany. The source and magnitude of noise annoyance was measured by a self-administered questionnaire. Depression and anxiety were also assessed based on established questionnaires. In this study, aircraft noise was the most commonly reported source of annoyance, followed by road noise annoyance. Depression and anxiety increased with the degree of overall noise annoyance. Compared to no annoyance, prevalence ratios for depression and anxiety, respectively, increased from moderate (PR depression 1.20; 95-percent CI 1.00 to 1.45; PR anxiety 1.42; 95- percent CI 1.15 to 1.74) to extreme annoyance (PR depression 1.97; 95-percent CI 1.62 to 2.39; PR anxiety 2.14; 95-percent CI 1.71 to 2.67). Compared to other sources, aircraft noise annoyance was prominent, affecting almost 60 percent of the population. More simply stated, strong noise annoyance was associated with a two-fold higher prevalence of depression and anxiety in the general population. The authors admit that the identified association of annoyance, particularly with aircraft noise, to depression and anxiety is suggestive of a cause but that more study is needed to identify causal relationships. The authors recognized that pre- existing anxiety and depression could contribute to increased susceptibility to noise annoyance. Also, the focus of this paper was on subjective annoyance, which is not related to objective measures of noise exposition.

Van den Berg et al. (2015) conducted a study that explored the suggested limitation in the Beutel (2016) study: the relationship between pre-existing concern and annoyance. More specifically, they sought insight in the relation between worry about a noise source and annoyance from that source. The motivation for the study was the longstanding important public concern for noise at a political level in Amsterdam, despite implementation of several measures to reduce noise exposure, and the desire to find other variables such as reducing fear and worry that might also help the situation. Using questionnaires from 1,968 respondents and modeling flight-related noise levels in a greater cosmopolitan area around Amsterdam, the researchers found that respondents with a high risk of anxiety/depression are significantly more likely to be highly worried about living close to the airport or

an air route compared to those with a low risk (all $p < 0.05$). Also, respondents who report to have bad/moderate health are significantly more likely to be highly worried about living close to the airport or an air route compared to those with good/excellent health. More generally, the results show there is a strong correlation between annoyance from aircraft or airport noise and worry about the risk for health and/or safety associated with living close to an air route or airport. Also, for aircraft noise, worry increases with both the subjective exposure (annoyance) and the objective exposure (sound level). The authors conclude "that more noise or odor is related to more worry, and this has more effect on persons that have a higher personal risk for being worried and annoyed." When considered within the context of other studies, such as Beutel (2016), it would seem that those who are predisposed to worry are more susceptible to both annoyance and the negative health effects associated with anxiety and depression.

An individual with an increased sensitivity to sounds may have hyperacusis, which results in a lower tolerance of everyday sound (Aazh et al., 2018). A person with hyperacusis reacts differently to sounds due to reactions of increased distress and discomfort from everyday sounds. This condition arises from a problem with the auditory processes within an afflicted individual's brain. The causes and diagnosis are not well understood (Aazh et al., 2018). Physical causes of hyperacusis may range from head injury, ear damage, or viral diseases, to TMJ. Neurologic causes may range from PTSD, chronic fatigue syndrome, depression, to migraine headaches (American Academy of Otolaryngology--Head and Neck Surgery, 2018). An individual with hyperacusis will also likely have tinnitus, which may lead to further discomfort. Hyperacusis can lead to misophonia, which may cause an individual to react with abnormally strong emotions and behaviors to specific sounds, but hyperacusis does not cause this reaction. Studies of misophonia are very limited at this time. Another condition that falls under the condition of hyperacusis is noise sensitivity (Aazh et al., 2018). A noise-sensitive individual is characteristically more prone to being annoyed by environmental noise compared to a non- noise-sensitive person regardless of the overall noise exposure (Kishikawa et al., 2006). This result indicates that the annoyance response for noise-sensitive people is not a direct function of noise exposure levels.

1.3.5.5 Hospital and Care Facilities

The ACRP (ACRP, 2008) reviewed the literature available at that time to draw the following conclusions regarding noise impacts on patients in hospitals and care facilities:

> "A careful search of recent research regarding aviation noise and hospitals and care facilities identified no studies that addressed this specific issue. It is common for airport noise/land-use compatibility guidelines to list hospitals and care facilities as noise-sensitive uses, although there are no studies that have identified health effects associated with aviation noise. There are numerous studies that identify problems with internal hospital noises such as warning alarms, pagers, gurney collisions with doors, talking, etc.; however, none that addressed aviation or roadway noise."

The WHO (2000), in its Guidelines for Community Noise (Section 4.3.3), applies available information on noise to derive the following general guidance. However, the guidance is not informed by research on hospital and care facility effects from aircraft noise.

> "For most spaces in hospitals, the critical effects of noise are on sleep disturbance, annoyance and communication interference, including interference with warning signals. The L_{Amax} of sound events during the night should not exceed 40 dB indoors. For wardrooms in hospitals, the

guideline values indoors are 30 dB L_{Aeq}, together with 40 dB L_{Amax} during the night. During the day and evening the guideline value indoors is 30 dB L_{Aeq}. The maximum level should be measured with the instrument set at '*fast*'.

Since patients have less ability to cope with stress, the equivalent sound pressure level should not exceed 35 dB L_{Aeq} in most rooms in which patients are being treated or observed. Particular attention should be given to the sound pressure levels in intensive care units and operating theatres. Sound inside incubators may result in health problems, including sleep disturbance, and may lead to hearing impairment in neonates. Guideline values for sound pressure levels in incubators must await future research."

1.3.5.6 Summary of Nonauditory Effects

Research studies seem to indicate that aircraft noise may contribute to the risk of health disorders, along with other factors such as heredity, medical history, smoking, alcohol use, diet, lack of exercise, and air pollution, but that the measured effect is small compared to these other factors and often not statistically significant--i.e., not necessarily real. Despite some sensational articles purporting otherwise and the intuitive feeling that noise in some way must impair health, there are no studies that definitively show a causal and significant relationship between aircraft noise and health. Such studies are notoriously difficult to conduct and interpret because of the large number of confounding factors that have to be considered for their effects to be excluded from the analysis. The WHO notes that there is still considerable variation among studies (WHO, 2011). And, almost without exception, research studies conclude that additional research is needed to determine whether such a causal relationship exists. The European Network on Noise and Health (ENNAH, 2013), in its summary report of 2013, concludes that ".....while the literature on non-auditory health effects of environmental noise is extensive, the scientific evidence of the relationship between noise and non-auditory effects is still contradictory."

As a result, it is not possible to state that there is sound scientific evidence that aircraft noise is a significant contributor to health disorders.

1.3.6 Performance Effects

The effect of noise on the performance of activities or tasks has been the subject of many studies. Some of these studies have found links between continuous high noise levels and performance loss. Noise-induced performance losses are most frequently reported in studies where noise levels are above 85 dB. Moderate noise levels appear to act as a stressor for more sensitive individuals performing a difficult psychomotor task. Little change has typically been found in low-noise cases; however, cognitive learning differences were measured in subjects exposed to noise of passing aircraft with maximum amplitudes of 48 dBA, presented once per minute, while performing text learning compared to a control group exposed to 35 dBA (Trimmel et al., 2012). The findings suggest that background noise below 50 dBA results in impaired and changed structures of learning, as indicated by reproduction scores, because test persons are less able to switch between strategies

While the results of research on the general effect of periodic aircraft noise on performance have yet to yield definitive criteria, several general trends have been noted, including:

- A periodic intermittent noise is more likely to disrupt performance than a steady-state continuous noise of the same level. Flyover noise, due to its intermittent nature, might be more likely to disrupt performance than a steady-state noise of equal level.
- Noise is more inclined to affect the quality than the quantity of work.
- Noise is more likely to impair the performance of tasks that place extreme physical and/or mental demands on workers.

1.3.7 Noise Effects on Children

Recent studies on school children indicate a potential link between aircraft noise and both reading comprehension and learning motivation. The effects may be small but of particular concern for children who are already scholastically challenged.

1.3.7.1 Effects on Learning and Cognitive Abilities

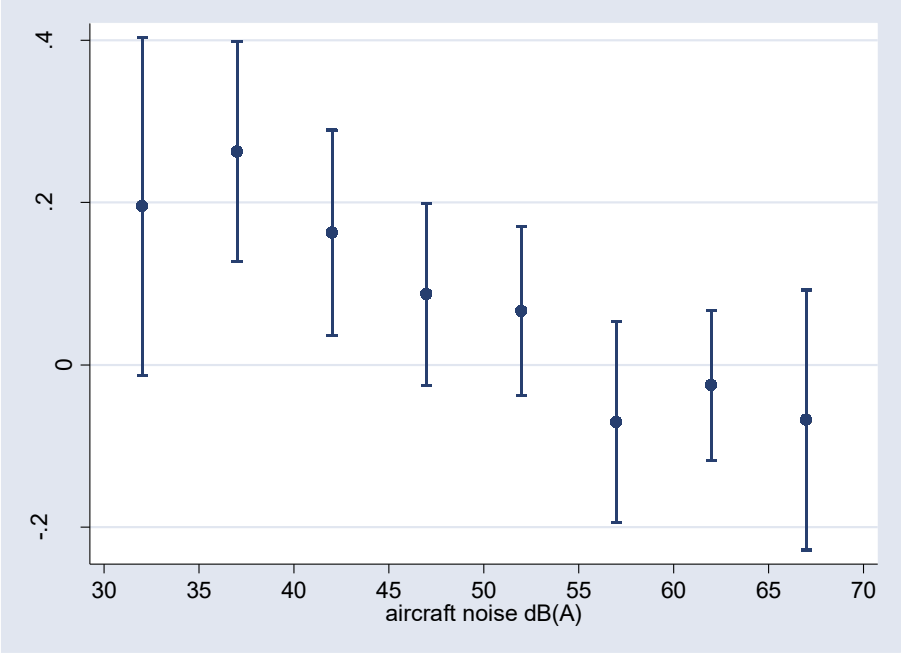
Early studies in several countries (Cohen et al., 1973, 1980, 1981; Bronzaft and McCarthy, 1975; Green et al., 1982; Evans et al., 1998; Haines et al., 2002; Lercher et al., 2003) showed lower reading scores for children living or attending school in noisy areas than for children away from those areas. In some studies, noise-exposed children were less likely to solve difficult puzzles or more likely to give up while attempting to do so.

A longitudinal study reported by Evans et al. (1998) conducted prior to relocation of the old Munich Airport in 1992, reported that high noise exposure was associated with deficits in long-term memory and reading comprehension in children with a mean age of 10.8 years. Two years after the closure of the airport, these deficits disappeared, indicating that noise effects on cognition may be reversible if exposure to the noise ceases. Most convincing was the finding that deficits in memory and reading comprehension developed over the two-year follow-up for children who became newly noise exposed near the new airport.

More recently, the Road Traffic and Aircraft Noise Exposure and Children's Cognition and Health (RANCH) study (Stansfeld et al., 2005; Clark et al., 2005) compared the effect of aircraft and road traffic noise on over 2,000 children in three countries. This was the first study to derive exposure-effect associations for a range of cognitive and health effects and the first to compare effects across countries.

The study found a linear relation between chronic aircraft noise exposure and impaired reading comprehension and recognition memory. No associations were found between chronic road traffic noise exposure and cognition. Conceptual recall and information recall surprisingly showed better performance in high road-traffic-noise areas. Neither aircraft noise nor road traffic noise affected attention or working memory (Stansfeld et al., 2005; Clark et al., 2005).

Figure M-12 shows RANCH's result relating noise to reading comprehension. It shows that reading falls below average (a z-score of 0) at L_{eq} greater than 55 dB. Because the relationship is linear, reducing exposure at any level should lead to improvements in reading comprehension.



Sources: Stansfeld et al. 2005; Clark et al. 2005.

Figure M-12 RANCH Study Reading Scores Varying with L_{eq}

The RANCH study observed that children may be exposed to aircraft noise for many of their childhood years and the consequences of long-term noise exposure were unknown. A follow-up study of the children in the RANCH project is being analyzed to examine the long-term effects on children's reading comprehension (Clark et al., 2009). Preliminary analysis indicated a trend for reading comprehension to be poorer at 15 to 16 years of age for children who attended noise-exposed primary schools. An additional study utilizing the same data set (Clark et al., 2012) investigated the effects of traffic-related air pollution and found little evidence that air pollution moderated the association of noise exposure on children's cognition.

There was also a trend for reading comprehension to be poorer in aircraft-noise-exposed secondary schools. Significant differences in reading scores were found between primary school children in the two different classrooms at the same school (Bronzaft and McCarthy, 1975). One classroom was exposed to high levels of railway noise, while the other classroom was quiet. The mean reading age of the noise-exposed children was 3 to 4 months behind that of the control children. Studies suggest that the evidence of the effects of noise on children's cognition has grown stronger over recent years (Stansfeld and Clark, 2015), but further analysis adjusting for confounding factors is ongoing and is needed to confirm these initial conclusions.

Studies identified a range of linguistic and cognitive factors to be responsible for children´s unique difficulties with speech perception in noise. Children have lower stored phonological knowledge to reconstruct degraded speech, reducing the probability of successfully matching incomplete speech input when compared with adults. Additionally, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Klatte et al., 2013).

FICAN funded a pilot study to assess the relationship between aircraft noise reduction and standardized test scores (Eagan et al., 2004; FICAN, 2007). The study evaluated whether abrupt aircraft noise reduction within classrooms, from either airport closure or sound insulation, was associated with improvements in test scores. Data were collected in 35 public schools near three airports in Illinois and Texas. The study used several noise metrics. These were, however, all computed indoor levels, which makes it hard to compare with the outdoor levels used in most other studies.

The FICAN study found a significant association between noise reduction and a decrease in failure rates for high school students, but not middle or elementary school students. There were some weaker associations between noise reduction and an increase in failure rates for middle and elementary schools. Overall, the study found that the associations observed were similar for children with or without learning difficulties and between verbal and math/science tests. As a pilot study, the FICAN study was not expected to obtain final answers, but it provided useful indications (FICAN, 2007).

A recent study of the effect of aircraft noise on student learning (Sharp et al., 2013) examined student test scores at a total of 6,198 U.S. elementary schools, 917 of which were exposed to aircraft noise at 46 airports and with noise exposures exceeding 55 dB DNL. The study found small but statistically significant associations between airport noise and student mathematics and reading test scores, after taking demographic and school factors into account. Associations were also observed for ambient noise and total noise on student mathematics and reading test scores, suggesting that noise levels per se, as well as from aircraft, might play a role in student achievement. Recent evidence suggests that potential negative effects on classroom performance can be due to chronic ambient noise exposure. A study of French 8- and 9-year-old children found a significant association between ambient noise levels in urban environments due primarily to road noise (Pujol et al., 2014). The study estimated noise levels at children's bedrooms (L_{den}) and found a modest effect of lower scores on French tests, and these lower scores were associated with higher L_{den} at children's homes. Once adjusted for classroom $L_{Aeq,day}$, the association between L_{den} and math test scores became borderline significant.

As part of the NORAH study conducted at Frankfurt Airport, reading tests were conducted on 1,209 school children at 29 primary schools. It was found that there was a small decrease in reading performance that corresponded to a 1-month reading delay. However, a recent study observing children at 11 schools surrounding LAX found that the majority of distractions to elementary age students were other students, followed by themselves, which includes playing with various items and daydreaming. Less than 1 percent of distractions were caused by traffic noise (National Academies of Sciences, Engineering, and Medicine, 2017).

While there are many factors that can contribute to learning deficits in school-aged children, there is increasing awareness that chronic exposure to high aircraft noise levels may impair learning. This awareness has led the WHO and a North Atlantic Treaty Organization working group to conclude that daycare centers and schools should not be located near major sources of noise, such as highways, airports, and industrial sites (North Atlantic Treaty Organization, 2000; WHO, 1999). The awareness has also led to the classroom noise standard discussed earlier (ANSI, 2010).

1.3.7.2 Health Effects on Children

A number of studies, including some of the cognitive studies discussed above, have examined the potential for effects on children's health. Health effects include annoyance, psychological health impacts, coronary risk, stress hormones, sleep disturbance, and hearing loss.

Annoyance. Chronic noise exposure causes annoyance in children (Bronzaft and McCarthy, 1975; Evans et al., 1995). Annoyance among children tends to be higher than among adults, and there is little habituation (Haines et al., 2001a). The RANCH study found annoyance may play a role in how noise affects reading comprehension (Clark et al., 2005).

Psychological Health. The available literature on psychological health impacts of noise exposure reveals inconsistent findings that are perhaps suggestive of highly situational-specific factors. Lercher et al. (2002) found an association between noise and teacher ratings of psychological health, but only for children with biological risk defined by low birth weight and/or premature birth. Haines et al. (2001b) found that children exposed to aircraft noise had higher levels of psychological distress and hyperactivity. Stansfeld et al. (2009) replicated the hyperactivity result, but not the result for distress. Crombie et al. (2011) found similar hyperactivity results but no significant associations between aircraft noise at school and later mental health issues in children at risk at birth--i.e., those with low birth weight.

Dreger et al. (2015) investigated the influence of different environmental noise sources at children's homes on the incidence of mental health problems in school-aged children. Using a survey of reported level of day and night annoyance by parents as the metric of noise level, the study identified an association between exposure to noise at home and mental health problems such as emotional symptoms, conduct problems, and hyperactivity. Road noise was the most common exposure and was significantly associated with the total difficulties score, emotional symptoms, and conduct problems. Noise by neighbors was associated with conduct problems and hyperactivity. However, aircraft noise (by day) and construction work (by day) were not associated with any of the SDQ categories at a significant level. More generally, and perhaps more importantly, the study found that children who were in the group of constant high exposure, and therefore were continuously exposed for a long time, had higher risk for mental health problems. The authors recognized the lack of quantitative noise measurements as an important study limitation but provide evidence from prior studies indicating reported annoyance as a good proxy.

Hjortebjerg et al. (2016) used noise models to determine average time-weighted road and railroad noise exposure for 46,940 children from birth to age 7 years. Airfield noise was similarly determined but only evaluated as a confounding variable, as was air pollution. A 10 dB increase in average time-weighted road traffic noise exposure from birth to 7 years of age was associated with a 7-percent increase in abnormal versus normal total difficulties scores; 5-percent increases in borderline and abnormal hyperactivity/inattention subscale scores, respectively; and 5-percent and 6-percent increases in abnormal conduct problem and peer relationship problem subscale scores, respectively. Exposure to road traffic noise during pregnancy was not associated with child behavioral problems at 7 years of age. While this study is quantitative, its application to airfield noise is limited due to the different nature of road versus airfield noise.

As with studies of adults, the available evidence suggests that chronic noise exposure is probably not associated with serious psychological illness, but there may be effects on well-being and quality of life. Further research is needed.

Coronary Risk. The HYENA study discussed earlier indicated a possible relation between noise and hypertension in older adults. Cohen et al. (1980, 1981) found some increase in blood pressure among school children, but this increase was within the normal range and not indicating hypertension. Hygge et al. (2002) found mixed effects. The RANCH study found some effect for children at home and at night but not at school (van Kempen, 2006). In the Munich study (Evans et al., 1998), chronic noise exposure was found to be associated with both baseline systolic blood pressure and lower reactivity of systolic blood pressure to a cognitive task presented under acute noise. After the new airport opened, a significant increase in systolic blood pressure was observed, providing evidence for a causal link between chronic noise exposure and raised blood pressure. No association was found between noise and diastolic blood pressure or reactivity (Stansfeld and Crombie, 2011; Stansfeld, 2015).

However, the relationship between aircraft noise and blood pressure was not fully consistent between surveys in different countries. These findings, taken together with those from previous studies, suggest that no unequivocal conclusions can be drawn about the association between aircraft noise exposure and blood pressure. Overall, the evidence for noise effects on children's blood pressure is mixed and less certain than for noise effects on older adults.

Stress Hormones. Some studies investigated hormonal levels between groups of children exposed to aircraft noise and those in a control group. Two studies analyzed cortisol and urinary catecholamine levels in school children as measurements of stress response to aircraft noise (Haines et al., 2001a, 2001b, 2001c). In both instances, there were no differences between the aircraft-noise-exposed children and the control groups.

Sleep Disturbance. A sub-study of RANCH in a Swedish sample used sleep logs and the monitoring of rest/activity cycles to compare the effect of road traffic noise on child and parent sleep (Ohrstrom et al., 2006). An exposure-response relationship was found for sleep quality and daytime sleepiness for children. While this suggests effects of noise on children's sleep disturbance, it is difficult to generalize from one study. Davies (2012) discusses how a study in France among 10-year-old schoolchildren showed that school noise exposure was associated with higher cortisol levels, indicative of a stress reaction; these findings are supported by a Swedish study that found increased prevalence of reduced diurnal cortisol variability in relation with classroom L_{eq} during school day noise levels of between 59 and 87 dBA.

1.3.8 Property Values

Noise, along with many other conditions, (i.e., location, number of rooms, crime rate, school district) can affect the value of homes. Economic studies of property values based on selling prices and noise have been conducted to find a direct relation. Studies of the effects of aviation noise on property values are highly complex due to differing community environments, market conditions, and methodological approaches, so study results generally range from some negative impacts to significant negative impacts. However, studies that considered positive aspects of airport accessibility have found net positive impacts on property values, while others found poorly informed buyers often bid higher prices in noise-impacted areas, only to potentially be disappointed after purchase (ACRP, 2008). The value-noise relation is usually presented as the Noise Depreciation Index (NDI), or Noise Sensitivity Depreciation Index, for the percent loss of value per dB (measured by the DNL metric). An early study by Nelson (1978) at three airports found an NDI of 1.8 to 2.3 percent per dB. Nelson also noted a decline in NDI over time, which he theorized could be due to either a change in population or the increase in commercial value of the property near airports. Crowley (1973) reached a similar conclusion. A larger study by Nelson (1980) studying property values near 18 airports found an NDI from 0.5 to 0.6 percent per dB.

In a review of property value studies, Newman and Beattie (1985) found a range of NDI from 0.2 to 2 percent per dB. They noted that many factors other than noise affected values. These socioeconomic factors include size of house, number of rooms per house, repair of the house, distance from amenities and business districts, and demographics.

Frankel (1991) conducted surveys of 200 realtors and 70 appraisers in 35 suburban communities near Chicago O'Hare International Airport and found that a significant segment of buyers lacked adequate information about the noise environment and often overbid, only to be disappointed after purchase. Frankel classified noise-affected property owners into two groups: one that moved to the location while the environment was quiet but later became noise-impacted and another that purchased from a previous owner while the property was already noise impacted. Frankel concluded that the former group members bore the true financial burden of airport noise.

Fidell et al. (1996) studied the influence of aircraft noise on actual sale prices of residential properties in the vicinity of a military base in Virginia and one in Arizona. They found no meaningful effect on home values. Their results may have been affected by non-noise factors, especially the wide differences in homes between the two study areas.

Tomkins (1998) conducted a study of the residential areas near Manchester Airport, England, and showed that when using the Noise and Number Index (no longer used but similar to DNL), there was no significant negative relationship between noise and property values. When L_{eq} measure was analyzed, fewer properties are included, but the most noise-blighted are identified. Ultimately, the proximity to the airport had a significant impact and was found to be a more important factor of property values than noise. This could be that potential buyers were more likely to be aware of potentially negative noise impacts when properties were closest to airports and much less aware at further distances.

Lipscomb (2003) analyzed the City of College Park, Georgia, and found that noise did not significantly affect the values of residential properties. Lipscomb concluded that local residents were more accepting

of noise because many were employed in airport-related occupations, so the proximity provided offsetting benefits, such as short work commutes.

Recent studies of noise effects on property values have recognized the need to account for non-noise factors. Nelson (2004) analyzed data from 33 airports and discussed the need to account for those factors and the need for careful statistics. His analysis showed NDI from 0.3 to 1.5 percent per dB, with an average of about 0.65 percent per dB. Nelson (2007) and Andersson et al. (2013) discuss statistical modeling in more detail.

Enough data are available to conclude that aircraft noise has a real effect on property values. This effect falls in the range of 0.2 to 2.0 percent per dB, with the average on the order of 0.5 percent per dB. The actual value varies from location to location, and it is very often small compared to non-noise factors such as location, market conditions, neighborhood characteristics, and property age, size, and amenities.

1.3.9 Noise-Induced Vibration Effects on Structures and Humans

The sound from an aircraft overflight travels from the exterior to the interior of a house in one of two ways: through the solid structural elements or directly through the air. Figure M-13 illustrates the sound transmission through a wall constructed with a brick exterior, stud framing, interior finished wall, and absorbent material in the cavity. The sound transmission starts with noise impinging on the wall exterior. Some of this sound energy will be reflected away, and some will make the wall vibrate. The vibrating wall radiates sound into the airspace, which in turn sets the interior finished surface vibrating, with some energy lost in the airspace. This surface then radiates sound into the dwelling interior. As the figure shows, vibrational energy also bypasses the air cavity by traveling through the studs and edge connections.

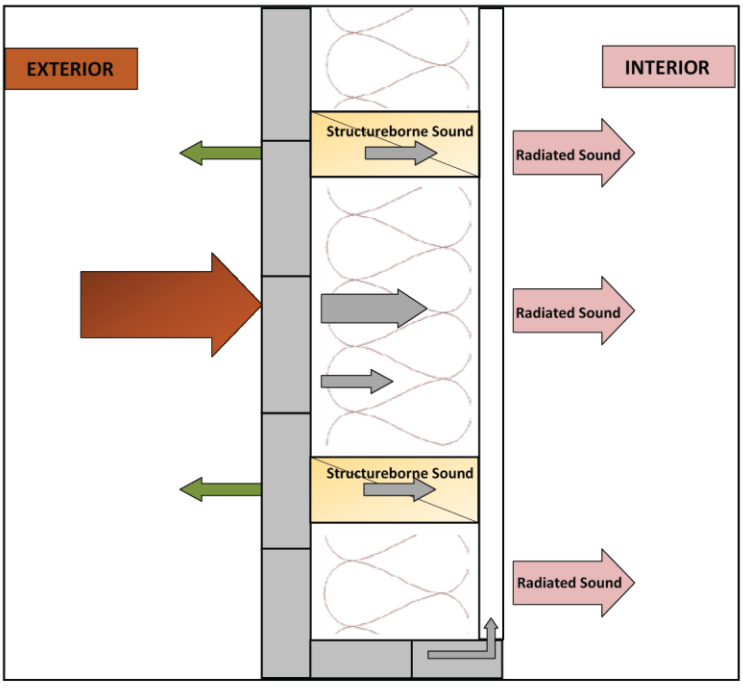


Figure M-13 Depiction of Sound Transmission through Built Construction

High noise levels can cause buildings to vibrate. If noise levels are high enough, building components can be damaged. The most sensitive components of a building are the windows, followed by plaster walls and ceilings. Possibility of damage depends on the sound pressures levels and the resonances of the building. While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies, in general, only sounds lasting more than one second at greater than an unweighted sound level of 130 dB in the 1 Hz to 1,000 Hz frequency range are potentially damaging to structural components (CHABA, 1977; von Gierke and Ward, 1991). Sound levels from normal aircraft operations are typically much less than 130 dB. Even sounds from low-altitude flyovers of heavy aircraft do not reach the potential for damage (Sutherland, 1990).

Noise-induced structural vibration may cause annoyance to dwelling occupants because of induced secondary vibrations, or "rattle," of objects--hanging pictures, dishes, plaques, and bric-a-brac--within the dwelling. Loose windowpanes may also vibrate noticeably when exposed to high levels of airborne noise, causing homeowners to fear breakage. In general, rattling occurs at unweighted sound levels that last for several seconds at greater than 110 dB.

A field study conducted by Schomer and Neathammer (1985, 1987) examined the role of structural vibration and rattle in human response to helicopter noise. It showed that human response is strongly and negatively influenced when the noise induces noticeable vibration and rattles in the house structure. The A-frequency weighting was adequate to assess community response to helicopter noise when no vibration or rattle was induced. When rattle or vibrations were induced by the helicopter noise, however, A-weighting alone did not assess the community response adequately, such that significant corrections from 12 dB (for little vibration or rattles) to 20 dB (high level of vibration or rattles) needed to be applied for subjects indoors. It was also found that the presence or absence of high-level noise-induced vibration and rattles was strongly dependent on the helicopter's slant distance. It was recommended that no housing or noise-sensitive land uses be located in zones where high levels of vibration or rattle are induced by helicopter noise.

Community reactions to conventional helicopter noise from low numbers of operations for two helicopter types were studied by Fields and Powell (1987). Using resident interviews in combination with controlled helicopter operations, the authors obtained relations between the annoyance score and noise exposure for short-term (9-hour daytime) periods. It was determined that annoyance increased steadily with noise exposure measured in L_{eq} from 45 to 60 dBA for that period. Annoyance response in terms of percentage annoyed was also presented on this scale for various annoyance rating values. The shape of these curves is similar to the well-known dose-response relationship (Schultz curve) for general transportation noise but relates to only the 9-hour daytime period and with no direct comparison with long-term noise exposure.

In a later review of human response to aircraft noise and induced building vibration, Powell and Shepherd (1989) also indicate that in aircraft noise surveys, the annoyance scores are on average greater when vibration is detected than with no vibration detected. Based on the results of the study by Fields and Powell (1987), they conclude, however, that no effect of increased annoyance was found for cases where the helicopter noise level and slant distance were such that appreciable rattle was expected to occur, in contrast to the results of Schomer and Neathammer (1987). Powell and Shepherd (1989) also quote a laboratory study (Cawthorn et al., 1978) in which the sound of rattling glassware added to the aircraft flyover noises but did not increase the level of annoyance.

Community annoyance in the vicinity of airports due to noise-induced vibration and rattle resulting from aircraft ground operations was studied by Fidell et al. (1999) and summarized in the Minneapolis-St. Paul International Airport Low Frequency Noise (LFN) Expert Panel Report (Sutherland et al., 2000). These field surveys of operations in the vicinity of a major international airport indicated that low-frequency aircraft noise can lead to secondary vibration and rattle in residential structures, which may significantly increase annoyance. These studies, however, have been criticized (FICAN, 2002) due to the absence of direct measurements of vibration in support of the findings on the presence of perceptible vibration and rattle. These issues were further addressed by Hodgdon et al. (2007). It was confirmed that the highest levels of noise near the runway during start-of-takeoff-roll and acceleration and during thrust reversal are at frequencies below 200 Hz. It was also found that aircraft noise exposures that contained audible rattling were not the most annoying, likely because the rattle content was audible but not loud compared to the overall noise content. This result is consistent with an earlier study of human response to aircraft noise and induced building vibration (Powell and Shepherd, 1989).

In the assessment of vibration on humans, the following factors determine whether a person will perceive and possibly react to building vibrations:

1. Type of excitation: steady state, intermittent, or impulsive vibration
2. Frequency of the excitation. ISO standard 2631-2 (ISO, 1989) recommends a frequency range of 1 to 80 Hz for the assessment of vibration on humans
3. Orientation of the body with respect to the vibration
4. The use of the occupied space (i.e., residential, workshop, hospital)
5. Time of day

Table M-6 lists the whole-body vibration criteria from ISO 2631-2 for one-third octave frequency bands from 1 to 80 Hz.

Table M-6 Vibration Criteria for the Evaluation of Human Exposure to Whole-Body Vibration - RMS Acceleration (m/s/s)

Frequency (Hz)	*Combined Criteria Base Curve*	*Residential Night*	*Residential Day*
1.00	0.0036	0.0050	0.0072
1.25	0.0036	0.0050	0.0072
1.60	0.0036	0.0050	0.0072
2.00	0.0036	0.0050	0.0072
2.50	0.0037	0.0052	0.0074
3.15	0.0039	0.0054	0.0077
4.00	0.0041	0.0057	0.0081
5.00	0.0043	0.0060	0.0086
6.30	0.0046	0.0064	0.0092
8.00	0.0050	0.0070	0.0100
10.00	0.0063	0.0088	0.0126
12.50	0.0078	0.0109	0.0156
16.00	0.0100	0.0140	0.0200
20.00	0.0125	0.0175	0.0250
25.00	0.0156	0.0218	0.0312
31.50	0.0197	0.0276	0.0394
40.00	0.0250	0.0350	0.0500

Frequency (Hz)	*Combined Criteria Base Curve*	*Residential Night*	*Residential Day*
50.00	0.0313	0.0438	0.0626
63.00	0.0394	0.0552	0.0788
80.00	0.0500	0.0700	0.1000

Source: ISO, 1989.

1.3.10 Noise Effects on Terrain

It has been suggested that noise levels associated with low-flying aircraft may affect the terrain under the flight path by disturbing fragile soil or snow, especially in mountainous areas, thereby causing landslides or avalanches. There are no known instances of such events. It is improbable that such effects would result from routine subsonic aircraft operations.

1.3.11 Noise Effects on Historical and Archaeological Sites

Historic buildings and sites can have elements that are more structurally fragile than conventional buildings. Aircraft noise may affect such sites more severely than newer, modern structures. In older structures, seemingly insignificant surface cracks caused by vibrations from aircraft noise may lead to greater damage from natural forces (Hanson et al., 1991). There are few scientific studies of such effects to provide guidance for their assessment.

One study involved measurements of noise and vibration in a restored plantation house, originally built in 1795. It is located 1,500 feet from the centerline at the departure end of Runway 19L at Washington Dulles International Airport. The aircraft generating the sound measured was the Concorde. There was special concern for the building's windows because roughly half of the house's 324 panes were original. No instances of structural damage were found. Interestingly, despite the high levels of noise during Concorde takeoffs, the induced structural vibration levels were actually less than those induced by touring groups and vacuum cleaning (Wesler, 1977).

As for conventional structures, noise exposure levels for normally compatible land uses should also be protective of historic and archaeological sites. Unique sites should, of course, be analyzed for specific exposure.

1.3.12 Effects on Domestic Animals and Wildlife

Hearing is critical to an animal's ability to react, compete, reproduce, hunt, forage, and survive in its environment. While the existing literature does include studies on possible effects of jet aircraft noise and sonic booms on wildlife, there appears to have been little concerted effort in developing quantitative comparisons of aircraft noise effects on normal auditory characteristics. Behavioral effects have been relatively well described, but the larger ecological context issues, and the potential for drawing conclusions regarding effects on populations, has not been well developed.

The relationships between potential auditory/physiological effects and species interactions with their environments are not well understood. Manci et al. (1988) assert that the consequences that physiological effects may have on behavioral patterns are vital to understanding the long-term effects of noise on wildlife. Questions regarding the effects (if any) on predator-prey interactions, reproductive success, and intra-inter specific behavior patterns remain.

The following discussion provides an overview of the existing literature on noise effects (particularly jet aircraft noise) on animal species. The literature reviewed here involves those studies that have focused on the observations of the behavioral effects that jet aircraft and sonic booms have on animals.

A great deal of research was conducted in the 1960s and 1970s on the effects of aircraft noise on the public and the potential for adverse ecological impacts. These studies were largely completed in response to the increase in air travel and as a result of the introduction of supersonic jet aircraft.

According to Manci et al. (1988), the foundation of information created from that focus does not necessarily correlate or provide information specific to the impacts to wildlife in areas overflown by aircraft at supersonic speed or at low altitudes.

The abilities to hear sounds and noise and to communicate assist wildlife in maintaining group cohesiveness and survivorship. Social species communicate by transmitting calls of warning, introduction, and other types that are subsequently related to an individual's or group's responsiveness.

Animal species differ greatly in their responses to noise. Noise effects on domestic animals and wildlife are classified as primary, secondary, and tertiary. Primary effects are direct, physiological changes to the auditory system, and these most likely include the masking of auditory signals. Masking is defined as the inability of an individual to hear important environmental signals that may arise from mates, predators, or prey. There is some potential that noise could disrupt a species' ability to communicate or could interfere with behavioral patterns (Manci et al., 1988). Although the effects are likely temporary, aircraft noise may cause masking of auditory signals within exposed faunal communities. Animals rely on hearing to avoid predators, obtain food, and communicate with, and attract, other members of their species. Aircraft noise may mask or interfere with these functions. Other primary effects, such as ear drum rupture or temporary and permanent hearing threshold shifts, are not as likely, given the subsonic noise levels produced by aircraft overflights.

Secondary effects may include non-auditory effects such as stress and hypertension; behavioral modifications; interference with mating or reproduction; and impaired ability to obtain adequate food, cover, or water. Tertiary effects are the direct result of primary and secondary effects, and these include population decline and habitat loss. Most of the effects of noise are mild enough that they may never be detectable as variables of change in population size or population growth against the background of normal variation (Bowles, 1995). Other environmental variables (e.g., predators, weather, changing prey base, ground-based disturbance) also influence secondary and tertiary effects, and confound the ability to identify the ultimate factor in limiting productivity of a certain nest, area, or region (Smith et al., 1988). Overall, the literature suggests that species differ in their response to various types, durations, and sources of noise (Manci et al., 1988).

Many scientific studies have investigated the effects of aircraft noise on wildlife, and some have focused on wildlife "flight" due to noise. Animal responses to aircraft are influenced by many variables, including size, speed, proximity (both height above the ground and lateral distance), engine noise, color, flight profile, and radiated noise. The type of aircraft (e.g., fixed wing versus rotor-wing [helicopter]) and type of flight mission may also produce different levels of disturbance, with varying animal responses (Smith et al., 1988). Consequently, it is difficult to generalize animal responses to noise disturbances across species, especially with respect to habituation and ability to adapt to change.

One result of the Manci et al. (1988) literature review was the conclusion that, while behavioral observation studies were relatively limited, a general behavioral reaction in animals from exposure to aircraft noise is the startle response. The intensity and duration of the startle response appears to be dependent on which species is exposed, whether a group or an individual is exposed, and whether there have been some previous exposures. Responses range from flight, trampling, stampeding, jumping, or running, to movement of the head in the apparent direction of the noise source. Manci et al. (1988) reported that the literature indicated that avian species may be more sensitive to aircraft noise than mammals.

1.3.12.1 Domestic Animals

Although some studies report that the effects of aircraft noise on domestic animals is inconclusive, a majority of the literature reviewed indicates that domestic animals exhibit some behavioral responses to military overflights but generally seem to habituate to the disturbances over a period of time. Mammals in particular appear to react to noise at sound levels higher than 90 dB, with responses including the startle response, freezing (i.e., becoming temporarily stationary), and fleeing from the sound source.

Many studies on domestic animals suggest that some species appear to acclimate to some forms of sound disturbance (Manci et al., 1988). Some studies have reported such primary and secondary effects as reduced milk production and rate of milk release, increased glucose concentrations, decreased levels of hemoglobin, increased heart rate, and a reduction in thyroid activity. These latter effects appear to represent a small percentage of the findings occurring in the existing literature.

Some reviewers have indicated that earlier studies and claims by farmers linking adverse effects of aircraft noise on livestock, did not necessarily provide clear-cut evidence of cause and effect (Cottereau, 1978). In contrast, many studies conclude that there is no evidence that aircraft overflights affect feed intake, growth, or production rates in domestic animals.

Cattle

In response to concerns about overflight effects on pregnant cattle, milk production, and cattle safety, the U.S. Air Force prepared a handbook for environmental protection that summarized the literature on the impacts of low-altitude flights on livestock (and poultry) and includes specific case studies conducted in numerous airspaces across the country. Adverse effects have been found in a few studies but have not been reproduced in other similar studies. One such study, conducted in 1983, suggested that 2 of 10 cows in late pregnancy aborted after showing rising estrogen and falling progesterone levels. These increased hormonal levels were reported as being linked to 59 aircraft overflights. The remaining eight cows showed no changes in their blood concentrations and calved normally. A similar study reported abortions occurred in three out of five pregnant cattle after exposing them to flyovers by six different aircraft. Another study suggested that feedlot cattle could stampede and injure themselves when exposed to low-level overflights (U.S. Air Force, 1994a).

A majority of the studies reviewed suggest that there is little or no effect of aircraft noise on cattle. Studies presenting adverse effects to domestic animals have been limited. A number of studies (Parker and Bayley, 1960; Casady and Lehmann, 1967; Kovalcik and Sottnik, 1971) investigated the effects of jet aircraft noise and sonic booms on the milk production of dairy cows. Through the compilation and examination of milk production data from areas exposed to jet aircraft noise and sonic boom events, it

was determined that milk yields were not affected. This was particularly evident in those cows that had been previously exposed to jet aircraft noise.

A study examined the causes of 1,763 abortions in Wisconsin dairy cattle over a 1-year time period, and none were associated with aircraft disturbances (U.S. Air Force, 1993). In 1987, researchers contacted seven livestock operators for production data, and no effects of low-altitude and supersonic flights were noted. Of the 43 cattle previously exposed to low-altitude flights, three showed a startle response to an F/A-18 aircraft flying overhead at 500 feet above ground level (AGL) and 400 knots by running less than 10 meters. They resumed normal activity within 1 minute (U.S. Air Force, 1994a). Beyer (1983) found that helicopters caused more reaction than other low-aircraft overflights and that helicopters at 30 to 60 feet overhead did not affect milk production and pregnancies of 44 cows in a 1964 study (U.S. Air Force, 1994a).

Additionally, Beyer (1983) reported that five pregnant dairy cows in a pasture did not exhibit fright-flight tendencies or disturb their pregnancies after being overflown by 79 low-altitude helicopter flights and four low-altitude, subsonic jet aircraft flights. A 1956 study found that the reactions of dairy and beef cattle to noise from low-altitude, subsonic aircraft were similar to those caused by paper blowing about, unfamiliar persons, or other moving objects (U.S. Air Force, 1994a).

In a report to Congress, the U. S. Forest Service concluded that "evidence both from field studies of wild ungulates and laboratory studies of domestic stock indicate that the risks of damage are small (from aircraft approaches of 50-100 m), as animals take care not to damage themselves (U.S. Forest Service, 1992). If animals are overflown by aircraft at altitudes of 50-100 m, there is no evidence that mothers and young are separated, that animals collide with obstructions (unless confined) or that they traverse dangerous ground at too high a rate." These varied study results suggest that, although the confining of cattle could magnify animal response to aircraft overflight, there is no proven cause-and-effect link between startling cattle from aircraft overflights and abortion rates or lower milk production.

Horses

Horses have also been observed to react to overflights of jet aircraft. Several of the studies reviewed reported a varied response of horses to low-altitude aircraft overflights. Observations made in 1966 and 1968 noted that horses galloped in response to jet flyovers (U.S. Air Force, 1993). Bowles (1995) cites Kruger and Erath as observing horses exhibiting intensive flight reactions, random movements, and biting/kicking behavior. However, no injuries or abortions occurred, and there was evidence that the mares adapted somewhat to the flyovers over the course of a month (U.S. Air Force, 1994a). Although horses were observed noticing the overflights, it did not appear to affect either survivability or reproductive success. There was also some indication that habituation to these types of disturbances was occurring.

LeBlanc et al. (1991) studied the effects of F-14 jet aircraft noise on pregnant mares. They specifically focused on any changes in pregnancy success, behavior, cardiac function, hormone production, and rate of habituation. Their findings reported observations of "flight-fright" reactions, which caused increases in heart rates and serum cortisol concentrations. The mares, however, did habituate to the noise. Levels of anxiety and mass body movements were the highest after initial exposure, with intensities of responses decreasing thereafter. There were no differences in pregnancy success when compared to a control group.

Swine

Generally, the literature findings for swine appear to be similar to those reported for cows and horses. While there are some effects from aircraft noise reported in the literature, these effects are minor.

Studies of continuous noise exposure (i.e., 6 hours and 72 hours of constant exposure) reported influences on short-term hormonal production and release. Additional constant exposure studies indicated the observation of stress reactions, hypertension, and electrolyte imbalances (Dufour, 1980). A study by Bond et al. (1963) demonstrated no adverse effects on the feeding efficiency, weight gain, ear physiology, or thyroid and adrenal gland condition of pigs subjected to observed aircraft noise.

Observations of heart rate increase were recorded, noting that cessation of the noise resulted in the return to normal heart rates. Conception rates and offspring survivorship did not appear to be influenced by exposure to aircraft noise.

Similarly, simulated aircraft noise at levels of 100 to 135 dB had only minor effects on the rate of feed utilization, weight gain, food intake, or reproduction rates of boars and sows exposed, and there were no injuries or inner ear changes observed (Gladwin et al., 1988; Manci et al., 1988).

Domestic Fowl

According to a 1994 position paper by the U.S. Air Force on effects of low-altitude overflights (below 1,000 feet) on domestic fowl, overflight activity has negligible effects (U.S. Air Force, 1994b). The paper did recognize that given certain circumstances, adverse effects can be serious. Some of the effects can be panic reactions, reduced productivity, and effects on marketability (e.g., bruising of the meat caused during “pile-up” situations).

The typical reaction of domestic fowl after exposure to sudden, intense noise is a short-term startle response. The reaction ceases as soon as the stimulus is ended, and within a few minutes all activity returns to normal. More severe responses are possible depending on the number of birds, the frequency of exposure, and environmental conditions. Large flocks of birds, and birds not previously exposed, are more likely to pile up in response to a noise stimulus (U.S. Air Force, 1994b). According to studies and interviews with growers, it is typically the previously unexposed birds that incite panic crowding, and the tendency to do so is markedly reduced within five exposures to the stimulus (U.S. Air Force, 1994b). This suggests that the birds habituate relatively quickly. Egg productivity was not adversely affected by infrequent noise bursts, even at exposure levels as high as 120 to 130 dB.

Between 1956 and 1988, there were 100 recorded claims against the Navy for alleged damage to domestic fowl. The number of claims averaged three per year, with peak numbers of claims following publications of studies on the topic in the early 1960s. Many of the claims were disproved or did not have sufficient supporting evidence. The claims were filed for the following alleged damages: 55 percent for panic reactions, 31 percent for decreased production, 6 percent for reduced hatchability, 6 percent for weight loss, and less than 1 percent for reduced fertility (U.S. Air Force, 1994b).

The review of the existing literature suggests that there has not been a concerted or widespread effort to study the effects of aircraft noise on commercial turkeys. One study involving turkeys examined the differences between simulated versus actual overflight aircraft noise, turkey responses to the noise, weight gain, and evidence of habituation (Bowles et al., 1990). Findings from the study suggested that turkeys habituated to jet aircraft noise quickly, that there were no growth-rate differences between the

experimental and control groups, and that there were some behavioral differences that increased the difficulty in handling individuals within the experimental group.

Low-altitude overflights were shown to cause turkey flocks that were kept inside turkey houses to occasionally pile up and experience high mortality rates due to the aircraft noise and a variety of disturbances unrelated to aircraft (U.S. Air Force, 1994b).

1.3.12.2 Wildlife

Studies on the effects of overflights and sonic booms on wildlife have been focused mostly on avian species and on ungulates such as caribou (*Rangifer tarandus*) and bighorn sheep (*Ovis canadensis*). Few studies have been conducted on marine mammals, small terrestrial mammals, reptiles, amphibians, and carnivorous mammals. Generally, species that live entirely below the surface of the water have also been ignored due to the fact they do not experience the same level of sound as terrestrial species (National Park Service, 1994). Wild ungulates appear to be much more sensitive to noise disturbance than domestic livestock. This may be due to previous exposure to disturbances. One common factor appears to be that low-altitude flyovers seem to be more disruptive in terrain where there is little cover (Manci et al., 1988).

Mammals

Terrestrial Mammals

Studies of terrestrial mammals have shown that noise levels of 120 dB can damage mammals' ears, and levels at 95 dB can cause temporary loss of hearing acuity. Noise from aircraft has affected other large carnivores by causing changes in home ranges, foraging patterns, and breeding behavior. One study recommended that aircraft not be allowed to fly at altitudes below 2,000 feet AGL over important grizzly bear (*Ursus arctos horribilis*) and polar bear (*Ursus maritimus*) habitat. Wolves (*Canis lupus*) have been frightened by low-altitude flights that were 25 to 1,000 feet AGL. However, wolves have been found to adapt to aircraft overflights and noise as long as they were not being hunted from aircraft (Dufour, 1980).

Wild ungulates (American bison [*Bison bison*], caribou, bighorn sheep) appear to be much more sensitive to noise disturbance than domestic livestock (Weisenberger et al., 1996). Behavioral reactions may be related to the past history of disturbances by humans and aircraft. Common reactions of reindeer kept in an enclosure exposed to aircraft noise disturbance were a slight startle response, rising of the head, pricking ears, and scenting of the air. Panic reactions and extensive changes in behavior of individual animals were not observed. Caribou in Alaska exposed to fixed-wing aircraft and helicopters exhibited running and panic reactions when overflights were at an altitude of 200 feet or less. The reactions decreased with increased altitude of overflights, and, with more than 500 feet in altitude, the panic reactions stopped. Also, smaller groups reacted less strongly than larger groups. One negative effect of the running and avoidance behavior is increased expenditure of energy. For a 90-kilogram animal, the calculated expenditure due to aircraft harassment is 64 kilocalories per minute when running and 20 kilocalories per minute when walking. When conditions are favorable, this expenditure can be counteracted with increased feeding; however, during harsh winter conditions, this may not be possible. Incidental observations of wolves and bears exposed to fixed-wing aircraft and helicopters in the northern regions suggested that wolves are less disturbed than wild ungulates, while grizzly bears showed the greatest response of any animal species observed (Weisenberger et al., 1996).

It has been proven that low-altitude overflights do induce stress in animals. Increased heart rates, an indicator of excitement or stress, have been found in pronghorn antelope (*Antilocapra Americana*), elk (*Cervus Canadensis*), and bighorn sheep. As such reactions occur naturally as a response to predation, infrequent overflights may not, in and of themselves, be detrimental. However, flights at high frequencies over a long period of time may cause harmful effects. The consequences of this disturbance, while cumulative, are not additive. It may be that aircraft disturbance may not cause obvious and serious health effects, but coupled with a harsh winter, it may have an adverse impact. Research has shown that stress induced by other types of disturbances produces long-term decreases in metabolism and hormone balances in wild ungulates.

Behavioral responses can range from mild to severe. Mild responses include head raising, body shifting, or turning to orient toward the aircraft. Moderate disturbance may be nervous behaviors, such as trotting a short distance. Escape is the typical severe response.

Marine Mammals

The physiological composition of the ear in aquatic and marine mammals exhibits adaptation to the aqueous environment. These differences (relative to terrestrial species) manifest themselves in the auricle and middle ear (Manci et al., 1988). Some mammals use echolocation to perceive objects in their surroundings and to determine the directions and locations of sound sources (Simmons, 1983 in Manci et al. 1988).

In 1980, the Acoustical Society of America held a workshop to assess the potential hazard of manmade noise associated with proposed Alaska arctic (North Slope-Outer Continental Shelf) petroleum operations on marine wildlife and to prepare a research plan to secure the knowledge necessary for proper assessment of noise impacts (Acoustical Society of America, 1980). Since 1980, it appears that research on responses of aquatic mammals to aircraft noise and sonic booms has been limited. Research conducted on northern fur seals (*Callorhinus ursinus*), sea lions, and ringed seals (*Pusa hispida*) indicated that there are some differences in how various animal groups receive frequencies of sound. It was observed that these species exhibited varying intensities of a startle response to airborne noise, and this response was habituated over time. The rates of habituation appeared to vary with species, populations, and demographics (age, sex). Time of day of exposure was also a factor (Myrberg, 1978 in Manci et al., 1988).

Studies were conducted near the Channel Islands near the area where the space shuttle launches occur. It was found that there were some response differences between species relative to the loudness of sonic booms. Those booms that were between 80 and 89 dB caused a greater intensity of startle reactions than lower-intensity booms at 72 to 79 dB. However, the duration of the startle responses to louder sonic booms was shorter (Jehl and Cooper, 1980).

Jehl and Cooper (1980) indicated that low-flying helicopters, loud boat noises, and humans were the most disturbing to pinnipeds. According to the research, while the space shuttle launch and associated operational activity noises have not had a measurable effect on the pinniped population, it also suggests that there was a greater “disturbance level” exhibited during launch activities. There was a recommendation to continue observations for behavioral effects and to perform long-term population monitoring (Jehl and Cooper, 1980).

The continued presence of single or multiple noise sources could cause marine mammals to leave a preferred habitat. However, it does not appear likely that overflights could cause migration from suitable habitats because aircraft noise over water is mobile and would not persist over any particular area. Aircraft noise, including supersonic noise, currently occurs in the overwater airspace of Eglin, Tyndall, and Langley Air Force bases from sorties predominantly involving jet aircraft. Survey results reported in Davis et al. (2000) indicate that cetaceans (i.e., dolphins) occur under all of the Eglin and Tyndall marine airspace. The continuing presence of dolphins (family Delphinidae) indicates that aircraft noise does not discourage use of the area and apparently does not harm the locally occurring population.

In a summary by the National Park Service (1994) on the effects of noise on marine mammals, it was determined that gray whales (*Eschrichtius robustus*) and harbor porpoises (*Phocoena phocoena*) showed no outward behavioral response to aircraft noise or overflights. Bottlenose dolphins (*Tursiops truncatus*) showed no obvious reaction in a study involving helicopter overflights at 1,200 to 1,800 feet above the water. Neither did they show any reaction to survey aircraft unless the shadow of the aircraft passed over them, at which point there was some observed tendency to dive (Richardson et al., 1995). Other anthropogenic noises in the marine environment from ships and pleasure craft may have more of an effect on marine mammals than aircraft noise (U.S. Air Force, 2000). The noise effects on cetaceans appear to be somewhat attenuated by the air/water interface. The cetacean fauna along the coast of California have been subjected to sonic booms from military aircraft for many years without apparent adverse effects (Tetra Tech, Inc., 1997).

Manatees (*Trichechus spp.*) appear relatively unresponsive to human-generated noise to the point that they are often suspected of being deaf to oncoming boats (although their hearing is actually similar to that of pinnipeds [Bullock et al., 1980]). Little is known about the importance of acoustic communication to manatees, although they are known to produce at least 10 different types of sounds and are thought to have sensitive hearing (Richardson et al., 1995). Manatees continue to occupy canals near Miami International Airport, which suggests they have become habituated to human disturbance and noise (Metro-Dade County, 1995). Since manatees spend most of their time below the surface and do not startle readily, no effect of aircraft overflights on manatees would be expected (Bowles et al., 1993).

Birds

Auditory research conducted on birds indicates that they fall between reptiles and mammals relative to hearing sensitivity. According to Dooling (1978), within the range of 1,000 to 5,000 Hz, birds show a level of hearing sensitivity similar to that of the more sensitive mammals. In contrast to mammals, bird sensitivity falls off at a greater rate with increasing and decreasing frequencies. Passive observations and studies examining aircraft bird strikes indicate that birds nest and forage near airports. Aircraft noise in the vicinity of commercial airports apparently does not inhibit bird presence and use.

High-noise events (like a low-altitude aircraft overflight) may cause birds to engage in escape or avoidance behaviors, such as flushing from perches or nests (Ellis et al., 1991). These activities impose an energy cost on the birds that, over the long term, may affect survival or growth. In addition, the birds may spend less time engaged in necessary activities like feeding, preening, or caring for their young because they spend time in noise-avoidance activity. However, the long-term significance of noise-related impacts is less clear. Several studies on nesting raptors have indicated that birds become

habituated to aircraft overflights and that long-term reproductive success is not affected (Ellis et al., 1991; Grubb and King, 1991). Threshold noise levels for significant responses range from 62 dB for the Pacific black brant (*Branta bernicla nigricans*) to 85 dB for the crested tern (*Thalasseus bergii*) (Brown, 1990; Ward and Stehn, 1990).

Songbirds were observed to become silent prior to the onset of a sonic boom event (F-111 jets), followed by "raucous discordant cries." There was a return to normal singing within 10 seconds after the boom (Higgins, 1974 in Manci et al., 1988). Ravens (*Corvus corax*) responded by emitting protestation calls, flapping their wings, and soaring.

Manci et al. (1988) reported a reduction in reproductive success in some small territorial passerines (i.e., perching birds or songbirds) after exposure to low-altitude overflights. However, it has been observed that passerines are not driven any great distance from a favored food source by a nonspecific disturbance, such as aircraft overflights (U.S. Forest Service, 1992). Further study may be warranted.

A cooperative study between the DoD and the U.S. Fish and Wildlife Service (USFWS) assessed the response of the red-cockaded woodpecker (*Leuconotopicus borealis*) to a range of military training noise events, including artillery, small arms, helicopter, and maneuver noise (Pater et al., 1999). The project findings show that the red-cockaded woodpecker successfully acclimates to military noise events.

Depending on the noise level that ranged from innocuous to very loud, the birds responded by flushing from their nest cavities. When the noise source was closer and the noise level was higher, the number of flushes increased proportionately. In all cases, however, the birds returned to their nests within a relatively short period of time (usually within 12 minutes). Additionally, the noise exposure did not result in any mortality or statistically detectable changes in reproductive success (Pater et al., 1999).

Red-cockaded woodpeckers did not flush when artillery simulators were more than 122 meters away and SELs were 70 dB.

Lynch and Speake (1978) studied the effects of both real and simulated sonic booms on the nesting and brooding eastern wild turkey (*Meleagris gallopavo silvestris*) in Alabama. Hens at four nest sites were subjected to between eight and 11 combined real and simulated sonic booms. All tests elicited similar responses, including quick lifting of the head and apparent alertness for 10 to 20 seconds. No apparent nest failure occurred as a result of the sonic booms. Twenty-one brood groups were also subjected to simulated sonic booms. Reactions varied slightly between groups, but the largest percentage of groups reacted by standing motionless after the initial blast. Upon the sound of the boom, the hens and poults fled until reaching the edge of the woods (approximately 4 to 8 meters). Afterward, the poults resumed feeding activities while the hens remained alert for a short period of time (approximately 15 to 20 seconds). In no instances were poults abandoned, and they did not scatter and become lost. Every observation group returned to normal activities within a maximum of 30 seconds after a blast.

Bald Eagle

A study by Grubb and King (1991) on the reactions of the bald eagle (*Haliaeetus leucocephalus*) to human disturbances showed that terrestrial disturbances elicited the greatest response, followed by aquatic (i.e., boats) and aerial disturbances. The disturbance regime of the area where the study occurred was predominantly characterized by aircraft noise. The study found that pedestrians consistently caused responses that were greater in both frequency and duration. Helicopters elicited the

highest level of aircraft-related responses. Aircraft disturbances, although the most common form of disturbance, resulted in the lowest levels of response. This low response level may have been due to habituation; however, flights less than 170 meters away caused reactions similar to other disturbance types. Ellis et al. (1991) showed that eagles typically respond to the proximity of a disturbance, such as a pedestrian or aircraft within 100 meters, rather than the noise level. Fleischner and Weisberg (1986) stated that reactions of bald eagles to commercial jet flights, although minor (e.g., looking), were twice as likely to occur when the jets passed at a distance of 0.5 mile or less. They also noted that helicopters were four times more likely to cause a reaction than a commercial jet and 20 times more likely to cause a reaction than a propeller plane.

The USFWS advised Cannon Air Force Base that flights at or below 2,000 feet AGL from October 1 through March 1 could result in adverse impacts to wintering bald eagles (USFWS, 1998). However, Fraser et al. (1985) suggested that raptors habituate to overflights rapidly, sometimes tolerating aircraft approaches of 65 feet or less.

Golden Eagle

In its guidelines for aerial surveys, USFWS (Pagel et al., 2010) summarized past studies by stating that most golden eagles (*Aquila chrysaetos*) respond to survey aircraft (fixed- and rotary-wing) by remaining on their nests and continuing to incubate or roost. Surveys take place generally as close as 10 to 20 meters from cliffs (including hovering less than 30 seconds if necessary, to count eggs) and no farther than 200 meters from cliffs, depending on safety considerations (Pagel et al., 2010).

Grubb et al. (2007) experimented with multiple exposure to two helicopter types and concluded that flights with a variety of approach distances (800, 400, 200, and 100 meters) had no effect on golden eagle nesting success or productivity rates within the same year or on rates of renewed nesting activity the following year when compared to the corresponding data for the larger population of non-manipulated nest sites (Grubb et al., 2007). They found no significant, detrimental, or disruptive responses in 303 helicopter passes near eagles. In 227 AH-64 Apache helicopter experimental passes (considered twice as loud as a civilian helicopter also tested) at test distances of 0 to 800 meters from nesting golden eagles, 96 percent resulted in no more response than watching the helicopter pass. No greater reactions occurred until after hatching, when individual golden eagles exhibited five flatten and three fly behaviors at three nest sites. The flight responses occurred at approach distances of 200 meters or less. No evidence was found of an effect on subsequent nesting activity or success, despite many of the helicopter flights occurring during early courtship and nest repair. None of these responding pairs failed to successfully fledge young, except for one nest that fell later in the season.

Excited, startled, or avoidance reactions were never observed. Non-attending eagles or those perched away from the nests were more likely to fly than attending eagles but also with less potential consequence to nesting success (Grubb et al., 2007). Golden eagles appeared to become less responsive with successive exposures. Much of helicopter sound energy may be at a lower frequency than golden eagles can hear, thus reducing expected impacts. Grubb et al. (2007) found no relationship between helicopter sound levels and corresponding eagle ambient behaviors or limited responses, which occurred throughout recorded test levels (76.7 to 108.8 dB, unweighted). The authors thought that the lower than expected behavioral responses may be partially due to the fact that the golden eagles in the area appear acclimated to the current high levels of outdoor recreational, including aviation, activities.

Based on the results of this study, the authors recommended reduction of existing buffers around nest sites to 100 meters (325 feet) for helicopter activity.

Richardson and Miller (1997) reviewed buffers as protection for raptors against disturbance from ground-based human activities. No consideration of aircraft activity was included. They stressed a clear line of sight as an important factor in a raptor's response to a particular disturbance, with visual screening allowing a closer approach of humans without disturbing a raptor. A Geographical Information Systems (GIS)-assisted viewshed approach combined with a designated buffer zone distance was found to be an effective tool for reducing potential disturbance to golden eagles from ground-based activities (Richardson and Miller, 1997). They summarized recommendations that included a median 0.5-mile (800-meter) buffer (range = 200 to 1,600 m, n = 3) to reduce human disturbances (from ground-based activities such as rock climbing, shooting, vehicular activity) around active golden eagle nests from February 1 to August 1 based on an extensive review of other studies (Richardson and Miller, 1997).

Physical characteristics (i.e., screening by topography or vegetation) are important variables to consider when establishing buffer zones based on raptors' visual- and auditory-detection distances (Richardson and Miller, 1997).

Osprey

A study by Trimper et al. (1998), in Goose Bay, Labrador, Canada, focused on the reactions of nesting osprey (*Pandion haliaetus*) to military overflights by CF-18 Hornets. Reactions varied from increased alertness and focused observation of planes to adjustments in incubation posture. No overt reactions (e.g., startle response, rapid nest departure) were observed as a result of an overflight. Young nestlings crouched as a result of any disturbance until 1 to 2 weeks prior to fledging. Helicopters, human presence, float planes, and other ospreys elicited the strongest reactions from nesting ospreys. These responses included flushing, agitation, and aggressive displays. Adult osprey showed high nest occupancy rates during incubation regardless of external influences. The osprey observed occasionally stared in the direction of the flight before the flight was audible to the observers. The birds may have been habituated to the noise of the flights; however, overflights were strictly controlled during the experimental period. Strong reactions to float planes and helicopters may have been due to the slower flight and therefore longer duration of visual rather than noise-related stimuli.

Red-tailed Hawk

Anderson et al. (1989) conducted a study that investigated the effects of low-level helicopter overflights on 35 red-tailed hawk (*Buteo jamaicensis*) nests. Some of the nests had not been flown over prior to the study. The hawks that were naïve (i.e., not previously exposed) to helicopter flights exhibited stronger avoidance behavior (nine of 17 birds flushed from their nests) than those that had experienced prior overflights. The overflights did not appear to affect nesting success in either study group. These findings were consistent with the belief that red-tailed hawks habituate to low-level air traffic, even during the nesting period.

Upland Game Birds

Greater Sage-grouse. The greater sage-grouse (*Centrocercus urophasianus*) was recently designated as a candidate species for protection under the Endangered Species Act after many years of scrutiny and research (USFWS, 2010). This species is a widespread and characteristic species of the sagebrush ecosystems in the Intermountain West. Greater sage-grouse, like most bird species, rely on auditory signals as part of mating. Sage-grouse are known to select their leks based on acoustic properties and depend on auditory communication for mating behavior (Braun, 2006). Although little specific research has been completed to determine what, if any, effects aircraft overflight and sonic booms would have on the breeding behavior of this species, factors that may be important include season and time of day, altitude, frequency and duration of overflights, and frequency and loudness of sonic booms.

Booth et al. (2009) found, while attempting to count sage-grouse at leks (breeding grounds) using light sport aircraft at 150 meters (492 feet) to 200 meters (650 feet) AGL, that sage-grouse flushed from leks on 12 of 14 approaches when the airplane was within 656 to 984 feet (200 to 300 meters) of the lek. In the other two instances, male grouse stopped exhibiting breeding behavior and crouched but stayed on the lek. The time to resumption of normal behavior after disturbance was not provided in this study.

Strutting ceased around the time when observers on the ground heard the aircraft. The light sport aircraft could be safely operated at very low speed (68 kilometers per hour or 37 nautical miles per hour) and was powered by either a two-stroke or a four-stroke engine. It is unclear how the response to the slow-flying light sport aircraft used in the study would compare to overflight by military jets, operating at speeds 10 to 12 times as great as the aircraft used in the study. It is possible that response of the birds was related to the slow speed of the light sport aircraft causing it to resemble an aerial predator.

Other studies have found disturbance from energy operations, and other nearby development have adversely affected breeding behavior of greater sage-grouse (Holloran, 2005; Doherty, 2008; Walker et al., 2007; Harju et al., 2010). These studies do not specifically address overflights, do not isolate noise disturbance from other types of disturbance (e.g., visual, human presence), and do not generally provide noise levels or qualification of the noise source (e.g., continuous or intermittent, frequency, duration).

Because so few studies have been done on greater sage-grouse response to overflights or sonic booms, research on related species may be applicable. Observations on other upland game bird species include those on the behavior of four wild turkey (*Meleagris gallapavo*) hens on their nests during real and simulated sonic booms (Manci et al., 1988). Simulated sonic booms were produced by firing 5-centimeter mortar shells from a location 300 to 500 feet from the nest of each hen. Recordings of pressure for both types of booms measured 0.4 to 1.0 pounds per square foot at the observer's location.

Turkey hens exhibited only a few seconds of head alert behavior at the sound of the sonic boom. No hens were flushed off the nests, and productivity estimates revealed no effect from the booms. Twenty brood groups were also subjected to simulated sonic booms. In no instance did the hens desert any poults (young birds), and the poults did not scatter or desert the rest of the brood group. In every observation, the brood group returned to normal activity within 30 seconds after a simulated sonic boom. Similarly, researchers cited in Manci et al. (1988) observed no difference in hatching success of bobwhite quail (*Colinus virginianus*) exposed to simulated sonic booms of 100 to 250 micronewtons per square meter.

Migratory Waterfowl

Fleming et al. (1996) conducted a study of caged American black ducks (*Anas rubripes*) and found that noise had negligible energetic and physiologic effects on adult waterfowl. Measurements included body weight, behavior, heart rate, and enzymatic activity. Experiments also showed that adult ducks exposed to high noise events acclimated rapidly and showed no effects.

The study also investigated the reproductive success of captive ducks and indicated that duckling growth and survival rates at Piney Island, North Carolina, were lower than those at a background location. In contrast, observations of several other reproductive indices (i.e., pair formation, nesting, egg production, and hatching success) showed no difference between Piney Island and the background location. Potential effects on wild duck populations may vary because wild ducks at Piney Island have presumably acclimated to aircraft overflights. It was not demonstrated that noise was the cause of adverse impacts. A variety of other factors, such as weather conditions, drinking water and food availability and variability, disease, and natural variability in reproduction, could explain the observed effects. Fleming noted that drinking water conditions (particularly at Piney Island) deteriorated during the study, which could have affected the growth of young ducks. Further research would be necessary to determine the cause of any reproductive effects (Fleming et al., 1996).

Another study by Conomy et al. (1998) exposed previously unexposed ducks to 71 noise events per day that equaled or exceeded 80 dB. It was determined that the proportion of time black ducks reacted to aircraft activity and noise decreased from 38 percent to 6 percent in 17 days and remained stable at 5.8 percent thereafter. In the same study, the wood duck did not appear to habituate to aircraft disturbance. This supports the notion that animal response to aircraft noise is species-specific. Because a startle response to aircraft noise can result in flushing from nests, migrants and animals living in areas with high concentrations of predators would be the most vulnerable to experiencing effects of lowered birth rates and recruitment over time. Species that are subjected to infrequent overflights do not appear to habituate to overflight disturbance as readily.

Black brant (*Branta bernicla nigricans*) studied in the Alaska Peninsula were exposed to jets and propeller aircraft, helicopters, gunshots, people, boats, and various raptors. Jets accounted for 65 percent of all the disturbances. Humans, eagles, and boats caused a greater percentage of brant to take flight. Brant demonstrated a markedly greater reaction to Bell-206-B helicopter flights than fixed wing, single-engine aircraft flights (Ward et al., 1986).

The presence of humans and low-flying helicopters in the Mackenzie Valley North Slope area did not appear to affect the population density of Lapland longspurs (*Calcarius lapponicus*), but the experimental group was shown to have reduced hatching and fledging success and higher nest abandonment. Human presence appeared to have a greater impact than fixed-wing aircraft on the incubating behavior of the black brant, common eider (*Somateria mollissima*), and Arctic tern (*Sterna paradisaea*) (Gunn and Livingston, 1974).

Gunn and Livingston (1974) found that waterfowl and seabirds in the Mackenzie Valley and North Slope of Alaska and Canada became acclimated to float plane disturbance over the course of three days.

Additionally, it was observed that potential predators (e.g., the bald eagle) caused a number of birds to leave their nests. Non-breeding birds were observed to be more reactive than breeding birds. Waterfowl were affected by helicopter flights, while snow geese (*Chen caerulescens*) were disturbed by Cessna 185

flights. The geese flushed when the planes were less than 1,000 feet AGL compared to higher flight elevations. An overall reduction in flock sizes was observed. It was recommended that aircraft flights be reduced in the vicinity of promigratory staging areas.

Manci et al. (1988) reported that waterfowl were particularly disturbed by aircraft noise. The most sensitive appeared to be snow geese. Canada geese (*Branta Canadensis*) and snow geese were thought to be more sensitive to aircraft noise than other animals such as turkey vultures (*Cathartes aura*), coyotes (*Canis latrans*), and raptors (Edwards et al., 1979).

Wading and Shorebirds

Black et al. (1984) studied the effects of low-altitude (less than 500 feet AGL) military training flights with sound levels from 55 to 100 dB on wading bird colonies (i.e., the great egret [*Ardea alba*], snowy egret [*Egretta thula*] tricolored heron [*Egretta tricolor*], and little blue heron [*Egretta caerulea*]). The training flights involved three or four aircraft and occurred once or twice per day. This study concluded that the reproductive activity--including nest success, nestling survival, and nestling chronology--was independent of F-16 overflights. Dependent variables were more strongly related to ecological factors, including location and physical characteristics of the colony and climatology.

Another study on the effects of circling fixed-wing aircraft and helicopter overflights on wading bird colonies found that at altitudes of 195 to 390 feet, there was no reaction in nearly 75 percent of the 220 observations. Approximately 90 percent displayed no reaction or merely looked toward the direction of the noise source. Another 6 percent stood up, 3 percent walked from the nest, and 2 percent flushed (but were without active nests) and returned within 5 minutes (Kushlan, 1978). Apparently, non-nesting wading birds had a slightly higher incidence of reacting to overflights than nesting birds. Seagulls observed roosting near a colony of wading birds in another study remained at their roosts when subsonic aircraft flew overhead (Burger, 1981). Colony distribution appeared to be most directly correlated to available wetland community types and was found to be distributed randomly with respect to military training routes. These results suggest that wading bird species' presence was most closely linked to habitat availability and that they were not affected by low-level military overflights (U.S. Air Force, 2000).

Burger (1986) studied the response of migrating shorebirds to human disturbance and found that shorebirds did not fly in response to aircraft overflights but did flush in response to more localized intrusions (i.e., humans and dogs on the beach). Burger (1981) studied the effects of noise from JFK Airport in New York on herring gulls (*Larus argentatus*) that nested less than 1 kilometer from the airport. Noise levels over the nesting colony were 85 to 100 dB on approach and 94 to 105 dB on takeoff. Generally, there did not appear to be any prominent adverse effects of subsonic aircraft on nesting, although some birds flushed when the Concorde flew overhead and, when they returned, engaged in aggressive behavior. Groups of gulls tended to loaf in the area of the nesting colony, and these birds remained at the roost when the Concorde flew overhead. Up to 208 of the loafing gulls flew when supersonic aircraft flew overhead. These birds would circle around and immediately land in the loafing flock (U.S. Air Force, 2000).

In 1970, sonic booms were potentially linked to a mass hatch failure of sooty terns (*Onychoprion fuscatus*) on the Dry Tortugas (Austin et al., 1970). The cause of the failure was not certain, but it was conjectured that sonic booms from military aircraft or an overgrowth of vegetation were factors. In the previous season, sooty terns were observed to have reacted to sonic booms by rising in a "panic flight," circling over the island, then usually settling down on their eggs again. Hatching that year was normal. Following the 1969 hatch failure, excess vegetation was cleared, and measures were taken to reduce supersonic activity. The 1970 hatch appeared to proceed normally. A colony of noddies (*Anous* spp.) on the same island hatched successfully in 1969, the year of the sooty tern hatch failure.

Subsequent laboratory tests of exposure of eggs to sonic booms and other impulsive noises (Cottereau, 1972; Cogger and Zegarra, 1980; Bowles et al., 1991, 1994) failed to show adverse effects on hatching of eggs. A structural analysis by Ting et al. (2002) showed that, even under extraordinary circumstances, sonic booms would not damage an avian egg.

Burger (1981) observed no effects of subsonic aircraft on herring gulls in the vicinity of JFK International Airport. The Concorde aircraft did cause more nesting gulls to leave their nests (especially in areas of higher density of nests), causing the breakage of eggs and the scavenging of eggs by intruder prey.

Clutch sizes were observed to be smaller in areas of higher-density nesting (presumably due to the greater tendency for panic flight) than in areas where there were fewer nests.

Raptors

In a literature review of raptor responses to aircraft noise, Manci et al. (1988) found that most raptors did not show a negative response to overflights. When negative responses were observed, they were predominantly associated with rotor-winged aircraft or jet aircraft that were repeatedly passing within 0.5 mile of a nest.

Ellis et al. (1991) performed a study to estimate the effects of low-level military jet aircraft and mid- to high-altitude sonic booms (both actual and simulated) on nesting peregrine falcons (*Falco peregrinus*) and seven other raptors (common black-hawk [*Buteogallus anthracinus*], Harris' hawk [*Parabuteo unicinctus*], zone-tailed hawk [*Buteo albonotatus*], red-tailed hawk, golden eagle, prairie falcon [*Falco mexicanus*], and bald eagle). They observed responses to test stimuli, determined nest success for the year of the testing, and evaluated site occupancy the following year. Both long- and short-term effects were noted in the study. The results reported the successful fledging of young in 34 of 38 nest sites (including all eight species) subjected to low-level flight and/or simulated sonic booms. Twenty-two of the test sites were revisited in the following year, and observations of pairs or lone birds were made at all but one nest. Nesting attempts were underway at 19 of 20 sites that were observed long enough to be certain of breeding activity. Reoccupancy and productivity rates were within or above expected values for self-sustaining populations.

Short-term behavior responses were also noted. Overflights at a distance of 150 meters or less produced few significant responses and no severe responses. Typical responses consisted of crouching or, very rarely, flushing from the perch site. Significant responses were most evident before egg laying and after young were "well grown." Incubating or brooding adults never burst from the nest, thus preventing egg breaking or knocking chicks out of the nest. Jet passes and sonic booms often caused noticeable alarm; however, significant negative responses were rare and did not appear to limit productivity or re-occupancy. Due to the locations of some of the nests, some birds may have been

habituated to aircraft noise. There were some test sites located at distances far from zones of frequent military aircraft usage, and the test stimuli were often closer, louder, and more frequent than would be likely for a normal training situation (Ellis et al., 1991).

Manci et al. (1988) noted that a female northern harrier (*Circus hudsonius*) was observed hunting on a bombing range in Mississippi during bombing exercises. The harrier was apparently unfazed by the exercises, even when a bomb exploded within 200 feet. In a similar case of habituation/non-disturbance, a study on the Florida snail-kite (*Rostrhamus sociabilis*) stated that the greatest reaction by that species to overflights (approximately 98 dB) was "watching the aircraft fly by." No detrimental impacts to distribution, breeding success, or behavior were noted.

Fish and Amphibians

The effects of overflight noise on fish and amphibians have not been well studied, but conclusions regarding their expected responses have involved speculation based upon known physiologies and behavioral traits of these taxa (Gladwin et al., 1988). Although fish do startle in response to noise from low-flying aircraft, and probably to the shadows of aircraft, they have been found to habituate to the sound and overflights. Amphibians that respond to low frequencies and those that respond to ground vibration, such as spadefoot toads, may be affected by noise.

Summary

Some physiological/behavioral responses such as increased hormonal production, increased heart rate, and reduction in milk production have been described in a small percentage of studies. A majority of the studies focusing on these types of effects have reported short-term or no effects.

The relationships between physiological effects and how species interact with their environments have not been thoroughly studied. Therefore, the larger ecological context issues regarding physiological effects of jet aircraft noise (if any) and resulting behavioral pattern changes are not well understood.

Animal species exhibit a wide variety of responses to noise. It is therefore difficult to generalize animal responses to noise disturbances or to draw inferences across species because reactions to jet aircraft noise appear to be species-specific. Consequently, some animal species may be more sensitive than other species and/or may exhibit different forms or intensities of behavioral responses. For instance, wood ducks appear to be more sensitive and more resistant to acclimation to jet aircraft noise than Canada geese in one study. Similarly, wild ungulates seem to be more easily disturbed than domestic animals.

The literature does suggest that common responses include the "startle" or "fright" response and, ultimately, habituation. It has been reported that the intensities and durations of the startle response decrease with the number and frequency of exposures, suggesting no long-term adverse effects. The majority of the literature suggests that domestic animal species (e.g., cows, horses, chickens) and wildlife species exhibit adaptation, acclimation, and habituation after repeated exposure to jet aircraft noise and sonic booms.

Animal responses to aircraft noise appear to be somewhat dependent on, or influenced by, the size, shape, speed, proximity (vertical and horizontal), engine noise, color, and flight profile of the aircraft. Helicopters also appear to induce greater intensities and durations of disturbance behavior as compared to fixed-wing aircraft. Some studies showed that animals that had been previously exposed to jet

aircraft noise exhibited greater degrees of alarm and disturbance to other objects creating noise, such as boats, people, and objects blowing across the landscape. Other factors influencing response to jet aircraft noise may include wind direction, speed, and local air turbulence; landscape structures (i.e., amount and type of vegetative cover); and, in the case of bird species, whether the animals are in the incubation/nesting phase.

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Appendix N

Coastal Consistency Determination

Note: The Coastal Consistency Determination will be provided with the Final EIS.

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Appendix O

Public Involvement

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SCOPING SUMMARY REPORT

Navy Old Town Campus Revitalization Project Environmental Impact Statement

April 2020

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Executive Summary

In support of Naval Information Warfare Systems Command (NAVWAR) mission requirements to revitalize its facilities, the Department of the Navy (Navy) conducted a robust public outreach process utilizing numerous outlets to announce the Notice of Intent to prepare an Environmental Impact Statement (EIS) and public scoping meetings. In addition to the advertisement methods listed below, the Navy also incorporated a publicly accessible project website, an email distribution list, and established a project-specific email address and project telephone information line as additional methods of communication to present the public scoping information. Scoping advertisements included:

1. Publication of the Notice of Intent in the *Federal Register*
2. Publication of newspaper advertisements of the EIS scoping process a total of 11 times over five San Diego area newspapers
3. Mailing of stakeholder letters to 75 interested parties
4. Mailing of postcards to 9,900 postal addresses surrounding the project area and 117 individuals and organizations
5. Emailing of scoping notifications to between 644 and 777 individual email addresses on four separate occasions during the scoping period

During the scoping period, which ran from January 24, 2020 to February 24, 2020, 124 comments were received. Generally, comments were supportive of the Navy, NAVWAR Revitalization, and redevelopment of the site but concerned with impacts to transportation / traffic and how building heights would impact the current character of the area. Additional comments were received on soil and groundwater contamination, seismic risks, and the historic characteristics of the buildings.

Comments also related to how redevelopment/revitalization would address the following concerns: regional need for affordable housing (including homelessness); availability of parking; bike lanes; transit connections; off-site development; and specific NAVWAR needs such as secure facility space, Navy security on a mixed-use site, space for Naval Information Warfare Center Pacific, and how NAVWAR would minimize impacts to Navy employees during construction.

The scope and structure of the EIS will address comments received during scoping. Some comments are outside the scope of the EIS and will not be quantitatively addressed such as: off-site development or specific site details such as percentage of affordable housing.

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Scoping Summary Report
Navy Old Town Campus Revitalization
Environmental Impact Statement

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1 Summary of Scoping Activities

In support of Naval Information Warfare Systems Command (NAVWAR) mission requirements to revitalize its facilities, the Department of the Navy (Navy) conducted notification and outreach activities in support of public scoping for the Navy Old Town Campus (OTC) Revitalization Environmental Impact Statement (EIS). The intent of public outreach for this phase of the project was to provide information to stakeholders, the public, and agencies on the purpose and need, Proposed Action, preliminary alternatives, and resources to be analyzed. Another intent of the scoping period was to obtain public comments on the project's purpose and need and alternatives. The Navy conducted robust outreach efforts to notify the public, media, government agencies, and elected officials of the public scoping period and scoping meetings as detailed below.

This summary report describes the Navy's notification and outreach activities as well as the results of the public scoping period for the EIS.

1.1 Notification Activities

The following notifications were made to inform the public of the scoping meetings and public comment period.

1.1.1 Federal Register

A Notice of Intent to prepare the EIS and to hold public scoping meetings was published in the *Federal Register* on January 24, 2020 (Appendix A).

1.1.2 Newspaper Advertisement

A display advertisement (Appendix B) was placed in five San Diego area newspapers listed below. The newspaper advertisement was published on the first available day in conjunction with the beginning of the public scoping period published in the *Federal Register* on January 24, 2020.

Newspaper	Date of Advertisement
The San Diego Union-Tribune (publishes daily)	Friday, January 24, 2020 Saturday, January 25, 2020 Sunday, January 26, 2020
The Península Beacon (publishes bi-weekly)	Friday, January 31, 2020 Friday, February 14, 2020
San Diego Uptown News (publishes bi-weekly)	Friday, January 24, 2020 Friday, February 7, 2020
Presidio Sentinel (publishes monthly)	Saturday, February 1, 2020
El Latino (publishes weekly)	Friday, January 24, 2020 Friday, January 31, 2020 Friday, February 7, 2020

1.1.3 Postcard Mailer

A postcard mailer (Appendix C) announcing the public scoping meetings, Proposed Action, and public commenting options was mailed to 59 individuals and organizations and 9,900 neighboring businesses and residents on January 23, 2020. The postcard was also mailed on January 30, 2020, to an additional 58 individuals and organizations that signed up on the project website to be added to the mailing list to receive project notifications.

1.1.4 Stakeholder Letter

A stakeholder letter (Appendix D) was mailed on January 23, 2020, to 75 key stakeholders, including federal, state, and local elected officials and government agencies.

1.1.5 News Release

A news release (Appendix E) was distributed by the Commander Navy Region Southwest (CNRSW) Public Affairs Officer (PAO) to media outlets on January 24, 2020. It announced the public scoping meetings, Proposed Action, and public commenting options.

1.1.6 Eblasts

Email notifications (Eblasts) were disseminated to contacts in the stakeholder/contact mailing list database that had an email address listed. The initial Eblast (Appendix F) was disseminated to 644 contacts on January 24, 2020, in conjunction with the beginning of the public comment period. It announced the public scoping meetings, Proposed Action, and public commenting options. A public scoping meeting reminder Eblast was disseminated to 648 contacts on February 12, 2020 and to 694 contacts on February 18, 2020, the day before each of the public scoping meetings. A close of public comment period reminder Eblast was disseminated to 777 contacts on February 21, 2020.

1.1.7 Facebook Posts

An announcement of the two public scoping meetings (Appendix G) was posted on the CNRSW Facebook page by the CNRSW PAO on February 13, 2020. An announcement for the second public scoping meeting was posted on the Naval Base Point Loma Facebook page by the Naval Base Point Loma PAO on February 13, 2020.

1.2 Information Resources

The following information resources were made available to the public.

1.2.1 Project Website

The project website, which was launched in December 2019, was updated to provide the public with project information, including the fact sheets and posters displayed at the public scoping meetings. Comments could be submitted through the website during the public comment period. The project website address is www.NAVWAR-revitalization.com.

1.2.2 Project Information Line

The project information telephone line (or “project hotline”), which was launched in December 2019, was updated to provide the public with project information about the public comment period and scoping meetings. It is a recorded line, and voicemail messages are returned within approximately two

business days. During the public comment period, the recorded greeting provided information on the scoping phase and referred callers to the project website for information on public commenting options. There was also an option to press 1 for a recording that provided detailed information on the public scoping meetings. The project hotline number is (888) OTC-NAVY / (888) 682-6289.

1.2.3 Project Email

A project email address was established in December 2019 to receive project inquiries. The auto reply to the project email address was updated to provide information on the public scoping meetings, public comment period, and public commenting options. The project email address is info@NAVWAR-revitalization.com.

1.3 Public Scoping Meetings

The Navy held two public scoping meetings. The public scoping meetings were held on Thursday, February 13, 2020 and Wednesday, February 19, 2020, from 4 to 7 p.m., at the Liberty Station Conference Center Main Hall, located at 2600 Laning Road, San Diego, 92106-6427.

The public scoping meeting format was an informal and allowed the public to arrive at any time during the three-hour event. There was no formal presentation. Members of the public were greeted at the welcome station and encouraged to sign in and be added to the project mailing list. A comment form and room layout handout were given to the attendees, along with verbal direction on the format of the meeting and the general flow/order of information stations.

Information stations were set up around the room. The information stations consisted of visual displays in the form of posters, fact sheets, and comment forms. Project team members staffed each information station to answer questions and provide information.

A comment station with tables, chairs, pens, and comment forms was also provided to facilitate submitting written comments at the public scoping meetings. A court reporter was available at the public scoping meetings to transcribe oral comments. Members of the public were encouraged to fill out comment forms to ensure their comments were submitted during the public comment period. Individuals could submit completed forms at the public scoping meetings or mail written comments to the address provided on the comment form and on the fact sheets. Written comments could also be submitted via the website.

A Spanish translator was available at the public scoping meetings. The meeting notices included language directing participants to contact Ron Bochenek, EIS Project Manager, to request an interpreter or other reasonable accommodations. A child activity station was also set up. The following outreach materials were developed for use during the public scoping meetings:

1.3.1 Fact Sheets

Two-page color fact sheets (Appendix H) were developed and included the following topics: NAVWAR mission and economic impact; project location and history; purpose and need for the Proposed Action; preliminary action alternatives; resources to be analyzed; and the National Environmental Policy Act (NEPA) process. The fact sheets were also posted on the project website.

1.3.2 Posters

Color posters (Appendix I) were developed and included the following topics: Welcome; NAVWAR mission and economic impact in San Diego; OTC site history; project location and surrounding area; purpose and need for the Proposed Action; preliminary action alternatives; resources to be analyzed; NEPA process; and how to submit scoping comments. The posters were also posted on the project website.

1.3.3 Handouts

Two handouts, a comment form (Appendix J) and room layout (Appendix K), were developed for the public scoping meetings. The comment form allowed attendees to submit written comments at the public scoping meetings or return it via mail to be postmarked by the close of the comment period on February 24, 2020. The comment form was also posted on the project website. The room layout provided direction on the flow of the poster stations.

1.3.4 Attendance

The information below reflects the number of people who attended the public scoping meetings.

<u>February 13, 2020</u>

Sixty-eight (68) people attended the first public scoping meeting, including the following groups/organizations and media:

- Congressman Juan Vargas' Office
- Midway-Pacific Highway Community Planning Group
- Old Town San Diego Chamber of Commerce
- San Diego Military Advisory Council
- Port of San Diego
- San Diego Audubon Society
- Sierra Club
- KPBS
- CBS News 8
- Presidio Sentinel

<u>February 19, 2020</u>

Eighty-seven (87) people attended the second public scoping meeting, including the following groups/organizations and media:

- Senator Toni Atkins' Office
- Assembly member Todd Gloria's Office
- Councilmember Jennifer Campbell's Office
- City of San Diego Planning Department
- Midway-Pacific Highway Community Planning Group
- Old Town San Diego Community Planning Group
- San Diego County Regional Airport Authority
- San Diego County Archaeological Society
- BikeSD Outreach, Inc.

At the welcome table, attendees had the option of sharing how they heard about the public scoping meetings. Below are the notification sources that attendees listed, as well as the number of people that listed each source.

February 13, 2020

- Email: 18
- Postcard mailer/letter: 6
- Newspaper: 6
- Online: 6
- Television: 5
- Work: 4
- Public notice: 3
- San Diego Military Advisory Council: 2
- *Federal Register*: 1
- Community Planning Group: 1
- Homeowners Association: 1
- Friend: 1

February 19, 2020

- Email: 18
- Postcard mailer/letter: 10
- Work: 10
- Online: 6
- Newspaper: 5
- Public notice: 5
- Family member/friend: 5
- School: 3
- Television: 2

1.3.5 Common Questions

The project team answered questions and provided information to the public during the public scoping meetings. Some common questions asked about the project during the public scoping meetings included:

- What is the timeline for development?
- What does high and low density mean?
- How tall would the buildings be? Will the height restrictions be altered?
- Will the land stay in federal ownership or be sold?
- Will parking be considered in any of the alternatives? How will parking be affected?
- Will preserving some aspect of the history of the site/cultural resources be considered?
- What will the traffic impacts be?
- What would the placement/configuration of a transit center be?
- Public-private development process: What is it? What is the timeline for the public-private development process?
- What is the timing of the NEPA and California Environmental Quality Act (CEQA) processes?

1.4 Public Comment Period

The public comment period was from January 24, 2020 to February 24, 2020. Throughout the public comment period, written comments were accepted by mail and on the project website. Oral and written comments were also accepted at the two public scoping meetings.

1.4.1 Comments Summary

During the scoping period, 124 comments were received. Most of the comments were received through the project website. While all scoping materials indicated that comments would not be accepted via the project hotline or the project email, two comments were submitted by email. Both of these comments were accepted for consideration in the Draft EIS. The 124 comments were received in the following manner:

- Project Website Submission: 85
- Public Meeting - February 13, 2020: 16 *(includes 3 court reporter comments)*
- Public Meeting - February 19, 2020: 14 (*includes 1 court reporter comment)*
- Email: 03
- Mail: 07
- Total Comments Received: 125

Organizations and agencies that submitted comments include:

- City of San Diego
- BikeSD Outreach, Inc.
- California Coastal Commission
- California State Parks, San Diego Coast District
- Caltrans, District 11
- California Department of Toxic Substances Control
- Port of San Diego
- San Diego County Archaeological Society
- San Diego County Regional Airport Authority
- San Diego Cyber Center of Excellence
- Save Our Heritage Organisation
- University of California, San Diego, Graduate Student Association
- United States Environmental Protection Agency (USEPA), Region 9

The comments received generally cover the topics of transportation/traffic, visual resources, land use, air quality, cultural resources, hazardous materials, development next steps, alternatives, purpose and need, and coastal resources. Each of these topics is addressed in this section to provide a summary of comments, and the Draft EIS approach and analysis to address the comment. All comments are not listed below but these are a general representation of the types of comments received. A summary of comments for miscellaneous topics is presented at the end of this section. A list of Frequently Asked Questions (Appendix L) also is being prepared as a result of the scoping process and will be posted to the project website.

1.4.1.1 Transportation/Traffic

Public Comments

Transportation and traffic received a number of comments. The general nature of comments included:

- The EIS should address changes in traffic flow and congestion as a result of the project, as well as the cumulative traffic effects in the area.
- The EIS should address how parking and traffic would be improved to accommodate the expected higher density development and associated increased traffic.
- Improvements are needed for Pacific Highway, which is an important component of local traffic to/from Interstate (I-) 5 and I-8.
- The EIS should address future transportation modes such as driverless cars.
- Caltrans recommended a Traffic Impact Study, which should involve: intersections at I-5, I-8, and State Route 163; a vehicles mile traveled analysis; data less than two years old, and early coordination with Caltrans. Traffic problems and congestion would increase, parking would be affected, and traffic access to freeways would be problematic.
- Existing traffic problems exist at Taylor Street (identified in the Mid Coast Trolley Expansion Environmental Impact Report), and the project could make this worse.
- Parking is problematic in the Old Town area and would get worse with this project.
- Construction would create increased traffic congestion and traffic flow problems.
- The addition of housing and high-density options also creates increased traffic. The public transit hub as a benefit for the community and inclusion of a transit center at the NAVWAR site would help achieve the region's transit goals.
- The project has potential to positively affect traffic and commute times in San Diego and the project would enhance public transit options and access to public transit.
- More housing near transit connections would be a positive and direct access to the trolley would help clear congestion for those traveling to other business centers (e.g., University Town Center/Sorrento Valley).

Specific traffic recommendations made by public commenters include:

- Consider separate bicycle, pedestrian, and micro-mobility vehicle infrastructure on site and in the immediate area to encourage non-car transportation options
- Create continued traffic flow, including use of traffic circles and roundabouts
- The transit hub should have autonomous small shuttle bus program that runs directly to nearby trolley stops as well as other catchments (one in each neighborhood)
- Trolley improvements would improve traffic
- Move Navy east of Old Town to reduce traffic problems
- Involve Caltrans in engineering of exits at Old Town
- Need a designated exit for the OTC site to mitigate the extra traffic in and out of Old Town
- Extend Old Town bridge over I-5 and the railroad tracks onto the Navy OTC so that all vehicular traffic flows smoothly on and off the freeway
- Bury the LOSSAN corridor train tracks through the project area (the Taylor Street crossing is a problem)

EIS Approach and Analysis

The project team is conducting vehicle traffic modeling for each alternative to be analyzed in the Draft EIS. This accounts for changes to population and land use concepts and estimated volumes and flows of traffic associated with each alternative. This traffic modeling is being done for roadways and intersections potentially affected by construction and operation. The results of this traffic modeling will be presented in the Draft EIS.

1.4.1.2 Visual Resources

Public Comments

Comments on visual resources generally addressed the following:

- Tall structures that could affect aesthetics/views of the area.
- The view over the project location is the first view of San Diego and the harbor when driving in on I-5.
- Any structure over five stories would compromise local citizens (e.g., Presidio Park, Mission Hills) and visitors to San Diego from enjoying the natural beauty and ocean views.
- The EIS should address how the vista would be changed by this development.
- Lower buildings would help the area remain consistent with both the look and feel of surrounding Old Town, Mission Hills, and Point Loma.
- Higher buildings would reduce the appeal of Old Town as a historic destination.
- The project should maintain open space and create multi-level aesthetically appealing functional development (e.g., a development that connects to Post Office development and Sports Arena Development to improve the Midway community).

EIS Approach and Analysis

The project team is conducting visual resource modeling. This is being done by simulating each alternative in a 3-dimensional fashion, then showing views of the project from sensitive viewing locations including those identified during the scoping process. The results of this analysis will be presented in the Draft EIS.

1.4.1.3 Land Use

Public Comments

Many of the land use comments were in the context of transportation options and are identified below:

- Promotion of high-density, mixed-use, and alternative transportation options (biking, pedestrian, etc.)
- Improvements to transit options, use of the area as a transit hub, increased housing (including military housing), use of area for parks/community uses, creating a city market type area, and creating a Cyber Innovation Center.

EIS Approach and Analysis

The project team is reviewing local land use plans and proposed developments. This planning information will be integrated into the land use analysis in the Draft EIS. The Draft EIS will also have sections on Transportation and Visual Resources.

1.4.1.4 Air Quality

Public Comments

Air quality comments centered on improvements to air quality from transit oriented development including:

- The NAVWAR site is in a prime location that is vastly underutilized and could have a substantial impact in helping San Diego manage the climate crisis.
- The City of San Diego's Climate Action Plan targets a reduction of greenhouse gas emissions of 51 percent below the 2010 baseline by the year 2035. One of several strategies identified to achieve this reduction is an increase in mass transit, walking, and biking.
- The Navy should be aligned with the Climate Action Plan and build a facility that will adapt to sea level rise.
- Alternative 4 would be best in terms of the City's Climate Action Plan.
- The project area is highly developed and adjacent to a freeway and other major roads; therefore, there is potential for future residential and commercial occupants of the site under the project to experience "near roadway" (within 200 meters of a road) air pollution.

EIS Approach and Analysis

The project team is conducting air emissions calculations for the construction and operation phases of each alternative. This incorporates guidance provided by USEPA public scoping comments and accounts for changes to population and land use concepts and estimated volumes and flows of traffic associated with each alternative. Additionally, the EIS will address the provisions of CEQA related to greenhouse gases/climate change, and odor. The results will be compared with existing air emissions in the City of San Diego and local and federal air quality standards to determine potential air quality impacts. The results of air emissions calculations will be presented in the Draft EIS.

1.4.1.5 Cultural Resources

Public Comments

Comments involved the potential impact to historic properties and the potential listing of on-site buildings on the National Register of Historic Places (NRHP) including:

- The site buildings are historic due to their use during World War II and the Cold War.
- The project should prepare a full range of NEPA alternatives to comprehensively evaluate and reduce the potential environmental impacts of this development on Historic Old Town, the Birthplace of California, which should include height and coastal zone requirements.
- The EIS should analyze tall buildings and potential impacts on the character of Old Town and other local listed and eligible properties.

EIS Approach and Analysis

The project team is conducting an assessment of the eligibility of OTC properties for both World War II and the Cold War. The results of this analysis will be presented in the Draft EIS. It is anticipated that some properties may be eligible for listing on the NRHP. Since development of the site under Alternatives 2, 3, 4, and 5 would include demolition of existing facilities, the Draft EIS will present a process for mitigation under the National Historic Preservation Act.

While the exact nature of visual impact to adjacent or local listed properties, such as Historic Old Town, would not be known until development plans are complete, the Draft EIS will include an analysis of potential visual impact to adjacent or local listed properties.

1.4.1.6 Hazardous Materials

Public Comments

Comments received were related to environmental contamination on the site including:

- The presence of soil and groundwater contamination on site and the associated development on contaminated properties.
- The EIS should address potential hazardous waste, toxic materials, and chemicals that may exist on/underneath the OTC.
- The cleanup of hazardous material should be considered and what decision will be made to move forward if it cannot be safely cleaned.
- The potential for additional contamination related to industrial uses during World War II.

EIS Approach and Analysis

The EIS will present a brief history of uses of the site and known releases of hazardous substances and wastes. The EIS will also describe the Environmental Restoration program and the investigation and successful remediation of sites. The EIS will present data related to ongoing environmental remediation and describe the process for cleanup of the site. The EIS will address a process and responsibility for any remediation actions that would take place during redevelopment.

1.4.1.7 Development Next Steps

Public Comments

While only a few comments were received on the development process, this was a predominant question from participants at the scoping meetings. Comments raised included:

- What is the agreement with the San Diego Association of Governments and the timing and process for redevelopment after the EIS.
- The alternatives involve extensive off-site redevelopment of train, trolley, and bus facilities; the EIS should address this and other potential off-site redevelopment, such as rebuilding of the intersection of Rosecrans Street, Taylor Street, and Pacific Highway.

EIS Approach and Analysis

The EIS will present an analysis of potential impacts for development on the OTC property. The EIS will address off-site development such as the transit connection to the airport in the cumulative impacts section. Because of the extensive interest from the development community and the questions discussed at scoping, the EIS will include a discussion of the anticipated development process in Chapters 1 and 2.

1.4.1.8 Alternatives

Public Comments

A number of comments were positive and supportive of the alternatives including:

- High-density mixed-use development is preferred on the site.
- The project would benefit enhanced transit options and result in a reduction in use of vehicles.
- The site should be transferred at no cost or should be part of the Federal process for excess property.

EIS Approach and Analysis

The existing alternatives are well representative of a range of development to meet the NAVWAR mission. Federal excess or no cost transfer would not meet the purpose and need of the project. The Navy will continue to examine the alternatives as impacts are analyzed during the next phase of the analysis.

1.4.1.9 Purpose and Need

Public Comments

Comments on the project purpose and need centered more on the development than the Navy mission requirements. Comment topics included:

- There is a local need for public transit solutions to reduce traffic and commute times, and housing near transit connections to benefit the community.
- Downtown San Diego needs housing opportunities for families, and the Navy deserves an iconic building.
- The NAVWAR location is ideal for centrally located housing.
- Affordable housing is needed for seniors and retired military.
- The need for physical and cyber security for the NAVWAR mission has not been addressed.
- Is the project needed since it would eliminate space for NAVWAR and is not a benefit to the government.

EIS Approach and Analysis

The purpose of the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements. The Navy requires secure, safe, modern, state-of-the-art facilities to meet NAVWAR's information technology, artificial intelligence, and cyber warfare operational needs. The background for this need is presented in the EIS and is the basis for developing alternatives. Input from the public during the scoping process is being used to inform the development of alternatives and the analysis of impacts in the EIS.

1.4.1.10 Coastal Resources

Public Comments

Some of the comments regarding cultural resources also referenced the coastal zone and threats of sea level rise. Comments included:

- The importance of long-term, regional transit improvements that provide connections to the airport. Such a connection would provide multiple local and regional benefits.
- The project would reduce traffic congestion on North Harbor Drive and other area roadways; reduction in vehicle-generated greenhouse gas emissions; and enhancement of the public's ability to access the coast.
- Although the project area is outside of the coastal zone, it may be subject to the Commission's federal consistency authority, pursuant to the federal Coastal Zone Management Act.
- The EIS should include an analysis of project alternatives' consistency with the California Coastal Act.

EIS Approach and Analysis

The EIS will include an assessment of potential impacts of the project on the coastal zone.

1.4.1.11 Other Public Comments

Additional topics included in scoping comments are summarized below:

- The OTC is located within the Airport Influence Area for the San Diego International Airport Land Use Compatibility Plan. The EIS should evaluate if the proposed project would result in a safety hazard to people staying and working in the project area or aircraft, expose people staying or working in the project area to excessive noise levels, and change air traffic patterns.
- Safety should be a consideration for high buildings in proximity of the San Diego airport.
- Bicycles and mass transit vehicles are safer than automobiles, so high-density development promoting alternative transportation concepts is safer.
- Consider separate infrastructure to encourage non-car transportation choices. This can include safe and comfortable bicycle access from all directions, as well as long-term storage for bicycles and personal electric vehicles.
- High-density development can create traffic congestion, noise, and light pollution.
- Redevelopment may considerably add to utilities demand, so the EIS should evaluate whether there is enough capacity.
- The existing infrastructure cannot withstand additional businesses, housing, or other private development of this land. Mitigation would be insufficient without a complete rebuild of the area.
- The Navy should design and build facilities in a manner that reduces use of energy and resources. All buildings should be designed to meet the U.S. Green Building Council's Leadership in Energy and Environmental Design Platinum certification. USEPA comments provide guidance for elements such as stormwater, renewable energy, energy conservation, recycled building materials, green building, and bird-friendly design.
- If children and/or environmental justice populations could occupy the site, USEPA recommends the Draft EIS address these issues in accordance with Executive Orders 13045 and 12898, respectively.

- The Navy should be careful about ownership and lease agreements to ensure they are fair for the government.
- NAVWAR should be located outside of the city hub (e.g., Camp Pendleton).
- There may be a fault (Rose Canyon Fault) or related fault complexes under the project site, in the immediate vicinity, or under or proximate to rail and trolley lines.
- There should be a plan for how to handle NAVWAR employees and work during the construction phase.

1.5 Media Coverage

KPBS, the local San Diego NPR station, and CBS News 8-San Diego attended and filmed during the first public scoping meeting on February 13, 2020. KPBS published several online media articles, covered the project on the radio and published a video on the project on February 10-11, 2020 ahead of the first public scoping meeting.

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equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support.

(iv) *Military Department*: Navy (AR-P-GVQ)

(v) *Prior Related Cases, if any*: AR-P-SSA, AR-P-GSH, AR-P-GSI, AR-P-GSJ

(vi) *Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid*: None

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold*: None

(viii) *Date Report Delivered to Congress*: December 19, 2019

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Argentina—Support for EDA P-3C Aircraft

The Government of Argentina has requested a possible sale of equipment, support and services in support of Argentina's EDA purchase of four (4) P-3C aircraft, including four (4) turboprop engines on each airframe and an additional four (4) turboprop engines. The proposed sale will include communications equipment; radar equipment; Infrared /Electro-optic equipment; aircraft depot maintenance; depopulation and repopulation; supply support/spares and repair of repairables; support equipment; publications; training; aviation life support systems; aircraft transportation; logistical and other technical assistance, and other related elements of logistical and program support. The total estimated program cost is $78.032 million.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of a partner in South America.

Argentina's existing P-3B patrol aircraft have reached the end of their operational service life. To maintain maritime security, Argentina acquired four EDA P-3C aircraft to replace its older aircraft. These EDA aircraft need this refurbishment and equipment to be fully operational. It is vital to the U.S. national interest to assist Argentina in developing and maintaining a strong and ready self-defense maritime patrol aircraft capability. Argentina will have no difficulty absorbing these aircraft into its armed forces.

The proposed sale of this equipment will not alter the basic military balance in the region.

The prime contractors will be Logistic Services International, Jacksonville, FL; Lockheed Martin Aircraft Center, Greenville, SC; Eagle Systems, Jacksonville, FL; and Rockwell Collins, Cedar Rapids, IA. There are no known offset agreements in connection with this potential sale.

Implementation of this proposed sale will require the temporary assignment of approximately 12 U.S. contractor representatives to Argentina to support the program.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2020–01130 Filed 1–23–20; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Navy

Certificate of Alternate Compliance for USS OAKLAND (LCS 24)

AGENCY: Department of the Navy, DoD.

ACTION: Notice of issuance of Certificate of Alternate Compliance.

SUMMARY: The U.S. Navy hereby announces that a Certificate of Alternate Compliance has been issued for USS OAKLAND (LCS 24). Due to the special construction and purpose of this vessel, the Deputy Assistant Judge Advocate General (DAJAG)(Admiralty and Maritime Law) has determined it is a vessel of the Navy which, due to its special construction and purpose, cannot comply fully with the navigation lights provisions of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) without interfering with its special function as a naval ship. The intended effect of this notice is to warn mariners in waters where 72 COLREGS apply.

DATES: This Certificate of Alternate Compliance is effective January 24, 2020 and is applicable beginning January 10, 2020.

FOR FURTHER INFORMATION CONTACT: Lieutenant Tom Bright, JAGC, U.S. Navy, Admiralty Attorney, Office of the Judge Advocate General, Admiralty and Maritime Law Division (Code 11), 1322 Patterson Ave. SE, Suite 3000, Washington Navy Yard, DC 20374–5066, 202–685–5040, or *admiralty@navy.mil.*

SUPPLEMENTARY INFORMATION: Background and Purpose. Executive Order 11964 of January 19, 1977 and 33 U.S.C. 1605 provide that the requirements of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), as to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, shall not apply to a vessel or class of vessels of the Navy where the Secretary of the Navy shall find and certify that, by reason of special construction or purpose, it is not possible for such vessel(s) to comply fully with the provisions without interfering with the special function of the vessel(s). Notice of issuance of a Certificate of Alternate Compliance must be made in the **Federal Register**.

In accordance with 33 U.S.C. 1605, the DAJAG (Admiralty and Maritime Law), under authority delegated by the Secretary of the Navy, hereby finds and certifies that USS OAKLAND (LCS 24) is a vessel of special construction or purpose, and that, with respect to the position of the following navigational lights, it is not possible to comply fully with the requirements of the provisions enumerated in the 72 COLREGS without interfering with the special function of the vessel:

Annex I, paragraph 2(a)(i), pertaining to the vertical position of the forward masthead light; Annex I, paragraph 3(a), pertaining to the horizontal position of the forward masthead light; Rule 21(a) and Annex I, paragraph 2(f)(i), pertaining to the aft masthead light being clear of obstructions; Annex I, paragraph 3(a), pertaining to the horizontal separation between the forward and aft masthead lights; Annex I, paragraph 2(f)(ii), pertaining to the vertical and horizontal spacing of task lights; and Rule 27(b)(i) and Annex I, paragraph 9(b), pertaining to task light obstructions.

The DAJAG (Admiralty and Maritime Law) further finds and certifies that these navigational lights are in closest possible compliance with the applicable provision of the 72 COLREGS.

Authority: 33 U.S.C. 1605(c), E.O. 11964

Approved: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020–01143 Filed 1–23–20; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Navy Old Town Campus Revitalization at Naval Base Point Loma, California, and To Announce Public Scoping Meetings

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality Regulations, the Department of the Navy (Navy) announces its intent to prepare an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Navy Old Town Campus (OTC) to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address provisions of the California Environmental Quality Act (CEQA) as it relates to non-federal development within the proposed alternatives. An EIS is considered the appropriate document for comprehensively analyzing the proposed action to demolish and construct buildings, utilities, and infrastructure at the OTC, Naval Base Point Loma, California. Specific proposed actions within the OTC proposal could include Navy recapitalization of the site or redevelopment through a public-private partnership.

DATES: The Navy is initiating a 30-day public scoping process to identify community interests and specific issues for analysis in the EIS. This public scoping process starts with the publication of this Notice of Intent. The Navy is planning two public scoping meetings to receive written comments on issues for analysis in the EIS. All public comments are due by February 24, 2020.

ADDRESSES: The meetings will be held in the following locations (all times local):

1. February 13, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.

2. February 19, 2020, 4:00 p.m. to 7:00 p.m., Liberty Station Conference Center, Main Hall, Door A, 2600 Laning Road, San Diego, California 92106–6427.

Additional information concerning meeting times and locations is available on the EIS website at *www.navwar-revitalization.com*. The Navy will announce public scoping meeting dates, times, and locations in the local news media.

Public scoping meetings will include open house sessions, with information stations staffed by Navy representatives. The Navy will collect comments during each of the two public scoping meetings. Written comments can also be made electronically on the project website.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101; telephone: 619–379–3860.

SUPPLEMENTARY INFORMATION: The U.S. Army Air Corps first used the OTC site in 1940. Use of the site transitioned to the United States Air Force in 1947. General Dynamics Corporation operated the facility, known as Air Force Plant 19, from approximately 1940 to the mid-1970s, using it primarily for aircraft production. Beginning in the late 1970s, subassembly activities for various missile production programs replaced aircraft assembly as the primary function of the facility. In 1994, the Air Force transferred ownership of the property to the U.S. Navy (with oversight given to Naval Base Point Loma) and manufacturing activities focused on space launch vehicle assembly as conducted by various military contractors.

NAVWAR established the OTC site as their headquarters in 1996, with a mission focus of naval communications and space programs. Site activities have since grown to include development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs.

The existing OTC facilities are beyond their useful life and their degradation is affecting NAVWAR's cyber warfare mission, security, and workforce safety. The Navy requires secure, safe, modern state-of-the-art space to support NAVWAR's mission requirements. NAVWAR proposes to revitalize the OTC, which would include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR on OTC.

NAVWAR's mission requirements include 1,064,268 square feet (SF) of space, as follows:

845,326 SF of office space;

29,156 SF of secure conference and auditorium space;

24,172 SF of warehouse/storage space; and

165,614 SF of lab space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

During development of the NAVWAR's mission requirements, the Navy identified a portion of the existing OTC facilities, primarily open storage/laydown and warehouse space, could be accommodated at an off-site location. This EIS does not address the potential NAVWAR off-site facilities relocation. Therefore, subsequent NEPA may be required if alternative selection results in utilization of an off-site location.

The purpose of and need for the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements. Current facilities are beyond their useful life and negatively affect NAVWAR's cyber warfare mission, security, and workforce safety. NAVWAR requires secure, safe, efficient, modern, state-of-the-art facilities to meet information technology, artificial intelligence, and cyber warfare operational needs as a central component to NAVWAR's mission in defense of our Nation.

In September 2018, the Navy issued a Request for Interest (RFI) to evaluate the availability and adequacy of potential business sources to revitalize the OTC site through a public-private partnership. In November 2018, the Navy held an industry day to solicit responses to the RFI and highlight the Navy's willingness to consider all types of concepts to achieve Navy goals for revitalizing the OTC, including long-term leases, a land exchange, or sale. The RFI process resulted in twelve responses, four of which contained substantive market research. After considering the proposals received on the RFI, feedback received at industry day, and subsequent discussions with internal and external stakeholders, the Navy entered into an agreement with the San Diego Association of Governments (SANDAG) on September 19, 2019, to conduct a planning process intended to lead to the redevelopment of the OTC, to include a potential Transit Center and the redevelopment of NAVWAR facilities. SANDAG's proposed Transit Center would improve multimodal regional transportation efficiency for the residents and visitors of the greater San Diego area, and would support NAVWAR's mission by providing access that is more efficient to industry partners and transportation. SANDAG is considering various conceptual transportation solutions for improved regional airport connectivity; some of the concepts under consideration include possible construction at the NAVWAR facility, others do not. In consideration of the fact that Navy may proceed without SANDAG if SANDAG and the Navy do not agree to move forward with redevelopment of the site to include a Transit Center, the Navy has developed

five preliminary alternatives in addition to the No Action alternative for revitalizing the OTC.

Alternative 1 (Navy Recapitalization at OTC) would consist of revitalization of the OTC to meet NAVWAR's facility requirements with Navy-funded capital improvements only. This would potentially include consolidating NAVWAR operations into two of the existing 310,000 SF buildings (Buildings 2 and 3) on OTC Site 1.

Alternative 2 (High-Density Mixed Use Revitalization) would consist of construction of new Navy facilities for NAVWAR on the OTC site through an agreement with a public-private partner, and the relocation of some warehouse functions to a separate off-site location.

Alternative 3 (Low-Density Mixed Use Revitalization) would be similar to Alternative 2, but the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 4 (High-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 5 (Low-Density Mixed Use Revitalization Including a Transit Center) would be similar to Alternative 2, but a portion of the OTC site would be developed as a transit center and the development scenario for private development would be reduced. The development requirements for NAVWAR would be the same as under Alternative 2.

Alternative 6 (No Action Alternative) would be no change from status quo. The Navy would continue to maintain and repair the existing facilities, and NAVWAR would continue to operate at the OTC site as is.

Environmental issues and resources to be examined and addressed in the EIS include, but are not limited to: Air Quality (including environmental effects analyses pursuant to CEQA for greenhouse gases/Climate Change and Odor), Transportation, Visual Resources, Land Use (including Agricultural Resources for CEQA), Socioeconomics (including Growth Inducing Impacts for CEQA), Cultural Resources (including Paleontology for CEQA), Hazardous Materials and Waste, Public Health and Safety (including Wildfire for CEQA), Environmental Justice, Infrastructure (including Schools, Utilities and Energy Consumption for CEQA), Airspace, Noise, Geology (including Mineral Resources for CEQA), Water Resources, and Biological Resources. The EIS will also analyze measures that would avoid or mitigate environmental effects. Additionally, the Navy will undertake any coordination and consultation activities required by the National Historic Preservation Act.

The Navy encourages interested persons to submit comments concerning the alternatives proposed for study, and environmental issues for analysis in the EIS. Federal, State, local, and Tribal agencies, and interested persons are encouraged to provide comments to the Navy to identify specific environmental issues or topics of environmental concern that the Navy should consider when developing the Draft EIS. The Navy will prepare the Draft EIS, incorporating issues identified by the commenting public. All comments received during the public scoping period will receive consideration during EIS preparation.

Mailed comments on the scope of the EIS should be postmarked no later than February 24, 2020. Comments may be mailed to: Naval Facilities Engineering Command Southwest, Navy OTC Revitalization EIS Project Manager, Attn: Mr. Ron Bochenek, 1220 Pacific Highway (Code EV21.RB), San Diego, California 92132–5101. Interested parties can also submit comments via the EIS website at *www.navwar-revitalization.com*.

Dated: January 20, 2020.

D.J. Antenucci,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2020–01144 Filed 1–23–20; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

Application Deadline for Fiscal Year 2020; Small, Rural School Achievement Program

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

SUMMARY: Under the Small, Rural School Achievement (SRSA) program, Catalog of Federal Domestic Assistance (CDFA) number 84.358A, the U.S. Department of Education (Department) awards grants on a formula basis to eligible local educational agencies (LEAs) to address the unique needs of rural school districts. In this notice, we establish the deadline and describe the submission procedures for fiscal year (FY) 2020 SRSA grant applications. All LEAs eligible for FY 2020 SRSA funds must submit an application electronically via the process described in this notice by the deadline in this notice.

DATES:

Applications Available: February 3, 2020.

Deadline for Transmittal of Applications: April 17, 2020.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Hitchcock, U.S. Department of Education, 400 Maryland Avenue SW, Room 3E–218, Washington, DC 20202. Telephone: (202) 260–1472. Email: *reap@ed.gov*.

If you use a telecommunications device for the deaf or a text telephone, call the Federal Relay Service, toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION:

I. Award Information

Type of Award: Formula grant.

Available Funds: The Administration has requested $90,420,000 for SRSA in FY 2020. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Estimated Range of Awards: $0–$60,000.

Note: Depending on the number of eligible LEAs identified in a given year and the amount appropriated by Congress for the program, some eligible LEAs may receive an SRSA allocation of $0 under the statutory funding formula.

Estimated Number of Awards: 4,000.

II. Program Authority and Eligibility Information

Under what statutory authority will FY 2020 SRSA grant awards be made?

The FY 2020 SRSA grant awards will be made under title V, part B, subpart 1 of the Elementary and Secondary Education Act of 1965, as amended (ESEA).

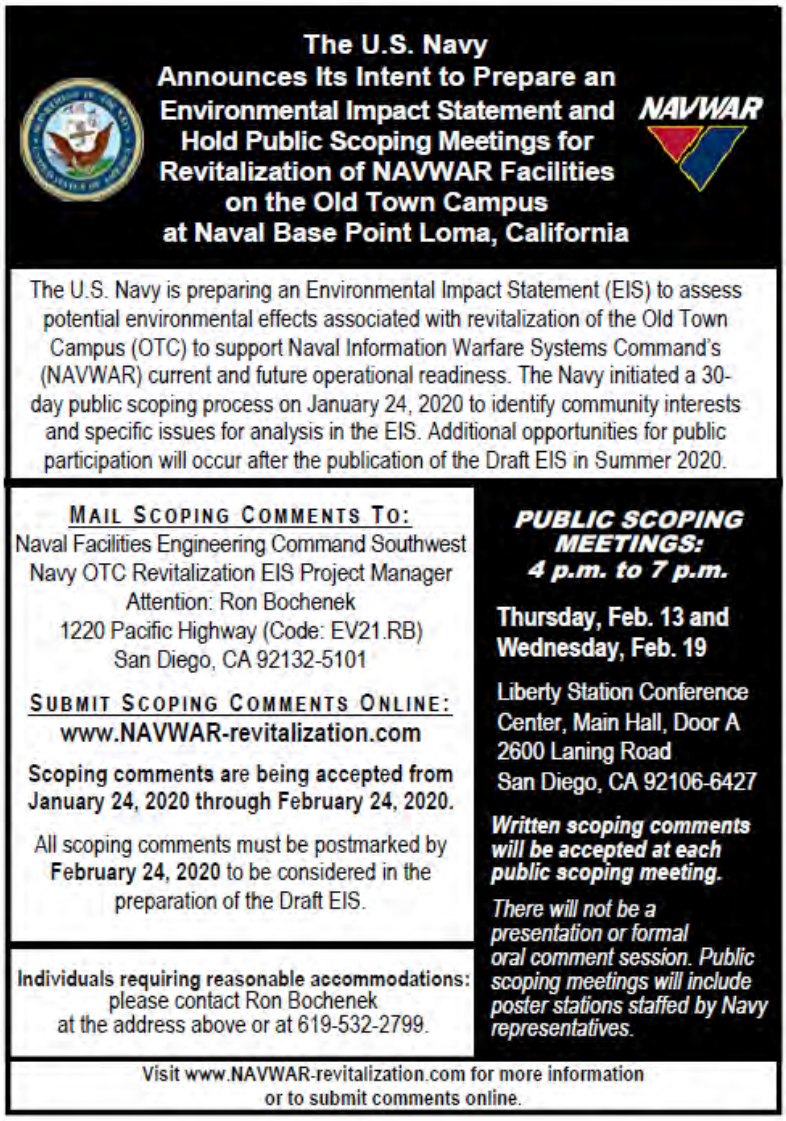
Which LEAs are eligible for an award under the SRSA program?

For FY 2020, an LEA (including a public charter school that meets the definition of LEA in section 8101(30) of the ESEA) is eligible for an award under the SRSA program if it meets one of the following criteria:

(a)(1) The total number of students in average daily attendance at all of the schools served by the LEA is fewer than 600; or each county in which a school served by the LEA is located has a total population density of fewer than 10 persons per square mile; and

(2) All of the schools served by the LEA are designated with a school locale

Appendix B: Newspaper Display Advertisement



The U.S. Navy Announces Its Intent to Prepare an Environmental Impact Statement and Hold Public Scoping Meetings for Revitalization of NAVWAR Facilities on the Old Town Campus at Naval Base Point Loma, California

NAVWAR

The U.S. Navy is preparing an Environmental Impact Statement (EIS) to assess potential environmental effects associated with revitalization of the Old Town Campus (OTC) to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. The Navy initiated a 30-day public scoping process on January 24, 2020 to identify community interests and specific issues for analysis in the EIS. Additional opportunities for public participation will occur after the publication of the Draft EIS in Summer 2020.

MAIL SCOPING COMMENTS TO:
Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

SUBMIT SCOPING COMMENTS ONLINE:
www.NAVWAR-revitalization.com

Scoping comments are being accepted from January 24, 2020 through February 24, 2020.

All scoping comments must be postmarked by **February 24, 2020** to be considered in the preparation of the Draft EIS.

Individuals requiring reasonable accommodations: please contact Ron Bochenek at the address above or at 619-532-2799.

PUBLIC SCOPING MEETINGS:
4 p.m. to 7 p.m.

Thursday, Feb. 13 and Wednesday, Feb. 19

Liberty Station Conference Center, Main Hall, Door A
2600 Laning Road
San Diego, CA 92106-6427

Written scoping comments will be accepted at each public scoping meeting.

There will not be a presentation or formal oral comment session. Public scoping meetings will include poster stations staffed by Navy representatives.

Visit www.NAVWAR-revitalization.com for more information or to submit comments online.

Appendix C: Postcard Mailer

Navy Old Town Campus Revitalization Environmental Impact Statement

NAVWAR

*The U.S. Navy initiated a **30-day public scoping process from January 24, 2020 through February 24, 2020** to identify community interests and specific issues for analysis in the Environmental Impact Statement.*

In accordance with the National Environmental Policy Act of 1969, the U.S. Navy announces its intent to prepare an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Old Town Campus (OTC) at Naval Base Point Loma, California to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. The Navy welcomes your input.

You can participate in a variety of ways:

- Submit written scoping comments at a public scoping meeting
- Submit scoping comments online at **www.NAVWAR-revitalization.com**
- Mail scoping comments to:

  Naval Facilities Engineering Command Southwest
  Navy OTC Revitalization EIS Project Manager
  Attention: Ron Bochenek
  1220 Pacific Highway (Code: EV21.RB)
  San Diego, CA 92132-5101

Scoping comments must be postmarked by **Monday, February 24, 2020.**

All scoping comments submitted by this date will be considered in the preparation of the Draft EIS.

Additional opportunities for public participation will occur after the publication of the Draft EIS in Summer 2020.

For additional project information or to submit written scoping comments, please visit: **www.NAVWAR-revitalization.com**

Public Scoping Meetings

Thursday, February 13, 2020 and Wednesday, February 19, 2020

4 p.m. to 7 p.m.

Liberty Station Conference Center
Main Hall, Door A
2600 Laning Road
San Diego, CA 92106-6427

Arrive at any time during the hours specified. Navy representatives will be available at poster stations to provide information about the project and answer questions. There will not be a presentation or a formal oral comment session.

Individuals requiring reasonable accommodations: please contact Ron Bochenek by email at info@NAVWAR-revitalization.com or by calling 619-532-2799.

Proposed Action

The Navy proposes to revitalize NAVWAR's facilities on the OTC. The existing OTC facilities are beyond their useful life and their degradation is affecting NAVWAR's cyber warfare mission, security, and workforce safety. Specific proposed actions within the OTC proposal could include Navy recapitalization of the site or redevelopment through a public-private partnership, including the consideration of a potential Transit Center.

For additional project information or to submit written scoping comments, please visit: **www.NAVWAR-revitalization.com**

Naval Facilities Engineering Command Southwest
Navy OTC Revitalization
EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

Appendix D: Stakeholder Letter

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAVAL BASE POINT LOMA
140 SYLVESTER ROAD
SAN DIEGO, CALIFORNIA 92106-3521

IN REPLY REFER TO
5090
Ser N01/037
January 24, 2020

Dear Sir or Madam:

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE NAVY OLD TOWN CAMPUS REVITALIZATION AT NAVAL BASE POINT LOMA, CALIFORNIA

Pursuant to the National Environmental Policy Act (NEPA) of 1969, the U.S. Navy is preparing an Environmental Impact Statement (EIS) to analyze the potential environmental effects associated with revitalization of Naval Base Point Loma Old Town Campus (OTC) to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address provisions of the California Environmental Quality Act as it relates to non-federal development within the proposed alternatives. The EIS will comprehensively analyze the proposed action to demolish existing facilities and construct new buildings, utilities, and infrastructure at the OTC. Specific proposed actions could include Navy recapitalization of the site or redevelopment through a public-private partnership, including the consideration of a potential Transit Center.

The Navy initiated a 30-day public scoping period on January 24, 2020 to identify community interests and specific resources for analysis in the EIS. The 30-day public scoping period extends through **February 24, 2020**. The Navy invites you to participate in the EIS process and welcomes your input.

Public Scoping Meetings

The Navy is holding two public scoping meetings to receive written scoping comments on issues for analysis in the EIS. The public scoping meetings will be held from **4 p.m. to 7 p.m. on Thursday, February 13, 2020 and Wednesday, February 19, 2020:**

Liberty Station Conference Center
Main Hall, Door A
2600 Laning Road
San Diego, CA 92106-6427

The public may arrive at any time during the hours specified. Navy representatives will be available at poster stations to provide information about the project and answer questions. There will not be a presentation or formal oral comment session. Individuals

requiring reasonable accommodations may contact Ron Bochenek, Navy OTC Revitalization EIS Project Manager, at info@NAVWAR-revitalization.com or by calling 619-532-2799.

Submitting Written Scoping Comments

The Navy requests and welcomes your scoping comments. Written scoping comments may be submitted at the public scoping meetings, online at **www.NAVWAR-revitalization.com**, or via postal mail to:

Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

The 30-day public scoping period will be open from January 24, 2020 through February 24, 2020. Scoping comments must be postmarked by **Monday, February 24, 2020**. All scoping comments submitted by this date will be considered in the preparation of the Draft EIS. Additional opportunities for public participation will occur after the publication of the Draft EIS in Summer 2020.

Background

NAVWAR established the OTC site as their headquarters in 1996, with a mission focus of naval communications and space programs. The mission has grown to include development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs.

Proposed Action

NAVWAR proposes to revitalize the OTC, which would include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR on the OTC. NAVWAR's mission requirements include 1,064,268 square feet (SF) of space, as follows:

- 845,326 SF of office space,
- 29,156 SF of secure conference and auditorium space,
- 24,172 SF of warehouse/storage space, and
- 165,614 SF of lab space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

During development of the NAVWAR's mission requirements, the Navy identified a portion of the existing OTC facilities, primarily open storage/laydown and warehouse space, which could be accommodated at an off-site location. This EIS does not address the potential NAVWAR off-site facilities relocation. Therefore, subsequent NEPA may be required if alternative selection results in utilization of an off-site location.

Purpose and Need for the Action

The purpose of the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements. Current facilities are beyond their useful life and negatively affect NAVWAR's cyber warfare mission, security, and workforce safety. NAVWAR requires secure, safe, efficient, modern, state-of-the-art facilities to meet information technology, artificial intelligence, and cyber warfare operational needs as a central component to NAVWAR's mission in defense of our Nation.

For more information, please visit the project website at **www.NAVWAR-revitalization.com** or contact Mr. Ron Bochenek, Navy OTC Revitalization EIS Project Manager, at 619-532-2799 or info@NAVWAR-revitalization.com.

Sincerely,

BRIEN W. DICKSON
Captain, U.S. Navy
Commanding Officer
Naval Base Point Loma

Enclosure: 1. Project Location Map

Enclosure 1: Project Location Map

Enclosure (1)

Appendix E: News Release

Region Southwest Release

COMMANDER NAVY REGION SOUTHWEST

Public Affairs Office
www.cnrsw.navy.mil

For Immediate Release **Jan. 24, 2020**

Tel: (619) 532-1430
Fax: (619) 532-3181
Address: 937 N. Harbor Drive
San Diego, CA 92132-0058

THE U.S. NAVY ANNOUNCES ITS INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT AND HOLD PUBLIC SCOPING MEETINGS FOR REVITALIZATION OF NAVWAR FACILITIES ON THE NAVY OLD TOWN CAMPUS AT NAVAL BASE POINT LOMA, CALIFORNIA

SAN DIEGO — Pursuant to the National Environmental Policy Act, the Navy is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Old Town Campus (OTC) at Naval Base Point Loma, California to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address the provisions of the California Environmental Quality Act as it relates to non-federal development within the proposed alternatives. The Navy is proposing to demolish existing facilities and construct new buildings, utilities, and infrastructure at the OTC. Specific proposed actions could include Navy recapitalization of the site or redevelopment through a public-private partnership, including the consideration of a potential Transit Center.

Public Scoping Meetings
4 p.m. to 7 p.m.

Thursday, February 13
and
Wednesday, February 19

Liberty Station Conference Center
Main Hall, Door A
2600 Laning Road
San Diego, CA 92106-6427

The Navy initiated a 30-day public scoping period on January 24, 2020 to identify community interests and specific resources for analysis in the EIS. The 30-day public scoping period extends through February 24, 2020. The Navy will hold two public scoping meetings, Thursday, February 13, 2020 and Wednesday, February 19, 2020. Details on the public scoping meetings and how to submit written comments are provided below. All comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS. The Navy welcomes input from the public during the scoping process.

Public Scoping Meetings

The Navy is holding two public scoping meetings to receive written comments on issues for analysis in the EIS.
The scoping meetings will be held from 4 p.m. to 7 p.m. on Thursday, February 13, 2020 and Wednesday, February 19, 2020 at:

Liberty Station Conference Center
Main Hall, Door A
2600 Laning Road
San Diego, CA 92106-6427

The public may arrive at any time during the hours specified. Navy representatives will be available at poster stations to provide information about the project and answer questions. There will not be a presentation or formal oral comment session. Individuals requiring reasonable accommodations may contact Ron Bochenek, Navy OTC Revitalization EIS Project Manager, at **info@NAVWAR-revitalization.com** or at (619) 532-2799.

Submitting Written Scoping Comments
Written scoping comments may be submitted at two public scoping meetings, online via a comment form at **www.NAVWAR-revitalization.com,** or via postal mail to:

Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

All comments must be postmarked or received by February 24, 2020 to be considered in the preparation of the Draft EIS. Additional opportunities for public participation will occur after the publication of the Draft EIS in Summer 2020.

For more information on the Navy OTC Revitalization Project, visit: **https://www.NAVWAR-revitalization.com/**

Or contact:

- Project Information Line: (888) OTC-NAVY / (888) 682-6289
- Project Email Address: **info@NAVWAR-revitalization.com**

Media inquiries can be directed to the Public Affairs Office, Navy Region Southwest, (619) 532-1430.

Thank you for your interest and participation in the future of San Diego.

- USN -

Appendix F: Eblasts

Eblast #1 (subsequent eblasts included similar content with updated headlines)

Headlines

Eblast #1: Notice of Intent for the Navy Old Town Campus (OTC) Revitalization Project
Eblast #2: Reminder - Feb. 13 and 19 Public Scoping Meetings for the Navy Old Town Campus Revitalization Project
Eblast #3: Reminder - Feb. 19 Public Scoping Meeting for the Navy Old Town Campus Revitalization Project
Eblast #4: Reminder - Feb. 24 Close of Public Scoping Comment Period for the Navy Old Town Campus Revitalization Project

The U.S. Navy Announces its Intent to Prepare an Environmental Impact Statement and Hold Public Scoping Meetings for Revitalization of NAVWAR Facilities on the Navy Old Town Campus at Naval Base Point Loma, California

Pursuant to the National Environmental Policy Act, the Navy is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Old Town Campus (OTC) at Naval Base Point Loma, California to support Naval Information Warfare Systems Command's (NAVWAR) current and future operational readiness. This EIS will also address the provisions of the California Environmental Quality Act as it relates to non-federal development within the proposed alternatives. The Navy is proposing to demolish existing facilities and construct new buildings, utilities, and infrastructure at the OTC. Specific proposed actions could include Navy recapitalization of the site or redevelopment through a public-private partnership, including the consideration of a potential Transit Center.

The Navy initiated a 30-day public scoping period on January 24, 2020 to identify community interests and specific resources for analysis in the EIS. The 30-day public scoping period extends through February 24, 2020. The Navy will hold two public scoping meetings, Thursday, February 13, 2020 and Wednesday, February 19, 2020. Details on the public scoping meetings and how to submit written comments are provided below. All comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS. The Navy welcomes input from the public during the scoping process.

Public Scoping Meetings

4 p.m. to 7 p.m.

Thursday, February 13

and

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Main Hall, Door A

2600 Laning Road

San Diego, CA 92106-6427

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contact Ron Bochenek, Navy OTC Revitalization EIS Project Manager, at **info@NAVWAR-revitalization.com** or at (619) 532-2799.

Submitting Written Scoping Comments

Written scoping comments may be submitted at two public scoping meetings, online via a comment form at **www.NAVWAR-revitalization.com**, or via postal mail to:

Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

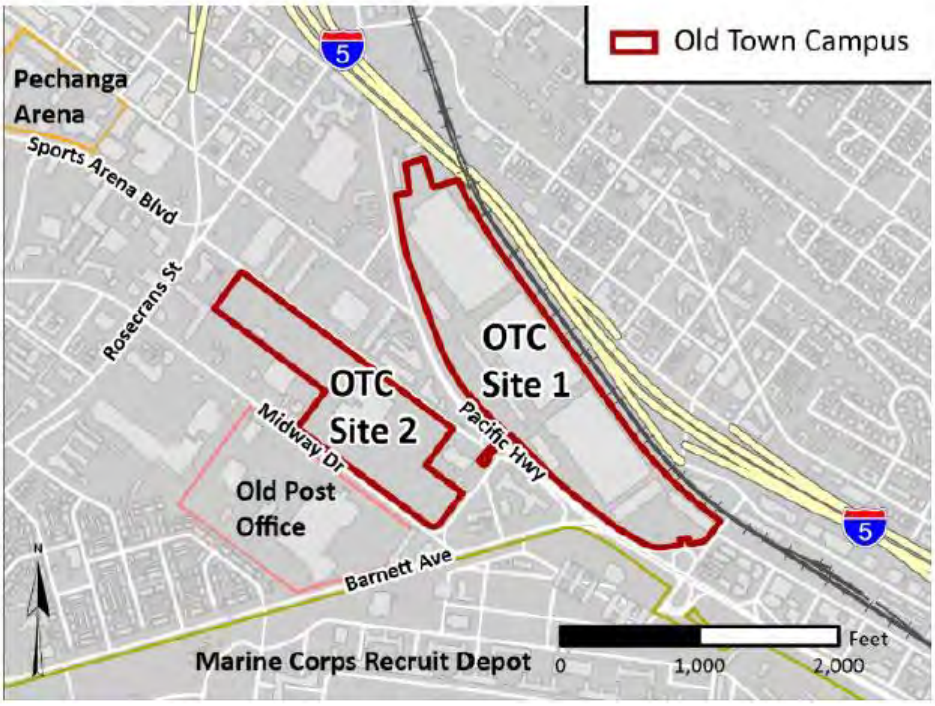
All comments must be postmarked or received by February 24, 2020 to be considered in the preparation of the Draft EIS. Additional opportunities for public participation will occur after the publication of the Draft EIS in Summer 2020.

For more information on the Navy OTC Revitalization Project, visit:
https://www.NAVWAR-revitalization.com/

Or contact:

- Project Information Line: (888) OTC-NAVY / (888) 682-6289
- Project Email Address: **info@NAVWAR-revitalization.com**

Thank you for your interest and participation in the future of San Diego.



For updated information on the revitalization of NAVWAR's facilities on Navy Old Town Campus (OTC), visit:
www.NAVWAR-revitalization.com

Or contact:
(888) OTC-NAVY
(888) 682-6289
info@NAVWAR-revitalization.com

Appendix G: Facebook Posts

Facebook Post #1 - Navy Region Southwest

Facebook Post #2 - Naval Base Point Loma

Appendix H: Fact Sheets

NAVWAR

Naval Information Warfare Systems Command

NAVWAR is responsible for providing the critical networks, sensors, and systems to connect the air, surface, subsurface, space, and cyberspace that are vital to the Navy and to national security.

In the era of information warfare, our homeland is no longer a sanctuary. Our adversaries reach across cyberspace daily to attack our networks, try to steal critical information, and get a foothold in our connected society. NAVWAR operates the largest network in the world:

- Supporting 700,000 users in 2,500 locations around the world;
- Blocking 8 million intrusion attempts per day; and
- Providing the essential communications the nation needs for strategic defense, communications, and deterrence.

To execute its high-tech operations and to meet emerging security requirements, NAVWAR must have state-of-the-art facilities to support its ability to identify, develop, deliver, and sustain information warfare capabilities.

Information and cyber warfare is now a fundamental element of warfare, an essential concept within the Navy's strategy, and is recognized as a warfare area on par with the traditional domains of air, sea, land, and space. NAVWAR's current facilities are not adaptable, sustainable, or compatible with these growing mission requirements.

The need for new facilities is urgent. The Navy and nation are under cyberattack each day, and NAVWAR's technical programs are at the front line of defense against them.

NAVWAR in the San Diego Region

NAVWAR and San Diego represent unique synergies for each other. While NAVWAR brings major economic, technological, and educational partnerships to benefit the region, San Diego provides NAVWAR with an unmatched network of defense contractors, research firms, academic institutions, and talent; and proximity to Navy operational forces, installations, and essential test facilities. In 2019, the San Diego Military Advisory Council, in collaboration with the Fermanian Business & Economic Institute at Point Loma Nazarene University, published a regional Economic Impact Study of NAVWAR and the Navy.

NAVWAR Economic Impact Study Results

- **5,200**
  Employees in San Diego Region
- **$800 million**
  Annual Value of Payroll and Benefits
- **$3.2 billion**
  Contribution to the Regional Economy in Fiscal Year 2018

Public Scoping – Your Input Matters

The Navy welcomes your comments. Written scoping comments may be provided in three ways:

1. **Fill out a comment form at a scoping meeting** (February 13 or February 19, 2020)
2. **By U.S. mail:**
   Naval Facilities Engineering Command Southwest
   Navy OTC Revitalization EIS Project Manager
   Attention: Ron Bochenek
   1220 Pacific Highway (Code: EV21.RB)
   San Diego, CA 92132-5101
3. **Via the website: www.NAVWAR-revitalization.com**

In accordance with the National Environmental Policy Act of 1969, the Navy is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the Old Town Campus (OTC) at Naval Base Point Loma, California to support NAVWAR's current and future operational readiness. The Navy initiated a 30-day public scoping process from January 24, 2020 through February 24, 2020 to identify community interests and issues to be considered for analysis in the EIS. The Navy welcomes your input. **Scoping comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS.**

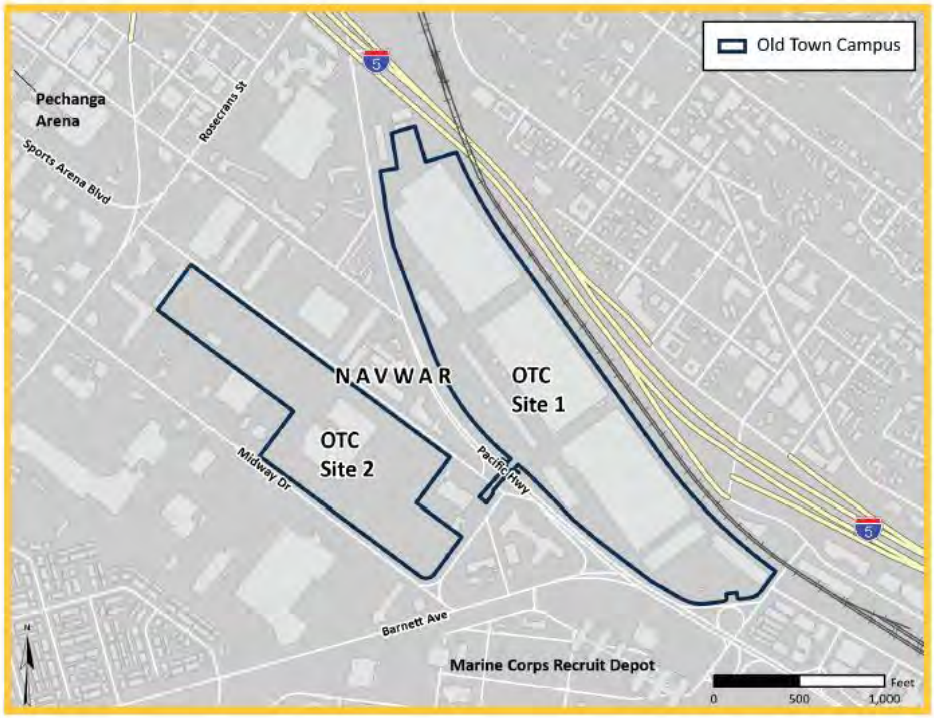
Project Location and History

Project Location

The Old Town Campus (OTC) at Naval Base Point Loma comprises two sites that total 70.5 acres of Navy-owned land located approximately 1.5 miles from downtown San Diego and a half-mile to San Diego International Airport. The OTC is located near major roadways (Interstate 5, Interstate 8, and Pacific Highway) and near the Old Town Transit Center.

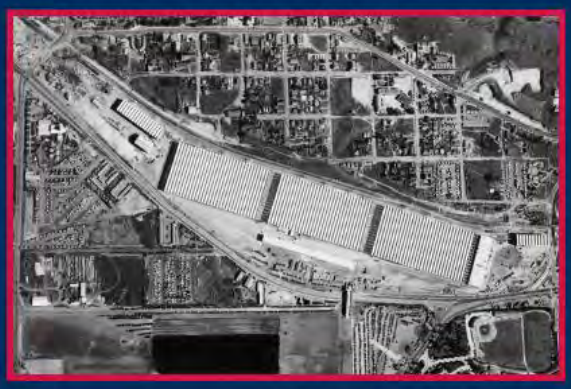
NAVWAR

NAVWAR site activities have grown to include development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance, and reconnaissance systems for Navy, Marine Corps, and selected joint service, allied nation, and other government agency programs.



OTC Site History

- **1941 –** The government-owned OTC site is dedicated by the facility operator, Consolidated Aircraft, and aircraft are built during World War II.
- **1946-1947 –** Deemed as post-war federal surplus, the OTC site transitions to largely non-military and non-manufacturing owners and tenants.
- **1950s-1980s –** In the mid-1950s, the Air Force acquires the site and Air Force Plant 19 operates as a government-owned, contractor-operated site. Convair/General Dynamics are the primary users of the manufacturing plant, working on aircraft production as well as missile production programs during the Cold War.
- **Mid 1960s-1994 –** The Navy increasingly utilizes space as a tenant of the Air Force at the OTC site.
- **1994 –** The Navy assumes ownership of OTC, with oversight given to Naval Base Point Loma.
- **1996 –** NAVWAR, a Navy Command, establishes the OTC site as its headquarters, with a mission focus of naval communications and space programs.



OTC Site Future

NAVWAR must have facilities to support its ability to identify, develop, deliver, and sustain information warfare capabilities and services that enable naval, joint, coalition, and other national missions.

NAVWAR's current facilities are not adaptable, sustainable, or compatible with these growing mission requirements. NAVWAR requires secure, safe, efficient, modern, state-of-the-art facilities to meet information technology, artificial intelligence, and cyber warfare operational needs as a central component to NAVWAR's mission in defense of our nation.

Public Scoping – Your Input Matters

The Navy welcomes your comments. Written scoping comments may be provided in three ways:

1. **Fill out a comment form at a scoping meeting** (February 13 or February 19, 2020)
2. **By U.S. mail:**
   Naval Facilities Engineering Command Southwest
   Navy OTC Revitalization EIS Project Manager
   Attention: Ron Bochenek
   1220 Pacific Highway (Code: EV21.RB)
   San Diego, CA 92132-5101
3. **Via the website: www.NAVWAR-revitalization.com**

In accordance with the National Environmental Policy Act of 1969, the Navy is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the OTC at Naval Base Point Loma, California to support NAVWAR's current and future operational readiness. The Navy initiated a 30-day public scoping process from January 24, 2020 through February 24, 2020 to identify community interests and issues to be considered for analysis in the EIS. The Navy welcomes your input. **Scoping comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS.**

Purpose and Need for Proposed Action

Purpose and Need

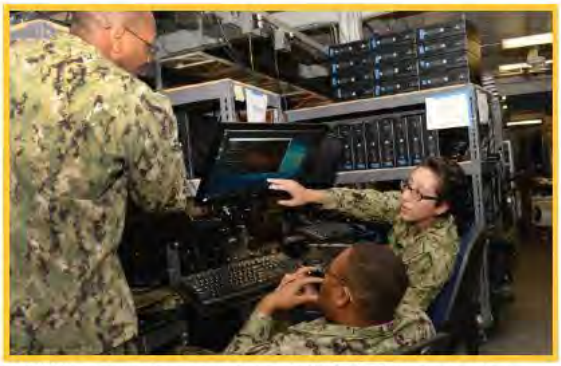
The purpose of the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements.

The existing Old Town Campus (OTC) facilities are beyond their useful life and their degradation is affecting NAVWAR's cyber warfare mission, security, and workforce safety. The Navy requires secure, safe, modern, state-of-the-art facilities to support NAVWAR's mission requirements.

Proposed Action

The Navy's Proposed Action is to revitalize the OTC at Naval Base Point Loma, which could include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR. Revitalization could include Navy recapitalization of the site or redevelopment through a public-private development, including consideration of a potential Transit Center.

Existing structures make it difficult to keep pace with the Navy's emerging security classification requirements.



NAVWAR accounts for approximately half of all cybersecurity jobs in San Diego. Modern facilities are required to support this world-class workforce in executing NAVWAR's mission.

The 1940s-era warehouse structures are not adaptable to support NAVWAR's mission requirements.

NAVWAR Requirements

NAVWAR's requirements for revitalized facilities on the OTC include 1,064,268 square feet (SF) of space, as follows:

- 845,326 SF of office space;
- 29,156 SF of secure conference and auditorium space;
- 24,172 SF of warehouse/storage space; and
- 165,614 SF of laboratory space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

In addition to the above, NAVWAR requires an additional 645,187 SF of open storage or laydown space, warehouse, office, and laboratory space that could be accommodated at an off-site location:

- 3,900 SF of office space;
- 457,769 SF of warehouse/storage space;
- 9,251 SF of laboratory space; and
- 174,267 SF of open storage or laydown space.

Public Scoping – Your Input Matters

The Navy welcomes your comments. Written scoping comments may be provided in three ways:

1. **Fill out a comment form at a scoping meeting** (February 13 or February 19, 2020)
2. **By U.S. mail:**
   Naval Facilities Engineering Command Southwest
   Navy OTC Revitalization EIS Project Manager
   Attention: Ron Bochenek
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3. **Via the website: www.NAVWAR-revitalization.com**

In accordance with the National Environmental Policy Act of 1969, the Navy is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with revitalization of the OTC at Naval Base Point Loma, California to support NAVWAR's current and future operational readiness. The Navy initiated a 30-day public scoping process from January 24, 2020 through February 24, 2020 to identify community interests and issues to be considered for analysis in the EIS. The Navy welcomes your input. **Scoping comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS.**

Preliminary Action Alternatives

The Navy is preparing an Environmental Impact Statement (EIS), in accordance with the National Environmental Policy Act, for the revitalization of the Old Town Campus (OTC) at Naval Base Point Loma. The Navy plans to study a range of alternatives that support the purpose and need of the Proposed Action, as well as a No Action Alternative. Public scoping could help shape the alternatives.

- **Alternative 1 – Navy Recapitalization at OTC**
  This alternative consists of revitalization of OTC to meet NAVWAR's facility requirements with Navy-funded capital improvements only. This would potentially include consolidating NAVWAR operations into two of the existing buildings on OTC Site 1.

- **Alternative 2 – High-Density Mixed Use Revitalization**
  This alternative consists of construction of new Navy facilities for NAVWAR on the OTC site through a public-private development, and the relocation of some warehouse functions to a separate off-site location.

NAVWAR Requirements

NAVWAR's requirements for revitalized facilities on the OTC include 1,064,268 square feet (SF) of space, as follows:

- 845,326 SF of office space;
- 29,156 SF of secure conference and auditorium space;
- 24,172 SF of warehouse/storage space; and
- 165,614 SF of laboratory space.

Parking will also be required for personnel working at OTC, either on site or at a separate nearby location.

- **Alternative 3 – Low-Density Mixed Use Revitalization**
  This alternative would be similar to what will be studied for the High-Density Mixed Use Revitalization alternative, but the development scenario for private development would be reduced.

- **Alternative 4 – High-Density Mixed Use Revitalization Including a Transit Center**
  This alternative would be similar to what will be studied for the High-Density Mixed Use Revitalization alternative, but a portion of the OTC site would be developed as a Transit Center.

Continued on back

- **Alternative 5 – Low-Density Mixed Use Revitalization Including a Transit Center**

  This alternative would be similar to what will be studied for the High-Density Mixed Use Revitalization alternative, but a portion of the OTC site would be developed as a Transit Center, and the development scenario for private development would be reduced.

- **No Action Alternative**

  Assumes there would be no change from status quo. The Navy would continue to maintain and repair the existing facilities, and NAVWAR would continue to operate at the OTC site as is.

Type of Development	Alternative 1 Navy Recapitalization at OTC	Alternative 2 High-Density Mixed Use Revitalization	Alternative 3 Low-Density Mixed Use Revitalization	Alternative 4 High-Density Mixed Use Revitalization Including a Transit Center	Alternative 5 Low-Density Mixed Use Revitalization Including a Transit Center	No Action Alternative
NAVWAR	Yes	Yes	Yes	Yes	Yes	Yes
Commercial	No	Yes	Yes	Yes	Yes	No
Residential	No	Yes	Yes	Yes	Yes	No
Transit Center	No	No	No	Yes	Yes	No
Public-Private Development	No	Yes	Yes	Yes	Yes	No

Public Scoping – Your Input Matters

The Navy welcomes your comments. Written scoping comments may be provided in three ways:

1. **Fill out a comment form at a scoping meeting** (February 13 or February 19, 2020)
2. **By U.S. mail:**
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In accordance with the National Environmental Policy Act of 1969, the Navy is preparing an EIS to evaluate the potential environmental effects associated with revitalization of the OTC at Naval Base Point Loma, California to support NAVWAR's current and future operational readiness. The Navy initiated a 30-day public scoping process from January 24, 2020 through February 24, 2020 to identify community interests and issues to be considered for analysis in the EIS. The Navy welcomes your input. **Scoping comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS.**

Resources to be Analyzed

The Navy is preparing an Environmental Impact Statement (EIS), in accordance with the National Environmental Policy Act, for the revitalization of the Old Town Campus (OTC) at Naval Base Point Loma. The EIS will analyze the potential environmental effects the Proposed Action and alternatives may have on various resource areas. The EIS will also address provisions of the California Environmental Quality Act (CEQA) as it relates to non-federal development within the proposed alternatives. The Navy recognizes the project is located in an urbanized environment and will focus analysis on appropriate resource areas. The public can suggest resources for consideration.

Key Resources to be Analyzed in the EIS

- **Air Quality**
  The EIS will evaluate the potential impacts to air quality (e.g., emission of air pollutants) from traffic, construction, and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to greenhouse gases/climate change, odor, and an evaluation of potential human health effects.

- **Transportation/Traffic**
  The EIS will evaluate the potential impacts to transportation and circulation (including the generation of traffic, potential impacts to mass transit, and connectivity) from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to alternative transportation and vehicle miles traveled.

- **Cultural/Historic Resources**
  The EIS will evaluate the potential impacts to cultural resources, focused on the built environment at the OTC site, from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to paleontology.

- **Visual Resources**
  The EIS will evaluate the potential impacts to visual resources from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to daytime glare.

- **Land Use**
  The EIS will evaluate the potential impacts to land use (e.g., compatibility with existing land uses in the area) from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to community character and agricultural resources.

- **Hazardous Materials and Waste**
  The EIS will evaluate the potential impacts from hazardous materials and waste, looking at both existing potential contamination on the site and potential generation of hazardous materials and waste during operations. Additionally, the EIS will address the provisions of CEQA related to siting projects in hazardous locations.

- **Cumulative Impacts**
  The EIS will evaluate the potential impacts from each resource described on this fact sheet in combination with other past, present, or future projects that may also potentially impact that resource area, and evaluate if the projects will have a greater potential to affect each resource area when the projects are combined.

Additional Resources

- **Socioeconomics**
  The EIS will evaluate the potential impacts to socioeconomics (e.g., housing and employment) from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to potential housing and growth inducing impacts.

- **Environmental Justice**
  The EIS will evaluate the potential impacts to environmental justice and the protection of children from environmental health risks from the construction and operation of the Proposed Action.

- **Public Services**
  The EIS will evaluate the potential impacts to public services (e.g., fire and police, education, recreation, and libraries) from the construction and operation of the Proposed Action.

- **Public Health and Safety**
  The EIS will evaluate the potential impacts to public health and safety (including Force Protection) from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to fire hazards/wildfire.

- **Infrastructure**
  The EIS will evaluate the potential impacts to infrastructure, including water and wastewater utilities and energy consumption from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to potential energy impacts.

- **Noise**
  The EIS will evaluate the potential impacts from noise generated by the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to vibration.

- **Geology**
  The EIS will evaluate the potential impacts of the geological resources and soils to the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to geologic hazards and mineral resources.

- **Water Resources**
  The EIS will evaluate the potential impacts to water resources from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to flood control.

- **Biological Resources**
  The EIS will evaluate the potential impacts to biological resources from the construction and operation of the Proposed Action. Additionally, the EIS will address the provisions of CEQA related to California State-listed and candidate species, locally important species, and wildlife corridors and linkages.

Public Scoping – Your Input Matters

The Navy welcomes your comments. Written scoping comments may be provided in three ways:

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2. **By U.S. mail:**
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   Attention: Ron Bochenek
   1220 Pacific Highway (Code: EV21.RB)
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National Environmental Policy Act Process

The Navy is committed to robust public outreach and encourages all members of the public to participate in this project. The Navy will continue to engage with the public and share information throughout the project.

Notice of Intent January 24, 2020	Announces the Navy's intent to prepare an Environmental Impact Statement (EIS).
Public Scoping Period January 24 – February 24, 2020	Public process to determine the scope and issues to be considered for analysis in the EIS. The Navy is holding public scoping meetings on February 13 and 19, 2020. **WE ARE HERE**
Draft EIS	The Navy will collect and consider all comments received during the public scoping period and prepare the Draft EIS.
Public Comment Period Summer 2020	The next opportunity for public comment. The Navy will hold public meetings during this time.
Final EIS	The Navy will collect and consider all comments received during the public comment period and prepare the Final EIS.
Notice of Availability Fall 2020	Announces availability of the Final EIS. The Final EIS documents comments received on the Draft EIS and includes a response to comments.
30-Day Waiting Period	Agencies are generally required to wait 30 days before making a final decision on a proposed action.
Record of Decision Winter 2020	Announces the formal decision on the Proposed Action.

Opportunities for Public Comment

How to Submit Scoping Comments

The Navy welcomes your comments. Scoping comments must be postmarked by **Monday, February 24, 2020** to be considered in the preparation of the Draft EIS.

- **Provide written scoping comments at the public scoping meetings on February 13 and February 19, 2020**
- **Mail written scoping comments to:**
  Naval Facilities Engineering Command Southwest
  Navy OTC Revitalization EIS Project Manager
  Attention: Ron Bochenek
  1220 Pacific Highway (Code: EV21.RB)
  San Diego, CA 92132-5101
- **Submit written scoping comments through the project website: www.NAVWAR-revitalization.com**

Public Scoping – Your Input Matters

Public participation helps the Navy make informed decisions. The Navy welcomes public input on the scope of the EIS.

Additional opportunities for public comment in the Navy's NEPA process will occur after the publication of the Draft EIS in Summer 2020.

In accordance with the National Environmental Policy Act of 1969, the Navy is preparing an EIS to evaluate the potential environmental effects associated with revitalization of the Old Town Campus (OTC) at Naval Base Point Loma, California to support NAVWAR's current and future operational readiness. The Navy initiated a 30-day public scoping process from January 24, 2020 through February 24, 2020 to identify community interests and issues to be considered for analysis in the EIS. **Scoping comments must be postmarked by February 24, 2020 to be considered in the preparation of the Draft EIS.**

Appendix I: Posters

NAVWAR
Naval Information Warfare Systems Command

The Importance of NAVWAR's Mission

- Develops, acquires, and secures cyber systems for national defense
- Operates largest network in the world, with 700,000 users in 2,500 locations
- Blocks 8 million intrusion attempts per day

PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

www.NAVWAR-revitalization.com

NAVWAR
Naval Information Warfare Systems Command

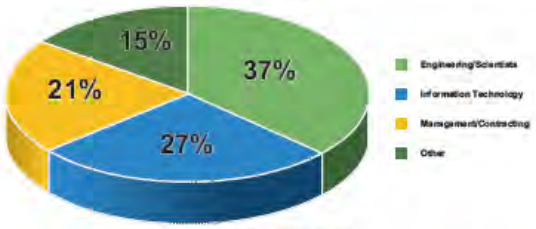
NAVWAR's Economic Impact in San Diego

- **NAVWAR** - Major economic, technological, and educational partnerships that benefit the region
- **San Diego** - Network of contractors, research firms, academic institutions, and talent; and proximity to Navy forces, installations, and test facilities

NAVWAR Economic Impacts	Fiscal Year 2018	Fiscal Year 2019 (estimated)
Jobs	26,000	29,000
Direct Spending ($ billion)	2.2	2.5
Income ($ billion)	2.2	2.4
Regional Economy ($ billion)	3.2	3.5

Source: NAVWAR, SDMAC 2019

NAVWAR Employment
Fiscal Year 2018



Source: NAVWAR, SDMAC 2019

NAVWAR is San Diego's 15th Largest Employer

PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

www.NAVWAR-revitalization.com

OTC Site History

NAVWAR

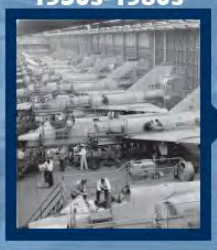
1941

The government-owned OTC site is dedicated by the facility operator, Consolidated Aircraft, and aircraft are built during World War II.

1946-1947

Deemed as post-war federal surplus, the OTC site transitions to largely non-military and non-manufacturing owners and tenants.

1950s-1980s



In the mid-1950s, the Air Force acquires the site and Air Force Plant 19 operates as a government-owned, contractor-operated site. Convair/General Dynamics are the primary users of the manufacturing plant, working on aircraft production as well as missile production programs during the Cold War.

1960s-1990s

The Navy increasingly utilizes space as a tenant of the Air Force at the OTC site.

1994

The Navy assumes ownership of OTC, with oversight given to Naval Base Point Loma.

1996

NAVWAR, a Navy Command, establishes the OTC site as its headquarters, with a mission focus of naval communications and space programs.

PUBLIC SCOPING

Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

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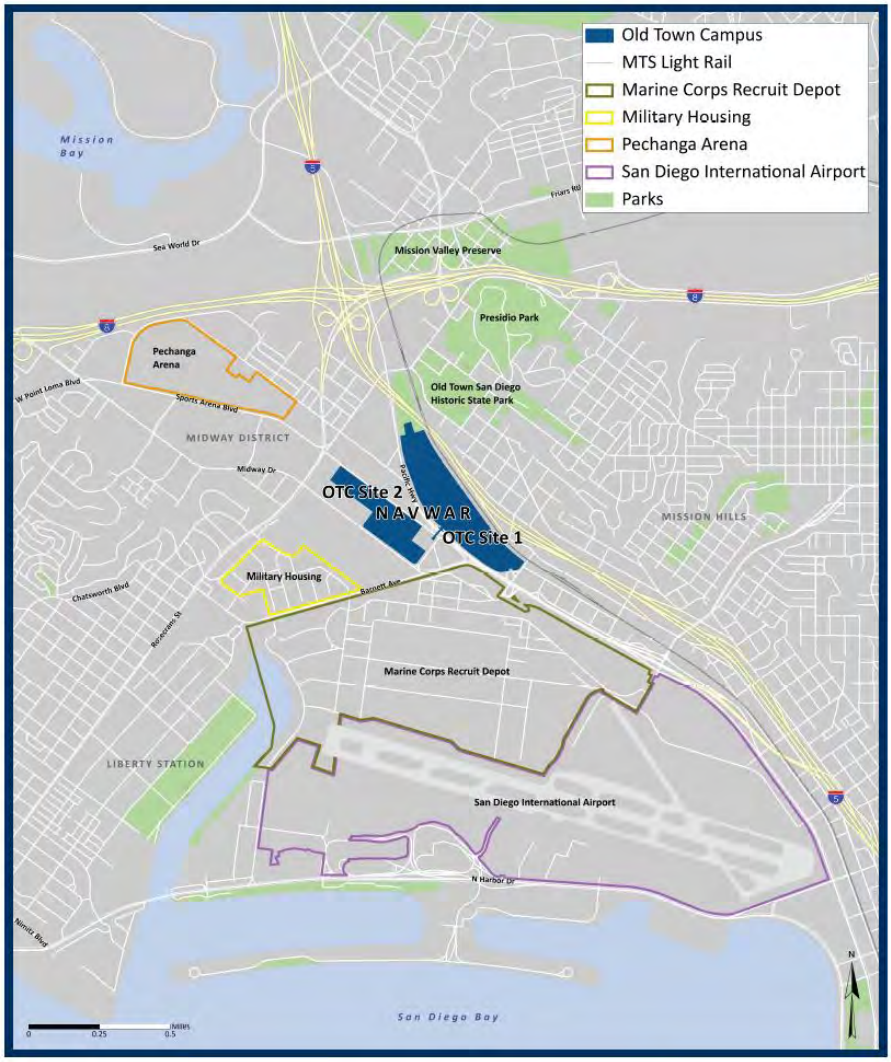
Project Location and Surrounding Area



PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS www.NAVWAR-revitalization.com

Purpose and Need for Proposed Action

Proposed Action

The Navy proposes to revitalize the Old Town Campus, which could include the demolition of existing facilities and construction of new buildings, utilities, and infrastructure to provide mission capable facilities for NAVWAR. Revitalization could include consideration of a potential Transit Center.

Purpose and Need

The purpose of the Proposed Action is to address substandard, inefficient, and obsolete facilities that are incapable of meeting and sustaining NAVWAR's mission requirements.

The Navy requires secure, safe, modern, state-of-the-art facilities to meet NAVWAR's information technology, artificial intelligence, and cyber warfare operational needs.

PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

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Preliminary Action Alternatives

The Navy plans to study a range of alternatives that support the purpose and need of the Proposed Action, as well as a No Action Alternative. Public scoping could help shape the alternatives.

Type of Development	Alternative 1 Navy Recapitalization at OTC	Alternative 2 High-Density Mixed Use Revitalization	Alternative 3 Low-Density Mixed Use Revitalization	Alternative 4 High-Density Mixed Use Revitalization Including a Transit Center	Alternative 5 Low-Density Mixed Use Revitalization Including a Transit Center	No Action Alternative
NAVWAR	Yes	Yes	Yes	Yes	Yes	Yes
Commercial	No	Yes	Yes	Yes	Yes	No
Residential	No	Yes	Yes	Yes	Yes	No
Transit Center	No	No	No	Yes	Yes	No
Public-Private Development	No	Yes	Yes	Yes	Yes	No

PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

www.NAVWAR-revitalization.com

Resources to be Analyzed

The Navy recognizes the project is located in an urbanized environment and will focus analysis on appropriate resource areas. The public can suggest resources for consideration.

Key Resources

Air Quality

Transportation/Traffic

Cultural/Historic Resources

Visual Resources

Land Use

Hazardous Materials and Waste

Cumulative Impacts

Other Resources?

?

Additional Resources

- Socioeconomics
- Environmental Justice
- Community Services
- Public Health and Safety
- Infrastructure
- Noise
- Geology
- Water Resources
- Biological Resources

PUBLIC SCOPING

Your Input Matters – We Welcome Your Comments

National Environmental Policy Act Process

The Navy will continue to engage with the public and share information throughout the project.

PUBLIC SCOPING

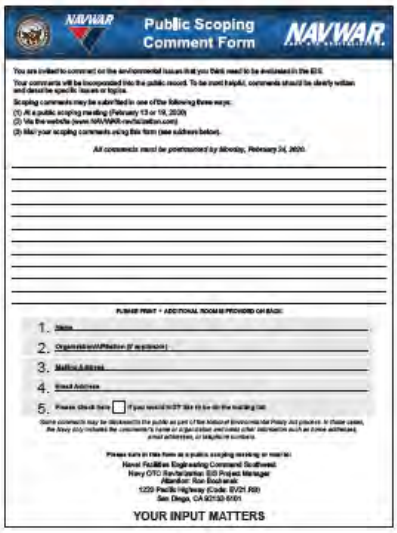
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS www.NAVWAR-revitalization.com

How to Submit Scoping Comments

The Navy encourages the public to submit comments on issues for analysis in the EIS.

- Scoping comments must be postmarked by Monday, February 24, 2020
- All comments received during the public scoping period will receive consideration during preparation of the Draft EIS
- Scoping comments may be submitted in three ways:
  1. Provide written comments at this public scoping meeting
  2. Mail written comments to:
     Naval Facilities Engineering Command Southwest
     Navy OTC Revitalization EIS Project Manager
     Attention: Ron Bochenek
     1220 Pacific Highway (Code: EV21.RB)
     San Diego, CA 92132-5101
  3. Submit written comments through the project website:
     www.NAVWAR-revitalization.com
- Additional opportunities for public comment in the Navy's NEPA process will occur after the publication of the Draft EIS in Summer 2020


Public Scoping Comment Form

YOUR INPUT MATTERS

Thank you for your time and interest.

PUBLIC SCOPING
Your Input Matters – We Welcome Your Comments

Navy OTC Revitalization EIS

www.NAVWAR-revitalization.com

Appendix J: Comment Form

You are invited to comment on the environmental issues that you think need to be evaluated in the EIS.

Your comments will be incorporated into the public record. To be most helpful, comments should be clearly written and describe specific issues or topics.

Scoping comments may be submitted in one of the following three ways:

(1) At a public scoping meeting (February 13 or 19, 2020)

(2) Via the website (www.NAVWAR-revitalization.com)

(3) Mail your scoping comments using this form (see address below).

All comments must be postmarked by Monday, February 24, 2020.

PLEASE PRINT * ADDITIONAL ROOM IS PROVIDED ON BACK

1. **Name** _____

2. **Organization/Affiliation (if applicable)** _____

3. **Mailing Address** _____

4. **Email Address** _____

5. **Please check here** ☐ **if you would NOT like to be on the mailing list**

Some comments may be disclosed to the public as part of the National Environmental Policy Act process. In those cases, the Navy only includes the commenter's name or organization and omits other information such as home addresses, email addresses, or telephone numbers.

Please turn in this form at a public scoping meeting or mail to:

Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

YOUR INPUT MATTERS

PLEASE PRINT

Please turn in this form at a public scoping meeting or mail to:

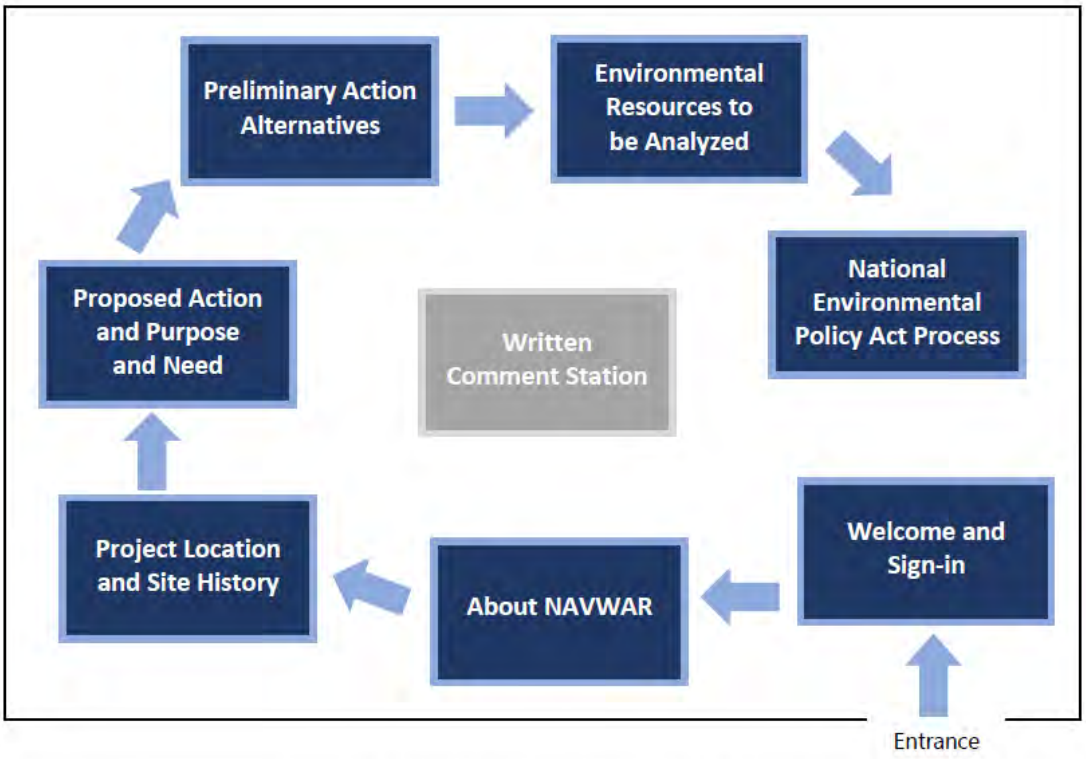
Naval Facilities Engineering Command Southwest
Navy OTC Revitalization EIS Project Manager
Attention: Ron Bochenek
1220 Pacific Highway (Code: EV21.RB)
San Diego, CA 92132-5101

YOUR INPUT MATTERS

Appendix K: Room Layout

The public scoping meeting will provide you with the opportunity to learn more about the proposed project. The Navy welcomes your comments on the environmental issues that you think need to be evaluated in the Environmental Impact Statement. Information stations are available throughout the room at the locations shown in the diagram below. Navy representatives are available at each station to provide information and answer questions. Please visit each station for more information about the proposed project.

The Navy welcomes your input.



www.NAVWAR-revitalization.com

Appendix P
Agency Correspondence

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Agreement Regarding
Naval Base Point Loma Old Town Campus

WHEREAS, this Agreement is entered into by the United States Department of the Navy ("Navy"), a Federal agency, and the San Diego Association of Governments ("SANDAG"), a California public agency, together which shall be known as the "Parties"; and

WHEREAS, the Navy has maintained facilities and a significant presence in San Diego for more than one hundred years; and

WHEREAS, the use of information technology, artificial intelligence, and cyber warfare have become a central component to the Navy's mission in defense of our Nation; and

WHEREAS, the Navy's Naval Information Warfare Systems Command ("NAVWAR") and Naval Information Warfare Center Pacific ("NIWC PAC") currently reside at Naval Base Point Loma's Old Town Campus ("Old Town Campus"); and

WHEREAS, the Old Town Campus is a substandard and obsolete facility incapable of sustaining the Navy's emerging requirements; and

WHEREAS, the Navy is considering the redevelopment of the Old Town Campus to include a recapitalized NAVWAR and NIWC PAC facility; and

WHEREAS a redeveloped NAVWAR and NIWC PAC facility in the San Diego region would serve the best interests of the Department of the Navy while continuing to contribute to the economic vitality of the San Diego region; and

WHEREAS, SANDAG is the San Diego region's Metropolitan Planning Organization ("MPO") and has a mission to plan for and construct a transportation system to meet the future needs of the San Diego region; and

WHEREAS, SANDAG has identified the need for a multi-modal regional transportation facility to serve as a connection linking the people of the San Diego region to the San Diego International Airport ("Transit Center"); and

WHEREAS, the Navy and SANDAG agree that a potential Transit Center located at the Old Town Campus may considerably improve the transportation options for people, including military personnel and Department of Defense employees, regionwide to connect with and use the San Diego International Airport; and

WHEREAS, the Navy and SANDAG now desire to enter into this Agreement describing a planning process intended to lead to the redevelopment of the Old Town Campus, to include a potential Transit Center and the redevelopment of NAVWAR and NIWC PAC facilities; and

NOW, THEREFORE, the Parties agree as follows:

1. The Navy and SANDAG agree that achievement of Navy requirements to leverage the Old Town Campus site to provide mission capable facilities for NAVWAR, NIWC PAC, and other tenant commands of Old Town Campus are the primary goal of this agreement.

2. The Agreement will allow flexibility in designing and delivering a high-density, mixed-use development compatible with the military missions of the Naval Base Point Loma and its tenant commands.

3. The Navy and SANDAG agree that the redevelopment of the Old Town Campus to include the establishment of a potential Transit Center and the provision of new facilities for NAVWAR may be beneficial to the Navy and San Diego region.

4. SANDAG agrees to fund and procure technical studies needed to support the development of an environmental document in compliance with the California Environmental Quality Act (CEQA) for redevelopment of the Old Town Campus; the Navy may rely on relevant CEQA documentation, as appropriate, for its compliance with its Record of Decision under the National Environmental Policy Act (NEPA). SANDAG's obligation to provide any funding is subject to the approval of the SANDAG Board of Directors.

5. The Navy and SANDAG agree to cooperate on preparation of appropriate environmental documentation with the Navy as the lead agency for NEPA compliance. Navy shall have no responsibility for any compliance with the CEQA or state and local laws that do not apply to the Navy, although Navy will cooperate with SANDAG in helping SANDAG meet its independent environmental requirements.

6. Construction and redevelopment of any improvements on the Old Town Campus, including a potential Transit Center, are contingent upon satisfying the applicable requirements of NEPA and CEQA, and executing the required real estate decision documents to move forward with the project.

7. The Navy and SANDAG will cooperate and use best efforts to maintain progress on the planning process to redevelop the Old Town Campus in accordance with the timelines described within the Project Development Schedule shown in **Exhibit A** to this Agreement.

8. SANDAG may seek funding from other stakeholders, including the U.S. Department of Transportation and State of California, to assist with the cost of public improvements.

9. All obligations under this Agreement are contingent upon compliance with all applicable federal, state, and local laws. SANDAG and the Navy shall proactively implement measures to ensure that any perceived or actual conflict of interest is neutralized and/or mitigated, as appropriate. Further, SANDAG and the Navy will ensure that proprietary and/or sensitive information generated beyond the conceptual level is safeguarded from unauthorized disclosure by way of a Non-Disclosure Agreement with its consultants or by other contractual provision. Both the Navy and SANDAG will report any potential conflicts of interest to one another, as well as the measures employed to mitigate or eliminate the conflict.

10. No alteration of or amendment to this Agreement shall be valid unless made in writing and signed by the Navy and SANDAG.

11. Neither the Navy nor SANDAG may assign this Agreement, in whole or in part, without prior written consent of the other Party. Any waiver, modification, consent, or acquiescence with respect to any provision of this Agreement to be effective must be set forth in writing and duly executed by or on behalf of the Party to be bound thereby. No waiver by any Party of any agreement provision hereunder will be deemed a waiver of any other agreement provision.

12. Wherever possible, each provision of this Agreement shall be interpreted in such a manner as to be valid under applicable law, but, if any provision of this Agreement is invalid or prohibited thereunder, such invalidity or prohibition shall be construed as if such invalid or prohibited provision had not been inserted herein and shall not affect the remainder of such provision or the remaining provisions of this Agreement.

13. No third-party beneficiaries are intended or contemplated by this Agreement.

14. Any notice required hereunder shall be in writing and shall be addressed as follows:

NAVY:

Navy Region Southwest
Attention: Executive Director
937 Harbor Drive
San Diego, VA 92132

Naval Facilities Engineering Command Southwest
Attention: Commanding Officer
1220 Pacific Highway
San Diego, CA 92132

SANDAG:

San Diego Association of Governments (SANDAG)
Attention: Executive Director
401 B Street, Suite 800
San Diego, CA 92101
FAX: (619) 699-1905

or to such other address as a Party may indicate in a written notice to the other Party. All notices and communications given under this Agreement shall be deemed to have been duly given and received: (i) upon personal delivery, or (ii) as of the third (3) business day after mailing by United States certified mail, return receipt requested, postage prepaid, addressed as set forth above, or (iii) the immediately succeeding business day after deposit (for next day delivery) with Federal Express or other similar overnight courier system, or (iv) twenty-four (24) hours after facsimile transmittal with confirmation of receipt and followed by personal delivery, United States mail, or overnight delivery as specified in this Section.

15. This Agreement may be executed in any number of identical counterparts, each of which shall be deemed to be an original, and all of which together shall be deemed to be one and the same instrument when each Party has signed one such counterpart. In addition, properly executed, authorized signatures may be transmitted via facsimile or electronic mail and upon receipt shall constitute an original signature.

16. The Navy and SANDAG agree that neither Party shall have any obligation to enter into a future, binding agreement with regard to the matters described herein, although the Parties agree to work in good faith to explore fully such matters. The Parties expressly agree and acknowledge that the relationship established by virtue of this Agreement does not constitute a partnership, joint venture, agency agreement, or employment agreement. This Agreement does not document nor provide for the exchange of funds or manpower between the Parties, nor does it make any commitment of funds or resources. Nothing in this Agreement creates, or shall be construed to create, an actual or coercive deficiency in violation of the Anti-Deficiency Act, 31 U.S.C 1341 et seq.

17. This Agreement shall remain in effect for three (3) years or may be terminated in writing based on a lack of substantive progress on an agreed-upon schedule, whichever is sooner. The Parties may extend the duration of this Agreement for successive periods of time upon mutual written agreement.

18. The Navy and SANDAG agree that either Party may share this Agreement with individuals or the public in accordance with its policies on the release of records.

19. This Agreement supersedes the Memorandum of Understanding between the Department of the Navy and the San Diego Association of Governments executed on June 17, 2019.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date of signature shown below.

THE UNITED STATES DEPARTMENT OF THE NAVY

By: _____

Richard V. Spencer
Secretary of the Navy

Date: _____

SAN DIEGO ASSOCIATION OF GOVERNMENTS

By: _____

Hasan Ikhrata
Executive Director

Date: _____

CITY OF SAN DIEGO

By: _____

Kevin L. Faulconer
SANDAG Board Member

Date: _____

EXHIBIT A: PROJECT DEVELOPMENT SCHEDULE

This schedule lays out a process to develop the requirements for a solicitation to redevelop the Navy's Old Town Campus.

September 2019

Memorandum of Agreement: –The parties will establish a written statement of their goals for the project and a notional timeline to supersede June 2019 MOU.

Development of Exchange Concept – Both parties will meet to discuss timeline, expectations, challenges, and the initial framework of an exchange. Specific issues to be discussed include site environmental baseline and status of NAVWAR requirements/design.

Determination of Funding – SANDAG to request approval for funding to initiate site planning.

Determination of Authority: DON will assess the need for authorizing legislation, and if necessary, initiate the drafting of legislation for the FY21 federal legislative process. Otherwise, DON will use existing legislative authorities.

October 2019

Completion of NAVWAR facility requirements documents – DON will complete facility requirements documents.

Environmental Baseline: Both parties will exchange information on known site conditions and start a site environmental study.

Initial Site Plan–This will be a high-level schematic of one or more plans for potential development on the site that will show location of buildings and other facilities.

November 2019

Facility Plan–This will be a high-level plan for each building or facility on the site describing its purpose, characteristics and physical and functional relationship to other elements of the site plan.

December 2019

Initiation of NEPA process – Commencement of all relevant environmental planning documents.

Environmental Clearance Scope and Timeline–Development of an environmental clearance processes required for the site and for facilities to connect the site to the surrounding community and infrastructure. Also included will be a timeline for environmental clearance activities and the ultimate Record of Decision(s).

January 2020

Project Development Timeline– Establish a timeline for the development of each building and facility on the site. It will lay out the phasing for the development of the project.

Request for Expressions of Interest–Issuance of a Request for Expressions of Interest that will ask developer teams to express their interest in responding to an upcoming solicitation. The RFEI will discuss the project based on the best information available. It will ask respondents to discuss the members of their proposed teams, the roles of each team member and the potential role of the team in designing, building, operating, maintaining and financing elements of the project.

March 2020

Conceptual Plan of Financial Participation–This will be a high-level plan indicating the sources of funding and finance for the project. It will include assumptions on the level and type of financial participation and the potential participation of other governmental funding and financing partners at the federal, state and regional level. It may also discuss the potential ways the selected developer(s) might participate in the funding and finance of the project.

Identification of Third-Party Agreements Required–Agreements that will ultimately be required with other governmental or private sector entities will be identified and proposed timelines for reaching agreements will be delineated.

Agreement on Potential Role of the Developer(s)–Agreements that will describe the role of the developer(s) in the project and on whether to seek one developer for the entire site or leave open the possibility for multiple developers to be selected for the site.

Initiate Design of NAVWAR facilities – Upon selection of a preferred site, initiate design with the plan to transition to design/build or other project acquisition method once the ROD had been signed and congressional authorization is received, if necessary.

April 2020

Preparation of Final Solicitation Materials for Approval by Principals–Based on internal review of the parties and industry comments, the parties will prepare the final solicitation materials for approval by principals of each party.

October 2020

Receive Congressional Authorization – If necessary, receive congressional authorization.

December 2020

Record(s) of Decision signed.

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Navy Old Town Campus Revitalization Agreement
U.S. Navy / SANDAG
23 January 2020

1. Preamble

This Agreement is entered into between the United States Department of the Navy ("Navy") and San Diego Association of Governments ("SANDAG") (collectively, the "Parties"). The purpose of this Agreement is to supplement, not supersede, the "Agreement Regarding Naval Base Point Loma Old Town Campus" executed by the Secretary of the Navy and SANDAG in September 2019 ("September 2019 Agreement").

The Navy has concluded a Request for Interest ("RFI") process, to which SANDAG was a respondent. The Navy's RFI process was performed to seek industry input on potential revitalization of the Naval Base Point Loma Old Town Campus ("Old Town Campus") and construction of new Navy facilities. The Navy and SANDAG entered into the September 2019 Agreement to describe a planning process intended to lead to the redevelopment of the Old Town Campus, to include a potential Transit Center and the redevelopment of Navy facilities. Both Parties continue to explore alternatives related to revitalization of Old Town Campus, construction of Navy Facilities and Transportation Facilities. Further, obligations under this Agreement are contingent upon satisfying all applicable federal, state, and local requirements including, but not limited to National Environmental Policy Act ("NEPA") and California Environmental Quality Act ("CEQA"), and executing the required real estate decision documents.

As specified below, the Navy and SANDAG agree to pursue property interest transfer(s) to allow for (i) constructing new, mission ready facilities for Naval Information Warfare Systems Command ("NAVWAR") and the Navy's other current Old Town Campus tenant commands (collectively, the "Navy Facilities"); (ii) evaluating the potential construction of a new SANDAG transit hub and subsequent separate airport connector facility to provide the travelling public with transit access to the San Diego International Airport (collectively, the "Transportation Facilities"); and (iii) facilitating mixed use real estate development ("Transit Oriented Development") proximate to the Navy Facilities and the Transportation Facilities. The Navy Facilities, Transportation Facilities and Transit Oriented Development are referred to in this Agreement as the "Old Town Campus Revitalization."

2. Exclusivity

The Navy agrees to engage with SANDAG on an exclusive basis regarding development of the Old Town Campus and the associated transfer by the Navy to SANDAG of certain real property interests owned at the Old Town Campus. As mutual consideration for this exclusivity, Navy and SANDAG agree that non-privileged products generated as a result of this Agreement, including but not limited to all elements of the Design Project Program and environmental studies, will be fully utilizable by both Parties. Further, SANDAG agrees to fund certain Navy administrative expenses, as mutually agreed upon by the Parties, in order to effectuate the September 2019 Agreement. This exclusivity is subject to the Termination provisions in Section 6 of this Agreement.

Navy and SANDAG confirm separately that they are authorized to enter into the exclusive arrangement described above.

3. Transfer of Navy Property to SANDAG

a. Transfer of Property Rights; Legal Authority

Subject to receiving appropriate approvals and Section 6 of this Agreement, Navy may transfer to SANDAG (or other party mutually agreed upon by Navy and SANDAG) such real property interests in the Old Town Campus as may be necessary or appropriate to facilitate the transactions contemplated in this Agreement. This transfer of interests would be accomplished under existing legal authority or via appropriate legislation, as approved by the Navy, to be introduced as soon as reasonably feasible under the circumstances.

b. Environmental Alternatives Analysis

Each Party reserves its discretion under CEQA and NEPA, as applicable, to select other alternatives and/or a no project alternative.

c. Nature of Real Property Interests to be Transferred

The real property interests transferred may take the form of a long-term leasehold interest, a fee title interest or a combination of the two. The Parties will discuss and mutually agree upon the nature, timing, triggering event(s), terms and conditions for each proposed real property transfer.

d. Timing of Real Property Transfers

The possession of the property interests transferred to SANDAG (or other party mutually agreed upon by Navy and SANDAG) would occur on or after Navy's completion of NEPA review thereof and the final Record of Decision ("ROD"), if at all.

e. Consideration

In consideration for such transfer(s), subject to Section 6 of this Agreement, Navy would receive new, mission capable facilities for current Old Town Campus tenant commands, the specifics of which shall be mutually agreed upon by the Parties.

f. Access to Property and Data

i. **Site Access.** The Navy will provide temporary access to the Old Town Campus to SANDAG and its representatives, consultants, contractors, agents, and employees, for the purpose of conducting environmental review activities and associated site investigative work. SANDAG understands and agrees that Navy will only provide such access during Navy's normal business hours and only to persons and entities to whom access can be reasonably granted in accordance with Navy security regulations and policies. The terms and procedures governing such access shall be the subject of a separate agreement between the Navy and SANDAG.

ii. **Sharing of Data.** Navy will provide SANDAG with access to available unclassified information, data, and studies concerning the physical condition of the real estate and facilities at the Old Town Campus and any other unclassified information reasonably requested from time to time by SANDAG to perform appropriate due diligence. SANDAG shall provide Navy with copies of any tests, studies or analysis obtained or made by SANDAG about the Old Town Campus within ten business days after receipt by SANDAG.

iii. **Licenses and Approvals.** SANDAG will ensure that all licenses, permits and governmental approvals required by applicable law are secured prior to performing any tests, studies, or analysis on the Old Town Campus property, and will coordinate the application process with the Navy prior to obtaining any necessary permits or governmental approvals. Navy will cooperate with SANDAG in securing necessary permits or governmental approvals to the extent reasonable and feasible under the circumstances.

4. Industry Outreach

During the duration of this Agreement, SANDAG will serve as the lead agency in connection with industry outreach on the Old Town Campus Revitalization, with the cooperation and assistance of Navy and in accordance with the roles and responsibilities to be outlined and agreed upon by the Parties. The industry outreach process is designed to ensure, among other things, financial feasibility and sufficient market interest.

The Parties will meet and confer to agree upon the roles and responsibilities of each Party and identify the optimal transactional and procurement structure. SANDAG will serve as the lead agency in connection with industry outreach and procurements on the Old Town Campus Revitalization.

5. Schedule

The Parties will meet and confer to develop an effective and efficient schedule and sequence of the various components of the Old Town Campus Revitalization so as to ensure timely completion of all components in an economically and commercially feasible manner. The Parties agree to the following process for the immediate next steps.

a. Project Development Timeline (to be initiated by SANDAG by 31 January 2020):

The Parties will develop a proposed timeline (the "Project Development Timeline") for the development of each component of the Old Town Campus Revitalization. The Project Development Timeline is subject to the mutual agreement of the Parties and to the NEPA/CEQA environmental review process.

b. Design Project Program (to be provided by SANDAG by 28 February 2020):

The Parties will meet and confer to facilitate SANDAG's development of a layout, site plan and floor plan of the Navy Facilities in accordance with Navy-provided technical requirements and guidelines. This Design Project Program will include an initial site plan and facility plan for the Navy Facilities.

c. Term Sheet (to be agreed upon by Navy and SANDAG by 31 March 2020):

Navy and SANDAG to work towards executing a term sheet outlining the basis for the agreements for the eventual transfer of real property interests in the Old Town Campus and completion of Navy Facilities. The Term Sheet shall also include the following from the September 2019 Agreement:

i. Conceptual Plan of Financial Participation

ii. Identification of Third-Party Agreements Required

iii. Agreement on Potential Role of the Developer(s)

iv. Solicitation Process and Timeline to include issuance of a Request for Expressions of Interest

v. Plan and Timeline for initiating Design of Navy Facilities

6. Termination

This Agreement may be terminated in writing by either party if:

a. There is a lack of substantive progress on the projects for any reason;

b. There exist hazardous materials on the Old Town Campus that materially impact the feasibility of the Old Town Campus Revitalization;

c. There is a failure of either party to receive necessary approvals or funding; or

d. Either Navy or SANDAG select a different alternative.

7. Confidentiality

To the greatest extent allowable under applicable law, the Parties agree to maintain the confidentiality of all communications, documents, surveys, feasibility studies, appraisal reports, site investigative reports or other materials directly or indirectly generated by the Parties. To facilitate such confidentiality, the Parties agree to cause all consultants, advisors or contractors at whatever tier to execute a confidentiality and non-disclosure agreement in a form mutually agreeable to the Parties.

8. Additional Agreements

The Parties will enter into subsequent agreements after additional details emerge and corresponding commercial and legal terms have been discussed and agreed.

It is so agreed.

The United States Department of the Navy

By: _____

Thomas B. Modly

Secretary of the Navy (Acting)

San Diego Association of Governments

By: _____

Hasan Ikhrata

Executive Director

San Diego Association of Governments

By: _____

Kevin L. Faulconer

SANDAG Board Member

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