# Appendix I

Hazardous Materials Technical Report

FINAL

# Hazardous Materials Technical Report

# Oceanside Pier and Facilities EIR

**MAY 2025**

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# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| AMSL | above mean sea level |
| CalEPA | California Environmental Protection Agency |
| CalGEM | California Geologic Energy Management |
| CalRecycle | California Department of Resources Recycling and Recovery |
| CIWQS | California Integrated Water Quality System |
| City | City of Oceanside |
| DTSC | Department of Toxic Substances Control |
| EIR | environmental impact report |
| LUST | Leaking Underground Storage Tank |
| NPDES | National Pollutant Discharge Elimination System |
| NPMS | National Pipeline Mapping System |
| PCB | Polychlorinated biphenyl |
| RWQCB | Regional Water Quality Control Board |
| SMARTS | Stormwater Multiple Application and Report Tracking System |
| SWIS | Solid Waste Information System |
| UST | Underground Storage Tank |

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# 1 Purpose and Scope

This Hazardous Materials Technical Report was conducted for the proposed restoration or replacement of the concrete portion of the Pier View Way Bridge and Lifeguard Headquarters at the Oceanside Municipal Pier in the City of Oceanside (City), San Diego County, California. The proposed project site (or project site) also includes the Junior Seau Beach Community Center, the Junior Seau Amphitheater and Bandshell, the Beachfront Operations Center, and Betty's Lot that will encompass the Phase II Beachfront Improvements Project. The project site is located on the west side of North Pacific Street along the Pacific Ocean and Oceanside City Beach, between Civic Center Drive and Parking Lot #28 to the north and First Street to the south, as shown on Figure 1, Proposed Project Site, in Attachment A. The project site is approximately 0.76 miles west of the Interstate 5, the nearest major access-controlled highway. The project site is approximately 4.21 acres.

The activities included in the proposed project are the following:

- Site preparation of the Pier View Way Bridges and Lifeguard Headquarters, including:
    - Public notification and construction of temporary municipal wooden pier access structure, fencing, and staging areas.
- Demolition of the Pier View Way Bridges, concrete piers, and removal of rock and riprap around the western end of the Pier View Way Bridges
- Grading and earthwork, including landform alterations of the existing coastal slope
- Structure construction and improvements, including the reconstruction of the Pier Bridges to include new spaces for the Lifeguard Headquarters, public amenities, commercial use, and public dining areas, and
- Landscaping and paving.

The objective of this report is to determine if there are any potential environmental concerns to the proposed project related to hazardous materials/waste. This report consists of a review and summary of regulatory agency records, historical aerial photographs, and potential site hazards due to hazardous material pipelines and/or oil and gas wells.

# 2 Physical Setting

The project site is located in the City of Oceanside, within San Diego County. The elevation of the project site ranges approximately from 11 to 41 feet above mean sea level (AMSL). Surrounding land uses include a mix of residential development, commercial properties, and recreational land uses. The project site is bounded by residences to the north, a park and additional residences to the south, multiple resorts and commercial businesses to the east, and the rest of the Oceanside Pier, Oceanside City Beach, a parking lot, a lifeguard station, and the Pacific Ocean to the west. The Interstate 5 freeway is located approximately 0.76 miles east of the project site and runs north to south.

Dudek consulted the online California Water Board Groundwater Information System for information about public supply water wells in the project site area (GAMA 2024). No water supply wells were identified on the project site. The closest municipal supply well was identified north of the San Luis Rey River, approximately 0.96 miles northeast of the project site.

# 3 Site History

The project site currently consists of the Pier View Way Bridges and Lifeguard Headquarters, the Junior Seau Beach Community Center, the Junior Seau Amphitheater and Bandshell, the Beachfront Operations Center, and Betty's Lot.

- The Oceanside Municipal Pier, which consists of a concrete structure spanning from Pier View Way and the Pacific Street intersection on the bluff to the pier, was constructed in 1926. The original structure consists of twin conventionally reinforced bridges, a ramp down to the beach, and public restrooms. The restrooms in the concrete structure at the bluff have been converted to storage, and portions of the substructure closest to the surf were converted from a dining hall into the Lifeguard Headquarters in 1985. The Lifeguard Headquarters is still used for lifeguard operations and currently consists of reception area, first aid area, a meeting room, offices and workstations, locker rooms, dive lockers, a kitchen, a storage area, and a garage. The bridges are also located above the pier plaza which is utilized by vendors, beachgoers, and visitors, with a plaza extension that connects to the Junior Seau Beach Community Center.
- The Junior Seau Beach Community Center, previously the Oceanside Community Center, was built in 1955 and is a public venue that has been used for meetings, social events, dances, live entertainment, and briefly as a senior center with an associated parking lot. The interior of the Community Center includes a gymnasium, dance/fitness rooms, a games/activities room, a stage, a kitchen, staff work areas, a storage area, and restrooms.
- The Junior Seau Amphitheater and Bandshell has been used as a recreational venue for holding concerts, graduation ceremonies, and special events. The Bandshell was initially built in 1919, relocated and rebuilt in 1950, and has been modernized and improved over the years to accommodate public event patrons.
- The Beachfront Operations Center facility was completed in 2022 as part of the Phase I Beachfront Facilities Project and consists of a police substation, public work maintenance building, and beachfront public restrooms.
- Betty's Lot, also known as the City's Parking Lot #30, has been and is currently a public parking lot with 111 parking spaces that was built in the 1950s.

Onsite structures were built starting in 1926. Many building materials commonly contained asbestos until the late 1970s, and a smaller list of building materials contained asbestos in the 1980s, such as drywall, joint compounds, vinyl flooring, roofing, asbestos-cement products, and stucco. Additionally, paint manufacturers frequently used lead as a primary paint ingredient through the 1940s and gradually decreased its use in the 1950s and 1960s, with final bans placed on the use of lead-based paint in residential structures in 1978. Finally, prior to 1978, polychlorinated biphenyls (PCBs) were often used in transformers and capacitors, specifically in cooling oils, and were also used in hydraulic oils. As discussed in Section 3.4, a hazardous building material survey was completed in May 2021, which identified asbestos-containing materials (ACM), lead-based paints (LBP), and other universal wastes and stored hazardous materials, such as paints and gasoline. Abatement specifications were prepared in September 2021 that outlined appropriate removal or abatement procedures for future construction activities which could disturb the identified hazardous materials.

## 3.1 Aerial Photographs

Historical aerial photographs (Attachment B) were reviewed to determine if there was evidence of potential environmental impacts to the project site. Historical aerial photographs from 1939, 1946, 1953, 1964, 1967, 1970, 1979, 1985, 1990, 1994, 1997, 2002, 2005, 2009, 2012, 2016, and 2020 were obtained from EDR. Dudek also reviewed aerial photographs from Google Earth for 2024 (Google Earth 2024). The aerial photographs are described in Table 1.

**Table 1. Historical Aerial Photograph Review**

| Date | Observations |
|---|---|
| 1939 | The project site consists of a mix of vacant land used and two small structures. Adjoining to the west of the project site are three unidentified rectangular objects, a pier, coastal land, and the Pacific Ocean in the western surrounding area. The adjoining and surrounding areas are observed as a mix of vacant land, multiple various-sized structures, and a network of roads. A railroad track is observed in the eastern surrounding area. |
| 1946 | Multiple additional structures were added to the project site. Portions of the western adjoining area appear to be used as material storage. Increased development is observed, including additional various-sized structures observed on the rest of the adjoining and surrounding areas. |
| 1953 | Some of the structures previously observed on the northern region of the project site have been removed. The rest of the project site appears similar to the 1946 aerial photograph. The material storage previously observed adjoining the west is no longer observed. The rest of the adjoining areas appear similar to the 1946 aerial photograph. Increased development is observed in all of the surrounding areas, including additional various-sized structures. |
| 1964 | Two larger structures are observed on the northern region and a smaller structure is observed on the southern region of the project site. The rest of the project site appears similar to the 1953 aerial photograph. Redevelopment and additional structures are observed on the northern, eastern, and southern adjoining areas. Increased development is observed in all of the surrounding areas, including the addition of various-sized structures. |
| 1967 | The project site appears similar to the 1964 aerial photograph. The adjoining and surrounding areas appear similar to the 1964 aerial photograph. |
| 1970 | The project site appears similar to the 1967 aerial photograph. The adjoining and surrounding areas appear similar to the 1967 aerial photograph. |
| 1979 | The project site appears similar to the 1970 aerial photograph. A small structure has been removed from the northern adjoining area. The rest of the adjoining and surrounding areas appear similar to the 1970 aerial photograph. |

## Table 1. Historical Aerial Photograph Review

| Date | Observations |
|---|---|
| 1985 | The project site appears similar to the 1979 aerial photograph. Multiple structures have been removed from an eastern adjoining area. The rest of the adjoining areas appear similar to the 1979 aerial photograph. Redevelopment is observed in the eastern surrounding area where multiple structures have been removed. The rest of the surrounding areas appear similar to the 1985 aerial photograph. |
| 1990 | The project site appears similar to the 1985 aerial photograph. The northern and northeastern adjoining and some of the northern surrounding properties have been redeveloped into commercial properties. The rest of the adjoining areas appear similar to the 1985 aerial photograph. Additional redevelopment is observed in the eastern surrounding areas. The rest of the surrounding areas appear similar to the 1985 aerial photograph. |
| 1994 | The project site appears similar to the 1990 aerial photograph. The adjoining areas appear similar to the 1990 aerial photograph. Additional redevelopment is observed in the southeastern surrounding areas. The rest of the surrounding areas appear similar to the 1985 aerial photograph. |
| 1997 | The project site appears similar to the 1994 aerial photograph. The adjoining and surrounding areas appear similar to the 1994 aerial photograph. |
| 2002 | The project site appears similar to the 1997 aerial photograph. The adjoining areas appear similar to the 1997 aerial photograph. Redevelopment is observed in the eastern surrounding area. The rest of the surrounding areas appear similar to the 1997 aerial photograph. |
| 2005 | The project site appears similar to the 2002 aerial photograph. The adjoining areas appear similar to the 2002 aerial photograph. Redevelopment is observed in the southeastern surrounding area. The rest of the surrounding areas appear similar to the 2002 aerial photograph. |
| 2009 | The project site appears similar to the 2005 aerial photograph. A large commercial structure is observed on an eastern adjoining area. Multiple structures have been removed from another eastern adjoining area. Redevelopment is observed in the eastern surrounding area. The rest of the adjoining and surrounding areas appear similar to the 2005 aerial photograph. |
| 2012 | The project site appears similar to the 2009 aerial photograph. The adjoining and surrounding areas appear similar to the 2009 aerial photograph. |
| 2016 | The project site appears similar to the 2012 aerial photograph. The adjoining areas appear similar to the 2012 aerial photograph. Redevelopment is observed in the eastern surrounding area. The rest of the surrounding areas appear similar to the 2012 aerial photograph. |
| 2020 | The project site appears similar to the 2016 aerial photograph. Redevelopment has occurred on two eastern adjoining areas where there are now large commercial structures. The rest of the adjoining areas appear similar to the 2016 aerial photograph. Redevelopment is observed in the eastern surrounding area. The rest of the surrounding areas appear similar to the 2016 aerial photograph. |
| 2024 | The project site appears similar to the 2016 aerial photograph. The adjoining areas appear similar to the 2020 aerial photograph. Redevelopment has occurred in the southeastern surrounding area. The rest of the surrounding areas appear similar to the 2020 aerial photograph. |

**Note:** See Attachment B for corresponding photographs for 1939 through 2020. The 2024 Google Earth photograph is available online and therefore is not included in Attachment B.

## 3.2 Topographic Maps

Historical topographic maps (Attachment C) were reviewed to determine if there was evidence of potential environmental impacts to the project site. Historical aerial photographs from 1893, 1898, 1901, 1947/1948, 1949, 1968, 1975, 1997, 2012, 2015, 2018, and 2022 were obtained from EDR. The topographic maps are described in Table 2.

**Table 2. Historical Topographic Map Review**

| Date | Observations |
|---|---|
| 1893 | The project site is depicted with a southeast-northwest trending roadway with a portion that extends to the southwest, toward the Pacific Ocean. The western adjoining area is depicted as a small portion of the coastline and the Pacific Ocean. The eastern adjoining area is depicted with multiple large structures, roads, and a railroad. A pier extending southwest into the Pacific Ocean is depicted in the southern surrounding area. The rest of the adjoining and surrounding areas are depicted with railroad tracks, multiple scattered structures, and multiple networks of roads. A marsh or swamp is depicted in the southern and northern surrounding areas. |
| 1898 | The project site is depicted with a portion of roadway that extends to the southwest, toward a pier and the Pacific Ocean. The rest of the project site is depicted similarly to the 1893 topographic map. The adjoining areas are depicted similarly to the 1898 topographic map. Additional structures and roadways are depicted in all of the surrounding areas. |
| 1901 | The project site is depicted similarly to the 1898 topographic map. The adjoining and surrounding areas are depicted similarly to the 1898 topographic map. |
| 1947/1948 | The project site is depicted as a completely built-up area. All of the adjoining areas are depicted as completely built-up areas. Multiple primary highways are depicted in the eastern surrounding areas. The San Luis Rey River (previously depicted but unnamed) and multiple woodlands are depicted in the northern surrounding area. The eastern surrounding area is depicted with built-up areas, some woodlands, and some intermittent streams/rivers. A reservation is depicted in the northern surrounding area with multiple various-sized structures. The rest of the surrounding areas are depicted similarly to the 1901 topographic map. |
| 1949 | The project site is depicted similarly to the 1947/1948 topographic map. The adjoining and surrounding areas are depicted similarly to the 1947/1948 topographic map. |
| 1968 | The project site is depicted with a large structure on its northern region. The rest of the project site is depicted similarly to the 1949 topographic map. All of the adjoining areas are depicted similarly to the 1949 topographic map. A sewage disposal site is depicted in the southern surrounding area. Additional structures and built-up areas are depicted in all of the surrounding areas. |
| 1975 | The project site is depicted similarly to the 1968 topographic map. The adjoining areas are depicted similarly to the 1968 topographic map. Additional structures are depicted in all of the surrounding areas. |
| 1997 | The central portion of the project site is no longer depicted as built up. The northern and southern portions of the project site are still depicted as built-up areas. Multiple parks are depicted adjoining to the south and east. The rest of the adjoining and surrounding areas are depicted similarly to the 1975 topographic map. |
| 2012 | Individual structures are no longer depicted on the map. The project site is depicted with a road that intersects its central portion and extends slightly toward the Pacific Ocean. The rest of the pier that was previously depicted extending from the project site to the ocean is not depicted. The adjoining and surrounding areas are depicted as a network of roads and highways. |

**Table 2. Historical Topographic Map Review**

| Date | Observations |
|---|---|
| 2015 | The project site is depicted similarly to the 2012 topographic map. The pier that was previously depicted extending from the project site to the Pacific Ocean is once again depicted. The adjoining areas are depicted similarly to the 2012 topographic map. Multiple schools are depicted in all of the surrounding areas. A police and fire station are depicted in the eastern surrounding area. The rest of the surrounding areas are depicted similarly to the 2012 topographic map. |
| 2018 | The project site is depicted similarly to the 2015 topographic map. The portion of the pier that was previously depicted extending from the project site into the Pacific Ocean is not depicted. The rest of the adjoining and surrounding areas are depicted similarly to the 2015 topographic map. |
| 2022 | The project site is depicted similarly to the 2018 topographic map. The portion of the pier that was previously depicted extending from the project site into the Pacific Ocean is once again depicted. The rest of the adjoining and surrounding areas are depicted similarly to the 2018 topographic map. |

**Note:** See Attachment C for corresponding maps.

## 3.3 Sanborn Maps

Historical Sanborn fire insurance maps (Attachment D) were reviewed to determine if there was evidence of potential environmental impacts to the project site. Historical Sanborn fire insurance maps from 1888, 1892, 1897, and 1907 were obtained from the Library of Congress (Library of Congress 2024). Observations are presented in Table 2.

**Table 3. Historical Sanborn Map Review**

| Date | Observations |
|---|---|
| 1888 | The project site area is not depicted. An eastern adjoining area depicts a structure identified as the Pacific Hotel, located west of Myers Street, north of 3rd Street, and south of 4th Street. The hotel consists of multiple hallways, a reading room, a bar, a billiards room, a washroom, an office, a dining room, and a kitchen. East of the hotel is a note that identifies an underground gasoline tank. North of the hotel is a gasoline generator, a dwelling, a laundry structure, and three smaller structures. In the eastern surrounding area is a railroad, a lumber company, multiple dwellings, and multiple various commercial properties. |
| 1892 | The project site area is not depicted. A northeastern adjoining area is depicted as vacant. The northwestern surrounding area is depicted with multiple dwellings, a hotel, sheds, a railroad, a livery, and feed stable, a mill and contractor's shop, a lumber yard, a carpenter, and a flour and planning mill. The eastern adjoining area is depicted with multiple dwellings, an opera house, a hotel, and a gasoline generator. In the eastern surrounding area is an underground gasoline tank, a railroad, a water tank, a freight depot, multiple dwellings, and multiple various commercial properties. |
| 1897 | The project site area is not depicted. The previously depicted eastern adjoining hotel is no longer depicted. The rest of the northeastern and eastern adjoining and surrounding areas are depicted similarly as the 1892 Sanborn map. |

**Table 3. Historical Sanborn Map Review**

| Date | Observations |
|---|---|
| 1907 | The project site area is not depicted. A few dwellings have been replaced by the El San Luis Rey Hotel adjoining to the east of the project site. The northeastern adjoining and surrounding and the rest of the eastern adjoining areas are depicted similarly as the 1897 Sanborn map. The eastern surrounding area id depicted similarly to the 1897 Sanborn map with the addition of multiple nurseries and tennis grounds where previously there was vacant land, and a grain warehouse. In the southern adjoining and surrounding area is a greenhouse and multiple dwellings. |

**Note:** See Attachment D for corresponding maps.

## 3.4 Previous Investigations

**Hazardous Building Materials Survey, May 2021.** A hazardous building materials survey (survey) was completed on the project site by Moffatt and Nichol in May 2021 (Moffatt and Nichol 2021a). Specifically, the pier bridge structure, bait shop storage, shed, and lifeguard headquarters were surveyed for ACM, LBP, and universal wastes. The survey included visual observations, bulk sampling, and in-situ sampling using x-ray fluorescence (XRF). The survey identified the following hazardous building materials:

- ACM was identified in a 6-inch transite pipe on the exterior of the lifeguard headquarters. None of the other samples collected contained detectable asbestos.
- LBP was identified within the pier storage spaces, formerly the restrooms. Specifically white paints on interior walls, wall tiles, and door frames.
- Other hazardous materials identified included fluorescent light tubes and ballasts, non-incandescent lights, smoke detectors, and freon refrigerant systems in the lifeguard headquarters, pier storage spaces, and on the exterior of the pier. Gasoline, oils, and paints were also observed in storage spaces.

**Hazardous Building Materials Abatement Specifications, September 2021.** In response to the findings of the hazardous building materials survey, Moffatt and Nichol prepared abatement specifications in September 2021. The document included specifications for abatement of asbestos, LBP, and universal wastes that were previously identified on the site. The specifications are intended to be used as guidance documents to contractors for removal and abatement of identified hazardous building materials (Moffatt and Nichol 2021b).

# 4 Online Regulatory Databases

Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to compile a list of hazardous waste and substances sites (Cortese List). While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1. List of Hazardous Waste and Substances sites from Department of Toxic Substances Control Envirostor database (Health and Safety Codes 25220, 25242, 25356, and 116395);
2. List of LUST Sites by County and Fiscal Year from the State Water Resources Control Board GeoTracker database (Health and Safety Code 25295);

3. List of solid waste disposal sites identified by the State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273[e] and 14 CCR Section 18051);
4. List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the State Water Resources Control Board (Water Code Sections 13301 and 13304); and
5. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by the Department of Toxic Substances Control.

Dudek conducted a search of the above-mentioned online databases that provide information on Cortese List sites in August 2024. The project site was not identified in any of the Cortese List site databases.

Dudek also consulted available online databases that provide environmental information on facilities and sites in the State of California. While these databases are not included in the Cortese List, they may provide additional information regarding potential environmental contamination on the project site. Table 1 provides a summary of the databases searched.

## Table 4. Online Database Listings

| Database | Details |
|---|---|
| California Environmental Protection Agency (CalEPA)<br>https://siteportal.calepa.ca.gov/nsite/ | The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. Data sources include California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxics Release Inventory (TRI). |
| Department of Toxic Substance Control (DTSC) EnviroStor<br>https://www.envirostor.dtsc.ca.gov/ | The DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons for further investigation. |
| Regional Water Quality Control Board (RWQCB) GeoTracker<br>http://geotracker.waterboards.ca.gov/ | The California RWQCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, various unregulated projects, and permitted facilities. Sites include LUSTs, Department of Defense, Cleanup Program, Irrigated Lands, Oil and Gas Production, Permitted USTs, and Land Disposal Sites. |
| National Pipeline Mapping System<br>https://www.npms.phmsa.dot.gov/ | The National Pipeline Mapping System Public Map Viewer is a web-based application designed to assist the general public with displaying and querying data related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation Pipeline and Hazardous Material Safety Administration jurisdiction. |

**Table 4. Online Database Listings**

| Database | Details |
|---|---|
| CalRecycle Solid Waste Information System (SWIS) https://www2.calrecycle.ca.gov/SolidWaste/Site/Search | The California Department of Resources Recycling and Recovery (CalRecycle) SWIS online database maintains information for all solid waste facilities, operations, and disposal sites in California. |
| California Geologic Energy Management (CalGEM) Well Finder https://maps.conservation.ca.gov/doggr/wellfinder/ | CalGEM Well Finder is a web-based mapping application that provides an interactive map viewer of wells, well fields, seeps, and notices and permits in the State of California. |

## 4.1 California Environmental Protection Agency

Dudek reviewed this online database on August 22, 2024. Sixty sites were identified on the CalEPA website within 0.5-miles of the project site (CalEPA 2024); one of which was identified on the project site.

The project site was identified in the Storm Water Multiple Application and Report Tracking System (SMARTS) database for a construction stormwater permit, which is required for construction projects over a certain size. This database listing is administrative in nature and does not necessarily indicate a release of hazardous materials to the environment; therefore, it is unlikely that this listing has impacted the environmental conditions of the project site.

Four sites were identified adjoining to the project site. The adjoining sites were permitted in the California Environmental Reporting System (CERS) and the California Integrated Water Quality System (CIWQS) databases for aboveground petroleum storage, chemical storage facility, wetland fill and dredge permits, and national pollutant discharge elimination system (NPDES) wastewater and stormwater permits. Dudek reviewed these listings and determined that, while administrative violations are documented for one of these sites (such as missing paperwork), the listings do not indicate a release of hazardous substances or petroleum products to the environment. Therefore, it is unlikely that these cases have impacted the environmental conditions of the project site.

Twenty-four nearby sites were identified in databases indicating a spill or release of hazardous substances or petroleum products to the environment. These 24 sites were identified in the GeoTracker database and are discussed below, in Section 4.3.

The remaining 31 sites within 0.50 miles were identified in databases that documented permits for chemical storage facilities, hazardous waste generators, air emissions, underground storage tanks (USTs), wastewater and stormwater discharges, sewage collection, construction stormwater discharges, and land disposal. Dudek reviewed these listings and determined that, while administrative violations are documented for some of the sites, the listings and violations do not necessarily indicate a release of hazardous materials or petroleum products to the environment. Therefore, it is unlikely that these listings are indicative of impacts to the environmental conditions of the project site.

## 4.2 EnviroStor

Dudek reviewed this online database on August 22, 2024. Nine sites were identified within 1 mile of the project site (DTSC 2024). Of these, two sites were identified with regulatory files that indicate a release of hazardous substances or petroleum products to the environment. No sites were identified on or adjoining the project site. Dudek reviewed the two release sites and, based on the information provided, regulatory status, distance, and gradient from the subject property, determined that neither of the listings are indicative of impacts to the environmental conditions of the project site.

## 4.3 GeoTracker

Dudek reviewed this online database on August 22, 2024. Thirty-seven listings at 24 unique addresses were identified within 0.5 miles of the project site with regulatory files indicative of a release of hazardous substances or petroleum products to the environment (RWQCB 2024). No sites were identified on or adjoining the project site. Dudek reviewed these sites, and based on the information provided, regulatory status, distance, and gradient from the project site, determined if they have the potential to impact the project site. No sites were determined to have a potential environmental impact on the project site.

## 4.4 National Pipeline Mapping System

Dudek reviewed this online database on August 19, 2024. No pipelines were identified on or within 1 mile of the project site. The closest pipeline was a hazardous liquid pipeline located approximately 2.95 miles east of the project site. No accidents or incidents were reported within 1-mile of the project site.

## 4.5 CalRecycle Solid Waste Information System

Dudek reviewed this online database on August 19, 2024 (CalRecycle 2024). The database has information for all solid waste facilities, operation, and disposal sites in California.

No sites were identified within 1 mile of the project site. The nearest site, Maxson Street Landfill, is located at 1800 Maxson Street, approximately 1.04 miles northeast of the project site. According to the site profile on CalRecycle, this site is closed (no longer receives waste) and inspected on a quarterly basis. An area of concern was noted during a recent inspection on July 25, 2024, that pertained to water observed in a probe vault and illegible labels on probes. Another violation was noted during a recent inspection on April 30, 2024, that pertained to elevated methane gas in a perimeter probe. The methane probe was later retested, and methane was not detected. Based on the status of the site, distance from the project site, and lack releases that have impacted beyond the landfill perimeter, it does not appear that this site has impacted the environmental condition of the project site.

## 4.6 CalGEM Well Finder

Dudek reviewed this online database on August 13, 2024 (CalGEM 2024). One idle oil and gas well was identified approximately 0.94 miles north of the project site. No other wells were identified on or within 1-mile of the project site.

# 5 Summary and Conclusions

The proposed project site (or project site) is located in the City of Oceanside, in San Diego County, along the Oceanside City Beach and the Pacific Ocean. The project site is approximately 4.21 acres and developed with the existing Pier View Way Bridge and Lifeguard Headquarters at the Oceanside Municipal Pier, and the adjoining Junior Seau Beach Community Center, Junior Seau Amphitheater and Bandshell, and Betty's Lot (also known as City Parking Lot #30) (see Figure 1, Proposed Project Site in Attachment A). The proposed project will involve the restoration and replacement of the concrete portion of the Pier View Way Bridge and Lifeguard Headquarters, as well as capital improvements to the Junior Seau Beach Community Center, the Junior Seau Amphitheater and Bandshell, and Betty's Lot.

The project site was not included on the list pursuant to California Government Code Section 65962.5, nor were the project site or adjoining properties identified within any of the databases indicative of a spill or release of hazardous materials to the environment.

A hazardous building material survey was completed in May 2021 that identified ACM, LBP, and other universal wastes and stored hazardous materials, such as paints and gasoline. Abatement specifications were prepared in September 2021 to serve as guidance documents for the removal and abatement of hazardous building materials identified during the survey.

# 6 Potential Impacts

Based on the findings of this report, hazardous building materials, including ACM, LBP, and universal wastes, are present in onsite structures. Construction and demolition activities shall follow the abatement specifications prepared for the project site in September 2021, which will provide guidance for removal and abatement of hazardous materials.

No additional hazardous material impacts were identified for the project site.

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Moffatt and Nichol. 2021b. Hazardous Building Materials Abatement Specifications, Pier View Way Bridge and Lifeguard Headquarters. September 17, 2021.

NPMS (National Pipeline Mapping System). 2024. National Pipeline Mapping System Public Viewer [data management system]. Accessed August 19, 2024. https://pvnpms.phmsa.dot.gov/PublicViewer/.

RWQCB (Regional Water Quality Control Board). 2024. GeoTracker [data management system]. Accessed August 22, 2024. https://geotracker.waterboards.ca.gov.

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# Attachment A

Figure 1, Proposed Project Site




SOURCE: ESRI Imagery

**FIGURE 1**

Proposed Project Site

Oceanside Pier and Facilities EIR - Hazardous Materials Technical Report

DUDEK

0 100 200 Feet

# Attachment B

EDR Historical Aerial Photographs

**Oceanside Pier**

Pier View Way

Oceanside, CA 92054

Inquiry Number: 7737234.2

August 15, 2024

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

08/15/24

**Site Name:**

Oceanside Pier
Pier View Way
Oceanside, CA 92054
EDR Inquiry # 7737234.2

**Client Name:**

DUDEK
605 Third Street
Encinitas, CA 92024
Contact: Stephanie Chao

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| Year | Scale | Details | Source |
|---|---|---|---|
| 2020 | 1"=500' | Flight Year: 2020 | USDA/NAIP |
| 2016 | 1"=500' | Flight Year: 2016 | USDA/NAIP |
| 2012 | 1"=500' | Flight Year: 2012 | USDA/NAIP |
| 2009 | 1"=500' | Flight Year: 2009 | USDA/NAIP |
| 2005 | 1"=500' | Flight Year: 2005 | USDA/NAIP |
| 2002 | 1"=500' | Acquisition Date: January 01, 2002 | USGS/DOQQ |
| 1997 | 1"=500' | Acquisition Date: October 16, 1997 | USGS/DOQQ |
| 1994 | 1"=500' | Acquisition Date: January 01, 1994 | USGS/DOQQ |
| 1990 | 1"=500' | Flight Date: September 06, 1990 | USDA |
| 1985 | 1"=500' | Flight Date: September 13, 1985 | USDA |
| 1979 | 1"=500' | Flight Date: January 27, 1979 | EDR Proprietary Landiscor |
| 1970 | 1"=500' | Flight Date: March 06, 1970 | EDR Proprietary Landiscor |
| 1967 | 1"=500' | Flight Date: May 07, 1967 | USGS |
| 1964 | 1"=500' | Flight Date: April 09, 1964 | USDA |
| 1953 | 1"=500' | Flight Date: April 14, 1953 | USDA |
| 1946 | 1"=500' | Flight Date: December 30, 1946 | USGS |
| 1939 | 1"=500' | Flight Date: April 16, 1939 | USDA |

**When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.**


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INQUIRY #: 7737234.2

YEAR: 2020

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 2016

= 500'

N

EDR


INQUIRY #: 7737234.2
YEAR: 2012
= 500'
N
EDR



INQUIRY #: 7737234.2

YEAR: 2009

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 2005

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 2002

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1997

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1994

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1990

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1985

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1979

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1970

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1967

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1964

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1946

= 500'

N

EDR



INQUIRY #: 7737234.2

YEAR: 1939

= 500'

N

EDR

# Attachment C

EDR Historical Topographic Maps

Oceanside Pier

Pier View Way

Oceanside, CA 92054

Inquiry Number: 7737234.1

August 15, 2024

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

08/15/24

**Site Name:**

Oceanside Pier
Pier View Way
Oceanside, CA 92054
EDR Inquiry # 7737234.1

**Client Name:**

DUDEK
605 Third Street
Encinitas, CA 92024
Contact: Stephanie Chao

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by DUDEK were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** 14045-2.6.All-2.3AIV

**Project:** Oceanside Pier PEIR

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 33.19413 33° 11' 39" North |
| **Longitude:** | -117.38365 -117° 23' 1" West |
| **UTM Zone:** | Zone 11 North |
| **UTM X Meters:** | 464239.60 |
| **UTM Y Meters:** | 3672874.10 |
| **Elevation:** | 18.58' above sea level |

**Maps Provided:**

| | |
|---|---|
| 2022 | 1947, 1948 |
| 2018 | 1901 |
| 2015 | 1898 |
| 2012 | 1893 |
| 1997 | |
| 1975 | |
| 1968 | |
| 1949 | |

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## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2022 Source Sheets



Oceanside
2022
7.5-minute, 24000

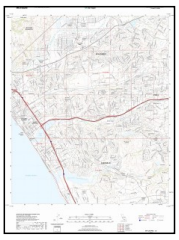


San Luis Rey
2022
7.5-minute, 24000

### 2018 Source Sheets



Oceanside
2018
7.5-minute, 24000



San Luis Rey
2018
7.5-minute, 24000

### 2015 Source Sheets



Oceanside
2015
7.5-minute, 24000



San Luis Rey
2015
7.5-minute, 24000

### 2012 Source Sheets



Oceanside
2012
7.5-minute, 24000



San Luis Rey
2012
7.5-minute, 24000

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1997 Source Sheets



Oceanside
1997
7.5-minute, 24000
Aerial Photo Revised 1997



San Luis Rey
1997
7.5-minute, 24000
Aerial Photo Revised 1997

### 1975 Source Sheets



San Luis Rey
1975
7.5-minute, 24000
Aerial Photo Revised 1975



Oceanside
1975
7.5-minute, 24000
Aerial Photo Revised 1975

### 1968 Source Sheets



Oceanside
1968
7.5-minute, 24000
Aerial Photo Revised 1967



San Luis Rey
1968
7.5-minute, 24000
Aerial Photo Revised 1967

### 1949 Source Sheets



San Luis Rey
1949
7.5-minute, 24000
Aerial Photo Revised 1946



Oceanside
1949
7.5-minute, 24000
Aerial Photo Revised 1946

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1947, 1948 Source Sheets



Oceanside
1947
7.5-minute, 24000
Aerial Photo Revised 1946



San Luis Rey
1948
7.5-minute, 24000
Aerial Photo Revised 1946

### 1901 Source Sheets



Oceanside
1901
15-minute, 62500

### 1898 Source Sheets



Oceanside
1898
15-minute, 62500

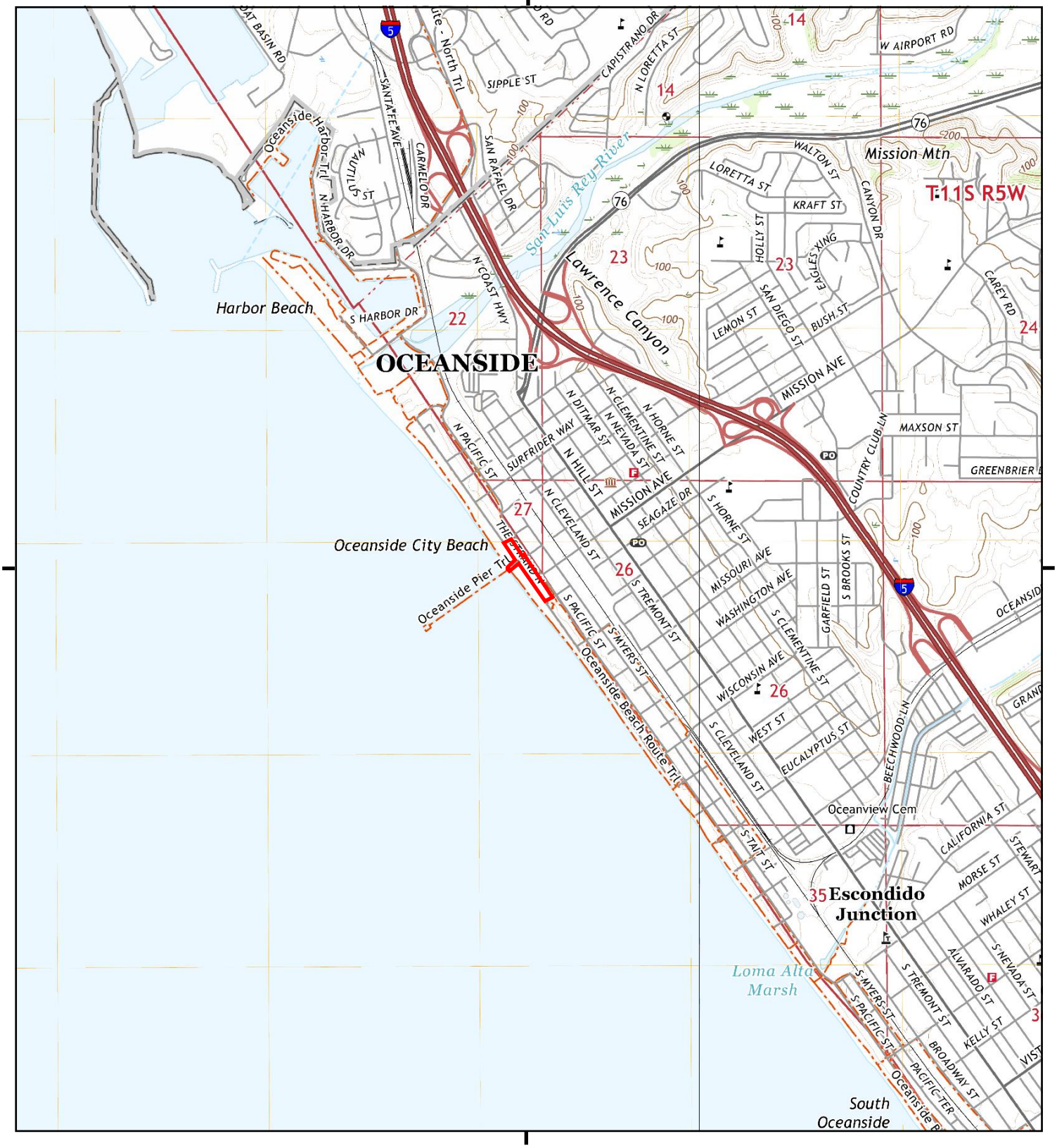
### 1893 Source Sheets



Oceanside
1893
15-minute, 62500

# Historical Topo Map

2022




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 2022, 7.5-minute
E, San Luis Rey, 2022, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N

# Historical Topo Map

2018




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 2018, 7.5-minute
E, San Luis Rey, 2018, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N

# Historical Topo Map

2015




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 2015, 7.5-minute
E, San Luis Rey, 2015, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N

# Historical Topo Map

2012




This report includes information from the following map sheet(s).

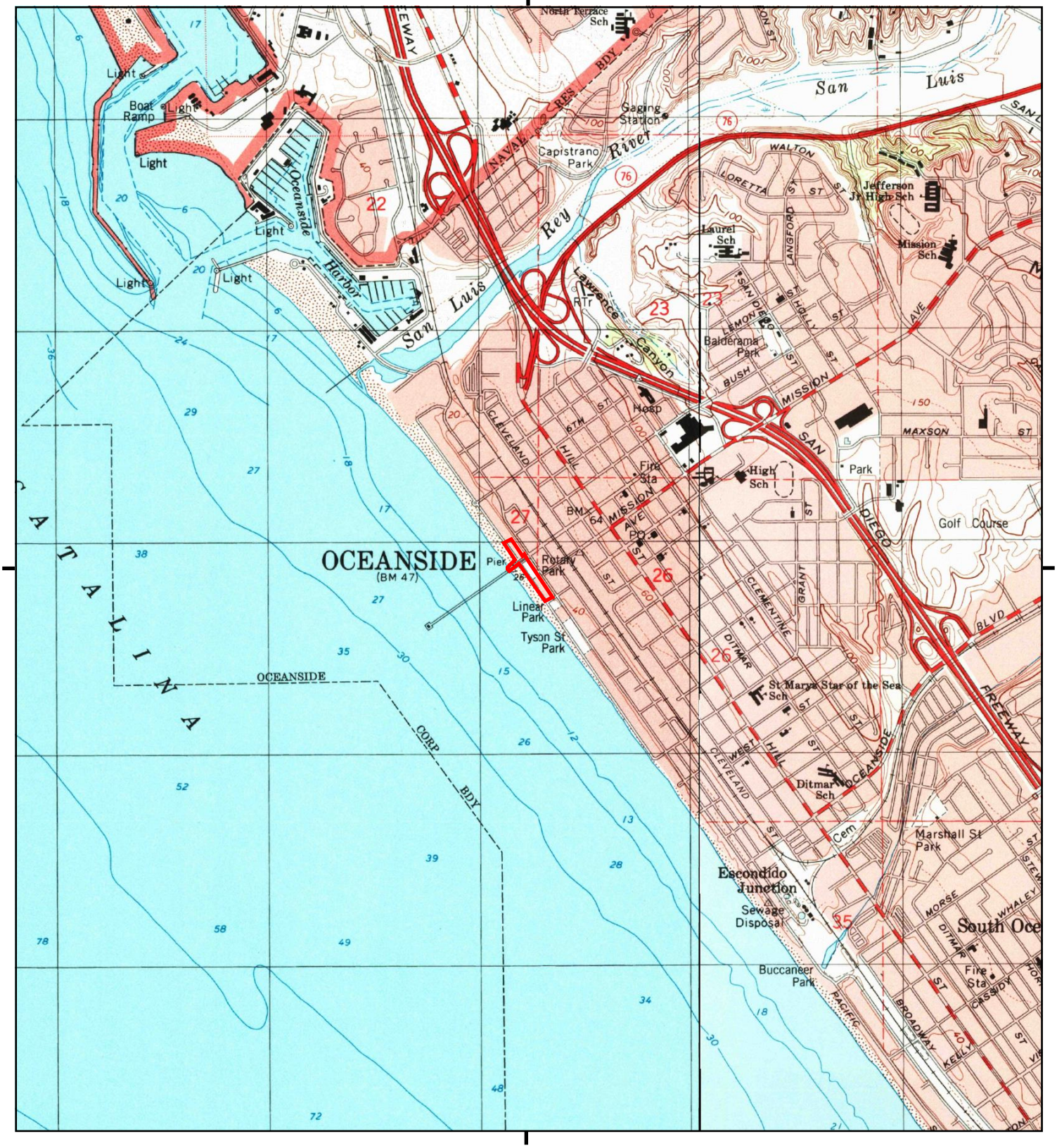
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 2012, 7.5-minute
E, San Luis Rey, 2012, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

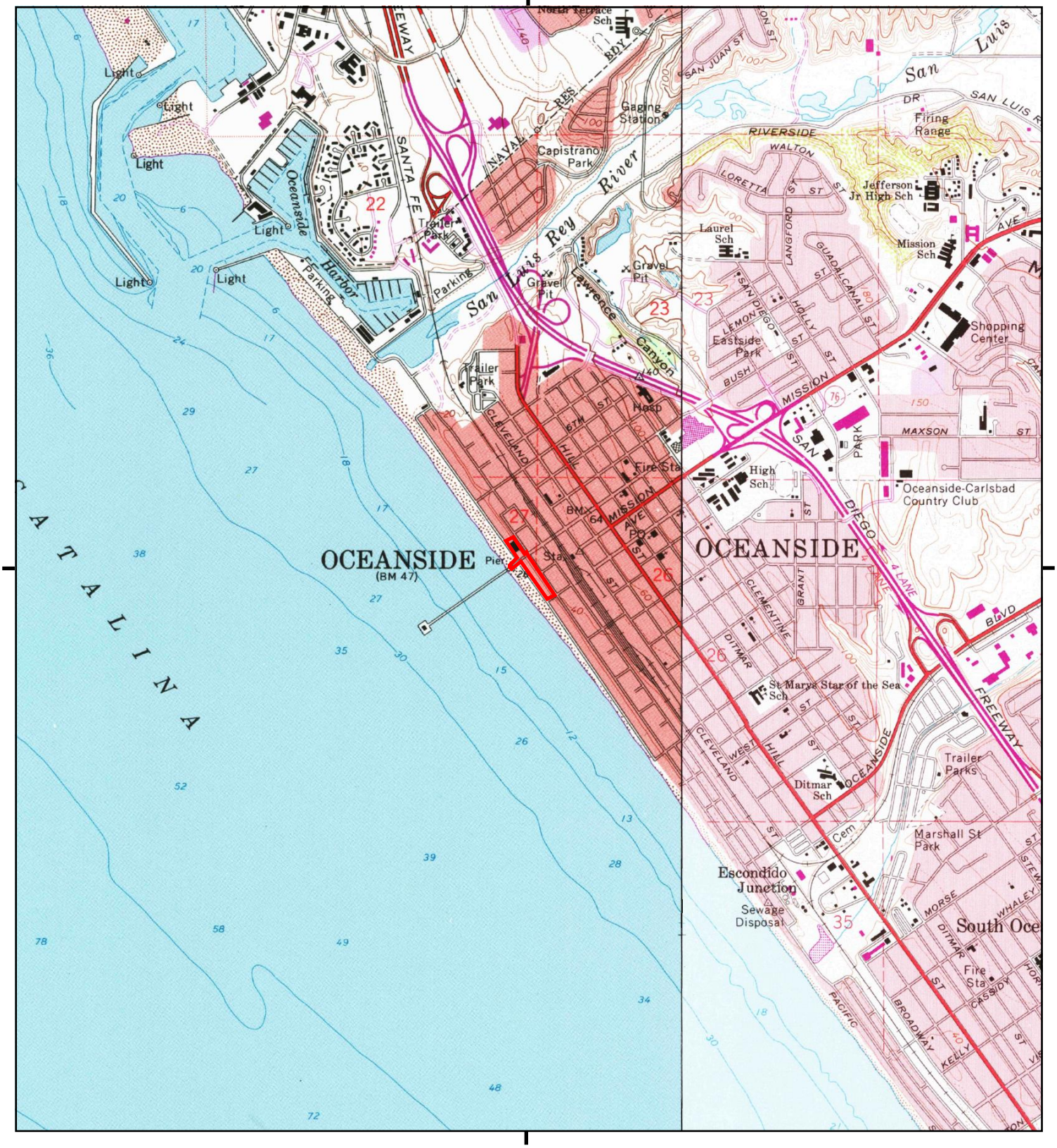
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1997, 7.5-minute
E, San Luis Rey, 1997, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

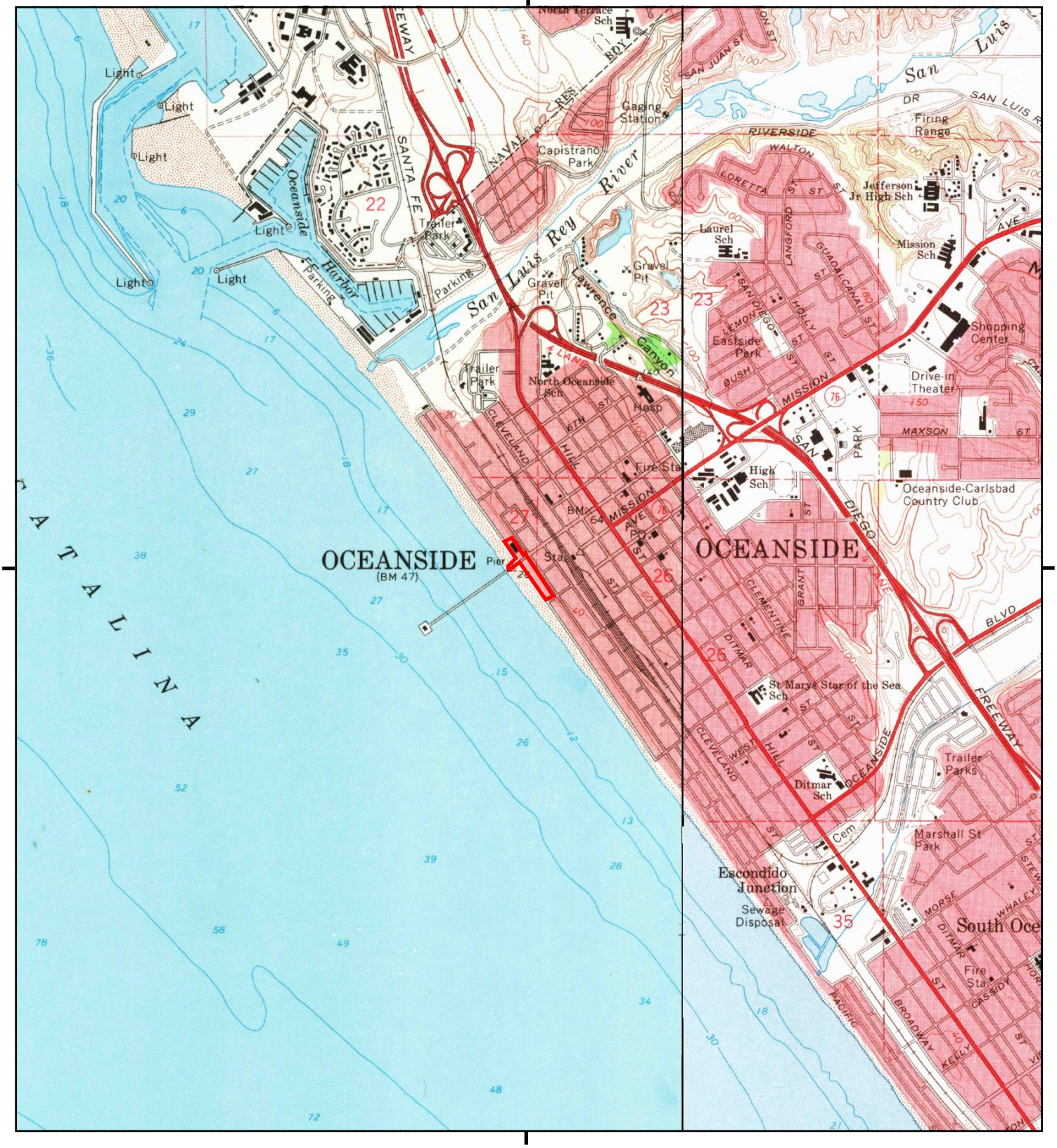
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1975, 7.5-minute
E, San Luis Rey, 1975, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

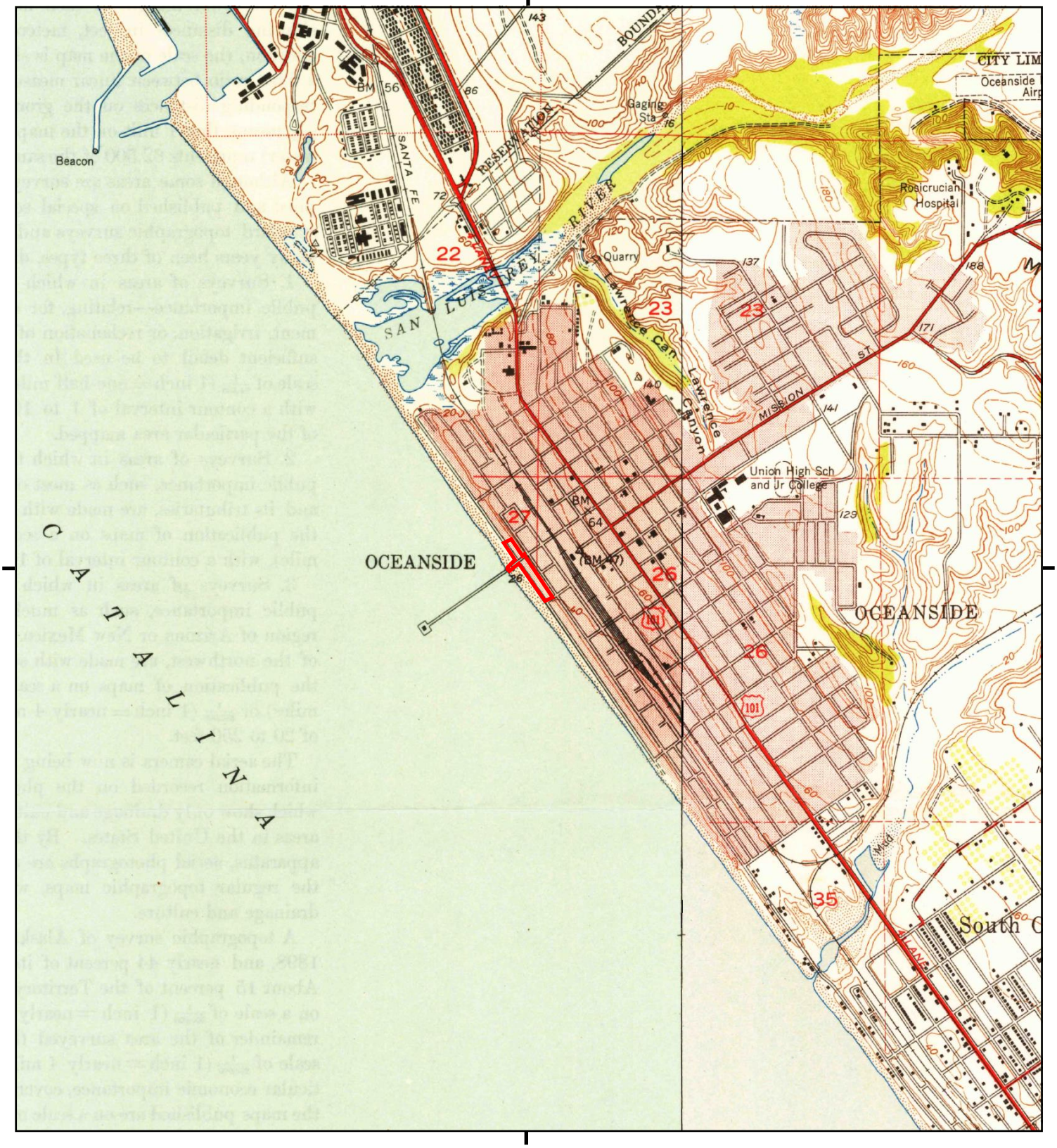
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1968, 7.5-minute
E, San Luis Rey, 1968, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

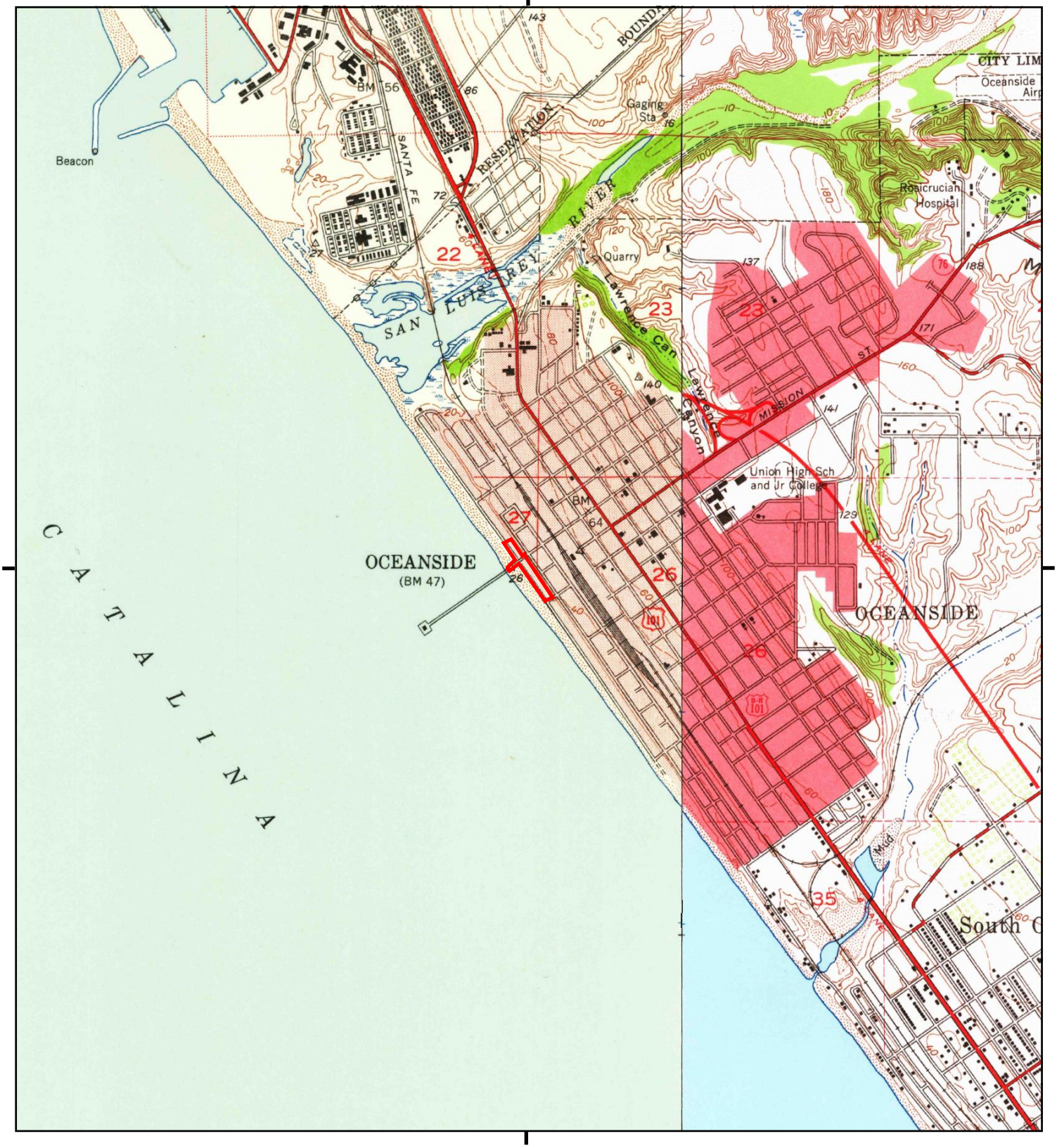
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1949, 7.5-minute
E, San Luis Rey, 1949, 7.5-minute

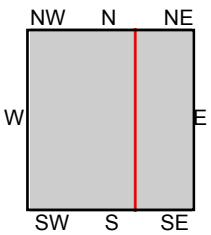
SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

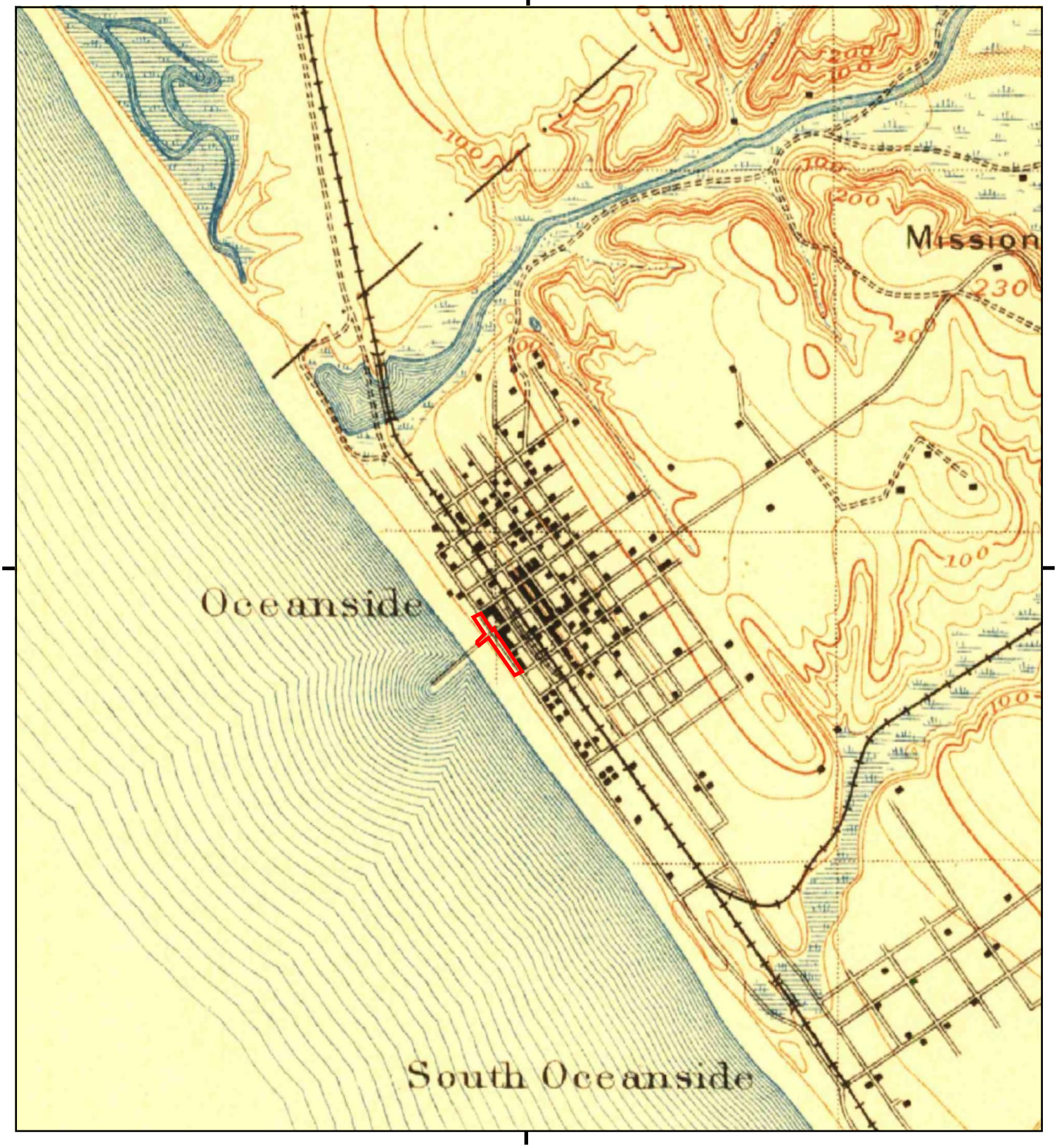
0 Miles 0.25 0.5 1 1.5




TP, Oceanside, 1947, 7.5-minute
E, San Luis Rey, 1948, 7.5-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

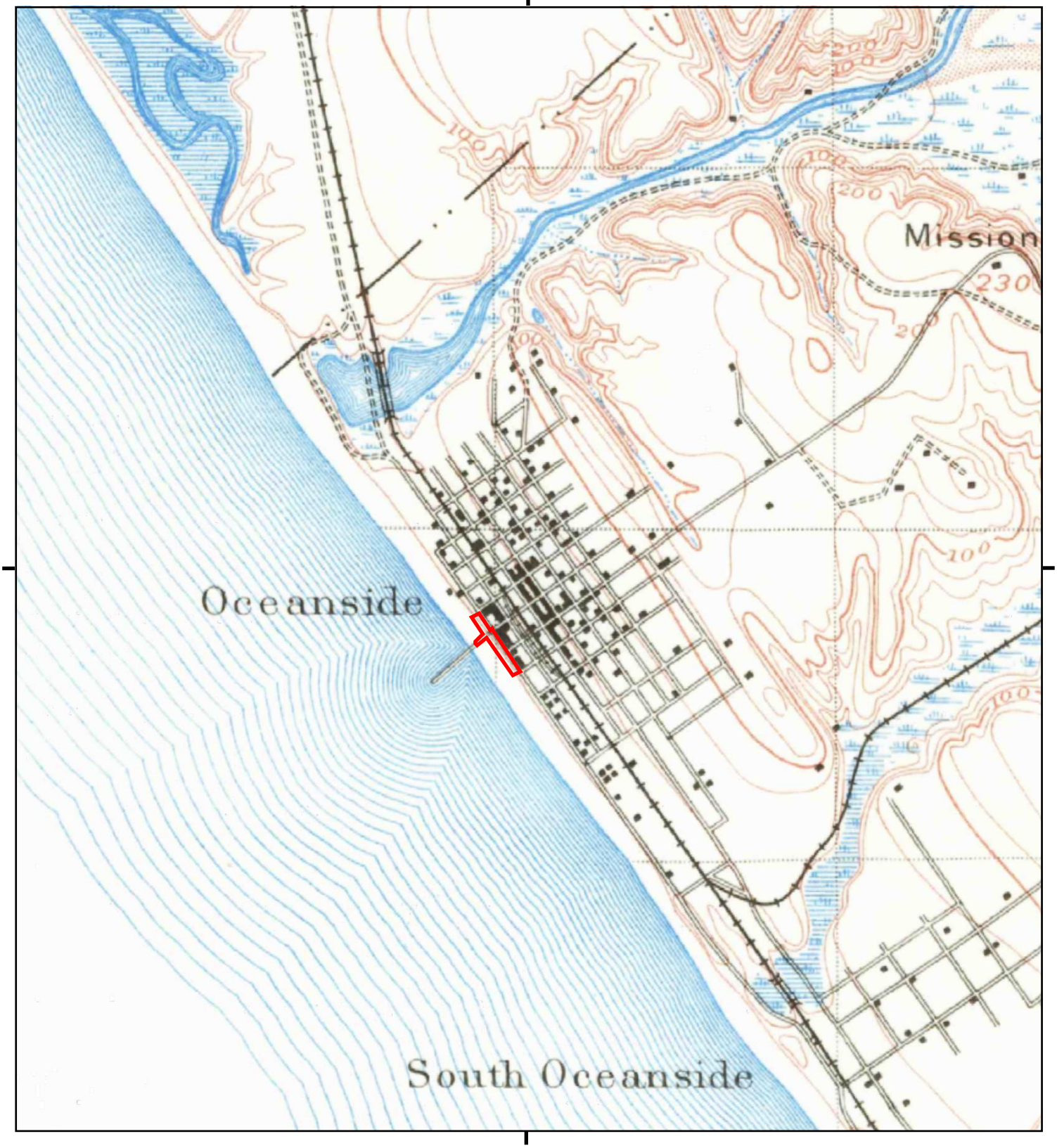
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1901, 15-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

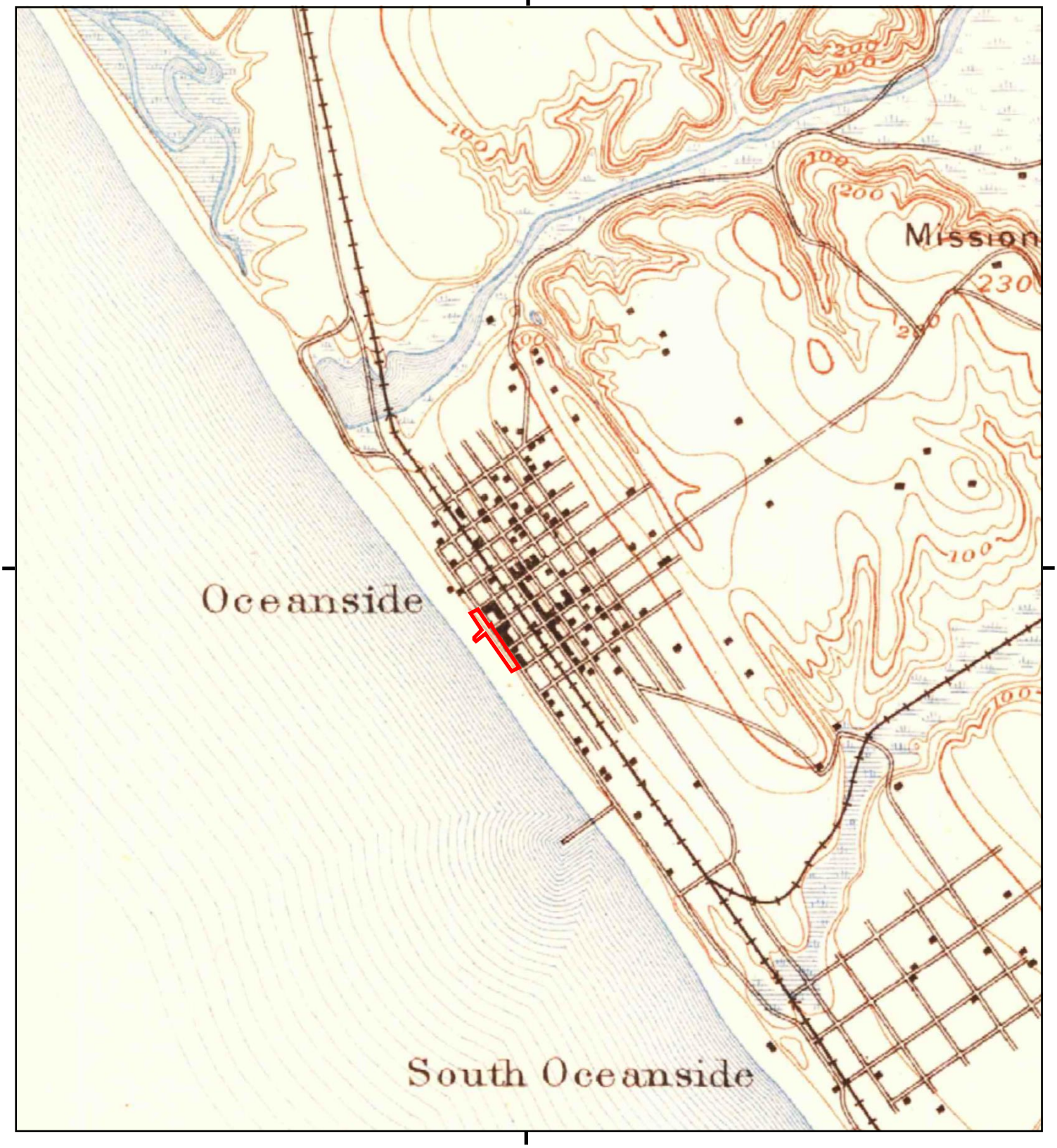
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1898, 15-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Oceanside, 1893, 15-minute

SITE NAME: Oceanside Pier
ADDRESS: Pier View Way
Oceanside, CA 92054
CLIENT: DUDEK

N

# Attachment D

Sanborn Maps

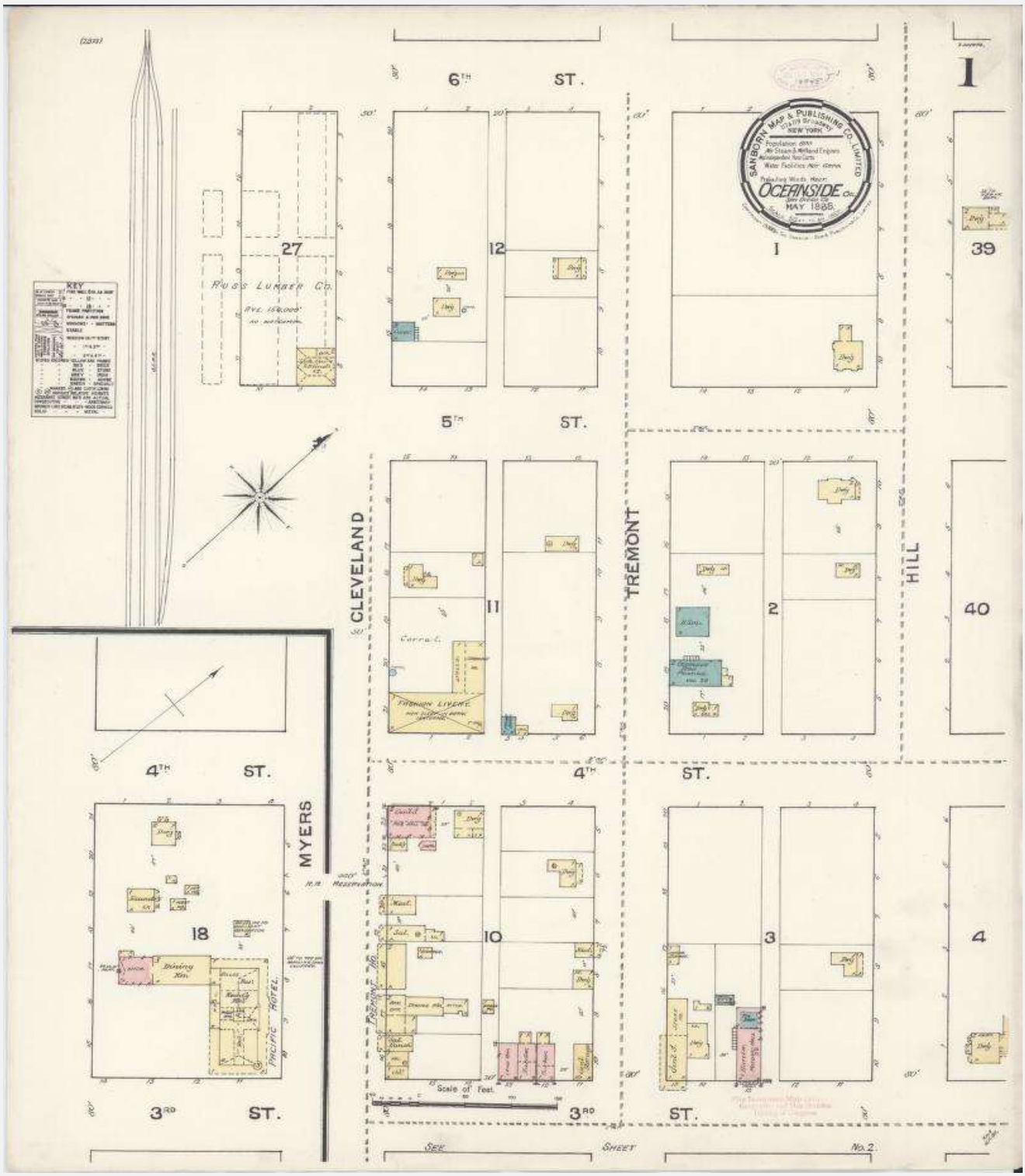



**Photo 1.** 1888 Sanborn Map

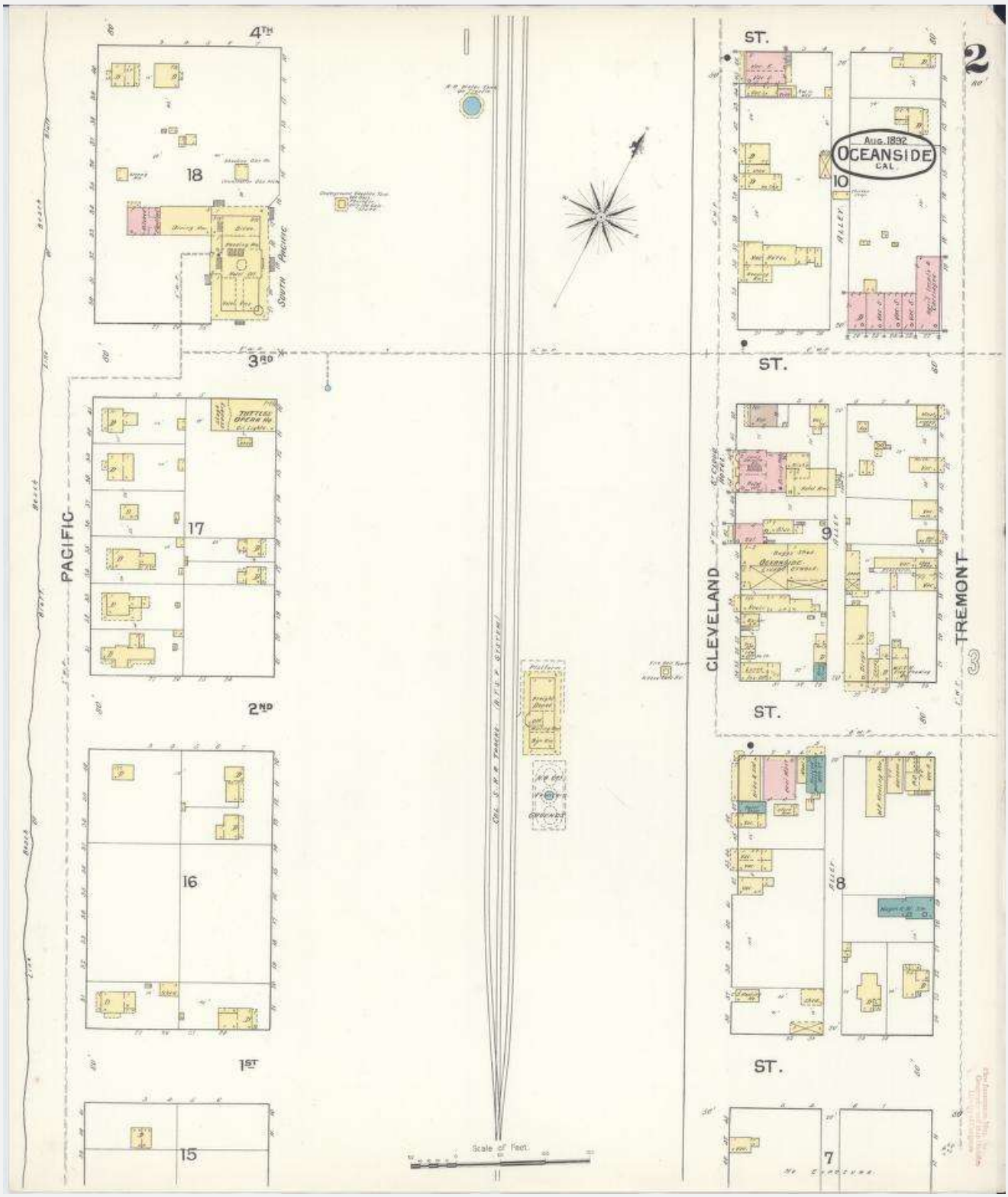



**Photo 2.** 1892 Sanborn Map

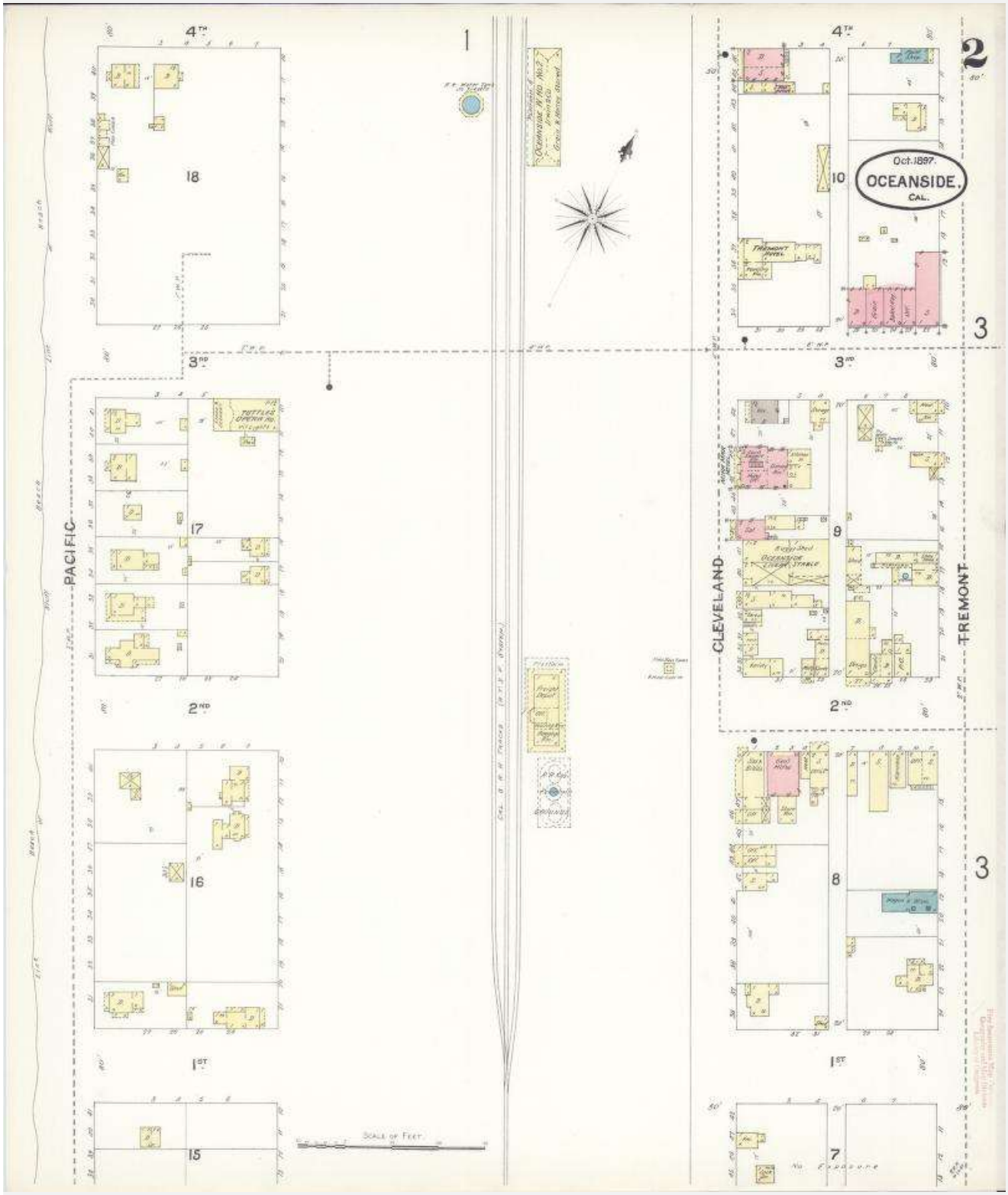



**Photo 3.** 1897 Sanborn Map

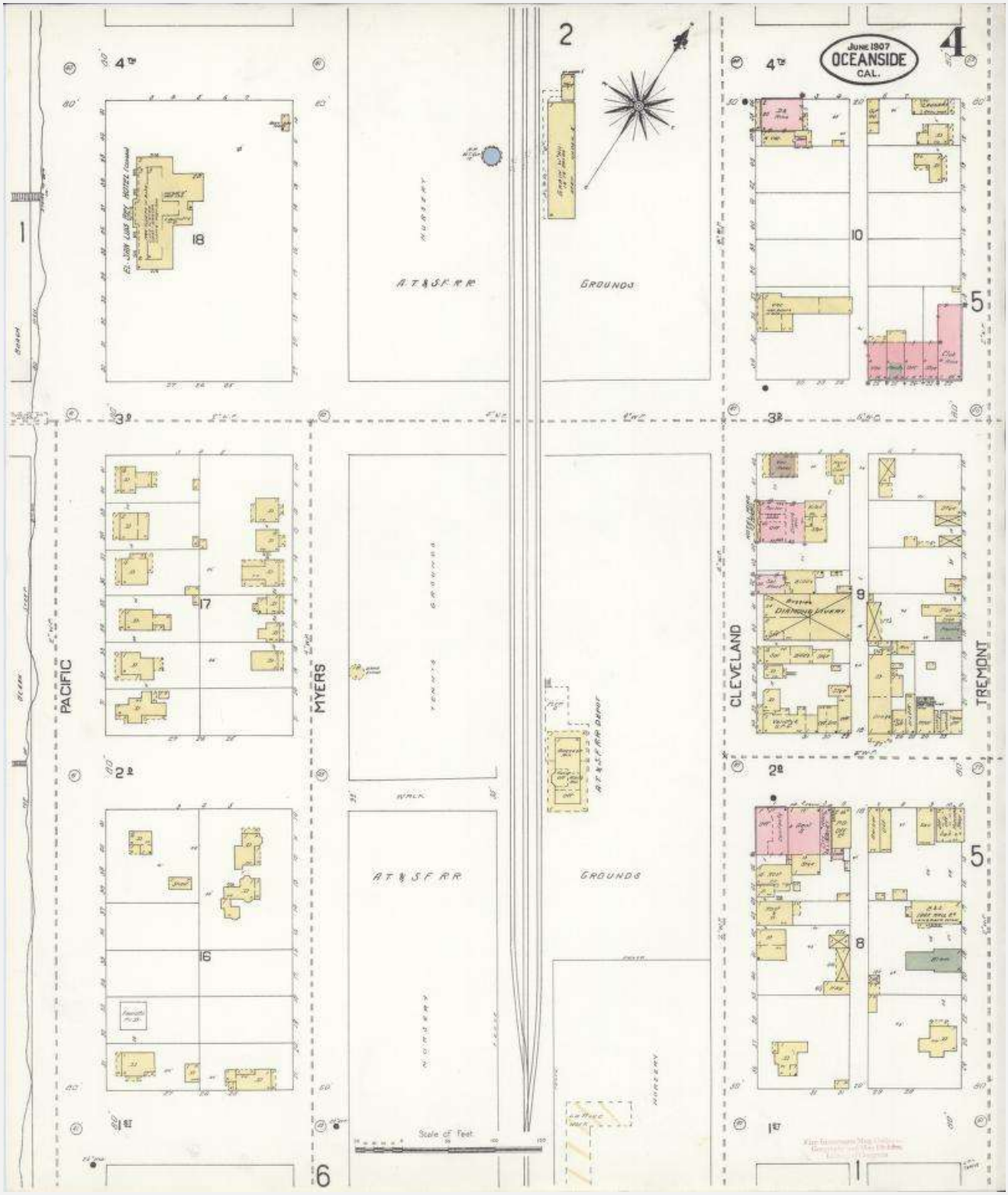



**Photo 4.** 1907 Sanborn Map

# Attachment E-1

Hazardous Building Materials Survey

# Hazardous Building Materials Survey

## City of Oceanside Municipal Pier
## Pier View Way Bridge and Lifeguard Headquarters
## Restoration/Replacement Project
## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


May 26, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

May 26, 2021
Project No. 109214001

Mr. Jared Cole, PE
Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, California 92108

Subject: Hazardous Building Materials Survey
City of Oceanside Municipal Pier
Pier View Way Bridge and Lifeguard Headquarters
Restoration/Replacement Project
301 The Strand North
Oceanside, California 92054

Dear Mr. Cole:

In accordance with your request and authorization to proceed, Ninyo & Moore has performed a hazardous building materials (HBM) survey at the Pier View Way Bridge and Lifeguard Headquarters (subject structures) of the City of Oceanside Municipal Pier, located at the western terminus of Pier View Way and addressed 301 The Strand North in Oceanside, California (subject site). The HBM survey was performed in support of the Restoration/Replacement Project, which is an effort between Moffatt & Nichol and the City of Oceanside to update and improve the subject structures. The attached report presents our methodology, findings, and recommendations regarding the HBM at the subject site.

Sincerely,
**NINYO & MOORE**

**Nicholas Marinello | CAC No. 17-6117**
Project Environmental Scientist

**Stephen J. Waide | CIH, CSP**
Principal Environmental Scientist

NSM/SJW/gg

Distribution: (1) Addressee (via email)
(1) Mr. Matthew Martinez, Moffatt & Nichol (via email)
(1) Ms. Alexandra Ford, Moffatt & Nichol (via email)

# CONTENTS


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| 4 | PHYSICAL LIMITATIONS | 3 |
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## FIGURES


1 – Site Location

2 – Site Plan

3 – Sample Locations, Lifeguard Headquarters

4 – Sample Locations, Bait Shop and Pier Storage


## TABLES


1 – Asbestos Survey Results

2 – Summary of Asbestos-Containing Materials

3 – XRF Data Sheet

4 – Summary of Lead-Containing Surfaces

5 – Summary of Other Potential Hazardous Building Materials

## APPENDICES

A – Suspect Asbestos-Containing Materials Sampling Protocol

B – Laboratory Analytical Report and Chain-of-Custody Records

C – County of San Diego – Rule 1206 Requirements

D – XRF Testing Methodology

E – CDPH Form 8552 – Lead Hazard Evaluation Report

# 1 INTRODUCTION

Ninyo & Moore has conducted an HBM survey at the Pier View Way Bridge and Lifeguard Headquarters of the Oceanside Municipal Pier, addressed 301 The Strand North within the City of Oceanside and the County of San Diego, California (Figure 1). Our services included an asbestos-containing materials (ACM) survey, a lead-containing surfaces (LCS) survey, and visual identification and quantification of building materials potentially falling under the California Department of Toxic Substances Control (DTSC) Universal Waste Rule (UWR) and other potential hazardous building materials. Our scope included the concrete portions of the Pier, specifically the concrete bridge, stairways, ramp, storage space, and lifeguard headquarters (subject structures). It is our understanding that the Restoration/Replacement Project will develop a plan either to renovate the subject structures to address age and access-related concerns or to demolish and replace the subject structures.

The purpose of this survey was to locate other suspect building materials/surfaces, to sample and/or test the identified suspect materials/surfaces, and to assess conditions and quantities of those materials/surfaces identified as hazardous that may be impacted by the Restoration/Replacement Project. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by the California Department of Public Health (CDPH) and U.S. Department of Housing and Urban Development (HUD), and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

The survey was performed in accordance with established guidelines for the assessment of ACM and LCS, and is based upon conditions at the subject site at the time of our survey update activities.

# 2 OBJECTIVE AND SCOPE OF SERVICES

The purpose of this report is to provide information regarding the current site conditions to assist Moffatt & Nichol and the City of Oceanside in developing and implementing future site improvements to the subject structures. Our scope of work performed for the survey is identified below.

- Conducted a visual reconnaissance of the subject structures to identify and/or document homogeneous areas and locate suspect ACM, LCS, building materials potentially falling under the UWR, and other potential hazardous building materials.
- Collected 58 bulk samples of suspect ACM and submitted them to an independent laboratory for analysis of asbestos content. Samples were analyzed via the U.S. Environmental Protection Agency (EPA)-recommended method of polarized light microscopy (PLM) with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993.

- Collected 264 X-Ray Fluorescence (XRF) readings of potential LCS.
- Visually assessed building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed.
- Prepared this report presenting our data and summarizing our findings and recommendations regarding ACM, LCS, and other potential hazardous building materials for the subject structures.
- Prepared sample location maps showing the locations where suspect ACM were collected and the locations where XRF readings of surfaces with lead concentrations in excess of 1.0 milligrams per square centimeter ($mg/cm^2$) were detected.

# 3 SITE DESCRIPTION

Ninyo & Moore performed survey activities in May of 2021. The subject site is located at the western terminus of Pier View Way, spanning across The Strand North from the intersection with North Pacific Street. The Junior Seau Beach Community Center is located to the north along The Strand and Rotary Park located to the south.

The concrete bridge was constructed in 1926 to connect the bluff to the wooden pier. The structure consists of two parallel spans, a ramp to the beach, stairways on the north and south sides, and storage spaces that were originally restrooms. Restroom use is reported to have ended decades ago when public restrooms were built along The Strand, and restroom fixtures are no longer present in the bridge structure. In 1985, the western portion of the bridge substructure was converted into the Oceanside Fire Department's Lifeguard Division Headquarters. The conversion built office, locker room, and garage space into the bridge.

The concrete bridge has a textured finish on the bent columns, railings, pedestals, and walls. The walking deck, ramp, and stairs are untextured and unpainted concrete. The storage areas generally have concrete ceilings, walls, and floors; the exception is the southwestern portion of the north storage area (formerly a men's restroom) where ceramic tiles are present on the walls and floors.

The Lifeguard Headquarters is generally finished with drop-in ceiling panel, drywall, or plaster ceilings; concrete or drywall walls with vinyl covebase; and carpet or vinyl floor tile floors. The locker room areas are finished with plaster ceilings, drywall and ceramic tile walls, and ceramic tile floors. The garage is finished with concrete and metal ceilings and concrete walls and floors.

# 4 PHYSICAL LIMITATIONS

Survey activities were limited to the aboveground structures within our scope. Underground utilities, such as suspect cementitious water lines or suspect insulated/coated gas or electrical lines, were not assessed during our survey activities.

Physical limitations, such as inaccessible rooms or spaces, were generally not encountered during survey activities. Since non-destructive sampling techniques were used, there is a possibility that additional suspect materials and/or surfaces may be encountered in inaccessible areas (e.g., interstitial wall and ceiling spaces and canopy soffits) during structure renovation and/or demolition activities. For instance, untested thermal system insulation may be present within wall and ceiling cavities and/or behind plumbing and heating fixtures (e.g., sinks, boilers, and radiators). Suspect materials and/or surfaces encountered during structure renovation and/or demolition activities that have not been assessed either may be assumed to be asbestos- and/or lead-containing and handled accordingly, or may be sampled and analyzed to assess whether they are asbestos- and/or lead-containing.

# 5 SAMPLE COLLECTION AND ANALYSES

The subject structures were assessed for the presence of ACM and LCS, and other potential hazardous building materials. The ACM and LCS surveys followed EPA guidelines, or industry standards, within the limitations of the scope of this assessment. Survey activities are discussed below.

## 5.1 Asbestos-Containing Materials Survey

Ninyo & Moore's objective was to collect representative samples of suspect ACM observed in the subject structures. The asbestos survey was performed by a State of California Certified Asbestos Consultant and Certified Site Surveillance Technician. Survey activities included a preliminary visual assessment, bulk sampling of suspect ACM, and logging and mapping of collected samples. Representative samples of suspect ACM were collected after identification of homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction or application date, and general appearance). Material type, location, condition, and friability were noted for each homogeneous area. For the purposes of the assessment, the bridge structures, including the Lifeguard Headquarters and storage spaces, were not subdivided for the identification of homogeneous areas. Fifty-eight (58) samples of suspect ACM were collected using EPA-recommended sampling procedures (Appendix A).

The suspect ACM samples were delivered to EMSL Analytical of San Diego, California and shipped to EMSL Analytical of Las Vegas, Nevada (EMSL) for analysis. EMSL is accredited in the National Voluntary Laboratory Accreditation Program for bulk asbestos fiber analysis. The samples were analyzed for the presence and quantification of asbestos fibers, using PLM with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993. Due to material layering, eighty-six (86) separate PLM analyses were initially performed. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by weight. Currently, the EPA and the State of California stipulate that materials containing greater than 1% asbestos constitute ACM. The State of California further stipulates that materials containing greater than 0.1% asbestos constitute asbestos-containing construction materials (ACCM).

Building materials that were sampled and analyzed for the presence of asbestos in this survey are presented in the attached Table 1, and the locations from which bulk asbestos samples were collected during this survey are shown on Figures 3 and 4. Copies of the laboratory analytical report and chain-of-custody records for this survey are presented in Appendix B. Survey information, as required by the County of San Diego Air Pollution Control District's Rule 1206, is presented in Appendix C.

## 5.2 Lead-Containing Surfaces Survey

Ninyo & Moore's objective was to test suspect LCS observed in the subject structures and to assess the condition of those surfaces found to be lead-containing. The testing was conducted by a CDPH-certified Inspector/Assessor using a portable Viken Detection Pb200i XRF Lead Paint Analyzer, in accordance with accepted environmental science and engineering practices for renovation projects. The testing methodology utilized is presented in Appendix D. Two hundred sixty-four (264) XRF readings (including calibration checks) were collected during the survey. LCS, based on the CDPH and HUD lead-based paint regulatory standards, are surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by CDPH and HUD, and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

Building components that were tested for the presence of lead during this survey are presented in the attached Table 3. The XRF testing orientation (A, B, C, and D wall orientations) utilized during the survey, and the locations from which XRF readings in excess of 1.0 mg/cm$^2$ were detected, are shown on Figures 3 and 4. A copy of CDPH Form 8552 "Lead Hazard Evaluation Report" for the subject buildings is included in Appendix E.

## 5.3 Other Potential Hazardous Building Materials

Ninyo & Moore performed a visual assessment of building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed. For the purposes of this assessment, "Freon" refers to both Freon™, the brand-name refrigerants and aerosols produced by The Chemours Company, and other halocarbon/fluorocarbon refrigerants. **In accordance with the scope of work, positive identification of the suspect hazardous material, via analytical testing, was not performed.** Other potentially hazardous building materials are summarized in Table 5.

# 6 FINDINGS AND RECOMMENDATIONS

The findings of this survey are based on our visual observations and analysis of suspect building materials/surfaces. Our findings are presented below.

## 6.1 Asbestos-Containing Materials

Based on the analytical results from this survey, ACM are located at the subject structures and are summarized in Table 2. Specifically, an approximately six-inch-diameter asbestos cement pipe (also known as transite) was identified emerging from the sand to the northeast of the Lifeguard Headquarters (see below photograph; additional photographs available upon request). The amount of material present is unknown, although approximately one foot was visible. Materials that were not sampled and analyzed as part of this assessment and that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should also be assumed to be asbestos-containing.

The identified ACM should not be disturbed. Given the material's location and accessibility, a protective enclosure of the material is recommended. Prior to future structure renovation and/or demolition activities, a licensed asbestos abatement contractor should remove the ACM in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm ACM locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.**




**Photograph**: Asbestos cement pipe (transite) located northeast of Lifeguard Headquarters.

Should additional suspect materials, not sampled or assessed in this report, be uncovered during building renovation and/or demolition: (a) samples of suspect materials should be collected for laboratory analysis, and all activities that may impact the materials should cease until laboratory analytical results are reviewed; or (b) the materials should be assumed to be asbestos-containing and handled as such. Note that any work involving the disturbance of materials containing asbestos should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

## 6.2 Lead-Containing Surfaces

Based on the results of the XRF assays collected during this survey, surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight, were identified in the subject structures. Specifically, painted surfaces and ceramic tile in the storage spaces/former restrooms were identified as LCS. Surfaces with a lead content exceeding the regulatory standards for lead in surface coatings are summarized in Table 4.

Please note that disturbing surfaces containing lead concentrations below the LCS criteria, as defined by CDPH and HUD, (e.g., lead concentrations less than 1.0 mg/cm$^2$, or 0.5% by weight) may still trigger the California Occupational Safety and Health Administration (Cal-OSHA) lead in construction standard (Title 8 California Code of Regulations Section 1532.1).

The identified LCS should not be disturbed. Prior to structure renovation and/or demolition activities, a licensed abatement contractor should remove the LCS in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm LCS locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.** In addition, please note that LCS condition was based upon Ninyo & Moore's visual observations during survey activities and that LCS conditions may further deteriorate prior to renovation and/or demolition activities.

Should suspect surfaces, not tested or assessed in this report, be uncovered during structure renovation and/or demolition: (a) XRF testing of the surfaces should occur and all activities that impact the suspect surfaces should cease until XRF testing results become available; (b) paint chip or bulk samples of suspect surfaces should be collected for laboratory analysis and all activities that impact the suspect surfaces should cease until laboratory analytical results are reviewed; or (c) the surfaces should be assumed to contain concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight, and handled as such. Note that any work involving the disturbance of surfaces containing lead should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

## 6.3 Other Potential Hazardous Building Materials

A visual assessment and quantification of building materials falling under the UWR and other potential hazardous building materials that could be impacted by the Restoration/Replacement Project was performed. Other potential hazardous building materials observed within the subject Structures are summarized in Table 5 and include:

- Fluorescent light tubes and associated ballasts;
- Non-incandescent light bulbs and associated ballasts;
- Potentially americium-containing smoke detectors;
- Potentially Freon-containing refrigeration systems; and
- Gasoline, oil, and paint storage.

Prior to renovation and/or demolition activities that could potentially disturb these materials, building materials falling under the UWR and other potential hazardous building materials should be removed and properly recycled or disposed of by a licensed contractor in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm miscellaneous hazardous building materials quantities and locations present prior to bid submittals and initiating renovation and/or demolition activities for the subject structures.** The Contractor is also responsible for waste characterization for all materials removed from the subject structures.

# 7 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by conducting a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the site evaluated. However, if additional suspect building materials are encountered during renovation and/or demolition activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. In addition, please note that quantities of impacted building materials are approximate. It is the contractor's responsibility to confirm quantities present.

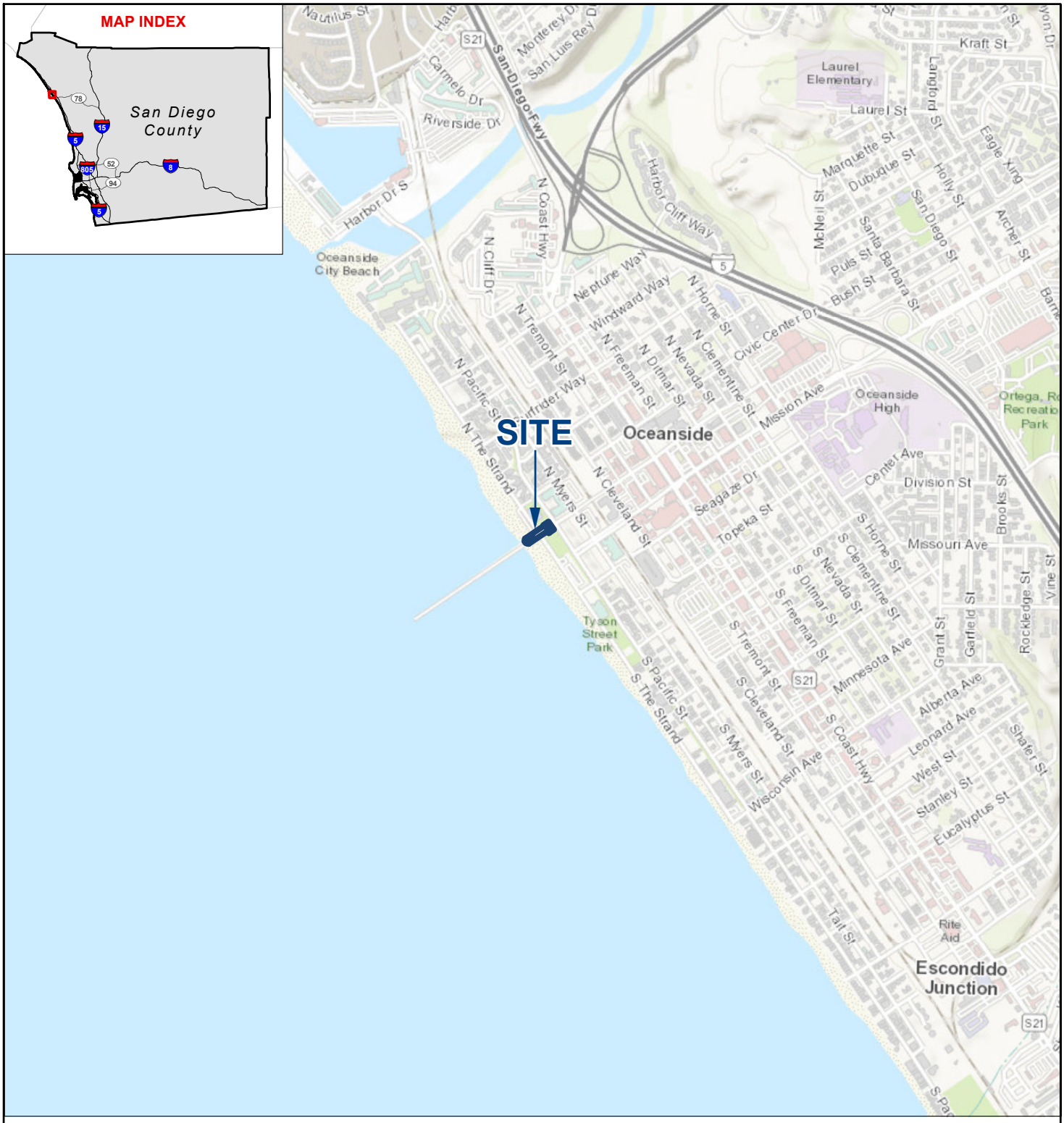
The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory that is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results. Please note the laboratory analytical report states “Due to the magnification limitations inherent in PLM, asbestos fibers below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testings by transmission electron microscopy to confirm asbestos quantities.”

Our findings, opinions, and recommendations are based on an analysis of the observed site conditions. It should be understood that the conditions of the site can change with time as a result of natural processes or the activities of humans at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

# FIGURES




NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: ESRI WORLD TOPO, 2021

1_109214001_SL.mxd 5/19/2021 AOB

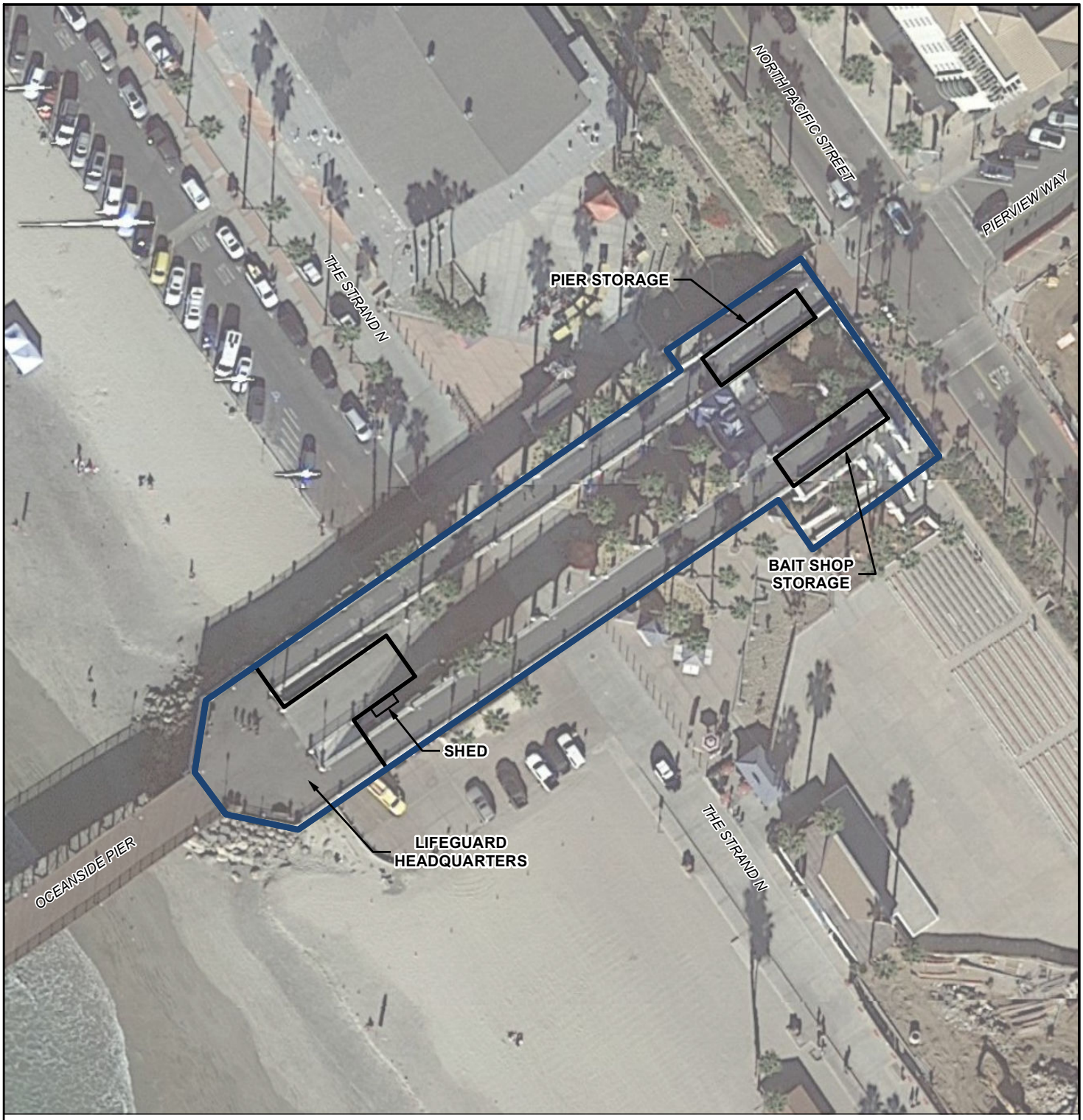
**FIGURE 1**

**SITE LOCATION**

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

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Geotechnical & Environmental Sciences Consultants




LEGEND

SITE BOUNDARY

AREA/SPACE BOUNDARY

N

FEET

0 60 120

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2021

2_109214001_SP.mxd 5/19/2021 AOB

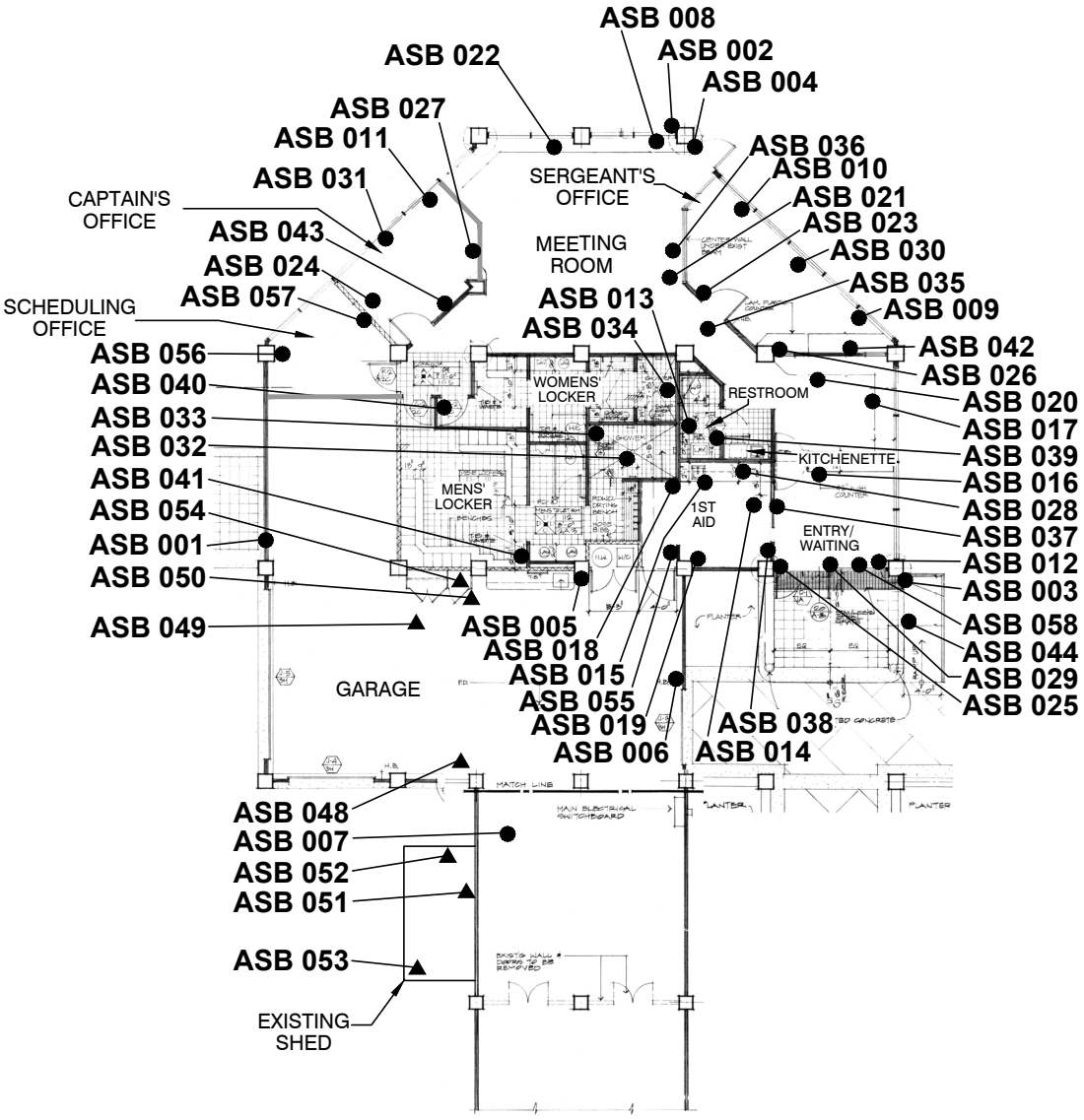
**FIGURE 2**

**SITE PLAN**

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 | 5/21

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants




LEGEND

● **ASB 058** ASBESTOS SAMPLE

▲ **ASB 054** ASBESTOS ROOF SAMPLE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: DANIELSON DESIGN GROUP, DATED 9/17/85.

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0 20 40

3 109214001 SPL LIFEGUARD.DWG AOB

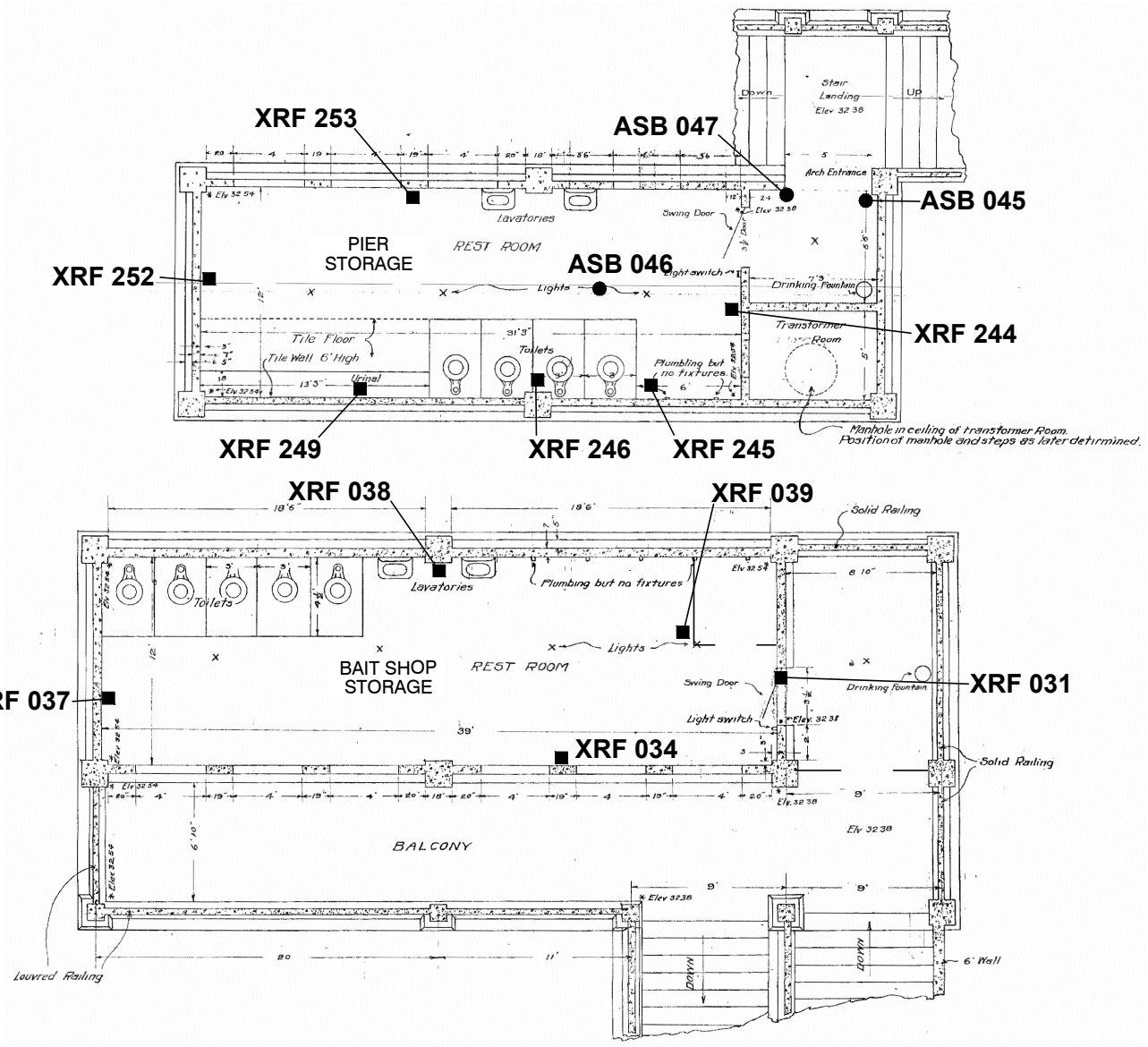
**FIGURE 3**

## SAMPLE LOCATIONS, LIFEGUARD HEADQUARTERS

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

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LEGEND

● **ASB 047** ASBESTOS SAMPLE

■ **XRF 253** XRF ASSAY IN EXCESS OF 1.0 mg/cm$^2$

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: CITY OF OCEANSIDE, DATED 1926.

N

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**FIGURE 4**

## SAMPLE LOCATIONS, BAIT SHOP AND PIER STORAGE

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

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# TABLES

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-001 | Lifeguard HQ | Exterior | South wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-002 | Lifeguard HQ | Exterior | West wall | Gray/white stucco | -- | N/A | N/A | ND |
| ASB-002A | Lifeguard HQ | Exterior | West wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-003 | Lifeguard HQ | Exterior | North wall | Gray/white stucco | -- | N/A | N/A | ND |
| ASB-003A | Lifeguard HQ | Exterior | North wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-004 | Lifeguard HQ | Exterior | West doorway | Gray door sealant | -- | N/A | N/A | ND |
| ASB-005 | Lifeguard HQ | Bay Area | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-006 | Lifeguard HQ | Bay Area | North wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-007 | Lifeguard HQ | Bay Area | South ceiling under ramp, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-008 | Lifeguard HQ | Meeting | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-009 | Lifeguard HQ | Sergeants' Office | East wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-010 | Lifeguard HQ | Sergeants' Office | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-011 | Lifeguard HQ | Captain's Office | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-012 | Lifeguard HQ | Waiting | East wall, over concrete | Gray texture material | -- | N/A | N/A | ND |
| ASB-013 | Lifeguard HQ | Restroom | South ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-014 | Lifeguard HQ | First Aid | North ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-015 | Lifeguard HQ | First Aid | West sink | White undercoating | -- | N/A | N/A | ND |
| ASB-016 | Lifeguard HQ | Waiting | East floor, under carpet | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-016A | Lifeguard HQ | Waiting | East floor, under carpet | Black mastic | -- | N/A | N/A | ND |
| ASB-017 | Lifeguard HQ | Waiting | North floor, under carpet | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-017A | Lifeguard HQ | Waiting | North floor, under carpet | Black mastic | -- | N/A | N/A | ND |
| ASB-018 | Lifeguard HQ | First Aid | West floor | 12"x12" blue vinyl floor tile | -- | N/A | N/A | ND |
| ASB-018A | Lifeguard HQ | First Aid | West floor | Black mastic | -- | N/A | N/A | ND |
| ASB-019 | Lifeguard HQ | First Aid | East floor | 12"x12" blue vinyl floor tile | -- | N/A | N/A | ND |
| ASB-019A | Lifeguard HQ | First Aid | East floor | Black mastic | -- | N/A | N/A | ND |
| ASB-020 | Lifeguard HQ | Waiting | West floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-021 | Lifeguard HQ | Meeting | North floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-022 | Lifeguard HQ | Meeting | West floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-023 | Lifeguard HQ | Sergeants' Office | East floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-024 | Lifeguard HQ | Captain's Office | South floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-025 | Lifeguard HQ | Waiting | East lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-026 | Lifeguard HQ | Sergeants' Office | East lower wall | Tan covebase glue | -- | N/A | N/A | ND |

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-027 | Lifeguard HQ | Captain's Office | North lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-028 | Lifeguard HQ | First Aid | West lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-029 | Lifeguard HQ | Waiting | East windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-030 | Lifeguard HQ | Sergeants' Office | West windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-031 | Lifeguard HQ | Captain's Office | West windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-032 | Lifeguard HQ | Men's Shower | Center ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-033 | Lifeguard HQ | Men's Shower | West ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-034 | Lifeguard HQ | Women's Shower | North ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-035 | Lifeguard HQ | Meeting/Corridor | North ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-036 | Lifeguard HQ | Meeting | West wall | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-037 | Lifeguard HQ | Waiting | South wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-037A | Lifeguard HQ | Waiting | South wall | White joint compound | -- | N/A | N/A | ND |
| ASB-037B | Lifeguard HQ | Waiting | South wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-038 | Lifeguard HQ | First Aid | North wall | White drywall | -- | N/A | N/A | ND |
| ASB-038A | Lifeguard HQ | First Aid | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-038B | Lifeguard HQ | First Aid | North wall | Tan/purple tape | -- | N/A | N/A | ND |
| ASB-039 | Lifeguard HQ | Restroom | North wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-039A | Lifeguard HQ | Restroom | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-039B | Lifeguard HQ | Restroom | North wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-040 | Lifeguard HQ | Women's Shower | South wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-040A | Lifeguard HQ | Women's Shower | South wall | Beige joint compound | -- | N/A | N/A | ND |
| ASB-040B | Lifeguard HQ | Women's Shower | South wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-041 | Lifeguard HQ | Men's Shower | East wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-041A | Lifeguard HQ | Men's Shower | East wall | Tan joint compound | -- | N/A | N/A | ND |
| ASB-042 | Lifeguard HQ | Sergeants' Office | North wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-042A | Lifeguard HQ | Sergeants' Office | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-042B | Lifeguard HQ | Sergeants' Office | North wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-043 | Lifeguard HQ | Captain's Office | East wall | White drywall | -- | N/A | N/A | ND |
| ASB-043A | Lifeguard HQ | Captain's Office | East wall | White joint compound | -- | N/A | N/A | ND |
| ASB-043B | Lifeguard HQ | Captain's Office | East wall | Tan/green tape | -- | N/A | N/A | ND |
| **ASB-044** | **Lifeguard HQ** | **Exterior** | **North pipe** | **Gray transite pipe (6" diameter)** | **Unknown (1 LF visible)** | **N** | **Fair** | **12% chrysotile 4% crocidolite** |

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-045 | Pier Stor. | Entry | North wall | Tan/white stucco | -- | N/A | N/A | ND |
| ASB-045A | Pier Stor. | Entry | North wall | Gray concrete | -- | N/A | N/A | ND |
| ASB-046 | Pier Stor. | Main Stor. | Center ceiling | Tan/white stucco | -- | N/A | N/A | ND |
| ASB-046A | Pier Stor. | Main Stor. | Center ceiling | Gray concrete | -- | N/A | N/A | ND |
| ASB-047 | Pier Stor. | Entry | North doorway | White door sealant | -- | N/A | N/A | ND |
| ASB-048 | Lifeguard HQ | Roof | East roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-048A | Lifeguard HQ | Roof | East roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-049 | Lifeguard HQ | Roof | Southwest roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-049A | Lifeguard HQ | Roof | Southwest roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-050 | Lifeguard HQ | Roof | West roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-050A | Lifeguard HQ | Roof | West roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-051 | Lifeguard HQ | Shed Roof | North roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-051A | Lifeguard HQ | Shed Roof | North roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-052 | Lifeguard HQ | Shed Roof | West roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-052A | Lifeguard HQ | Shed Roof | West roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-053 | Lifeguard HQ | Shed Roof | East roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-053A | Lifeguard HQ | Shed Roof | East roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-054 | Lifeguard HQ | Roof | West roof | Gray/white edge sealant | -- | N/A | N/A | ND |
| ASB-055 | Lifeguard HQ | First Aid | East ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-056 | Lifeguard HQ | Scheduling Office | Southwest wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-057 | Lifeguard HQ | Scheduling Office | North lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-058 | Lifeguard HQ | Waiting | East floor | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-058A | Lifeguard HQ | Waiting | East floor | Black mastic | -- | N/A | N/A | ND |

**NOTES:**

Bulk asbestos sample analysis via EPA 600/R-93/116 method using polarized light microscopy, unless otherwise noted.

Results in **BOLD** are ACM, as defined by EPA and the State of California, and results in *ITALICS* are ACCM, as defined by the State of California.

**[1] = Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

LF = Linear feet

N/A = Not applicable

ND = None detected

HQ = Headquarters

Stor. = Storage

## Table 2 - Summary of Asbestos-Containing Materials

| Sample No.(s) | ACM Location [1] | ACM Description | Approx. Quantity [2] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|
| ASB-044 | Northeast of Lifeguard Headquarters - Emerging from sand | Transite pipe (6" diameter) | Unknown (1 LF visible) | N | Fair | 12% chrysotile 4% crocidolite |

**NOTES:**

[1] = ACM locations are based upon Ninyo & Moore's visual observations during survey activities. Materials that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should be presumed to be asbestos-containing.

**[2] = Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

LF = Linear feet

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 0.9 | 0.3 |
| 2 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 3 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 4 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 5 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 6 | -- | Blank Calibration Check | | | | | | | | -- | -0.1 | 0.3 |
| 7 | Lifeguard HQ | 1 | B | Women's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 8 | Lifeguard HQ | 1 | C | Women's Locker | Door | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 9 | Lifeguard HQ | 1 | C | Women's Locker | Door vent | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 10 | Lifeguard HQ | 1 | C | Women's Locker | Door jamb | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 11 | Lifeguard HQ | 1 | C | Women's Locker | Locker | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 12 | Lifeguard HQ | 1 | C | Women's Locker | Soffit | Metal | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 13 | Lifeguard HQ | 1 | C | Women's Locker | Soffit | Metal | Intact | White | NEG | -- | -0.1 | 0.3 |
| 14 | Lifeguard HQ | 1 | C | Women's Locker | Cabinets | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 15 | Lifeguard HQ | 1 | C | Women's Locker | Wall | Metal | Intact | Beige | NEG | -- | -0.3 | 0.3 |
| 16 | Lifeguard HQ | 1 | C | Women's Locker | Wall | Metal | Intact | Blue | NEG | -- | -0.6 | 0.3 |
| 17 | Lifeguard HQ | 1 | -- | Women's Locker | Ceiling | Plaster | Intact | White | NEG | -- | -0.1 | 0.3 |
| 18 | Lifeguard HQ | 1 | -- | Women's Shower | Ceiling | Plaster | Intact | White | NEG | -- | 0.0 | 0.3 |
| 19 | Lifeguard HQ | 1 | D | Women's Shower | Wall | Metal | Intact | Beige | NEG | -- | -0.4 | 0.3 |
| 20 | Lifeguard HQ | 1 | A | Women's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.0 | 0.3 |
| 21 | Lifeguard HQ | 1 | -- | Women's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 22 | Lifeguard HQ | 1 | -- | Women's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 23 | Lifeguard HQ | 1 | A | Women's Locker | Toilet | Metal | Intact | White | NEG | -- | -0.2 | 0.3 |
| 24 | Lifeguard HQ | 1 | A | Women's Locker | Baseboard | Metal | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 25 | Bait Shop Stor. | 2 | A | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 26 | Bait Shop Stor. | 2 | B | Entry | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 27 | Bait Shop Stor. | 2 | B | Entry | Door stop | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |
| 28 | Bait Shop Stor. | 2 | B | Entry | Wall | Wood | Intact | White | NEG | -- | 0.1 | 0.3 |
| 29 | Bait Shop Stor. | 2 | B | Entry | Wall | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 30 | Bait Shop Stor. | 2 | B | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| **31** | **Bait Shop Stor.** | **2** | **C** | **Entry** | **Door frame** | **Wood** | **Intact** | **White** | **POS** | **2 EA** | **6.7** | **0.3** |
| 32 | Bait Shop Stor. | 2 | C | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 33 | Bait Shop Stor. | 2 | D | Entry | Wall | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| **34** | **Bait Shop Stor.** | **2** | **B** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **1,100 SF** | **4.2** | **0.3** |
| 35 | Bait Shop Stor. | 2 | B | Main Storage | Window frame | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Bait Shop Stor. | 2 | C | Main Storage | Wall | Concrete | Intact | White | NEG | -- | 0.9 | 0.2 |
| **37** | **Bait Shop Stor.** | **2** | **C** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **2.5** | **0.3** |
| **38** | **Bait Shop Stor.** | **2** | **D** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **3.8** | **0.3** |
| **39** | **Bait Shop Stor.** | **2** | **D** | **Main Storage** | **Wall** | **Wood** | **Intact** | **White** | **POS** | **75 SF** | **1.2** | **0.3** |
| 40 | Bait Shop Stor. | 2 | D | Main Storage | Door | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| **41** | **Bait Shop Stor.** | **2** | **A** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **1.5** | **0.3** |
| 42 | Bait Shop Stor. | 2 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 43 | Bait Shop Stor. | 2 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 44 | Bait Shop Stor. | 2 | D | Closet | Rafter/framing | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 45 | Bait Shop Stor. | 2 | D | Closet | Rafter/framing | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 46 | Bait Shop Stor. | 2 | A | Closet | Shelf | Wood | Intact | White | NEG | -- | -0.1 | 0.3 |
| 47 | Bait Shop Stor. | 2 | A | Closet | Shelf | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 48 | Bait Shop Stor. | 2 | B | Closet | Door | Wood | Intact | Green | NEG | -- | -0.1 | 0.3 |
| 49 | Bait Shop Stor. | 2 | B | Closet | Door | Wood | Intact | Green | NEG | -- | -0.3 | 0.3 |
| 50 | Bridge | 3 | A | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 51 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 52 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 53 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 54 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 55 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 56 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 57 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 58 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 59 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 60 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 61 | Bridge | 3 | D | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 62 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 63 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 64 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.3 | 0.3 |
| 65 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 66 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 67 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 68 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | Bridge | 3 | D | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 70 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 71 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 72 | Bridge | 3 | C | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 73 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.3 | 0.3 |
| 74 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 75 | Bridge | 3 | C | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 76 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 77 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 78 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 79 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 80 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 81 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 82 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.4 | 0.2 |
| 83 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 84 | Bridge | 3 | B | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 85 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.4 | 0.3 |
| 86 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 87 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 88 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 89 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 90 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 91 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 92 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 93 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 94 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 95 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 96 | Bridge | 3 | B | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 97 | Bridge | 3 | B | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 98 | Bridge | 3 | D | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 99 | Bridge | 3 | D | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 100 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 101 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 102 | Bridge | 2 | D | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 103 | Bridge | 2 | D | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104 | Bridge | 2 | B | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 105 | Bridge | 2 | B | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 106 | Bridge | 2 | A | Center Ramp | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 107 | Bridge | 2 | A | Center Ramp | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 108 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 109 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 110 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 111 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 112 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 113 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 114 | Bridge | 1 | B | Ground Level, along Strand | Pipe, vertical | Metal | Intact | White | NEG | -- | 0.5 | 0.2 |
| 115 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 116 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 117 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 118 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 119 | Bridge | 1 | B | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 120 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 121 | Bridge | 1 | D | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 122 | Bridge | 1 | D | South Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 123 | Bridge | 1 | D | South Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 124 | Bridge | 1 | B | South Bridge Stairs | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 125 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 126 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 127 | Bridge | 2 | A | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 128 | Bridge | 2 | D | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 129 | Bridge | 2 | D | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130 | Bridge | 2 | C | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 131 | Bridge | 2 | C | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 132 | Bridge | 2 | D | South Bridge Stairs | Door | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 133 | Bridge | 2 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 134 | Bridge | 3 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 135 | Bridge | 3 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 136 | Bridge | 3 | A | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 137 | Bridge | 3 | A | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 138 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 139 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 140 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 141 | Bridge | 3 | A | At sidewalk | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 142 | Bridge | 3 | D | At sidewalk | Bollard | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 143 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 144 | Bridge | 2 | D | North Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 145 | Bridge | 2 | B | North Bridge Stairs | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 146 | Bridge | 2 | B | North Bridge Stairs | Door casing | Wood | Intact | White | NEG | -- | -0.4 | 0.3 |
| 147 | Bridge | 2 | B | North Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 148 | Bridge | 2 | B | North Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 149 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 150 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 151 | Bridge | 2 | B | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 152 | Bridge | 2 | B | North Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 153 | Bridge | 2 | D | North Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 154 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 155 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 156 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 157 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 158 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 159 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 160 | Lifeguard HQ | 1 | A | First Aid | Column | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 161 | Lifeguard HQ | 1 | A | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 162 | Lifeguard HQ | 1 | A | First Aid | Door | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 163 | Lifeguard HQ | 1 | A | First Aid | Door casing | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 164 | Lifeguard HQ | 1 | C | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | Lifeguard HQ | 1 | C | First Aid | Cabinets | Wood | Intact | Beige | NEG | -- | -0.1 | 0.3 |
| 166 | Lifeguard HQ | 1 | C | First Aid | Cabinets | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 167 | Lifeguard HQ | 1 | C | First Aid | Countertop | Wood | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 168 | Lifeguard HQ | 1 | D | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | -0.1 | 0.3 |
| 169 | Lifeguard HQ | 1 | D | First Aid | Door casing | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 170 | Lifeguard HQ | 1 | D | First Aid | Sliding door | Metal | Intact | Pink | NEG | -- | 0.0 | 0.3 |
| 171 | Lifeguard HQ | 1 | D | First Aid | Door jamb | Metal | Intact | Pink | NEG | -- | 0.1 | 0.3 |
| 172 | Lifeguard HQ | 1 | A | Waiting/Reception | Double door | Wood | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 173 | Lifeguard HQ | 1 | B | Waiting/Reception | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 174 | Lifeguard HQ | 1 | C | Waiting/Reception | Countertop | Wood | Intact | Brown | NEG | -- | 0.0 | 0.3 |
| 175 | Lifeguard HQ | 1 | D | Waiting/Reception | Cabinets | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 176 | Lifeguard HQ | 1 | D | Waiting/Reception | Wall | Concrete | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 177 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 178 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | Brown | NEG | -- | -0.1 | 0.3 |
| 179 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 180 | Lifeguard HQ | 1 | A | Corridor | Countertop | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 181 | Lifeguard HQ | 1 | B | Corridor | Door | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 182 | Lifeguard HQ | 1 | B | Corridor | Door casing | Metal | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 183 | Lifeguard HQ | 1 | -- | Corridor | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 184 | Lifeguard HQ | 1 | A | Restroom | Wall | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 185 | Lifeguard HQ | 1 | A | Restroom | Wall | Metal | Intact | Blue | NEG | -- | -0.4 | 0.3 |
| 186 | Lifeguard HQ | 1 | A | Restroom | Sink | Metal | Intact | White | NEG | -- | -0.2 | 0.3 |
| 187 | Lifeguard HQ | 1 | B | Restroom | Wall | Drywall | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 188 | Lifeguard HQ | 1 | C | Restroom | Toilet | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 189 | Lifeguard HQ | 1 | -- | Restroom | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 190 | Lifeguard HQ | 1 | A | Sergeants' Office | Wall | Drywall | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 191 | Lifeguard HQ | 1 | B | Sergeants' Office | Wall | Drywall | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 192 | Lifeguard HQ | 1 | D | Sergeants' Office | Wall | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 193 | Lifeguard HQ | 1 | A | Meeting | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 194 | Lifeguard HQ | 1 | A | Meeting | Column | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 195 | Lifeguard HQ | 1 | A | Meeting | Countertop | Wood | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 196 | Lifeguard HQ | 1 | A | Meeting | Cabinets | Wood | Intact | White | NEG | -- | 0.2 | 0.2 |
| 197 | Lifeguard HQ | 1 | B | Meeting | Wall | Drywall | Intact | White | NEG | -- | 0.0 | 0.3 |
| 198 | Lifeguard HQ | 1 | B | Meeting | Wall | Drywall | Intact | White | NEG | -- | -0.1 | 0.3 |
| 199 | Lifeguard HQ | 1 | C | Meeting | Door | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | Lifeguard HQ | 1 | A | Captain's Office | Wall | Drywall | Intact | White | NEG | -- | -0.1 | 0.3 |
| 201 | Lifeguard HQ | 1 | B | Captain's Office | Wall | Concrete | Intact | Beige | NEG | -- | 0.4 | 0.2 |
| 202 | Lifeguard HQ | 1 | D | Captain's Office | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 203 | Lifeguard HQ | 1 | B | Scheduling Office | Column | Concrete | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 204 | Lifeguard HQ | 1 | -- | Scheduling Office | Ceiling | Drywall | Intact | Brown | NEG | -- | 0.1 | 0.3 |
| 205 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | Brown | NEG | -- | 0.1 | 0.3 |
| 206 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 207 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 208 | Lifeguard HQ | 1 | A | Men's Locker | Rafter/framing | Wood | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 209 | Lifeguard HQ | 1 | B | Men's Locker | Shelf | Metal | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 210 | Lifeguard HQ | 1 | C | Men's Locker | Door casing | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 211 | Lifeguard HQ | 1 | C | Men's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 212 | Lifeguard HQ | 1 | C | Men's Locker | Countertop | Wood | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 213 | Lifeguard HQ | 1 | C | Men's Locker | Urinal | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 214 | Lifeguard HQ | 1 | C | Men's Locker | Toilet | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 215 | Lifeguard HQ | 1 | D | Men's Locker | Wall | Metal | Intact | Blue | NEG | -- | -0.5 | 0.3 |
| 216 | Lifeguard HQ | 1 | D | Men's Locker | Wall | Metal | Intact | Beige | NEG | -- | -0.5 | 0.3 |
| 217 | Lifeguard HQ | 1 | -- | Men's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 218 | Lifeguard HQ | 1 | -- | Men's Shower | Ceiling | Plaster | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 219 | Lifeguard HQ | 1 | A | Garage | Ceiling | Plaster | Intact | White | NEG | -- | 0.5 | 0.2 |
| 220 | Lifeguard HQ | 1 | A | Garage | Ceiling | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 221 | Lifeguard HQ | 1 | A | Garage | Floor | Concrete | Intact | Red | NEG | -- | 0.3 | 0.2 |
| 222 | Lifeguard HQ | 1 | A | Garage | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 223 | Lifeguard HQ | 1 | A | Garage | Wall | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 224 | Lifeguard HQ | 1 | A | Garage | Door | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 225 | Lifeguard HQ | 1 | A | Garage | Door casing | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 226 | Lifeguard HQ | 1 | B | Garage | Wall | Metal | Intact | White | NEG | -- | -0.4 | 0.3 |
| 227 | Lifeguard HQ | 1 | B | Garage | Rafter/framing | Wood | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 228 | Lifeguard HQ | 1 | C | Garage | Cabinets | Wood | Intact | Brown | NEG | -- | 0.0 | 0.3 |
| 229 | Lifeguard HQ | 1 | C | Garage | Cabinets | Wood | Intact | Brown | NEG | -- | -0.1 | 0.3 |
| 230 | Lifeguard HQ | 1 | B | Exterior | Wall | Plaster | Intact | White | NEG | -- | 0.1 | 0.2 |
| 231 | Lifeguard HQ | 1 | B | Exterior | Column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 232 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 233 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 234 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 0.9 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 235 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 236 | -- | Blank Calibration Check | | | | | | | | -- | 0.0 | 0.3 |
| 237 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 238 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 239 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 240 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 241 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 242 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 243 | -- | Blank Calibration Check | | | | | | | | -- | -0.1 | 0.3 |
| **244** | **Pier Stor.** | **1** | **A** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **900 SF** | **3.5** | **0.3** |
| **245** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.7** | **0.3** |
| **246** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Column** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **4.3** | **0.3** |
| 247 | Pier Stor. | 1 | B | Main Storage | Wall | Brick | Intact | White | NEG | -- | 0.5 | 0.2 |
| 248 | Pier Stor. | 1 | B | Main Storage | Wall | Brick | Intact | White | NEG | -- | 0.9 | 0.2 |
| **249** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Wall** | **Ceramic** | **Intact** | **White** | **POS** | **90 SF** | **7.2** | **0.3** |
| 250 | Pier Stor. | 1 | B | Main Storage | Floor | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |
| 251 | Pier Stor. | 1 | B | Main Storage | Floor | Metal | Intact | White | NEG | -- | 0.4 | 0.2 |
| **252** | **Pier Stor.** | **1** | **C** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.2** | **0.3** |
| **253** | **Pier Stor.** | **1** | **D** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.5** | **0.3** |
| 254 | Pier Stor. | 1 | D | Main Storage | Wall | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 255 | Pier Stor. | 1 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 256 | Pier Stor. | 1 | B | Small Storage | Wall | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 257 | Pier Stor. | 1 | C | Small Storage | Wall | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 258 | Pier Stor. | 1 | A | Entry Vestibule | Wall | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 259 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 260 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 261 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |
| 263 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |
| 264 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |

**NOTES:**

XRF assays were collected using a portable Viken Detection Pb200i XRF Lead Paint Analyzer.

Results in **BOLD** are LCS, as defined by CDPH and HUD.

**[1] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

PCS = Performance Characteristic Sheet, as maintained by HUD. A device-specific document outlining acceptable operating specifications for an XRF analyzer.

POS = Positive

NEG = Negative

INCOM = Incomplete

EA = Each

SF = Square feet

$mg/cm^2$ = milligrams per square centimeter

## Table 4 - Summary of Lead-Containing Surfaces [1]

| Reading No.(s) | Room / Area [2] | Source / Component | Substrate | Condition | Color(s) | Lead Reading(s) ($mg/cm^2$) | Approximate Quantity [3] |
|---|---|---|---|---|---|---|---|
| **Pier Storage Spaces (Formerly Restrooms)** | | | | | | | |
| 31 | Storage Rooms | Door frame (At former swinging door) | Wood | Intact | White | 6.7 | 2 EA |
| 34, 37, 38, and 41 | Bait Shop Storage (South Storage) Main Room | Interior walls (including arches / columns) | Concrete | Intact, but deteriorated at substrate failure | White | 1.5-4.2 | 1,100 SF |
| 39 | Bait Shop Storage (South Storage) Main Room | Interior wall at closet | Wood | Intact | White | 1.2 | 75 SF |
| 244, 245, 246, 252, and 253 | Pier Storage (North Storage) Main Room | Interior walls (including arches / columns) | Concrete | Intact, but deteriorated at substrate failure | White | 3.2-4.3 | 900 SF |
| 249 | Pier Storage (North Storage) Main Room - Southwest corner at former urinals | Interior wall tiles | Ceramic | Intact | White | 7.2 | 90 SF |

**NOTES:**

[1] = Note that the LCS in this table are materials that meet or exceed the criteria of CDPH. LCS in this table does not necessarily identify all materials that could contain lead at concentrations less than 1.0 $mg/cm^2$ or 5,000 milligrams per kilogram (mg/kg), which could trigger the Cal-OSHA lead in construction standard.

[2] = LCS locations are based upon Ninyo & Moore's visual observations during survey activities.

**[3] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

EA = Each
SF = Square feet
$mg/cm^2$ = milligrams per square centimeter

## Table 5 - Summary of Other Potential Hazardous Building Materials [1]

| Building | Fluorescent Light Tubes | Fluorescent Light Ballasts | Non-Incandescent Lights | Smoke Detectors | Mercury Thermostats and Switches | A/C Units | Tritium-Powered Exit Signs | Freon Refrig. Systems | Wet Transformers | Cooling Towers | Lead Acid Batteries | Halon Fire Suppression Systems | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lifeguard Headquarters** | 44 | 32 | 10 | 8 | -- | -- | -- | 3 | -- | -- | -- | -- | Gas/oil storage |
| **Pier Storage Spaces** | 20 | 10 | 4 | 2 | -- | -- | -- | 5 | -- | -- | -- | -- | Paint & gas/oil storage |
| **Exterior** | -- | -- | 35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**NOTES:**

**[1] = Materials summarized are limited to the areas of the buildings that were in the scope of this survey.**

**Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at subject site.**

A/C = Air Conditioning

# APPENDIX A

## Suspect Asbestos-Containing Materials Sampling Protocol

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

# SUSPECT ASBESTOS-CONTAINING MATERIALS SAMPLING PROTOCOL

## Personal Protection Equipment

Inhalation of asbestos fibers during asbestos survey poses a serious health and safety hazard, the use of personal protection equipment (PPE) by building inspectors is recommended during sampling activities. Our building inspectors generally wear a respirator (either a full- or half-face mask) equipped with high-efficiency disposable filter cartridges. If utilized, full-face masks will also prevent eye irritation from dust, fibers, and debris released during sampling activities. When necessary, disposable clothing is worn during sampling activities. Our building inspectors utilize plastic bags to handle the disposal of drop cloths, protective clothing, wet cloths, and debris.

## Sampling Equipment

Our building inspector(s) will need various tools and materials to accomplish their sampling tasks, including those listed below:

- A ladder to access areas and a flash light to aid visibility,
- Airtight, sampling containers (e.g., resealable plastic bags),
- A plastic spray bottle, filled with amended water, to wet the material to be sampled,
- Plastic drop cloths to spread beneath the area to be sampled,
- A utility knife, linoleum cutter, or other tool appropriate for collecting samples,
- A caulking gun and compound for filling holes once a sample has been extracted,
- Spray acrylic or adhesive to encapsulate the small areas from which samples were collected,
- Duct tape for repairing thermal system insulation jackets,
- Cloths and cleaner for decontaminating tools,
- A vacuum cleaner equipped with high efficiency particulate air (HEPA) filters, when necessary,
- Indelible ink pen for labeling sample containers, and
- Camera for photographic documentation, and
- Chain-of-Custody documentation forms.

## Sampling Procedures

ACM are divided into three categories: Surfacing Materials, Thermal System Insulation (TSI), and Miscellaneous Materials. The procedures for sampling these three types of materials are as follows:

**Surfacing Materials**

1. Select a location where the material has been previously damaged or a low profile area.
2. Spread a plastic drop cloth on the floor and set up other equipment, (e.g., ladder).
3. Put on protective equipment (respirator at all times when sampling friable material and protective clothing, when needed).
4. Moisten area where sample is to be collected (spray the area with amended water).
5. Collect sample using a clean knife or other tool appropriate to cut out or scrape off a small piece of the material. Care is taken to ensure that all layers of material are collected, without disturbing any adjacent material.
6. Place the sample in the labeled container and tightly seal it.
7. Wipe the exterior of the container with a wet wipe to remove any residue which may have adhered to the container it during sampling.
8. Clean tools with wet wipes and vacuum area with a HEPA vacuum to clean all debris.
9. Fill hole with caulking compound or appropriate filler (to minimize subsequent fiber release and for appearance).
10. Label container with its sample identification number and fill out location and type of material being sampled on a Chain-of-Custody documentation form.
11. Mark the location and sample identification number on the sample location map.
12. Repeat the above steps at each sample location. Place sample containers in plastic bags.
13. Discard protective clothing, rags, and drop cloth in a plastic bag.

**Thermal System Insulation**

Sampling TSI follows the same procedural sequence as laid out above. Obtain samples from exposed or damaged areas, if possible. However, random sampling will require sampling of some intact material. Sampling holes can be patched with plastic spackling, caulk, or fibrous glass.

**Miscellaneous Materials**

Sampling miscellaneous materials follows the same procedural sequence as laid out above, making sure that a cross section of the materials have been obtained.

**Forwarding Samples to Laboratory**

The samples are transferred, using standard chain-of-custody procedures, to a laboratory accredited in the National Voluntary Laboratory Accreditation Program (NVLAP), for bulk asbestos fiber analysis. The samples are analyzed using polarized light microscopy with dispersion staining (PLM/ds) for the presence and quantification of asbestos fibers, in general accordance with either United States Environmental Protection Agency (USEPA) Method 600/M4-82-020 or USEPA Method 600/R-93/116. The lower limit of reliable detection for asbestos using the PLM/ds method is approximately 1% by volume. California regulations require certain worker protection standards and have certain contractor requirements for disturbing those materials having an asbestos content of greater than one tenth of 1% (0.1%).

# APPENDIX B

## Laboratory Analytical Report and Chain-of-Custody Records

# EMSL Analytical, Inc.

**6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120**
Tel/Fax: (702) 931-3532 / (702) 931-3533
http://www.EMSL.com / lasvegaslab@EMSL.com


**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

**Attention:** Brian Ford
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123

**Phone:** (858) 761-7067
**Fax:** (858) 576-9600
**Received Date:** 05/10/2021 10:30 AM
**Analysis Date:** 05/10/2021
**Collected Date:** 05/03/2021

**Project:** 109214001 / OCEANSIDE, CA

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-001<br>*312101438-0001*<br>*Only concrete present within sample.* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | 10% Glass | 90% Non-fibrous (Other) | None Detected |
| ASB-002-Stucco<br>*312101438-0002* | STUCCO & CONCRETE | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-002-Concrete<br>*312101438-0002A* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-003-Stucco<br>*312101438-0003* | STUCCO & CONCRETE | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-003-Concrete<br>*312101438-0003A* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-004<br>*312101438-0004* | DOOR SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-005<br>*312101438-0005* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-006<br>*312101438-0006* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-007<br>*312101438-0007* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-008<br>*312101438-0008* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-009<br>*312101438-0009* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-010<br>*312101438-0010* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-011<br>*312101438-0011* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-012<br>*312101438-0012* | TEXTURE MATERIAL CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-013<br>*312101438-0013* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 60% Cellulose<br>20% Min. Wool | 20% Non-fibrous (Other) | None Detected |
| ASB-014<br>*312101438-0014* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 60% Cellulose<br>20% Min. Wool | 20% Non-fibrous (Other) | None Detected |

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**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-015<br>*312101438-0015* | SINK COATING | White<br>Non-Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-016-Vinyl Floor Tile<br>*312101438-0016* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-016-Mastic<br>*312101438-0016A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-017-Vinyl Floor Tile<br>*312101438-0017* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-017-Mastic<br>*312101438-0017A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-018-Vinyl Floor Tile<br>*312101438-0018* | 12X12 VFT W MASTIC | Blue<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-018-Mastic<br>*312101438-0018A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-019-Vinyl Floor Tile<br>*312101438-0019* | 12X12 VFT W MASTIC | Blue<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-019-Mastic<br>*312101438-0019A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-020<br>*312101438-0020* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-021<br>*312101438-0021* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-022<br>*312101438-0022* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-023<br>*312101438-0023* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-024<br>*312101438-0024* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-025<br>*312101438-0025* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-026<br>*312101438-0026* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-027<br>*312101438-0027* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-028<br>*312101438-0028* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-029<br>*312101438-0029* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

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**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-030<br>*312101438-0030* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-031<br>*312101438-0031* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-032<br>*312101438-0032*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-033<br>*312101438-0033*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-034<br>*312101438-0034*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-035<br>*312101438-0035*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-036<br>*312101438-0036*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-037-Drywall<br>*312101438-0037* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-037-Joint Compound<br>*312101438-0037A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-037-Tape<br>*312101438-0037B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-038-Drywall<br>*312101438-0038* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Fibrous<br>Homogeneous | 15% Cellulose | 85% Non-fibrous (Other) | None Detected |
| ASB-038-Joint Compound<br>*312101438-0038A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-038-Tape<br>*312101438-0038B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Purple<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-039-Drywall<br>*312101438-0039* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-039-Joint Compound<br>*312101438-0039A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-039-Tape<br>*312101438-0039B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |

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**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-040-Drywall<br>*312101438-0040* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-040-Joint Compound<br>*312101438-0040A* | DRYWALL/JOINT COMPOUND/TAPE | Beige<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-040-Tape<br>*312101438-0040B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-041-Drywall<br>*312101438-0041*<br>*Joint compound not present within sample.* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-041-Tape<br>*312101438-0041A* | DRYWALL/JOINT COMPOUND/TAPE | Tan<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-042-Drywall<br>*312101438-0042* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-042-Joint Compound<br>*312101438-0042A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-042-Tape<br>*312101438-0042B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-043-Drywall<br>*312101438-0043* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Fibrous<br>Homogeneous | 15% Cellulose | 85% Non-fibrous (Other) | None Detected |
| ASB-043-Joint Compound<br>*312101438-0043A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-043-Tape<br>*312101438-0043B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-044<br>*312101438-0044* | TRANSITE 6 IN PIPELINE | Gray<br>Fibrous<br>Homogeneous | | 84% Non-fibrous (Other) | 12% Chrysotile<br>4% Crocidolite |
| ASB-045-Stucco<br>*312101438-0045* | STUCCO & CONCRETE | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-045-Concrete<br>*312101438-0045A* | STUCCO & CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-046-Stucco<br>*312101438-0046* | STUCCO & CONCRETE | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-046-Concrete<br>*312101438-0046A* | STUCCO & CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-047<br>*312101438-0047* | DOOR SEALANT | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-048-Roofing<br>*312101438-0048* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |

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**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

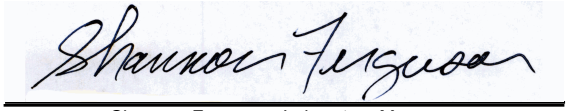
| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-048-Tar Felt<br>*312101438-0048A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-049-Roofing<br>*312101438-0049* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-049-Tar Felt<br>*312101438-0049A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-050-Roofing<br>*312101438-0050* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-050-Tar Felt<br>*312101438-0050A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-051-Shingle<br>*312101438-0051* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-051-Tar Paper<br>*312101438-0051A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-052-Shingle<br>*312101438-0052* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-052-Tar Paper<br>*312101438-0052A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-053-Shingle<br>*312101438-0053* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-053-Tar Paper<br>*312101438-0053A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-054<br>*312101438-0054* | EDGE SEALANT | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-055<br>*312101438-0055* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 70% Cellulose<br>10% Glass | 20% Non-fibrous (Other) | None Detected |
| ASB-056<br>*312101438-0056* | TEXTURE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-057<br>*312101438-0057* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-058-Vinyl Floor Tile<br>*312101438-0058* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-058-Mastic<br>*312101438-0058A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

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| | |
|---|---|
| **EMSL Order:** | 312101438 |
| **Customer ID:** | 32NIN63 |
| **Customer PO:** | |
| **Project ID:** | |

Analyst(s)
*Lori Grenier (86)*



Shannon Ferguson, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV NVLAP Lab Code 600140-0, AZ 0953, CA 3002, NV 050132018-1

Initial report from: 05/10/2021 19:44:19

№ 312101438 Sheet 1 of 4

# ASBESTOS BULK SAMPLE DATA SHEET

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA<br>EMAIL TO KMARINELLO@NINYOANDMOORE.COM | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION: - 50 Samples -

| Relinquished By: (sign / print) | Company | Date | Time (24-hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Bryan Ford BF | Ninyo & Moore | 5/3/21 | 5 DAY TAT | Kim Marinello 5/3/21 | Ninyo-Moore |
| Kim Marinello | KM | 5/5/2021 | 11:30 | Kim Stimson 5.5.2021 @ 11:38am | EMSL-SD |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-001 | Lifeguard H.Q | Exterior | South Wall | Stucco & Concrete | | N | Good |
| ASB-002 | | | West Wall | | | | |
| ASB-003 | | | North Wall | | | | |
| ASB-004 | | | West Door | Door Sealant | | N | Good |
| ASB-005 | | Bay Area | West Wall | Texture Material | | N | Good |
| ASB-006 | | Bay Area | North Wall | Concrete | | | |
| ASB-007 | | Bay Area | South Ceiling | | | | |
| ASB-008 | | Meeting 2 | West Wall | | | | |
| ASB-009 | | Office | East Wall | | | | |
| ASB-010 | | Office 1 | West Wall | | | | Good |
| ASB-011 | | Office 2 | West Wall | | | | |
| ASB-012 | | Waiting | East Wall | | | | |
| ASB-013 | | Rest Room | South Ceiling | 2x4 ACP | | N | Good |
| ASB-014 | | First Aid | North Ceiling | | | | |
| ASB-015 | | First Aid | West Sink | Sink Coating | | N | Good |

Relinquished By: KStimson 5.07.2021 @ 3:22 pm ROW ID: 10039686

Asbestos Sample

OrderID: 312101438

Page 1 Of 4

№ 312101438 Sheet 2 of 4

# ASBESTOS BULK SAMPLE DATA SHEET

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Brianford B. S | Ninyo & Moore | 5/3/21 | 5DAYS | AA 5/10/21 1030 | EMSL-LV |
| | | | | VX | |

| Sample ID | Building Number | Room Number. | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-016 | Lifeguard H.Q. | waiting | East under carpet Floor | 12x12 FT w MASTIC | | N | Good |
| ASB-017 | | waiting | North under carpet Floor | | | | |
| ASB-018 | | First Aid | West Floor | | | | |
| ASB-019 | | First Aid | East Floor | | | | |
| ASB-020 | | waiting | West Floor | Carpet Glue | | N | Good |
| ASB-021 | | breeting | North Floor | | | | |
| ASB-022 | | | West Floor | | | | |
| ASB-023 | | office 1 | East Floor | | | | |
| ASB-024 | | office 2 | South Floor | | | | |
| ASB-025 | | waiting | West Wall | Cove base Glue | | N | Good |
| ASB-026 | | office 1 | East Wall | | | | |
| ASB-027 | | office 2 | North Wall | | | | |
| ASB-028 | | First Aid | West Wall | | | | |
| ASB-029 | | waiting | East Window | Window Sealant | | | |
| ASB-030 | | office 1 | West Window | | | | |



OrderID: 312101438

# ASBESTOS BULK SAMPLE DATA SHEET

№312101438



| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Bradford Bell | Ninyo & Moore | 5/3/21 | 5DAYS | | |
| | | | | VR | |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-031 | Lifeguard H.Q. | office 2 | WEST Window | window Sealant | | N | Good |
| ASB-032 | | MEN Shower | Center Ceiling | Plaster | | | |
| ASB-033 | | MEN Shower | West Ceiling | | | | |
| ASB-034 | | WOMEN Shower | North Ceiling | | | | |
| ASB-035 | | MEETING | North Ceiling | | | ✓ | ✓ |
| ASB-036 | | ✓ | WEST WALL | | | N | Good |
| ASB-037 | | WAITING | South WALL | DRYWALL w/ JOINT COM. TAPE | | N | Good |
| ASB-038 | | FIRST AID | North WALL | | | | |
| ASB-039 | | REST ROOM | North WALL | | | | |
| ASB-040 | | WOMEN Shower | South WALL | | | | |
| ASB-041 | | MEN Shower | EAST WALL | | | | |
| ASB-042 | | office | North WALL | | | | |
| ASB-043 | ✓ | office 2 | EAST WALL | ✓ | | ✓ | ✓ |
| ASB-044 | ✓ | EXTERIOR | North under pipeline | TRANSITE 6INCH pipeline | | N | Good |
| ASB-045 | Pool Storage | INT. | North STAIRCASE WALL | STUCCO & CONCRETE | | N | Good |



OrderID: 312101438

# ASBESTOS BULK SAMPLE DATA SHEET

312101438 Sheet 4 of 4

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BCF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Brian Ford BCF | Ninyo & Moore | 5/3/21 | 5DA/5 | | |
| | | | | VK | |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-046 | Pier Storage | Int. | Center Ceiling | Stucco w/ Concrete | | N | Good |
| ASB-047 | ↓ | ↓ | North Door | Door Sealant | | N | Good |
| ASB-048 | Lifeguard H.Q | Roof | EAST Roof | Roof Assembly | | N | Good |
| ASB-049 | | Roof | Southwest Roof | | | | |
| ASB-050 | | Roof | WEST Roof | | | | |
| ASB-051 | | Roof | North Skylight Roof | | | | |
| ASB-052 | | Roof | WEST Roof | | | | |
| ASB-053 | | Roof | EAST Roof | ↓ | | ↓ | ↓ |
| ASB-054 | | Roof | WEST Roof | Edge Sealant | | N | Good |
| ASB-055 | | First Aid | EAST Ceiling | 2x4 ACP | | N | Good |
| ASB-056 | | office 3 | Southwest Wall | Texture | | N | Good |
| ASB-057 | | ↓ | North Wall | Cove Base Glue | | N | Good |
| ASB-058 | | Waiting | EAST Floor | 12x12 VFT w/ Mastic | | N | Good |
| ASB-059 | | | | | | | |
| ASB-060 | ↓ | | | | | | |

Page 4 Of 4

OrderID: 312101438

Asbestos Sample

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

**County of San Diego – Rule 1206 Requirements**

(d) (5) (i) Facility Information

- Name of Building(s):
  Pier View Way Bridge and Lifeguard Headquarters
  Oceanside Municipal Pier

- Address of Building(s):
  301 The Strand North
  Oceanside, CA 92054

- Building Owner:
  City of Oceanside
  Engineering Division
  300 North Coast Highway
  Oceanside, CA 92054
  760-435-5106

(d) (5) (ii) Consultant Information

- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

  EPA AHERA Building Inspector
  Design For Health Training Center – Cert. No. 0221BIR188557
  Expires February 19, 2022

(d) (5) (iii) Facility Survey Date

- May 3 & 5, 2021

(d) (5) (vi) Suspect Materials Information

- See Tables 1 and 2

(d) (5) (v) Analytical Laboratory Information

- EMSL Analytical, Inc.
  6325 Harrison Drive, Suites 3 & 4
  Las Vegas, NV 89120
  702-931-3532

(d) (5) (vi) Analytical Laboratory Qualifications

- Laboratory qualification documents can be found on their website below - https://www.emsl.com/Locations.aspx?laboratoryid=64

(d) (5) (vii) Analytical Test Method Used

- Asbestos Analysis of Bulk Materials via EPA Method 600/R-93/116 using Polarized Light Microscopy

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

## XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

After a visual assessment, accessible painted surfaces were screened for lead content with a Viken Detection Pb200i XRF Lead Paint Analyzer. Correction for paint matrix and substrate effects is performed automatically by the XRF analyzer.

XRF readings were made on testing combinations in all room equivalents in an effort to test typical materials that are representative of the room equivalent. Testing combinations were tested non-destructively by holding the shutter of the XRF against the surface being tested. At each XRF assay location, the trigger is depressed to open the shutter, and one reading was made using the standard paint testing mode. Results of each assay were recorded in the memory of the XRF spectrum analyzer and downloaded via the software provided by the manufacturer. In addition, the results of each assay were read and recorded on the XRF Data Sheet field data sheet.

The XRF testing orientation is depicted on the attached sample location maps. The “A” direction was initially assigned to the direction of the street, and the subsequent directions (“B”, “C”, and “D”) were assigned clockwise from the “A” direction. Should the subject site be located on the corner of two streets, the “A” direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three calibration checks were made using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the green 1.06 mg/cm$^2$ Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST).

In addition to the three starts up tests, calibration readings are collected between each building, after four hours, and at the completion of XRF testing. Results of each calibration reading were recorded within the memory of the XRF spectrum analyzer and on the XRF Data Sheet. The quality control tests taken during testing at the subject site were within the acceptable performance range prescribed by the XRF equipment manufacturer. Documentation of the quality control calibration check is included in the XRF Data Sheet, Table 3.

State of California—Health and Human Services Agency | California Department of Public Health

# LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** 05/03-05/2021

**Section 2 — Type of Lead Hazard Evaluation (Check one box only)**

☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

| Address [number, street, apartment (if applicable)] | City | County | Zip Code |
|---|---|---|---|
| 301 The Strand N. (Pier Bridge & Lifeguard HQ) | Oceanside | San Diego | 92054 |

| Construction date (year) of structure | Type of structure | | Children living in structure? | |
|---|---|---|---|---|
| 1926-1985 | ☐ Multi-unit building | ☐ School or daycare | ☐ Yes | ☑ No |
| | ☐ Single family dwelling | ☑ Other Muni. Pier Bridge | ☐ Don't Know | |

**Section 4 — Owner of Structure (if business/agency, list contact person)**

| Name | Telephone number |
|---|---|
| City of Oceanside - Engineering Div. | 760-435-5106 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 300 N. Coast Highway | Oceanside | CA | 92054 |

**Section 5 — Results of Lead Hazard Evaluation (check all that apply)**

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

**Section 6 — Individual Conducting Lead Hazard Evaluation**

| Name | Telephone number |
|---|---|
| Nicholas Marinello | 858-576-1000 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 5710 Ruffin Road | San Diego | CA | 92123 |

| CDPH certification number | Signature | Date |
|---|---|---|
| LRC-00003568 | | 5/6/2021 |

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

**Section 7 — Attachments**

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)

# APPENDIX C

## County of San Diego – Rule 1206 Requirements

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

**County of San Diego – Rule 1206 Requirements**

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- Address of Building(s):
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  Oceanside, CA 92054

- Building Owner:
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  Engineering Division
  300 North Coast Highway
  Oceanside, CA 92054
  760-435-5106

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- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

  EPA AHERA Building Inspector
  Design For Health Training Center – Cert. No. 0221BIR188557
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- May 3 & 5, 2021

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  702-931-3532

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- Laboratory qualification documents can be found on their website below - https://www.emsl.com/Locations.aspx?laboratoryid=64

(d) (5) (vii) Analytical Test Method Used

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# APPENDIX D

## XRF Testing Methodology

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

## XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

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The XRF testing orientation is depicted on the attached sample location maps. The “A” direction was initially assigned to the direction of the street, and the subsequent directions (“B”, “C”, and “D”) were assigned clockwise from the “A” direction. Should the subject site be located on the corner of two streets, the “A” direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three calibration checks were made using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the green 1.06 mg/cm$^2$ Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST).

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# APPENDIX E

## CDPH Form 8552 – Lead Hazard Evaluation Report

State of California—Health and Human Services Agency | California Department of Public Health

# LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** 05/03-05/2021

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☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

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|---|---|---|---|
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| Construction date (year) of structure | Type of structure | | Children living in structure? | |
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| 1926-1985 | ☐ Multi-unit building | ☐ School or daycare | ☐ Yes | ☑ No |
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**Section 4 — Owner of Structure (if business/agency, list contact person)**

| Name | Telephone number |
|---|---|
| City of Oceanside - Engineering Div. | 760-435-5106 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 300 N. Coast Highway | Oceanside | CA | 92054 |

**Section 5 — Results of Lead Hazard Evaluation (check all that apply)**

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| Name | Telephone number |
|---|---|
| Nicholas Marinello | 858-576-1000 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 5710 Ruffin Road | San Diego | CA | 92123 |

| CDPH certification number | Signature | Date |
|---|---|---|
| LRC-00003568 | | 5/6/2021 |

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

**Section 7 — Attachments**

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)




5710 Ruffin Road | San Diego, California 92123 | p. 858.576.1000

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

# Attachment E-2

Hazardous Building Materials
Abatement Specifications

# Hazardous Building Materials Abatement Specifications

# Pier View Way Bridge and Lifeguard Headquarters

## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


September 17, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

CELEBRATING 35 YEARS 1986 2021 NINYO & MOORE

September 17, 2021
Project No. 109214001

Mr. Jared Cole
Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, California 92108

Subject: Hazardous Building Materials Abatement Specifications
City of Oceanside Municipal Pier
Pier View Way Bridge and Lifeguard Headquarters
Restoration/Replacement Project
301 The Strand North
Oceanside, California

Dear Mr. Cole:

In accordance with your request for specification preparation and our proposal dated July 8, 2020, Ninyo & Moore has prepared Hazardous Building Material Abatement Specifications for the above-referenced structure/project. These specifications will serve as guidance documents to contractors for the removal and/or abatement of identified hazardous building materials.

Ninyo & Moore is pleased to be of continued service to you on this important project.

Sincerely,
**NINYO & MOORE**

**Nicholas Marinello, DOSH CAC, LRC I/A**
Project Environmental Scientist

**Stephen J Waide, CIH, CSP**
Principal Environmental Scientist

NSM/SJW/gg

Distribution: (1) Addressee (via email)
(1) Mr. Matthew Martinez, Moffatt & Nichol (via email)
(1) Ms. Alexandra Ford, Moffatt & Nichol (via email)

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**SECTION 2 – Lead-Related Construction Specifications**

**SECTION 3 – Universal and Other Hazardous Waste Removal Specifications**

**SECTION 4 – Project Drawings, Pier View Way Bridge and Lifeguard Headquarters**

**SECTION 5 – Hazardous Building Materials Survey Report**

# SECTION 1

## Asbestos Abatement and Removal Specifications

# Asbestos Abatement and Removal Specifications

# Pier View Way Bridge and Lifeguard Headquarters

## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


September 15, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

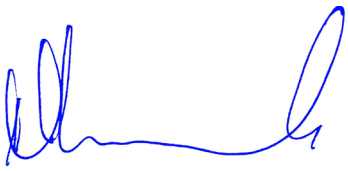
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

CELEBRATING 35 YEARS 1986 2021 NINYO & MOORE

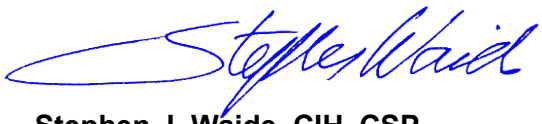
# Asbestos Abatement and Removal Specifications
# Pier View Way Bridge and Lifeguard Headquarters
## 301 The Strand North
## Oceanside, California 92054

Mr. Jared Cole
Moffatt & Nichol
1660 Hotel Circle North, Suite 500 | San Diego, California 92054

September 15, 2021 | Project No. 109214001



**Nicholas Marinello, CAC No. 17-6117**
Project Environmental Scientist



**Stephen J. Waide, CIH, CSP**
Principal Environmental Scientist

NSM/SJW/gg

Distribution: (1) Addressee (via email)
(1) Mr. Matthew Martinez, Moffatt & Nichol (via email)
(1) Ms. Alexandra Ford, Moffatt & Nichol (via email)

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## TABLE

1 – Description and Location of Asbestos-Containing Materials 1

# 1 SCOPE OF WORK

The scope of work for the asbestos abatement portion of the Pier View Way Bridge and Lifeguard Headquarters (subject structure) restoration/replacement project involves the removal of asbestos-containing materials (ACM) prior to structure restoration or demolition, as outlined in the construction contract documents. ACM have been identified at the following locations in the Pier View Way Bridge and Lifeguard Headquarters, located at 301 The Strand North in Oceanside, California (subject site).

**Table 1 – Description and Location of Asbestos-Containing Materials**

| ACM Location [1] | ACM Description |
|---|---|
| Northeast of Lifeguard Headquarters – Emerging from the sand | Transite (asbestos cement) pipe, 6 in. diameter |

**NOTES:**
[1] = ACM locations are based upon Ninyo & Moore's visual observations during survey activities. Materials that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should be presumed to be asbestos-containing.

The ACM were identified during a hazardous building materials survey conducted by Ninyo & Moore in May 2021. Tables summarizing the types of material sampled and analytical results are included in the Hazardous Building Materials Survey Report (Section 5). At the time of this writing, additional exploration and delineation of the extent of ACM has not been conducted and it is not known whether or not project scope will impact the ACM in its identified location. **It is the Contractor's responsibility to locate and appropriately quantify, to the extent possible, materials that are to be affected by the scheduled restoration and/or demolition activities prior to bid submittals, as outlined in the construction contract documents and as part of the Contractor's due diligence, and prior to initiating restoration/demolition activities at the subject site.**

Specific Contractor responsibilities will include, but will not be limited to, the following activities listed below, which will be performed as part of the finalized scope of work.

- The Contractor is responsible for the protection and decontamination of fixtures and equipment remaining in the work area, prior to and after abatement.
- The Contractor shall furnish all labor, materials, services, insurance, equipment, and decontamination facilities to carry out the complete removal and disposal of all ACM identified in these specifications.
- Work shall be performed in accordance with all applicable regulations, codes, ordinances, and standards of governing authorities having jurisdiction and the requirements specified herein. Where applicable state or local standards are more stringent than federal standards, the Contractor shall adhere to the most stringent standards.

The Contractor shall furnish all labor, materials, services, supervision, insurance, construction tools, equipment, and decontamination facilities necessary to perform the following work:

- Removal of all identified ACM, as found in Table 1, prior to building restoration/demolition. The Contractor shall verify quantities and locations as part of the Contractor's due diligence.
- Provision and maintenance of environmental and occupational safety protective measures, equipment, and procedures at the work site, including appropriate engineering controls.
- Cleaning of the work site to completely remove all visually apparent potential asbestos and reduce airborne asbestos fiber concentrations.
- If, in the course of removal of ACM from the site, the Contractor discovers any other suspect ACM other than that described in plans, reports, and/or specifications, the Contractor shall notify the Owner and/or Consultant in writing, and after receiving the Owner's approval, the Contractor will remove and dispose of such material(s) at the contract unit price identified by the Contractor in its bid.
- With respect to available utilities, the Contractor shall coordinate access and use of all utilities as needed for the duration of the project with the Owner. If utilities are unavailable, the Contractor will be required to provide the utilities at the Contractor's own cost.
- The Contractor shall obtain all necessary permits from the Owner, San Diego Air Pollution Control District (SDAPCD), and any other authorities having jurisdiction.
- Packaging, transport, and disposal of all ACM and asbestos-contaminated materials to a disposal site approved by the applicable federal, state, and local authorities shall be the sole responsibility of the Contractor, including any certifications or statements of non-friability required by the landfill.
- Cooperation with the Consultant with regards to air monitoring and observation of procedures.

## 1.1 Definitions

- "Aggressive method" means removal or disturbance of building material by sanding, abrading, grinding, or by a method that breaks, crumbles, or disintegrates intact ACM.
- "Amended water" means water to which a surfactant (i.e., wetting agent) has been added to increase the ability of the liquid to penetrate ACM.
- "Area sampling" means sampling of asbestos fiber concentrations that approximates the concentrations of asbestos fibers in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.
- "Asbestos" means chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite asbestiform mineral fibers, and any of these materials that has been chemically treated and/or altered.
- "ACM" means asbestos-containing materials; any material containing more than 1% asbestos (>1.0%).

- “ACCM” means asbestos-containing construction material; any material containing between 0.1% and 1% (0.1% to 1%) asbestos.

- “Authorized person” means any person authorized by the employer and required by work duties to be present in regulated areas.

- “Class I asbestos work” means activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM.

- “Class II asbestos work” means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing transite/asbestos cement, wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

- “Class III asbestos work” means repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed.

- “Clean room” means an uncontaminated room having facilities for the storage of employees’ street clothing and uncontaminated materials and equipment.

- “Competent person” means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. In addition, for Class I and Class II work, one who is specially trained in a training course, which meets the criteria of the U.S. Environmental Protection Agency (EPA) model accreditation plan (40 Code of Federal Regulations [CFR] 763) for project designer or supervisor, or its equivalent.

- “Consultant” shall be the independent party retained by the Owner to provide consultation and supervision services for asbestos abatement activities.

- “Critical barrier” means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

- “Decontamination area” means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

- “Demolition” means the wrecking or taking out of load-supporting structural member and any related razing, removing, or stripping of building materials.

- “Disturbance” means contact that releases fibers from ACM or ACCM or from debris containing ACM or ACCM. This term includes activities that disrupt the matrix of ACM or ACCM, render ACM or ACCM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and ACCM, no greater than the amount that can be contained in one standard sized glove bag or waste bag in order to access a building component; in no event shall the amount of ACM or ACCM so disturbed exceed the amount that can be contained in one glove bag or waste bag, which shall not exceed 60 inches in length and width.

- “Employee exposure” means that exposure to airborne asbestos fibers that would occur if the employee were not using respiratory protective equipment.

- "Encapsulants" means specific materials in various forms used to chemically or physically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulants, as follows, that must comply with performance requirements as specified herein:
    - Removal Encapsulant (can be used as a wetting agent).
    - Bridging Encapsulant (used to provide a tough, durable surface coating to ACM/ACCM).
    - Penetrating Encapsulant (used to penetrate the ACM/ACCM encapsulating all asbestos fibers and prevent fiber release due to routine mechanical damage).
    - Lock-Down Encapsulant (used to seal off or "lock-down" minute asbestos fibers left on surfaces from which ACM/ACCM has been removed).
- "Equipment room (change room)" means a contaminated room located within the decontaminated area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.
- "Fiber" means a particulate form of asbestos, 5 micrometers or longer, with a length to diameter ratio of at least 3 to 1.
- "Glovebag" means an impervious plastic bag-like enclosure that can be affixed around ACM, with glove-like appendages through which materials and tools can be handled.
- "High-efficiency particulate air (HEPA) filter" means a filter capable of trapping and retaining at least 99.97% of all mono-dispersed particles of 0.3 micrometer in diameter.
- "Homogenous area" means an area of surfacing material or TSI that is uniform in color, texture, and date of installation.
- "Industrial hygienist" means a professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.
- "Intact" means that ACM has not crumbled, been pulverized, or otherwise deteriorated so that it is no longer likely to be bound with its matrix.
- "Modification" means a changed or altered procedure, material, or component of a control system that replaces a procedure, material, or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system, is not a "modification."
- "Negative initial exposure assessment" means a demonstration by the employer that complies with the criteria in Title 8 California Code of Regulations (CCR) Section 1529, subsection (f)(2)(c), that employee exposure during an operation is expected to be consistently below the Permissible Exposure Limit (PEL).
- "Owner" shall refer to the City of Oceanside.
- "Presumed ACM" means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of material as "PACM" may be rebutted pursuant to Title 8 CCR Section 1529, subsection (k) (5).

- “Project Designer” means a person who has successfully completed the initial training requirements and maintained annual refreshers for the abatement project designer established by Title 40 CFR 763 Appendix C.

- “Regulated area” means an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and/or waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the PEL.

- “Removal” means all operations where ACM and/or ACCM are taken out or stripped from structures or substrates, and includes demolition operations.

- “Renovation” means the modifying of an existing structure, or portion thereof.

- “Repair” means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or ACCM attached to structures or substrates.

- “Surfacing material” means material that is sprayed, troweled-on, or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

- “Surfacing ACM” means surfacing material, which contains more than 1% (>1.0%) asbestos.

- “Surfactant” means a chemical wetting agent added to water to improve penetration, thus reducing the amount of water required for a given operation or area, and enhancing the effect of the water in reducing fiber release.

- “TSI” means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain.

## 1.2 Notifications

Notification of asbestos abatement activities shall be provided by the Contractor as required and in accordance to all applicable federal, state, and local agency regulations/requirements prior to the start of abatement activities.

## 1.3 Quantity Takeoff

All ACM quantities shall be determined by the bidder and no claim for additional cost will be accepted by the Owner as a result of quantities of ACM to be removed.

## 1.4 Regulatory Compliance

All work shall be performed in compliance with pertinent laws, rules, and regulations existing at the time of the work, including but not limited to:

- General Industry Safety and Health Standards, Title 29 CFR Part 1910.
- Safety and Health Standards for the Construction Industry, Title 29 CFR Part 1926.
- The Occupational Safety and Health Standards for Asbestos, Title 29 CFR Parts 1910.1001 and 1926.1101.
- The EPA National Emission Standard for Hazard Air Pollutants, National Emission Standard for Asbestos, Title 40 CFR Part 61(a) and (m).
- The Occupational Safety and Health Administration (OSHA) Standards, for respiratory protection, Title 29 CFR Part 1910.134.
- Title 8 CCR Section 1529, Asbestos in Construction.
- The Transportation Safety Act, Hazardous Material Transportation Act, Title 49 CFR Parts 106, 107, 171 to 179.
- The Asbestos Hazard Emergency Response Act, Title 40 CFR, Part 763.
- All applicable state and local regulations and ordinances, including any regulations regarding State and/or local licenses or certificates.

Where applicable state or local regulations are more stringent than federal requirements or the requirements referenced herein, the Contractor shall adhere to the most stringent regulations. In addition, the Contractor warrants that he is familiar with the codes and requirements applicable to asbestos abatement work and shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the work. If the Contractor observes that the Specifications or plans are at variance therewith, he shall give written notice to the Owner and/or Consultant describing such variances. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without written notice to the Owner and/or Consultant, the Contractor shall bear all costs arising there from. The Contractor's particular attention is directed to the applicable California Division of Occupational Safety and Health (Cal/OSHA or DOSH) regulations found in Title 8 CCR Section 1529 and the necessity of complying with the regulations in the progress of its work. Failure or omission on the part of the Contractor, or any of its representatives, either to discover or to bring to the attention of the Owner and/or Consultant any deviation from, omission from, or noncompliance with the requirements for asbestos abatement shall not be used by the Contractor as defense for failure on its part to fulfill such requirements.

# 2 CONTRACTOR SUBMITTALS

## 2.1 Manufacturer's Product Data

The Contractor shall submit the following product data for products/materials to be used in the removal and demolition of materials containing asbestos at least **two weeks prior** to the start of work.

- HEPA-Filtered Equipment (vacuums, negative air equipment, etc.)
- Respirators
- Surfactants
- Encapsulants

## 2.2 Plan for Removal and Demolition of Asbestos

The Contractor shall prepare and submit a detailed, job specific work plan of the work procedures to be used in the removal and demolition of materials containing asbestos at least **two weeks prior** to the start of work.

- The work plan shall be prepared and signed by the Contractor and Contractor's Competent Person.
- Such plan shall include a sketch showing the location, size, and details of asbestos control areas, location and details of the decontamination area, layout of the decontamination area, layout and location of waste container(s), pass-out airlock system, and locations of HEPA-filtered negative air equipment, if applicable.
- The work plan shall also include interface of trades involved in the construction, sequencing of asbestos-related work, disposal plan, type of wetting agent and removal encapsulants to be used, respirators, protective equipment, pressure differential monitoring devices, and a detailed description of the method to be employed in order to control pollution/contamination.
- The work plan shall include copies of emergency, security, and contingency plans as follows:
    - A plan to provide emergency and fire evacuation for removing workers from the work area. A copy of this plan shall be filed with the local fire and/or ambulance unit.
    - A plan for maintaining the security of the work area. The security plan shall provide a means of preventing accidental or unauthorized entry.
    - A contingency plan addressing emergencies, equipment failures, and barrier failure. This plan shall include telephone numbers of representatives of the Contractor to be contacted in emergencies.
- The work plan shall be approved by the Owner and/or Consultant prior to the start of asbestos abatement work.
- Prior to beginning work, the Owner, Consultant, and Contractor shall meet to discuss in detail the asbestos work plan, including work procedures and safety precautions.

## 2.3 Administrative Submittals

### 2.3.1 Notification of Equipment Rental

If rental equipment is to be used during asbestos handling, removal, and/or disposal, written notification concerning the intended use will be furnished to the rental agency, with a copy provided to the Owner and/or Consultant.

### 2.3.2 Waste Disposal Site Approval

Submit the recommended waste disposal site to the Owner and/or Consultant for approval prior to the start of the project. Submit written evidence to the Owner and/or Consultant, prior to waste disposal, that the waste disposal site is approved for asbestos disposal by the EPA and other applicable authorities. At job completion, these records shall be inserted into the job binder and transmitted to the Owner and/or Consultant.

### 2.3.3 Landfill Delivery Records

Within three days after delivery of ACM to the landfill, submit detailed delivery tickets and hazardous waste manifests, prepared, signed, and dated by an agent of the landfill, certifying the amount of materials delivered to the landfill.

### 2.3.4 Personnel Training Certificates

Prior to the Notice-to-Proceed, the Contractor shall submit to the Owner and/or Consultant a declaration certifying that all of the Contractor's employees have been adequately trained in accordance with Title 8CCR Section 1529. The Contractor shall also submit proof that all personnel who will be permitted to enter contaminated work areas have been adequately trained in accordance with Title 8 CCR Section 1529 for certification as an Asbestos Worker or Supervisor for Class I and II asbestos abatement projects. Confirmation of training (i.e., review of training certificates) will be performed by the Consultant before the start of work.

### 2.3.5 Medical Examinations and Respirator Fit Tests

Prior to the Notice-to-Proceed, the Contractor shall submit proof that all personnel who will be permitted to enter contaminated work areas have had medical examinations and have performed a respirator fit test for their assigned respirator in accordance with Title 8 CCR Section 1529 and Title 29 CFR 1910.134. In addition, the Contractor shall provide written certification, signed by a licensed physician, that all workers and supervisors have met or exceeded all of the medical prerequisites listed herein and in CCR Title 8, Section 1529 and 29 CFR 1910.134. Confirmation will be performed by the Consultant before the start of work.

### 2.3.6 Testing Laboratory Information

The Contractor shall submit:

- The name, address, and telephone number of each testing laboratory selected for the sampling, analysis, and reporting of airborne concentrations of asbestos fibers, along with evidence that each laboratory selected holds the appropriate state license and/or permits;
- Proof of certification that each laboratory is American Industrial Hygiene Association (AIHA) accredited; and
- Proof that persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry and have successfully participated in the laboratory in the Proficiency Analytical Testing Program.

### 2.3.7 Personal Air Sampling Results

The Contractor shall have fiber counting analysis for personal air sampling completed and shall provide results to the Owner and/or Consultant for review ***within 24 hours of sample collection***. The Contractor will notify the Owner and/or Consultant immediately of any airborne levels of asbestos fibers in excess of the PEL.

### 2.3.8 Asbestos Disposal Quantity Report

The Contractor shall review and report to the Owner and/or Consultant the amount of ACM removed during a given work day within 24 hours the end of said work day (i.e., the following work day).

### 2.3.9 Contractor Licensing Board Asbestos Certification

Submit a copy of the Contractor's California State Contractor's Licensing Board Asbestos Certification in accordance with the California Business and Professional Code, Section 7058.5, to the Owner and/or Consultant.

### 2.3.10 Contractor Class C Asbestos Removal License

Submit proof that the Contractor possesses a current California Class C Asbestos Removal License to the Owner and/or Consultant.

### 2.3.11 Hazardous Waste Hauler License and EPA Transporter's Number

Submit proof that the Contractor's Hazardous Waste Hauler possesses a current Hazardous Waste Hauler License and EPA Transporter's Number to the Owner and/or Consultant.

### 2.3.12 At Job Completion

Contractor shall transmit the job binder to Owner and/or Consultant. Contents shall be as described in this section plus any additional items as designated by the Owner and/or Consultant.

## 2.4 Quality Assurance

- Where the methods or procedures are specified, they shall constitute the minimum measures and shall in no way relieve the Contractor of sole responsibility for the means, measures, methods, techniques, sequences, or safety measures in connection with the work.
- The removal of asbestos shall be supervised by a licensed supervisor who has experience in this field of construction and can furnish a record of satisfactory performance on at least three projects for work of comparable type and size.
- Subcontractor qualifications shall be the same in form and quantity as required for the Contractor.

# 3 PRODUCTS

Products to be supplied by the Contractor, include, but are not limited to, the following.

- ***Polyethylene:*** Polyethylene sheeting in various sizes to minimize the frequency of joints.
- ***Tape:*** Glass fiber or other tape capable of sealing joints of adjacent plastic sheets and for attachment of plastic sheeting to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions.

- ***Surfactant (Wetting Agent):*** Shall consist of materials that are non-toxic and non-irritating to skin and eye, and non-carcinogenic. The surfactant/wetting agent shall consist of 50% polyoxyethylene or polyglycolester and 50% polyoxyethylene ether, or the equivalent. Wetting agents shall be applied by means of an airless sprayer or equivalent.

- ***Encapsulant:*** Shall conform to EPA requirements, and shall contain no toxic or hazardous substances and no solvents.

- ***Impermeable Containers:*** Air- and water-tight, suitable to receive and retain any asbestos-containing or contaminated materials until disposal time at an approved site and labeled in accordance with applicable Cal/OSHA regulations (Title 8 CCR Section 1529). Two types of impermeable containers shall be used:

    - 6-millimeter (mil) plastic bags.
    - Metal or fiber drums with tightly fitting lids.

- ***Warning Labels and Signs:*** In conformance with applicable Cal/OSHA regulations (Title 8 CCR Section 1529).

- ***Other Materials:*** Provide all other materials, such as lumber, nails, and hardware that may be required to construct and dismantle the decontamination area and the barriers that isolate the work area.

# 4 EXECUTION

## 4.1 Material Handling

- Deliver materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.

- Store materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damages or contamination.

- Removal and disposal of all ACM and asbestos-contaminated materials from the premises in accordance with applicable regulatory standards.

## 4.2 Equipment

### 4.2.1 Respirators

The Contractor shall provide workers with personally issued and marked respiratory equipment approved by the National Institute for Occupational Safety and Health (NIOSH) and meeting the specifications of Cal/OSHA. This respiratory equipment shall be suitable for the asbestos exposure level in the work area according to Title 8 CCR Section 1529(i). The Contractor shall provide disposable HEPA (P100) cartridges as required for all workers, the Owner, the Consultant, and visitors, with sufficient replacement cartridges.

### 4.2.2 Personal Protective Equipment

The Contractor shall provide workers, the Owner, the Consultant, and authorized visitors with sets of protective disposable clothing, head covers, gloves, eye protection, and foot covers of sizes to properly fit individual workers and visitors whenever they are required to enter the work area. Provide access and use of the Contractor's change room. Provide a minimum of four sets per day for visitors and sufficient sets as required for workers and the Owner and/or Consultant. The personal protective equipment (PPE), both new and used, shall remain the property of the Contractor.

### 4.2.3 Change Room and Decontamination Area

Provide a temporary unit with a separate equipment room (with storage lockers), a shower unit, and a clean room (with storage lockers) for personnel required to wear whole body protective clothing.

- Separate each room from the others and from the control area by airlocks.
- Provide two separate lockers for each asbestos worker, one in the clean room and one in the equipment room.
- Keep street clothing and street shoes in the clean room locker.
- Vacuum and remove asbestos-contaminated disposable protective clothing while still wearing respirators in the equipment room. Seal clothing in impermeable bags or containers for disposal.
- Do not wear work clothing between home and work.
- Provide showers with hot and cold running water.
- Locate showers between the equipment room and the clean room, and require employees to shower before changing into street clothes.
- Shower wastewater shall be handled and disposed as asbestos-containing material or shall be filtered through a final filter of at least 0.5-micron particle size collection capability before disposal into the sanitary sewer system.
- Handle and dispose of wastewater filters as ACM.
- Change rooms shall be physically attached to the work area wherever feasible.

### 4.2.4 Eye Protection

Furnish goggles for personnel engaged in asbestos operation when a full-face respirator is not being used.

### 4.2.5 Caution Signs and Labels

Provide caution signs printed in English and Spanish at approaches to asbestos work areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the work area. Provide caution labels printed in English and Spanish. Affix labels to friable asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos-containing products. Caution signs and labels shall conform to the requirements defined in Title 8 CCR Section 1529.

### 4.2.6 Fire Extinguisher

A minimum of one 4A/60BC dry chemical extinguisher shall be maintained at each of the following locations:

- At each electrical panel.
- At each corner of the work area.
- Within 5 feet of the internal entry to the shower room from the work area.
- Within 5 feet of the external entry to the shower room from the "clean room."

## 4.3 Worker Protection

### 4.3.1 Contractor Responsibility

Prior to commencement of work, all workers shall be instructed and shall be knowledgeable in the appropriate procedures of personal protection and asbestos removal.

The Contractor shall be solely responsible for enforcing worker protection requirements.

### 4.3.2 Reporting Unusual Events

When an event of unusual and significant nature occurs at the site, Contractor shall prepare and submit a special report listing chain of events, persons participating, responses, and similar pertinent information. When such events are known or predictable in advance, advise the Owner and/or Consultant at the earliest possible date. Unusual events would include breaches of containment.

### 4.3.3 Reporting Accidents

If a significant accident occurs at the site or anywhere else work is in progress, the Contractor shall prepare and submit appropriate reports to the Owner. For this purpose, a significant accident is defined to include events where personal injury or property loss of substance is sustained.

## 4.4 General Work Area Requirements

### 4.4.1 Respirators

- Workers shall always wear a respirator properly fitted on the face while in the work area.
- Workers wearing tight-fitting face pieces shall be clean-shaven to the extent that the hair does not interfere with the sealing surface of the respirator. This must be documented by a standard respirator fit test.
- The Contractor shall instruct and train workers in proper respirator use.

### 4.4.2 Clothing

Workers shall wear disposable, full-body coveralls with head covers and footwear suitable for asbestos work in the work area.

## 4.5 Decontamination Unit Requirements

At all work areas, the Contractor shall set up a clean room, shower, and equipment room outside the work area. Where feasible and required, the clean room, shower, and equipment room will be attached to the work area. All workers, without exception, shall:

- Remove and properly store street clothes in the clean room and put on new disposable coveralls, head covers, footwear, and cleaned respirator before entering the work area.
- Remove the disposable coveralls, head covers, and footwear in the equipment room and dispose them in an appropriate asbestos waste container. Still wearing their respirators, workers shall proceed to the showers and remove their respirators while showering with soap and tempered water. Wetted HEPA respirator cartridges shall be disposed of in appropriate asbestos containers.
- This procedure shall be followed each time a worker leaves the work area.
- Workers shall not eat, drink, smoke, or chew gum or tobacco in the work area.
- The Contractor shall provide disposable coveralls, head covering, and footwear to any official representative of the Owner who inspects the project.
- All persons entering the work area shall wear an approved respirator and disposable coveralls, head covering, and footwear.

## 4.6 Personal Air Monitoring

Daily personal air monitoring shall be conducted by the Contractor in order to determine the airborne concentrations of asbestos to which workers may be exposed.

## 4.7 Sign-In/Sign-Out Log & Daily Activity Report

- Contractor shall maintain a sign-in/sign-out log in the immediate vicinity of the change room of any decontamination area. This log shall be maintained from the time the first activity is performed involving the disturbance of ACM until acceptance of the final air test results. All persons entering the work area, including the Contractor's workers, Owner, Consultant, and Government officials, shall be required to sign in and out each time upon entering and leaving the work area. All persons shall indicate name, time, company or agency represented, and reason for entering the work area.

- Contractor shall maintain a daily activity report describing work performed, materials and methods used, inspection(s) made, test(s) and/or sample(s) taken, and any unusual conditions or problems.

- Except for governmental inspectors having jurisdiction, no outside visitors shall be allowed in any work area, except as authorized by the Owner.

## 4.8 Housekeeping

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by their employees. Bags of asbestos material and other waste material shall be removed immediately at the completion of work. Maintain surfaces of the work area free of debris and keep waste from being distributed outside of the immediate work area.

### 4.8.1 Removal of Asbestos Waste Containers

The Contractor shall provide a waste container removal system. Asbestos waste containers shall not be removed through the change rooms, if possible. The waste container removal system shall consist of a wash-down station inside the work area, a washroom, and a waste container holding area. Provide airlocks between each area and an airlock with access to outside the work area from the holding areas. Provide caution signs as specified herein for asbestos work areas. The waste container removal system shall be a temporary unit constructed to prevent the escape of asbestos fibers from the area. The system shall be physically attached to the work area. Personnel entering the waste container removal system shall wear appropriate personal protective equipment. The system shall not be used to enter or exit the work area. Access to outside the waste container removal system shall be sealed except during the removal of asbestos waste containers. Perform cleanup of the waste container removal system as specified herein for enclosed work areas. Do not remove the waste container removal system enclosure and caution signs prior to receipt of the Consultant's clearance certification. All asbestos waste containers shall be removed from the work area daily.

### 4.8.2 Procedure for Disposal of Asbestos

Do not remove any ACM from the site without approval from the Owner. Procedure for hauling and disposal of asbestos waste shall comply with Title 40 CFR 61, Subpart M and Title 22 CCR.

## 4.9 Work Area Preparation

### 4.9.1 Warning Signs

The Contractor will provide Warning Signs meeting regulatory requirements at each visual and physical barrier.

### 4.9.2 Critical Barriers

Where appropriate, the Contractor shall seal all openings with two layers of 6-mil minimum polyethylene as a containment barrier to prevent leakage of air into the outside environment or other portions of the building. Individually seal ventilation openings in walls (supply and exhaust), wall-mounted fixtures, doorways, windows, convectors, and other wall and floor openings into the work area with adhesive tape alone or with two layers of polyethylene sheeting at least 6-mil, taped securely in place with adhesive tape.

### 4.9.3 Pre-Cleaning

1. The Contractor shall pre-clean movable objects to be salvaged for the Owner within the proposed work areas using HEPA vacuum equipment and/or wet cleaning methods, as appropriate. The Contractor shall move such items to storage or other area as directed by the Owner.

2. The Contractor shall pre-clean immovable objects such as mechanical and electrical equipment and fixtures within the proposed work area using HEPA vacuuming equipment and/or wet cleaning methods, as appropriate.

3. Prior to placing plastic sheeting, clean the work area(s) and immediately adjacent areas physically connected to abatement areas using HEPA vacuum equipment and/or wet-cleaning methods, as appropriate. Do not use methods that raise dust such as broom sweeping or vacuuming with non-HEPA equipped vacuum cleaners.

### 4.9.4 Containment

The Contractor will contain work areas with two layers of 4-mil plastic sheeting on walls and ceilings, and two layers of 6-mil plastic sheeting on floors, or as otherwise directed in writing by the Consultant.

### 4.9.5 Decontamination Unit

The Contractor shall construct worker and waste container/equipment decontamination units in compliance with the EPA guidelines. Provide sufficient numbers of lockers in change or "clean" rooms or worker's clothing with one locker reserved for Owner and/or Consultant personnel.

### 4.9.6 Emergency Exits

The Contractor shall establish emergency exits and procedures for the work area, satisfactory to fire officials and provide fire extinguishers as required.

### 4.9.7 Work Area Maintenance

The Contractor shall ensure that impermeable drop cloths remain around the perimeter of the work area and that the interior containment walls remain intact. Inadvertent tears in plastic shall be repaired with fiber tape and the tear covered by plastic applied with spray adhesive, overlapping the tear by 6 inches on all sides.

If, during performance of abatement work, ACM or suspect ACM is observed outside the work area perimeter, work shall stop immediately upon discovery, appropriate repairs will be made (by Contractor), and all such debris will be collected using appropriate vacuums and wet methods.

# 5 ASBESTOS REMOVAL

## 5.1 General Work Area Requirements

In any work area, the Contractor shall:

- Remove and dispose of all ACM and asbestos-contaminated material in accordance with the methods and procedures outlined in Title 8 CCR Section 1529.
- All asbestos removal shall be supervised by a competent person.
- Where appropriate, enclose work areas under differential air pressure for the duration of the asbestos removal and subsequent cleaning phases and until all removal areas have been air-tested and found to be in compliance with the specified final air quality clearance level, as determined by the Owner and/or Consultant.
- Perform appropriate cleaning using HEPA vacuum and/or wet cleaning methods of all areas physically connected to areas receiving asbestos removal.

- Dispose of all contaminated or otherwise removed materials and wastes in sealed and labeled containers in an approved sanitary landfill.
- Never use high-pressure water streams to remove any type of ACM.
- After removal, all surfaces shall be wet-cleaned and HEPA vacuumed to remove residual accumulated material. After cleaning, surfaces shall appear free of visible material.
- Prior to air clearance testing and the removal of the plastic sheeting, apply approved sealant (lock-down encapsulant) to plastic sheeting and then, following clearance and plastic removal, on all concrete or wood substrates, structural steel, and piping surfaces from which the plastic was removed.
- Following work completion, remove any remaining floor and wall plastic, including seals on openings, and dismantle worker waste container/equipment decontamination areas and leave all areas clean.
- Eating, smoking, or applying cosmetics shall not be permitted in the work areas.

## 5.2 Removal of OSHA Class II Asbestos-Containing Materials

### 5.2.1 Transite Pipe Removal

The Contractor shall demonstrate to either the Owner or the Consultant that the full extent of the transite pipe material, as impacted by the project, has been identified and removal has occurred as required. The Contractor shall adhere to the following additional work practices regarding the removal of transite pipes

- Transite pipes shall be removed with hand tools, and to the extent feasible, substantially intact.
- If the transite pipes cannot be removed intact, the Contractor shall prepare a work area, consistent with the requirements for an OSHA Class II removal.
- Should any mechanical system that includes the asbestos-containing transite pipes be scheduled for removal, the Contractor shall coordinate the removal activities of the transite pipes from the mechanical system with the other trades. The Contractor shall conduct the removal of the pipes prior to removing the mechanical system from the site.
- Transite pipe determined to be in good, substantially intact condition is not considered a friable-ACM. The Contractor shall not use any removal method that will render intact transite pipe into a friable-ACM.
- Mechanical assistance can be used to move intact sections of transite pipe, as conditions permit. This assistance shall not be considered a ‘mechanical removal method’ so long as the transite is not made into a friable-ACM.

# 6 CLOSURE

## 6.1 Waste Labeling

- ACM and asbestos-contaminated materials should be placed in labeled, leak-tight containers and/or wrapping. The labels for friable ACM, if applicable, shall contain all information as specified by the Occupational Safety and Health Standards of the Department of Labor, under Title 29 CFR 1926.1101(k)(2)(iii), Title 8 CCR Section 5229, and any local regulations.

- For temporary storage on site, ACM shall be stored in a secured area. The area shall be demarcated with Asbestos Warning Signs.

## 6.2 Clearance

- Work areas and all other decontaminated areas and cleaned areas shall be considered clean when:

  - The work area passes a visual inspection by the Consultant,

  - Air testing performed by the Consultant and analyzed by Phase Contrast Microscopy (PCM) are found to be less than 0.01 fibers per cubic centimeter (f/cc) or background (to be determined by the Consultant, prior to abatement activities). PCM air samples will be analyzed in general accordance with NIOSH Method 7400.

- Areas that do not comply with the standard of cleaning for final clearance shall continue to be cleaned by and at the Contractor's expense until the specified standard is achieved as evidenced by results of air sampling tests by the Consultant. The costs of all follow-up tests necessitated by the failure of the air tests to meet the cleaning criteria, listed above, shall be borne by the Contractor; the Owner will deduct the cost of such follow-up tests from whatever moneys remain due to the Contractor. Follow-up testing shall occur within the time allotted for gross removal or all costs to the Owner of the building attributable to delayed occupancy or usage shall be borne by the Contractor.

- When the clearance is achieved, as listed above, and an inspection determines that the area has been visually decontaminated, the decontamination enclosure systems shall be removed, the area thoroughly wet cleaned, and materials from the equipment room and shower disposed of as contaminated waste. The remaining barriers between contaminated and clean areas and all seals on openings into the work area and fixtures shall be removed and disposed of as contaminated waste.

## 6.3 Tear Down

All plastic sheeting, tape, cleaning material, clothing, and all other disposable material used in the asbestos removal operation or items used in the work area shall be packed into sealable 6-mil plastic bags. These bags must be marked with labels as required by Cal-OSHA in Title 8 CCR Section 1529.

# SECTION 2

## Lead-Related Construction Specifications

# Lead-Related Construction Specifications

# Pier View Way Bridge and Lifeguard Headquarters

## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


September 17, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

# Lead-Related Construction Specifications
# Pier View Way Bridge and Lifeguard Headquarters
## 301 The Strand North
## Oceanside, California

Mr. Jared Cole
Moffatt & Nichol
1660 Hotel Circle North, Suite 500 | San Diego, California 92108

September 17, 2021 | Project No. 109214001

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# 1 GENERAL

## 1.1 Scope of Work

The scope of work for the lead abatement portion of the Pier View Way Bridge and Lifeguard Headquarters (subject structure) restoration/replacement project may involve the removal and/or abatement of lead-containing surfaces (LCS) prior to structure restoration or demolition, as outlined in the finalized construction contract documents (which are still in development at the time of this writing).

For the purposes of this specification, LCS refers to both lead-based paint, as defined by the U.S. Department of Housing and Urban Development (HUD) and the California Department of Public Health (CDPH), and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures. LCS, as defined by the HUD and CDPH lead-based paint regulatory standards, are surfaces containing concentrations of lead greater than or equal to 1.0 milligram per square centimeter ($mg/cm^2$), or 0.5% by weight.

LCS have been identified in the following locations in the Pier View Way Bridge and Lifeguard Headquarters, located at 301 The Strand North in Oceanside, California (subject site).

**Table 1 – Building Component, Description, and Location**

| LCS Building Component | LCS Description (Color / Substrate) | LCS Location |
|---|---|---|
| Door Frame (former swinging doors) | White / Wood | Bridge Storage Rooms |
| Interior walls (including arches / columns) | White / Concrete | Bridge Storage Rooms |
| Interior wall at closet | White / Wood | Bait Shop Storage (South Storage) |
| Interior wall tiles | White / Ceramic | Pier Storage (North Storage) at former urinals |

*LCS in this table are surfaces that meet or exceed the HUD and CDPH criteria. LCS in this table do not necessarily identify all materials that could contain lead at concentrations less than 1.0 $mg/cm^2$ or 5,000 milligrams per kilogram (mg/kg), which could trigger the Cal/OSHA lead in construction standard.*

The LCS were identified during a hazardous building material survey performed by Ninyo & Moore in May 2021. **It is the Contractor's responsibility to quantify materials that are to be impacted by the scheduled restoration/demolition activities, as outlined in the construction contract documents, prior to bid submittals and as part of the Contractor's due diligence prior to initiating restoration/demolition activities at the subject site.**

Our understanding is that the subject structure is scheduled for restoration or demolition. Specific contractor responsibilities include, but are not limited to, the following:

- The Contractor is responsible for the protection and decontamination of fixtures and equipment remaining in the work area, prior to and after abatement.

- The Contractor shall furnish all labor, materials, services, insurance, equipment, and decontamination facilities to carry out the complete removal and disposal of all LCS identified in these specifications that are to be impacted by the restoration/demolition project.

- Work shall be performed in accordance with all applicable regulations, codes, ordinances, and standards of governing authorities having jurisdiction and the requirements specified herein. Where applicable state or local standards are more stringent than federal standards, the Contractor shall adhere to the most stringent standards.

- The Contractor shall extend full cooperation to the Owner in all matters involving the use of the Owner's facilities. At no time shall the Contractor cause or allow there to be caused conditions that may cause risk or hazard to the general public or conditions that might impair safe use of the facilities. The use of electricity, water, or like utilities by the Contractor shall be coordinated through the Owner.

- The Contractor shall submit a timeline schedule, not date specific, to the Owner and/or Consultant for integration into the overall project schedule and shall coordinate the work with that of all other trades. Phasing and scheduling of this project will be at the discretion of the Owner and/or Consultant and shall not proceed in any area without the express consent of the Owner and/or Consultant. The Contractor shall be available within 24-hour notice for additional work or rework if, after acceptance of the work, it is found that full abatement was not achieved from the initial work effort as determined by the Owner and/or Consultant.

## 1.2 Applicability

- As defined by California Code of Regulations (CCR) Title 17, Division 1, Chapter 8, Accreditation, Certification, and Work Practices for Lead-Based Paint and Lead Hazards, “lead-based paint” means paint, other surface coatings, or items that contain an amount of lead equal to, or in excess of, 1.0 mg/cm2 or 0.5% by weight.

- As per California Division of Occupational Safety and Health (Cal/OSHA or DOSH) and U.S. Occupational Safety and Health Administration (OSHA), whenever construction activities disturb lead in any amount, the employer must assume that employees may be exposed to lead and comply with the requirements of the “Lead in Construction Standard,” Title 8 CCR Section 1532.1.

## 1.3 Definitions

- “Contractor” shall refer to the contractor responsible for lead-related construction, or any disturbance of lead-containing surfaces, presumed lead-containing surfaces, or any other leaded material.

- “Consultant” shall refer to Owner’s authorized representative(s).

- "High-efficiency particulate air (HEPA) filter" shall refer to a filter capable of filtering out monodispersive particles of 0.3 microns or greater diameter from a body of air at 99.97% efficiency or greater.
- "Owner" shall refer to the City of Oceanside.
- "Project" shall refer to any lead-related construction activities to be carried out for the scheduled restoration/demolition project at the subject site.

## 1.4 Codes and Standards

All work shall conform to the standards set by applicable federal, state, and local laws, regulations, ordinances, and guidelines in such form in which they exist at the time of work on the contract and as may be required by subsequent regulations.

While many of the following standards were written for residential housing, it has become standard industry practice to apply the following standards to schools, commercial buildings, and industrial settings. The following is a partial list:

- The Contractor shall comply with the requirements of the California General Industry Safety and Health Standards, and the Safety and Health Regulations for Construction, Title 8 CCR, including, but not limited to the following sections:
    - Section 5144: Respiratory Protection
    - Section 2405.4: Electrical
    - Section 1637, 1640, 1658: Scaffolding
    - Section 1513: Housekeeping
    - Section 5194: Hazard Communication
    - Section 1675: Ladders
    - Section 3215 and 3220: Egress and Emergency Plans
    - Section 1514: Personal Protective Equipment
    - Section 1519 and 3360: Sanitation
    - Section 1684, 3555, and 3556: Powered Hand Tools
    - Section 1502: Contractors Responsibilities
    - Section 1511: General Safety and Health Provisions
    - Section 1510: Safety Training and Education
    - Section 1527 and 3366: Washing Facilities
    - Section 1528: Gases, Vapors, Fumes, Dusts and Mists
    - Section 1531 and 5143: Ventilation
    - Section 3203: Injury and Illness Prevention Program
    - Section 3204: Access to Employee's Exposure and Medical Records
    - Section 6003: Accident Prevention Signs
    - Section 3221: Fire Prevention Plan
    - Section 1532.1: Construction Safety Orders, Lead

- The Contractor shall comply with the Federal Environmental Protection Agency (EPA) Regulations pertaining to handling and disposal of lead-containing materials, as well as the State of California and any local governmental agencies, which have delegated responsibility for the administration and enforcement of federal regulations.

    - Title 22 CCR Section 66261 Identification and Listing of Hazardous Waste
    - Title 10 Code of Federal Regulations (CFR) Part 261

- The Contractor shall comply with all requirements of the EPA-approved landfill that is selected as the disposal site.

- The Contractor shall comply with Title 17 CCR Division 1, Chapter 8.

- The Contractor shall comply with CDPH Certification of Lead-Related Construction Activities and work practices.

- The following may also apply to this project:

    - 24 CFR Parts 35, 36, 37: United States Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint (LBP) Hazards and Housing

    - American Society for Testing Materials (ASTM)

    - American National Standards Institute (ANSI)

    - ANSI Z228.2-8: Practices

- In addition to any detailed requirements of this Specification, the Contractor shall at his own cost and expense comply with all laws, ordinances, rules, regulations, and guidelines of federal, state, regional, and local authorities regarding handling and storing of lead waste material.

- All regulations by the above and other governing agencies in their most current version are applicable throughout this project. Where there is a conflict between this Specification and the cited federal, state, or local regulations or guidelines, the more restrictive or stringent requirements shall prevail. This Section refers to many requirements found in these references, but in no way is it intended to cite or reiterate all provisions therein or elsewhere. It is the Contractor's responsibility to know, understand, and abide by all such regulations, guidelines, and common practices.

# 2 CONTRACTOR QUALIFICATIONS AND RESPONSIBILITIES

The Contractor shall provide that documentation be provided for all aspects of the work at the bid opening detailing the firm's qualifications on the following criteria:

- California Contractor License, granted by the California Contractors State License Board.

- All workers and supervisors assigned to this project shall have been trained in accordance with California Construction Safety Orders, Title 8 CCR 1532.1 Lead-Related Construction, and Title 17 CCR Division 1, Chapter 8. The workers should be currently certified as a "Lead-Related Construction Worker," granted by CDPH. The on-site supervisor shall be currently certified as a "Lead-Related Construction Supervisor," granted by CDPH.

## 2.1 Document Review

Contractors shall examine all Drawings and all other Sections of the Specifications and Contract Documents for requirements affecting the work of this Section. Questions on interpretations, omissions, and methods should be referred to the Owner and/or Consultant.

## 2.2 Notifications and Approvals

The Contractor shall make all applicable and necessary notifications (in proper and timely fashion) to relevant federal, state, and local authorities and shall obtain and comply with the provisions of all permits or applications required by the work specified, as well as make all required submittals required under those auspices. The Contractor shall indemnify the Owner and/or Consultant from, and pay for all claims resulting from, failure to adhere to these provisions. The costs for all permits, applications, and the like are to be assumed by the Contractor.

## 2.3 Fees, Permits, and Licenses

- The Contractor shall pay all licensing fees, royalties, and other costs necessary for the use of any copyrighted or patented product, design, invention, or process for the performance of the job specified in these Lead-Related Construction Specifications. The Contractor shall be solely responsible for costs, damages, or losses resulting from any infringement of these patent rights or copyrights. The Contractor shall hold the Owner and the Consultant harmless from any costs, damages, and losses resulting from any infringement of these rights or copyrights. If the Contract Specification requests the use of any product, design, invention, or process that requires a licensing fee or royalty fee for use in the performance of the job, the Contractor shall be responsible for the fee or royalty and shall disclose the existence of such rights.

- The Contractor shall be responsible for costs for all licensing requirements and notification requirements and all other fees related to the ability of the Contractor to perform the work in this section.

- The Contractor shall be responsible for securing all necessary permits for work under this Section, including hauling, removal, disposal, fire, and materials usage, or any other permits required to perform the specified work.

## 2.4 Coordination and Cooperation

The Contractor shall meet with the Owner and Consultant for a pre-construction meeting prior to commencing work on the project. The meeting shall be at the facility of the Owner at a mutually convenient time and date, to be determined by the Owner and the Consultant.

At the meeting, the Contractor shall be represented by authorized representatives and the field supervisors who shall run the project on a daily basis, and shall present evidence that all requirements for initiation of the work have been met.

The minimum agenda for the meeting shall be:

- Channels of communication;
- Construction schedule, including sequence of critical work;
- Designation of responsible personnel;
- Procedures for safety, security, quality control, housekeeping, and related matters;
- Use of premises, facilities, and utilities;
- Review of "Pre-Job Submittal", as discussed in Section 3.1

# 3 CONTRACTOR SUBMITTALS

## 3.1 Pre-Job Submittal

The Contractor shall submit a detailed Project Work Plan composed of at least the following:

- A sketch showing the detail, location, and layout of the clean area, the dirty area (Decontamination, or Decon, System), and the work areas.
- The sequencing of the work.
- The timing and projected completion of the work.
- Detailed description of the method to be employed in order to control airborne and wastewater pollution.
- The type of equipment and amount of equipment available to the Contractor to be used on the project, including ventilation equipment, HEPA vacuums, etc.
- A ventilation plan showing the types and locations of units, if needed.
- The procedures to contain, package, and remove the waste from the work area and the procedures and locations for the storage and/or disposal of hazardous and non-hazardous waste.
- A personal air sampling plan to include air sampling training and strategy, sampling locations, projected number of samples, and frequency, methodology, and duration of sampling.

- Proposed respiratory protection program for employees throughout all phases of the job, including make, model, and National Institute for Occupational Safety and Health (NIOSH) approval numbers of respirators to be used.

- A safety precautions plan that shall include special precautions taken by the Contractor in performing their respective tasks, safety equipment to be worn by employees, frequency of safety meetings, and all other relevant functions to be performed by the Contractor to ensure a safe workplace.

- Copy of Abatement Plan as specified in Title 17 CCR Division 1, Chapter 8, Section 36100(b).

- Any other data that enhances this work plan. Innovative ideas and/or technology are encouraged.

In addition, the following items will be requested by the Owner and/or Consultant, either prior to or during lead-related construction activities:

- Copies of all notifications, permits, applications, licenses and similar documentation required by federal, state, or local regulations, including, but not limited to, CDPH Form 8551, Cal/OSHA Notification, and equipment licensing and certification from the local environmental regulatory agency. Copies of the notification(s) shall be given to the Owner and/or Consultant a minimum of two days prior to the beginning of each phase or mobilization of work to disturb lead.

- Copies of medical records, indicating that each individual has been medically cleared, via blood lead level testing, to perform work involving lead, or a notarized statement by the examining medical doctor that such examinations took place within the past 12 months for each employee to be used on the project.

- Copies of the records of a successful respirator fit testing performed by a qualified individual within the previous 12 months for each employee to be used on this project, with the employee's name clearly visible and legible on each record. NOTE: In the event employees are hired after the project start date, the Contractor shall supply the proper documentation, as required, at least 24 hours in advance of their start.

- Written description, for the Owner's and/or Consultant's review and acceptance, of all proposed procedures, methods, or equipment to be utilized that differ from the contract specifications, including manufacturers specifications on any equipment not specified for use by this Section; in all instances, the Contractor must comply with all applicable federal, state, and local regulations.

- Proposed worker orientation plan, which at a minimum includes a description of lead hazards and abatement methodologies, a review of worker protection requirements, and the outline of safety procedures.

- Chain-of-command of responsibility at work site including names of supervisors, foremen, and competent persons, and their certificates of training, obtained within the previous 12 months.

- List of all supervisors and workers intended to be assigned to the project and copies of current CDPH Lead-Related Construction Certifications, obtained within the past 12 months.

- Proposed Emergency Plan and route of egress from work areas in case of fire or injury, including the name, address, phone number, and mapped route to the nearest medical assistance center. This shall be conspicuously posted at the work site and filed with proper agencies.

- The name and address of the Contractor's blood lead testing lab, including their OSHA-Center for Disease Control and Prevention (CDC) listing and Certification in California.

- The name and address of the Contractor's personal air monitoring and waste disposal lead testing laboratory(-ies), including certification(s) of Environmental Lead Proficiency Analytical Testing (ELPAT) accreditation for heavy metal analysis, listing of relevant experience in air and debris lead analysis, and presentation of a documented Quality Assurance and Quality Control (QA/QC) Program.

- Safety Data Sheets (SDS) on all materials and chemicals to be used on the project.

- Name, address, and identification (ID) number of the hazardous waste hauler, waste transfer route, and proposed disposal site.

- Name, address, and ID number of the proposed construction debris site.

- Name, address, and ID number of hazardous disposal site. Documents must be submitted from these sites proving they are licensed to accept such waste and will accept such waste.

- Map number and evidence that the Contractor has contracted with a hauler/disposal facility must be presented at the pre-construction meeting.

- Cal/OSHA Lead Compliance Program, Title 8 CCR Section 1532.1.

- Cal/OSHA Respiratory Protection Program, Title 8 CCR Section 5144.

- Cal/OSHA Injury and Illness Prevention Program, Title 8 CCR Section 3203.

## 3.2 Post-Job Submittal

- Copies of manifests and receipts acknowledging disposal of all hazardous and non-hazardous waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.

- A copy of the entry-exit logbook.

- Final copies of all notifications, permits, applications, licenses and similar documentation as required in Section 3.1, if any changes have occurred, such as the project end date.

- All personal monitoring results.

- All waste characterization test results.

- All waste manifests.

### 3.3 Substitution of Materials and/or Methods

- Any substitution in materials or methods to those specified shall be approved by the Owner and/or Consultant prior to use. Any requests for substitution shall be provided in writing to the Owner and/or Consultant at least 48 hours prior to proposed use. The request shall clearly state the rationale for the substitution. The contractor shall submit to the Owner and/or Consultant product data and samples of all materials to be considered as an alternate.

- Product data shall consist of manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts illustrations, SDS, and other standard descriptive data. Submittal data shall be clearly marked to identify pertinent materials, products or models and show performance characteristics and capacities. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product or material with integrally related parts and attachment devices.

- No work shall begin, which requires submittal for approval, until the Owner and/or Consultant "approved" or "approved as noted" the submittal.

## 4 EXECUTION

### 4.1 Materials and Equipment

The work of this Section includes the furnishing of labor, materials, tools, equipment, services, and incidentals necessary to complete all LCS removal/abatement activities, in accordance with the plans and specifications. These plans and specifications are intended to describe, and provide for a finished and complete piece of work; work which is described by any portion of these documents shall be complete in every detail and in accordance with established trade practice, notwithstanding whether or not every item or detail necessarily involved is particularly mentioned.

### 4.2 Approvals and Inspections

All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet this Section, along with EPA, OSHA, NIOSH, and HUD regulations, recommendations, and guidelines, as well as any other federal, state, and local regulations. Where there exists an overlap of these regulations and guidelines, the most stringent applies. All work performed by the Contractor is further subject to approval of the Owner and/or Consultant.

## 4.3 Work Area Set Up

### 4.3.1 Site Safety

The Contractor is responsible for all safety at the work site. This includes, but is not limited to, electrical, mechanical (tool), fire, and personnel protective safety. Safety requirements are, for the most part, common sense and sound business practice; however, the Contractor is advised that federal, state, and local regulations exist that govern safety on the work site. Therefore, in addition to the following, the Contractor is responsible for adhering to the most stringent requirements in affect by any entity with jurisdiction or these Specifications.

A primary concern in this type of work is to ensure that adequate exits exist in the event of an emergency and, conversely, that adequate entrances exist for emergency personnel. The nature of this work requires sealing entrances and the extensive use of 6-millimeter (mil) polyethylene sheeting; however, the Contractor should never permanently seal (e.g., nail, bolt, or hard cover) any potential escape exits and should take extra care to clearly identify potential exits and inform the workers.

## 4.4 Safety Regulations

The following are some applicable Federal regulations:

| Occupational Safety and Health Administration (OSHA) Regulations | |
|---|---|
| 29 CFR 1910 | General Industry Standard |
| 29 CFR 1910.1025 | Lead Hazard Standard |
| 29 CFR 1910.134 | Respiratory Protection |
| 29 CFR 1910.1200 | Hazard Communication Specifications for Accident Prevention |
| 29 CFR 1910.145 | Sign and Tags |
| 29 CFR 1926 | Construction Industry Standard |
| **American National Standard Institute (ANSI) Publications:** | |
| Z288.2-80 | Practices for Respiratory Protection |

### 4.4.1 Signage

Prior to the preparation of the building for abatement, the Contractor shall place warning signs immediately outside all entrances and exits to the building that warn that abatement work is being conducted in the vicinity. The signs shall be in English and Spanish, at least 20 inches by 14 inches with bold lettering not smaller than 2 inches tall, and read:

WARNING:

LEAD PAINT REMOVAL HAZARD
UNAUTHORIZED ENTRY PROHIBITED
NO SMOKING, EATING, OR DRINKING
ALLOWED IN THE WORK AREA

## 4.5 Notifications

The Contractor is responsible for notifying all officials as indicated by federal, state, or local law.

## 4.6 Access to Work Areas

The Owner will provide specific access as required during the project to the Contractor and personnel assigned to the project. The Contractor will be responsible for the security of each and every demarcated work area or portion thereof involved in the abatement project. It will also be the Contractor's responsibility to allow only authorized personnel into the work area, and to secure all assigned entrances and exits at the end of the workday to prevent unauthorized entry.

The Contractor shall maintain a bound logbook in which any person entering or leaving the lead abatement work area must sign and enter the dates and times of entry and departure.

Use of and access to waste containers onsite shall be controlled under the following requirements:

- Location of waste containers onsite shall be coordinated with the Owner and/or Consultant.
- The waste containers shall be solid enclosed containers, lined with two layers of 6-mil polyethylene sheeting and locked and secured when not in immediate use.
- The Contractor shall comply with all federal, state, and local regulations and ordinances regarding lead waste storage.
- The Contractor, Supervisor, or Worker(s) will not allow anyone access to the project area unless they have successfully completed a training program and are wearing a properly fitted respirator, unless stated otherwise by the Consultant.

## 4.7 Containment

Contractor shall establish “containment" as specified in Tables 8.1, 8.2, and 8.3 of the HUD guidelines, incorporated below (Tables 2, 3, and 4, respectively) and as applicable:

| Table 2 – Interior Worksite Preparation (not including windows) | | | | |
|---|---|---|---|---|
| **Description** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Typical Applications (Hazard Controls)** | Not applicable to this project. | Any interim control or abatement method disturbing between 2 and 10 square feet of painted surface per room. | Same as Level 2. | Any interim control or abatement method disturbing more than 10 square feet per room. |
| **Containment and Barrier System** | Not applicable to this project. | Two layers of plastic on entire floor. Plastic sheet with primitive airlock flap on all doorways. Door secured from inside the work area need not be sealed. Children should not have access to plastic sheeting (suffocation hazard). | Two layers of plastic on entire floor. Plastic sheet with primitive airlock flap on all doorways to work areas. Doors secured from inside the work area need not be sealed. Overnight barrier should be locked or firmly secured. | Two layers of plastic on entire floor. If entire unit is being treated, cleaned, and cleared, individual room doorways need not be sealed. If only a few rooms are being treated, seal all doorways with primitive airlock flap to avoid cleaning entire building. Doors secured from inside the work area need not be sealed. |
| **Warning Signs** | Not applicable to this project. | Required at entry to room but not on building (unless exterior work is also under way). | Posted at main and secondary entryways, since occupant will not be present to answer the door. | Posted at building exterior near main and secondary entryways. |
| **Ventilation System** | Not applicable to this project. | Turned off and all vents in room sealed with plastic. Negative pressure zones (with negative air machines) are not required, unless large supplies of fresh air must be admitted into the work area to control exposure to other hazardous substances (for example, solvent vapors.) | Same as Level 2. | Same as Level 2. |

| Table 2 – Interior Worksite Preparation (not including windows) | | | | |
|---|---|---|---|---|
| **Description** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Furniture** | Not applicable to this project. | Removed from work area. Large items that cannot be moved can be sealed with a single layer of plastic sheeting and left in work area. | Same as Level 2. | Same as Level 2. |
| **Cleanup (See Section 8 for further details)** | Not applicable to this project. | HEPA vacuum, wet wash and HEPA vacuum *all* surfaces in room. Also, wet wash and HEPA vacuum floor in adjacent area(s) used as pathway to work area. Do not store debris inside building overnight; use a secure locked area. | Remove top layer or plastic from floor and discard. Keep bottom layer of plastic on floor for use on the next day. HEPA vacuum, wet wash and HEPA vacuum *all* surfaces in room. Also, wet wash and HEPA vacuum floor in adjacent area(s) used as pathway to work area. Do not store debris inside building overnight; use a secure locked area. | Full HEPA vacuum, wet wash and HEPA vacuum cycle, as detailed in Section 6. |
| **Dust Sampling** | Not applicable to this project. | Clearance only. | One sample collected outside work area every few jobs plus clearance. | Clearance only. |

| Table 3 – Exterior Worksite Preparation Levels (not including windows) | | | |
|---|---|---|---|
| **Description** | **Level 1** | **Level 2** | **Level 3** |
| **Typical Applications (Hazard Controls)** | Any interim control or abatement method disturbing less than 10 square feet of exterior painted surface per building. Also includes soil control work. | Any interim control or abatement method disturbing 10 to 50 square feet of exterior painted surface per building. Also includes soil control work. | Any interim control or abatement method disturbing more than 50 square feet of exterior painted surface per building. Also includes soil control work. |

| Table 3 – Exterior Worksite Preparation Levels (not including windows) | | | |
|---|---|---|---|
| **Description** | **Level 1** | **Level 2** | **Level 3** |
| **Containment and Barrier System** | One layer of plastic on ground extending 10 feet beyond the perimeter of working surfaces. Do not anchor ladder feet on top of plastic (puncture the plastic to anchor ladders securely to ground). For all other exterior plastic surfaces, protect plastic with boards to prevent puncture from falling debris, nails, etc., if necessary. Raise edges of plastic to create a basin to prevent contaminated runoff in the event of unexpected precipitation. Secure plastic to side of building with tape or other anchoring system (no gaps between plastic and building). Weight all plastic sheets down with two-by-fours or similar objects. Keep all windows within 20 feet or working surfaces closed, including windows of adjacent structures. | Same as Level 1. | Same as Level 1. |
| **Signs** | Post warning signs on the building and at a 20-foot perimeter around building (or less if distance to next building or sidewalk is less than 20 feet). | Same as Level 1. | Same as Level 1. |
| **Weather** | Do not conduct work if wind speeds are greater than 20 miles per hour. Work must stop and cleanup must occur before rain begins. | Same as Level 1. | Same as Level 1. |
| **Security** | Erect temporary fencing or barrier tape at a 20-foot perimeter around working surfaces (or less if distance to next building or sidewalk is less than 20 feet). If an entryway is within 10 feet of working surfaces, require use of alternative entryway. If practical, install vertical containment to prevent exposure. Use a locked dumpster, covered truck or locked room to store debris before disposal. | Same as Level 1. | Same as Level 1. |
| **Cleanup (See Section 8)** | Do not leave debris or plastic out overnight if work is not completed. Keep all debris in secured area until final disposal. | Same as Level 1. | Same as Level 1. |

| Table 4 – Window Treatment or Replacement Worksite Preparation | |
|---|---|
| **Appropriate Applications** | **Any Window Treatment or Replacement** |
| **Containment and Barrier System** | One layer of plastic sheeting on ground or floor extending 5 feet beyond perimeter of window being treated/replaced. Two layers of plastic taped to interior wall if working on window from outside; if working from the inside, tape two layers of plastic to exterior wall. If working from inside, implement a minimum Interior Worksite Preparation Level 2. Children cannot be present in an interior room where plastic sheeting is located due to suffocation hazard. Do not anchor ladder feet on top of plastic (puncture the plastic to anchor ladders securely to ground). For all other exterior plastic surfaces, protect plastic with boards to prevent puncture from falling debris, nails, etc. (if necessary). Secure plastic to side of building with tape or other anchoring system (no gaps between plastic and building). Weight all plastic sheets down with two-by-fours or similar objects. All windows in building should be kept closed. All windows in adjacent buildings that are closer than 20 feet to the work area should be kept closed. |
| **Signs** | Post warning signs on the building and at a 20-foot perimeter around building (or less if distance to next building or sidewalk is less than 20 feet). If window is to be removed from inside, no exterior sign is necessary. |
| **Security** | Erect temporary fencing or barrier tape at a 20-foot perimeter around building (or less if distance to next building or sidewalk is less than 20 feet). Use a locked dumpster, covered truck or locked room to store debris before disposal. |

| Table 5 – Window Treatment or Replacement Worksite Preparation | |
|---|---|
| **Appropriate Applications** | **Any Window Treatment or Replacement** |
| **Weather** | Do not conduct work if wind speeds are greater than 20 miles per hour. Work must stop and cleanup must occur before rain begins, or work should proceed from the inside only. |
| **Cleaning** | If working from the inside, HEPA vacuum, wet wash and HEPA vacuum all interior surfaces within 10 feet of work area in all directions. If working from the exterior, no cleaning of the interior is needed, unless the containment is breached. Similarly, no cleaning is needed on the exterior if all work is done on the interior and the containment is not breached. If containment is breached, then cleaning on both sides of the window should be performed. No debris or plastic should be left out overnight if work is not completed. All debris must be kept in a secure area until final disposal. |

#### 4.7.1 Decontamination Unit

At a minimum, the Contractor shall construct a two-stage decontamination unit. This unit shall be connected to the abatement work area for the decontamination of workers contaminated with lead. The decontamination unit shall consist of an equipment/dirty room and clean room/wash area, in series. The Contractor shall ensure that employees enter and exit the work area through this unit.

- The decontamination unit shall be constructed with 6-mil polyethylene sheeting on floors, walls, and ceiling. Doors through this unit shall be constructed as described in Table 2.

#### 4.7.2 Clean Room / Wash Area

The Contractor shall select a clean area outside the abatement area for the workers to change into protective equipment. This area shall contain hand washing facilities, clean cloths, storage for a HEPA vacuum, and respirator storage space. Contaminated equipment or personnel shall not be permitted in this area. The floors and walls of this area shall be covered with 6-mil polyethylene sheeting.

#### 4.7.3 Abatement Area

The Contractor shall pre-clean all surfaces with a HEPA vacuum and remove any furniture or other movable objects. All debris gathered during this clean up shall be disposed of properly.

# 5 PROTECTIVE PROCEDURES

## 5.1 Worker Protection Requirements

#### 5.1.1 Biological Monitoring

This screening shall be performed every two months for the first six months, and every six months thereafter. In addition, the Contractor shall have a medical examination performed on each employee. This medical examination must be performed before workers begin lead-related work and yearly or at the termination of an employee's employment, whichever comes first. A worker shall be removed from the job whenever two blood-sampling tests average more than 25 micrograms per deciliter (µg/dl) or if a single test exceeds 30 µg/dl, and/or an increase of 10 µg/dl or more. The Contractor shall be responsible for medical surveillance and record keeping. All applicable regulations will apply.

### 5.1.2 Training Requirements

All Supervisors and Workers shall have completed a CDPH-approved training course provided by an accredited training provider and be able to provide copies of their updated certification while working at the site.

### 5.1.3 Supervision

The Contractor shall provide at least one onsite abatement Supervisor whose responsibilities include coordination, safety, security, and execution of all phases of the lead removal project. The Supervisor shall not be used as a lead removal worker, and shall be assigned full time to the project. The Supervisor shall be fully qualified in all aspects of lead abatement practices and procedures, as well as training in relevant federal, state, and local regulatory requirements, procedures and standards, supervisory techniques, reading and interpreting lead inspection reports, and proper disposal procedures.

The Contractor shall ensure that all Workers are familiar with all aspects of proper abatement practices during the performance of the work (i.e., workers are trained and prepared to do a good and careful job and to protect themselves and building occupants).

### 5.1.4 Respirators and Personal Protective Equipment (PPE)

- Personal protection, in the form of disposable coveralls and NIOSH-approved respirators, is required for all Workers, Supervisors, and authorized visitors entering the work area during the abatement and cleaning operations.
- Each Worker shall be supplied with disposable suits every day.
- Under no circumstances will anyone entering the removal area be allowed to reuse a contaminated suit. In addition to disposable suits for the Workers, the Contractor shall also supply suits for the Consultant and other personnel who are authorized to inspect the worksite. Disposable suits, such as TYVEK™ suits, and other PPE must be donned prior to entering work area. A clean area will be provided for Workers to put on suits and other personal protective equipment and to store their street clothes.
- Work clothes shall consist of disposable full-body suits, head covers, gloves with cuffs extending outside the sleeves of the protective suit, boot or shoe covers, and other protection, as needed. Hard hats shall be worn, as required.
- Eye protection for personnel engaged in lead operations shall be furnished when the use of a full-face respirator is not required.
- Goggles with side shields will be worn when working with a material that may splash or fragment, or if protective eyewear is specified on the SDS for that product.
- Additional respiratory protection by supplemental filters, such as organic vapor cartridges, may be needed when handling some coating products. Consult the SDS and obtain the proper filters, as necessary.

- The Contractor shall supply Workers and supervisory personnel with NIOSH-approved respirators and HEPA filters. Respiratory protection shall be implemented for all work performed by the Contractor under this Section. The respirators shall be sanitized and maintained according to the manufacturer's specifications. Disposable respirators shall not be considered acceptable under any circumstances. The Contractor will maintain onsite a sufficient supply of HEPA filters to allow Workers and supervisory personnel to change contaminated filters per manufacturer's recommendations or when breathing resistance is encountered. The Contractor is solely responsible for means and methods used and for compliance with applicable regulations.

- Respirators shall be individually assigned to Workers for their exclusive use. All respiratory protection shall be provided to Workers in accordance with the approved respiratory protection program, which includes all items in the Cal/OSHA Respiratory Protection Program Title 8 CCR Section 5144. A copy of this program shall be kept at the worksite and shall be posted in the clean area.

- Workers must perform negative- and positive-pressure fit tests each time a respirator is put on, whenever the respirator design so permits.

- Powered air purifying respirators (PAPR) shall be tested for adequate flow, as specified by the manufacturer.

- Workers shall be given a qualitative fit test in accordance with procedures detailed in 29 CFR 1910.134, Qualitative Fit Test Protocols, for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

- If a question exists as to the proper selection of respirators, the Contractor may consult Cal/OSHA Tables.

- Upon leaving the active work area, cartridges must be removed and respirators cleaned in a disinfectant solution and clean water rinsed.

- Clean respirators should be stored in plastic bags when not in use.

- The Contractor shall inspect respirators daily for broken, missing, or damaged parts.

- The Contractor shall provide personal sampling to check personal exposure levels. Samples shall be taken for the duration of the work shift or for eight hours, whichever is less. Personal samples need not to be taken every day but must be taken in accordance with Title 8, Section 1532.1. Sampling will determine eight-hour Time-Weighted Averages (TWA). Results shall be provided to the Owner and Consultant within 48 hours of the sampling.

- Contractor shall comply with all Cal-OSHA and/or other applicable requirements of worker medical examinations for approval to wear respiratory protection, and shall submit documentation of such approval to the Owner.

## 5.2 Work Procedures

In order to avoid possible exposure to dangerous levels of lead and to prevent possible contamination of areas outside the demarcated work area, work shall follow the general guidelines listed below:

### 5.2.1 Work Area Entry

At no time shall a Worker or other authorized personnel entering the work area go further than the clean area without proper respiratory protection and protective clothing.

### 5.2.2 Work Area Departure

The Workers shall remove all gross contamination, debris, and dust from contaminated disposable suits by completely HEPA vacuuming them before leaving work area.

### 5.2.3 Personal Protective Equipment (PPE)

All persons leaving the work area must remove their personal protective equipment (except respirators) before leaving the dirty/equipment room. Suits shall be removed "inside out" to minimize the dispersal of lead dust.

### 5.2.4 Equipment

All equipment used by the Workers inside the work area shall be either left in the work area or thoroughly decontaminated before being removed from the area. Extra work clothing (in addition to the disposable suits supplied by the Contractor) shall be left in the clean area until the completion of work in that area. The clean area shall be cleaned of all visible debris and disposable materials daily.

### 5.2.5 Prohibited Activities

Under no circumstances shall Workers or supervisory personnel eat, drink, smoke, chew gum, chew tobacco, or remove their respirators in the work area. To do so shall be grounds for the Owner and/or Consultant to stop all removal/abatement operations. Only in the case of life threatening emergency shall Workers or supervisory personnel be allowed to remove their respirators while in the work area. In this situation, respirators are to be removed for as short of duration as possible.

### 5.2.6 Shock Hazards

- The Contractor is responsible for using safe procedures to avoid electrical hazards. Power will be shut off and checked before work begins when a hazard exists.
- All extension cords and power tools used within the work area shall be attached to Ground Fault Circuit Interrupters (GFCI).

## 5.3 Personal Air Sampling

### 5.3.1 General

The Contractor is required to perform the personal air sampling activities. The results of such sampling shall be posted, provided to individual workers, and submitted to the Owner and Consultant as described herein.

### 5.3.2 Sampling

Samples shall be collected for the duration of the work shift. Personal air samples must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be used to determine eight-hour TWA. The Contractor is responsible for personal air sampling.

### 5.3.3 Sampling Results

Air sampling results shall be transmitted to the Owner/Consultant and individual workers in written form no more than 48 hours after the completion of the work shift when the air samples were collected. The reporting document shall list each sample's sampling time and date, personnel monitored, flow rate, sample duration, sample yield, cassette size, and analysts' name and company, and shall include an interpretation of the results. Air sample analysis results will be reported in micrograms per cubic meter ($\mu g/m^3$).

### 5.3.4 Testing Laboratory

The Contractor's testing lab shall be ELPAT accredited for heavy metals. Contractor shall submit for the Owner's and Consultant's review and acceptance the name and address of the laboratory, certification(s) of ELPAT accreditation for heavy metal analysis, a listing of relevant experience in air lead analysis, and presentation of a documented QA/QC program.

### 5.3.5 Air Monitoring Frequency

The air monitoring frequency for Contractor operations will be established in accordance with the requirements set forth in Title 8 CCR Section 1532.1.

# 6 INSPECTIONS

In addition to various daily inspections of the lead work area and abatement practices, the Consultant will make three mandatory inspections during the work, one during each phase of removal. Each inspection must be requested by the Contractor and be performed by the Consultant. The work being inspected must meet the Consultant's satisfaction before work may begin for the next phase of work. Failure on the part of the Contractor to obtain the Consultant's approval before proceeding to the next scheduled phase is regarded as a violation of these Section(s). In the event of this occurring, the Consultant will request work to be stopped and the Owner will be contacted to intervene. The three inspections are as follows:

## 6.1 Work Area Preparation Inspection

The Contractor shall have all pre-abatement preparations of the work area complete and seek and receive approval from the Consultant to proceed.

## 6.2 Post-Removal Inspection

The Contractor shall have completed abatement and final clean-up of all visible debris, HEPA vacuuming, and wet washing.

## 6.3 Final Clearance Inspection

The Consultant will perform final clearance wipe testing after final clean-up activities are completed, but not before one hour has passed/elapsed from clean-up completion.

# 7 ABATEMENT PROCEDURES

## 7.1 Overview

The information contained in this Section indicates specific abatement procedures for designated components and general abatement procedures for non-specific components. The actual components to be abated are found in Table 1.

### 7.1.1 Workmanship

All LCS abatement activities shall be conducted in a professional, workman-like manner. The Contractor must realize that any abatement procedure may cause damage to the substrate and/or adjacent surface if performed improperly; therefore, strict work controls are required.

### 7.1.2 Approval

The Contractor must receive prior approval from the Owner and Consultant before using any substituted materials or equipment. No methods involving open flame, the aid of a flammable solvent, an abrasive compound, or a solvent containing methylene chloride, shall be used in removing leaded paint.

### 7.1.3 Disposal

All leaded materials, residues, debris, or soil contaminated, as a result of abatement, must be treated and/or disposed of in accordance with the regulations and guidelines of EPA and HUD, state and local regulations and ordinances, and all other applicable agencies.

- All such materials shall be wrapped in 6-mil plastic sheeting with all edges and seams sealed or placed in 6-mil plastic bags with the top of the bags twisted to form a loop. The loop shall then be sealed. The bags of residue/debris shall then be further containerized in an additional 6-mil plastic bag (i.e., double-bagged).
- The sealing process shall include the use of a waterproof tape of sufficient strength to maintain the integrity of the seal.
- All components shall have all nails and/or other hardware flattened or removed prior to disposal.
- The residue/debris shall be lightly misted prior to placement for disposal.
- The residue/debris shall be carefully handled so as to prevent rupture, or in any way diminishing container integrity.
- All wastewater shall be collected and tested prior to disposal. The Contractor shall consider filtering the water through a 5-micron filter prior to testing.
- Storage and disposal of generated materials shall follow the requirements outlined in Section 9, specifically:
- Double-bagged materials will be further sealed, packaged, stored, and transported in leak-tight containers approved under 49 CFR 173, 178, and 199.
- Stored materials shall be isolated in a secured area or lockable and DOT-approved container that is inaccessible to all persons other than abatement personnel.

### 7.1.4 Material and Equipment

The work of this Section, without limiting the generality thereof, includes the furnishing of labor, materials, tools, equipment, services, and incidentals necessary to complete Lead-Related Abatement in accordance with the Plans and Specifications that are intended to describe, and provide for, a finished piece of work; what is called for by any portion of these documents shall be complete in every detail, notwithstanding whether or not every item necessarily involved is particularly mentioned.

- Polyethylene sheeting (minimum thickness of 6-mil),
- Plastic bags (minimum thickness of 6-mil),
- Waterproof tape,
- Lead warning signs (as required),
- Ventilation units and exhaust fans,
- Flexible duct for ventilation units (if required),
- Spray adhesive (fire retardant),
- PPE (NIOSH-approved respirators, eyewash stations, disposable coveralls, etc.),
- HEPA vacuums,
- Polyethylene sealer (concrete compatible),
- Lead specific cleaner,
- Fire extinguishers,
- All products required to perform abatement as specified,
- Other materials, tools, and equipment necessary for LCS abatement,
- SDS for all products used (kept on site at all times).

### 7.1.5 Responsibilities and Supervision

The Contractor will be required to use specific abatement methodologies during the course of the work. It will be the responsibility of the Contractor to abide by all of the worker protection and safety specifications as outlined. The Contractor will be required to provide electrical service sufficient for the equipment to be used during abatement. Plumbing shall also be provided by the Contractor so that adequate services are available for washing down the areas after abatement and for personal hygiene. The Contractor will be required to have an onsite abatement Supervisor during all phases of abatement and will be required to have all employees trained that perform the actual work.

## 7.2 Component Removal Procedures

Abatement procedures detail both specific components and generalities of component removal. Specific components are listed in Table 1; generalities of abatement are detailed in Tables 2 through 4, and below. All resulting bundles or "containers" of removed components and/or debris shall be carefully handled to reduce the potential of ripping, bursting, or otherwise diminishing the integrity of the bundle or "container."

- Care must be taken so that leaded materials are neither burned, made to become dusty, nor result in further exposure to Workers, occupants, or observers.

- Care shall be taken to avoid damage to adjacent areas during the removal of components. The Contractor shall carefully run a utility knife around the edge (score) of the abatement substrate and the adjacent (non-abated) substrate to cut any bonding between the substrates and thereby eliminate damage.

- If components to be removed contain gross areas of loose or peeling paint, these areas shall be wet scraped or HEPA vacuum prior to removal. The paint chips shall be contained either in the HEPA vacuum or in a separate 6-mil polyethylene bag. Temporary encapsulant expressly for this purpose is also acceptable.

## 7.3 Paint Film Stabilization

### 7.3.1 Substrate Repairs

- Prior to stabilizing lead-based paint, correct substrate surface defects. Remove loose, unsound, or deteriorated substrates.

- Place deteriorated substrates in 6-mil polyethylene disposal bag and dispose of in accordance with applicable regulations.

### 7.3.2 Paint Removal

- Wet Scraping: Remove all loose, flaking, and deteriorated paint by wet scraping. Continually mist surface with water during scraping. Clean any generated debris by HEPA vacuum.

- Wet Sanding: Prepare finish surfaces by wet sanding, featheredges lightly. Keep surface wet while sanding. Use hand sanding and HEPA-vacuum debris. If mechanical sanders are used, they must be equipped with integrated HEPA-filtered dust collection.

### 7.3.3 Surface Cleaning

- Dust and chips: HEPA vacuum surface after drying.

- Chemically treat surface if necessary for good paint adhesion. Follow manufacturer's printed instructions for system used.

# 8 CLEAN-UP AND FINAL CLEARANCE

## 8.1 End-of-Day Cleaning

Sixty minutes prior to the end of each workday, the lead work area must be cleaned of all debris. Under no circumstances will lead clean-up be permitted when active LCS abatement work is proceeding. All interior surfaces in the work area shall be cleaned of dust and debris. Such cleaning shall include a thorough HEPA vacuuming of all affected surfaces, as determined by the consultant. Additionally, such cleanings may require the use of a lead-specific cleaner. All waste materials generated during this daily clean up shall be disposed of as hazardous waste, unless analytical testing proves otherwise.

## 8.2 Equipment Cleaning

Durable equipment, such as power and hand tools, generators, and vehicles shall be cleaned prior to removal from work area undergoing abatement, or the site. All equipment shall be cleaned by HEPA vacuuming and wet washing with a lead-specific cleaner.

## 8.3 High-Efficiency Particulate Air Vacuum

The Contractor will obtain training in the use of the HEPA vacuum from the manufacturer prior to use and submit evidence of this training to the Owner and Consultant. The Contractor shall obtain HEPA vacuum attachments, such as various size brushes, crevice tools, and angular tools to be used for varied applications and service the HEPA vacuum routinely to assure proper operation. Caution shall be used any time the HEPA vacuum is opened for filter replacement or debris removal. Operators shall wear a full set of protective clothing and equipment, including respirators, when using the HEPA vacuuming equipment or removing/replacing used filters.

## 8.4 Preliminary Clean-Up

Upon completion of the LCS abatement and a satisfactory visual inspection by the Owner/Consultant in a given work area, a preliminary clean-up shall be performed by the Contractor. This clean-up includes removal of any contaminated material, equipment, or debris including polyethylene sheeting from the work area. The polyethylene sheeting shall first be sprayed or misted with water for dust control, the resulting abatement debris removed, and then the sheeting shall be folded in upon itself.

### 8.4.1 Large Debris

Large debris from abatement shall be wetted and wrapped in polyethylene sheeting at least 6-mil thick, sealed with appropriate tape, and stored until proper disposal.

### 8.4.2 Small Debris

Prior to picking up or collecting small debris, the surfaces of this debris will be sprayed with a fine mist of water. The debris will be picked up, collected, and placed into a single plastic bag, at least 6-mil thick. The bags shall not be overloaded, shall be securely sealed, and shall be stored in the designated area until disposal. Dry sweeping is not permitted in the work area.

### 8.4.3 Sheeting

Removal of 6-mil polyethylene sheeting shall begin from upper levels. Removal of ground polyethylene sheeting shall begin at the corners and be folded into the middle to contain dust or residue. All collected polyethylene sheeting shall be placed in 6-mil polyethylene bags for proper disposal, as described in this specification.

### 8.4.4 High-Efficiency Particulate Air Vacuuming

Once the 6-mil polyethylene sheeting is removed from the work area, cleaning shall begin with a thorough HEPA vacuuming of all surfaces, starting at the ceilings, proceeding down the walls and including windows, door, and door trim, and floor. The floor shall be vacuumed last, beginning at the farthest corners from the entrance to the work area. HEPA vacuuming shall again be performed, as noted above, after the following wet wash.

### 8.4.5 Wet Wash

Contractor shall next wet wash or mop the same surfaces with a lead-specific cleaner, following the same top-down, far-to-near procedures, and allow surfaces to dry. Then a second HEPA vacuuming of the surfaces will be performed by the Contractor, as described above. By the conclusion of the cleaning phase, all visible dust and debris shall have been completely removed.

### 8.4.6 Hygiene, Cleaning Equipment, and Supplies

Special attention shall be given to personal hygiene and the cleaning of supplies and/or equipment. All mop heads, sponges, and rags shall be replaced or changed daily, at a minimum. Rags, mop heads, or sponges may be reused if the Contractor has them cleaned via a washing system specially equipped for lead-contaminated materials.

### 8.4.7 Detergents

The Contractor shall prepare and use detergents specifically designed for lead abatement work. The manufacturer's recommended coverage will be followed. Detergent solutions should be replaced as needed.

The wastewater from the cleanup shall be contained and disposed of according to all applicable federal, state, county, and local regulations and guidelines. In no instance shall wastewater be disposed in storm sewers (e.g., yard inlet or street drain) or sanitary sewers (e.g., toilet, sink, or any other household/ residential/ commercial type drain system) without specific governmental approval.

## 8.5 Post-Removal Inspections

The Contractor shall then request a visual inspection by the Owner and Consultant. If the area does not pass a visual inspection, the Contractor shall re-clean the area.

## 8.6 Final Clearance Inspections

When all surfaces have passed visual inspection, wipe samples shall be performed by the Consultant. This shall be performed after the Contractor has completed the final clean up. The standards for passing a wipe test are outlined in Table 6. Should laboratory results indicate that the wipe test clearance level is exceeded, the Contractor shall re-clean the affected area, at no additional cost to the Owner, utilizing the methods specified above. Re-testing will then be performed to verify compliance with the mandated levels. The Contractor shall pay for all additional testing and provide, at no additional cost, a re-cleaning of an affected area until the clearance level is achieved. The Contractor is also responsible for any additional expenses, such as relocation expenses and Consultant fees, due to failure of clearance testing.

## 8.7 Inspection, Clearance, and Wipe Standards

When clean-up has been completed and before surfaces have been sealed, wipe sampling by the Consultant will be performed. The following sampling scheme shall be followed, as closely as possible, for all "clearance" requirements:

**Table 6 – Wipe Tests**

| Type of Abatement Procedure | Number and Location of Wipe Samples |
|---|---|
| Interior Treatments | Two wipe samples from every treated room (up to four rooms) as follows: |
| | -One interior window sill or window trough, alternating between rooms (one floor, if window not present) |
| | -One floor |
| Exterior Treatments | Two wipe samples as follows: |
| | -At least one dust sample on a horizontal surface in part of the outdoor area. |
| | -One window trough sample on each floor where exterior work was performed |

Other applicable areas may also have wipe samples taken, at the discretion of the Consultant, in conformance with the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.

Clearance shall be achieved once the laboratory results of the dust wipe samples meet the clearance standards, as described in Chapter 15 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing and Title 17 CCR Division 1, Chapter 8, and per the following table:

**Table 7 – Wipe Standards**

| Sample Location | Standards for Passing a Wipe Test |
|---|---|
| Interior floors | ≤ 10 µg/ft$^2$ |
| Interior window sills/surfaces | ≤ 100 µg/ft$^2$ |
| Exterior horizontal window and floors | ≤ 400 µg/ft$^2$ |

**NOTE:**
µg/ft$^2$ = lead concentration in micrograms per square foot.

## 8.8 Re-tests

Should laboratory results indicate that the wipe test clearance level is exceeded, the Contractor shall re-clean the affected area, at no additional cost to the Owner, utilizing the methods specified above. Re-testing will then be performed to verify compliance with the mandated levels. The Contractor shall pay for all additional testing and Consultant fees, and provide at no additional cost a re-cleaning of an affected area until the clearance level is achieved.

# 9 DISPOSAL OF WASTE MATERIAL

## 9.1 Caution Note for Contractors

All materials, whether hazardous or non-hazardous, shall be disposed in accordance with all laws, the provisions of this section, and all applicable federal, state, county, or local regulations and guidelines. It shall be the sole responsibility of the Contractor to assure compliance with all laws and regulations relating to this disposal.

## 9.2 General Applicability

The Contractor shall contact the regional EPA office, state, and local authorities to determine LCS debris disposal requirements.

The requirements of the Resource Conservation and Recovery Act (RCRA) shall be complied with, as well as California solid waste plan requirements. During abatement, the Contractor shall not leave debris on the property, incinerate debris, dump waste by the road or in an unauthorized dumpster, or introduce lead-contaminated water into storm or sanitary sewer systems.

## 9.3 Hazardous Waste Tests

In order to determine whether the wastes are classified as non-hazardous solid or hazardous waste, as defined under RCRA, the Toxicity Characteristic Leaching Procedure (TCLP) testing/analysis must be performed. Representative samples shall be required of all material to be disposed.

If any of these samples are above the TCLP regulatory limits, the Contractor shall dispose of all of that type of material as hazardous waste.

- The Contractor shall further meet the requirements of the State of California, as per Title 22 CCR 66261 and other related regulations. This will include, if applicable, other waste testing, such as Total Threshold Limit Concentration (TTLC) and Soluble Threshold Limit Concentration (STLC).

- All costs associated with disposal of all of the above materials as non-hazardous waste (general demolition) and hazardous waste shall be included in the Contractor's Base Bid Price.

- The Contractor shall submit written manifest to Owner prior to removing any waste from the site and shall submit complete manifests to Owner after waste is disposed of. The following documents are made applicable and part of this Section: Title 40 CFR 241, 257, 261, and 262, and Title 49 CFR 172, 173, 178, and 179 (Department of Transportation (DOT) Regulations).

## 9.4 Disposal Requirements

The following materials will be disposed of by the Contractor as hazardous waste, in accordance with this section. All costs associated with the disposal of these materials as hazardous waste shall be included in the Contractor's Base Bid Price.

- All paint chips and paint chip debris.
- Lead-containing materials exceeding TCLP regulatory requirements.

The following materials, individually and at a minimum, shall be tested by the Contractor and results made available to Owner and Consultant, to determine whether or not they are to be considered hazardous. All costs associated with the testing and proper disposal of the below mentioned materials shall be included in the Contractor's Base Bid Price.

- Wastewater used to decontaminate.
- Rags, sponges, mops, HEPA filters, respirator cartridges, and other materials used for abatement and clean-up and containment.
- Other LCS abatement derived waste.

## 9.5 Disposal of Non-Hazardous Contaminated Solid Waste

The following procedures shall be followed for the disposal of all non-hazardous materials.

- The Contractor shall place all non-hazardous contaminated materials in 6-mil polyethylene bags that are airtight and puncture resistant. Pieces of wood or other types of substrates that do not fit into plastic bags shall be wrapped and labeled "DANGER, LEAD DUST."
- The Contractor shall place all disposable cleaning materials, such as sponges, mop heads, filters, disposable clothing in 6-mil plastic bags and seal.
- The Contractor shall clean surfaces and equipment and bag large debris. The Contractor shall then remove plastic sheeting and tape from covered surfaces. Prior to removing the plastic sheeting, the Contractor shall lightly mist the sheeting in order to keep dust down and fold inward to form tight bundles to bag for disposal. The Contractor shall place all plastic sheeting in 6-mil bags and seal. Any bags shall be labeled "DANGER, LEAD DUST."
- The Contractor shall bag and seal vacuum bags and filters in 6-mil bags.
- The Contractor shall place all contaminated clothing or work area clothing used during abatement, in 6-mil thick plastic bags for disposal prior to leaving the work area.
- The Contractor shall contain and properly dispose of all liquid waste, including lead-dust-contaminated wastewater.

- The Contractor shall HEPA vacuum the exterior of all liquid waste containers, prior to removing the waste containers from the work area, and wet wipe the containers to ensure that there is no residual contamination. Containers shall then be moved out of the work area into the designated storage area.

- The Contractor shall ensure that all waste is transported in covered vehicles to a landfill, or lined landfill, if available, in accordance with applicable DOT and EPA Regulations.

- The Contractor shall submit to the Owner and Consultant for approval, the waste transfer procedure and route, and shall comply with all EPA and DOT regulations concerning hazardous and non-hazardous waste removal and transportation.

## 9.6 Disposal of Hazardous Waste

The following procedures shall be followed for disposal of all material as hazardous waste:

- The Contractor and transporting contractor will be required to comply with the RCRA and with all applicable state and local regulations.

- The Contractor shall comply with all EPA regulations.

- The Contractor shall prepare hazardous waste for disposal as follows:

    - Packaged and sealed in containers approved under Title 49 CFR 173, 178, and 199.

    - Containers shall be numbered to correspond to the seal number, labeled with the type of materials, date it was filled and sealed, seal number, and weight of sealed container in addition to the information required under Title 49 CFR 172.

    - A log shall be prepared at time of filling, identifying each numbered container and the information from above. A copy of this log shall be turned over to the Consultant within three working days after the containers are filled.

    - Name, location, and telephone number of the disposal site used. A copy of the sites state and locally issued license, and a signed agreement that they will accept the hazardous lead waste, shall be provided to the Consultant.

    - Name, address, and telephone number of any waste subcontractors used. Provide copies of licenses and signed agreements to the Consultant.

    - Submit copies of the Hazardous Waste Manifest, as required by these specifications.

- Waste Transportation: All hazardous waste shall be transported by a certified hazardous waste transporter. The Contractor shall require the certified hazardous waste transporter to follow RCRA and DOT regulations.

- Prior to the removal of any hazardous waste, the below listed information must be received in writing by the Consultant and Owner for their review and approval. Once approval is received by the Contractor from the Consultant and Owner, the waste may be transported as required.
    - Quantity of Hazardous Waste.
    - Type of Waste Materials.
    - Method of Containerizing Waste or Waste Treatment, and appropriate licensing, certification, and regulatory approvals.
    - Proposed Waste Hauler and Disposal Route.
    - Proposed Waste Disposal Site or Landfill.
- Receipts from the Waste Hauler and waste disposal site or landfill must be received and approved by Owner and Consultant, as per regulation.

## 9.7 Storage Requirements

Any item found to be hazardous, by way of testing, shall be kept in a secured area or lockable and DOT-approved container that is inaccessible to all persons other than abatement personnel. All hazardous waste shall be labeled "Hazardous Waste" and a date that the contractor began to collect waste in that container. All hazardous and non-hazardous waste shall be kept in totally and completely separate containers. Until TCLP testing proves an item to be non-hazardous, all items shall be considered hazardous and stored in a secured area or lockable container.

## 9.8 Regulations

The contractor will be required to comply with RCRA and/or any other applicable federal, state, or county law, regulation, and/or guideline, whichever is most stringent.

## 9.9 Emergency Procedures

Contractors shall keep and properly maintain suitable fire extinguisher(s) on site; have an immediate means of communication with a regulatory agency in the event of an emergency; keep a list of phone numbers of regulatory agencies on site, make sure all employees know how to deal with all types of accidents, and make one person who is always on site the emergency coordinator to ensure that emergency procedures are carried out in the event an emergency arises; and keep and maintain a "right to know" manual that is in an easily accessible location and in an area that is known to all employees.

# SECTION 3

## Universal and Other Hazardous Waste Removal Specifications

# Universal and Other Hazardous Waste Removal Specifications

# Pier View Way Bridge and Lifeguard Headquarters

## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


September 17, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

# Universal and Other Hazardous Waste Removal Specifications
# Pier View Way Bridge and Lifeguard Headquarters
## 301 The Strand North
## Oceanside, California

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September 17, 2021 | Project No. 109214001

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# 1 SCOPE OF WORK

The scope of work for the universal waste abatement and/or removal portion of the Pier View Way Bridge and Lifeguard Headquarters (subject structure) restoration/replacement project could involve the removal, transport, and disposal, prior to structure restoration or demolition, of items and/or materials generally referred to as "universal waste" (u-waste) and other potentially hazardous materials, as outlined in the construction contract documents. Work will be performed for, and subject to the review of, the City of Oceanside (Owner) and its assigns (including, but not limited to, Moffatt & Nichol), which will be referred to herein as the Consultant, if engaged by the Owner.

U-waste is defined on the federal level in the Resource Conservation and Recovery Act (RCRA; Title 40 Code of Federal Regulations [CFR] Part 273) and, on the state level, in Title 22 California Code of Regulations (CCR) Division 4.5, Chapters 11 and 23, both of which are referred to as Universal Waste Rules (UWRs). Administration of u-waste is within the purview of the U.S. Environmental Protection Agency (EPA) and the California Department of Toxic Substances (DTSC). U-waste is categorized as batteries, pesticides, mercury-containing equipment, lamps (e.g., fluorescent), electronics, and non-empty aerosol cans.

Other hazardous materials include, but are not limited to, potentially polychlorinated biphenyl (PCB)-containing light ballasts, potentially tritium-containing exit signs, potentially americium-containing smoke detectors, and potentially Freon-containing air conditioning units and refrigerators. For the purposes of this specification, "Freon" refers to both Freon™, the brand-name refrigerants and aerosols produced by The Chemours Company, and other halocarbon/fluorocarbon refrigerants. **Confirmation analysis to identify other potentially hazardous materials has not been performed and is the responsibility of the Contractor.**

## 1.1 Overview

- All work shall be supervised by experienced persons trained, knowledgeable, and qualified in the performance of abatement, handling, and cleaning activities related to u-waste and other hazardous materials, including PCB-containing and PCB-contaminated materials.
- The Contractor shall provide and maintain environmental and occupational safety protective measures, equipment, and procedures at the work site.
- The Contractor shall furnish all labor, materials, services, insurance, equipment, decontamination facilities, and waste characterization of all u-waste materials in order to carry out the complete removal, transport, and disposal of all u-waste identified in the specifications that are part of the restoration/replacement project.

- The Contractor shall furnish all labor, materials, services, insurance, equipment, decontamination facilities, and waste characterization of all other potentially hazardous materials, including PCB-containing and PCB-contaminated materials, in order to carry out the complete removal, transport, and disposal of all other hazardous materials identified in the specifications as potentially hazardous and that are part of the restoration/replacement project.

- With respect to available utilities, the Contractor shall coordinate access and use of all utilities as needed for the duration of the project with the Owner. If utilities are unavailable, the Contractor will be required to provide the utilities at the Contractor's own cost.

- Work shall be performed in accordance with all applicable regulations, codes, ordinances, and standards of governing authorities having jurisdiction and the requirements specified herein. Where applicable state or local standards are more stringent than federal standards, the Contractor shall adhere to the most stringent standards.

## 1.2 Universal and Other Wastes Scope of Work

The Contractor's Scope of Work for U-Waste and Other Hazardous Materials may include, but is not limited to, the following:

- Removal and disposal/recycling of potentially mercury-containing fluorescent light tubes from light fixtures;

- Removal and disposal/recycling of potentially americium-containing smoke detectors;

- Removal and disposal/recycling of potentially Freon-containing air conditioning units and refrigeration systems;

- Removal and disposal/recycling of potentially PCB-containing and PCB-contaminated materials, as further outlined in Section 1.3;

- Placement of all contaminated items generated as a result of work and cleanup activities in approved storage containers;

- Marking and labeling of all u-waste and other potentially hazardous materials and items for storage and disposal/recycling purposes;

- Transport of all u-waste and other potentially hazardous materials items and containers to a disposal facility and/or to an approved and off-site processing site for recycling;

- Preparing manifests, bills of lading, and all other required documentation for transportation, processing, and disposal of u-waste and other potentially hazardous materials, for signature by the Owner;

- Removal and disposal/recycling of any other potentially hazardous building materials as described in Ninyo & Moore's Hazardous Building Materials Survey (Section 5 of the Abatement Specifications).

## 1.3 Polychlorinated Biphenyl Waste Scope of Work

The Contractor's Scope of Work for PCB waste may include, but is not limited to, the following:

- Removal of all potentially PCB-containing ballasts from light fixtures. All light fixtures are to be visually inspected, prior to removal or retrofitting, to determine if they contain PCBs. Those ballasts marked as "No PCBs" or "PCB Free" shall be considered as such. Those ballasts that are unmarked shall be considered PCB-containing and properly handled.
- Removal of all potentially PCB-containing oils, residues, and rinsates from electrical transformers.
- Proper cleanup and disposal of light fixtures, if ballast oils have breached the fixture container.
- Placement and proper packaging in approved storage containers of all PCB-containing and/or PCB-contaminated waste generated as a result of work and cleanup activities.
- Proper packaging includes the use of an approved absorbent to contain any leaks that may occur during transportation to the disposal facility.
- Marking and labeling of all PCB-containing and/or PCB-contaminated materials for storage and disposal purposes.
- Transportation of all PCB-containing and/or PCB-contaminated materials and disposal containers to an on-site storage facility, a disposal facility, and to an approved and permitted off-site processing site for draining and/or flushing prior to disposal and recycling.
- Labeling and record keeping in accordance with all applicable local, state, and federal regulations.
- Incineration or recycling of PCB-containing and/or PCB-contaminated fluids (and solids, if preferred by the Contractor) and land filling of contaminated solids, only as authorized by 40 CFR 761, at facilities approved by the EPA and all other applicable regulatory agencies for such purposes.
- Prepare manifests and all other documentation for transportation, processing, and disposal of PCB wastes, for signature by the Owner.

## 1.4 Quality Assurance

Since the work described herein includes the handling and disposal of highly toxic substances and materials requiring special expertise, the Contractor shall meet the following specific qualifications:

- Single Party Responsibility: The Contractor performing the work shall be responsible for, and accomplish, all u-waste and other potentially hazardous materials-related work activities.
- License Requirements: The Contractor or agent performing work for the Contractor must be currently licensed by the State of California Department of Public Health for the transporting, handling, and hauling of extremely hazardous wastes, including materials falling under the UWR and PCB-related wastes.

- Qualifications Statement: The Contractor shall provide a Statement of Qualifications for review by the Owner and/or the Consultant. The statement will provide sufficient data and information to prove to the satisfaction of the Owner that the Contractor performing the work described herein is fully experienced in the handling, storage, and transport of u-waste and other hazardous materials, including contaminated articles and PCB-related wastes.

## 1.5 Submittals

### 1.5.1 Pre-Work Submittals

Prior to the start of work, the Contractor performing the work described herein will submit to the Owner/Consultant, for review, a Statement of Qualifications (as described in Section 1.4), Site Specific Work Plan, Hazardous Waste Permits (where applicable), Hazardous Waste Haulers License Number, EPA Identification Number, Certification of Disposal (where applicable), Accidental Spills Contingency Plan, and Routing of Equipment to be removed.

The Contractor, together with applicable subcontractors/agents, will develop a Site Specific Work Plan for review by the Owner and/or the Consultant. The Work Plan, at a minimum, will address and specify the following:

- Procedures and materials for the containment of the regulated work area, where appropriate;
- Delineation of the project work area and planned regulated work areas;
- Abatement procedures and materials for the removal of u-waste and other hazardous materials, including PCB-containing and/or PCB-contaminated liquids, solids, and articles;
- Decontamination procedures for personnel and equipment and disposal of equipment falling under the UWR and/or containing or contaminated by PCBs;
- Emergency procedures, including emergency contact names and daytime phone numbers of all key personnel, location/route and contact information for the nearest hospital emergency room, and on-site first aid treatment and procedures;
- Waste storage container types for on-site storage and transportation for disposal; and
- Temporary on-site storage procedures and locations, including required documentation.

The Work Plan may contain/encompass the Accidental Spills Contingency Plan. However, a generalized, “boiler-plate” type of work plan will not be accepted – the Work Plan must be site specific.

Following Work Plan review by the Owner and/or the Consultant, the Contractor will submit a complete, finalized list of all the materials and equipment proposed for use in the project. The list shall include such items as protective clothing, respiratory protection, absorbents, solvents, waste storage containers, item containers, and all appurtenances. A current Safety Data Sheet (SDS) will be submitted for each material/item for which a SDS is available. For items which a SDS in not available, the Contractor will submit the name of the manufacturer, brand name, and catalog/serial number for each item.

### 1.5.2 Post-Work Submittals

Following the completion of work, the contractor shall provide the Owner with adequate documentation related to the completion and closeout of project activities. Required submittals are discussed in Sections 4.5 and 4.6.

## 1.6 Regulatory Compliance

All work shall be performed in compliance with pertinent laws, rules, and regulations existing at the time of the work, including but not limited to:

- Federal UWR, Title 40 CFR Part 273.
- California UWR, Title 22 CCR Division 4.5.
- Title 8 CCR Division 1, Chapter 4.
- California Health and Safety Code, Division 20.
- The Occupational Safety and Health Administration (OSHA) Standards for respiratory protection, Title 29 CFR Part 1910.134.
- The Transportation Safety Act, Hazardous Material Transportation Act, Title 49 CFR Parts 106, 107, 171-179 (referred to as *DOT [part no.]*).
- All applicable state, regional, and local regulations and ordinances, including any regulations regarding state and/or local licenses or certificates.
- Where applicable state, regional, or local regulations are more stringent than federal/OSHA requirements or the requirements referenced herein, the Contractor shall adhere to the more stringent regulations.

The Contractor warrants that it is familiar with the codes and requirements applicable to materials falling under the UWR and other hazardous materials, including PCB waste, and shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the work. If the Contractor observes that the Specifications or plans are at variance therewith, he shall give written notice to the Owner and/or the Consultant describing such variances. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without written notice to the Owner and/or the Consultant, the Contractor shall bear all costs arising therefrom. Failure or omission on the part of the Contractor, or any of its representatives or subcontractors, either to discover or to bring to the attention of the Owner and/or the Consultant any deviation from, omission from, or noncompliance with the requirements for abatement of materials falling under the UWR and/or other hazardous materials shall not be used by the Contractor as defense for failure on its part to fulfill such requirements.

# 2 PRODUCTS

## 2.1 Storage Containers

- All u-waste, PCB waste, and other potentially hazardous fluids and contaminated fluids, including flush and cleaning solvents and mixtures, shall be stored in sealed Department of Transportation (DOT) 17E closed-top drums or other waste container approved for the storage of these materials.

- For the purposes of these specifications, PCB-contaminated fluids are defined as containing a concentration of PCBs more than 5 but less than 500 parts per million (ppm). PCB-containing fluids (PCB fluids) are defined as containing a concentration of PCBs of 500 ppm or greater. Flush solvents shall be assumed to contain more than 500 ppm PCBs (i.e., assumed to be a PCB fluid).

- All u-waste, PCB waste, and other potentially hazardous soil wastes and items used in the course of work, such as rags, absorbents, and protective clothing, shall be stored in sealed DOT 17C open-type drums or other waster container approved for the storage of these materials.

- Any u-waste, PCB waste, or other potentially hazardous article container, other than approved DOT drums described above, that is intended for the storage of u-waste or other potentially hazardous materials/articles, shall be submitted to the Owner and/or the Consultant for approval.

## 2.2 Solvents, Cleaning Agents, and Absorbents

- An appropriate solvent in which u-waste and/or other potentially hazardous materials are shown to be soluble will be selected. Specifically related to PCB waste, an appropriate solvent in which PCBs are shown to be at least 5% soluble, by weight, will be selected. Solvents specified by the EPA include: kerosene, diesel fuel, terpene hydrocarbons, and a mixture of terpene hydrocarbons and terpene alcohols. Care should be taken to limit the complexity of the waste stream. In all cases where solvents are used in the course of work, proper personal protective equipment (PPE) shall be used by the contractor in accordance with the SDS for the solvent and proper ventilation shall be provided by the Contractor to insure that the resulting fumes/vapors are safely dispersed from the work area and do not impact occupied building areas outside of the work area, either as a result of natural convection or via air intakes for building ventilation systems. The manufacturer's recommendations for applications and requirements for California Division of Occupational Safety and Health (Cal/OSHA or DOSH) shall be strictly observed.

- An appropriate cleaning agent in which u-waste and/or other potentially hazardous materials are shown to be soluble in will be selected. Specifically related to PCB waste, an appropriate cleaning agent in which PCBs are shown to be at least 5% soluble, by weight, will be selected. Care should be taken to limit the complexity of the waste stream. Numerous non-toxic cleaning agents, shown to meet or exceed the solubility standard, are commercially available. In all cases where cleaning agents are used in the course of work, proper ventilation shall be provided by the Contractor to insure that the resulting fumes/vapors are safely dispersed from the work area and do not impact occupied building areas outside of the work area, either as a result of natural convection or via air intakes for building ventilation systems. The manufacturer's recommendations for applications and requirements for Cal/OSHA shall be strictly observed.

- Safestep, as manufactured by Andesite of California, Inc. or functional equivalent, approved by the Owner and/or the Consultant, will be used as an absorbent.

# 3 SAFETY PROCEDURES AND WORKER PROTECTION

## 3.1 General Precautions

- The Contractor shall take all precautions and measures required to protect employees, inspection personnel, the Consultant and any other Representative of the Owner, and the general public from exposure to u-waste, PCBs, and other potentially hazardous solids, liquids, and vapors.

- All personnel authorized for entry into the work areas shall be instructed in the proper procedures for working with or around electrical hazards, u-waste, PCBs, other potentially hazardous materials, and materials contaminated by u-waste, PCBs, or other potentially hazardous materials.

- All electrical equipment, upon which abatement/removal activities are to be performed, shall be de-energized, locked out/tagged out, and disconnected from any power source prior to the commencement of work.

- Consumption of food or tobacco products shall not be permitted in any of the work areas where u-waste, other hazardous materials, or volatile solvents are present. In addition, no open flames shall be permitted in the work areas. Signage to this effect will be posted at each entry and exit from the work areas.

## 3.2 Work Area Protection and Demarcation

- Prior to commencing any abatement/removal work activities, the Contractor will provide barricades, roping, and warning signs to clearly identify and effectively guard against unauthorized entry into the work area.
    - At a minimum, barricades may consist of yellow sawhorses, set end-to-end.
    - Ropes are to be yellow in color and supported by the use of weighted-bottom, pipe-type supports.
    - Warning signs shall be suspended from the rope and placed at intervals of approximately 10 feet. Warning signs for the work area shall be approximately 18 inches square, with a yellow background and black lettering. Signs shall read “DANGER - KEEP OUT - TOXIC CHEMICAL WORK AREA”.
- The Contractor will place barricades in order to maintain a minimum “buffer” zone of 25 feet between all perimeters of the work being conducted and the barricades, where feasible.
- All equipment, such as tools and containers, shall be confined to the work area until the work is complete, containers are sealed, and equipment has been properly decontaminated and safely stored for transport.

## 3.3 Personal Protective Clothing, Equipment, and Procedures

- At all times when u-waste and/or other potentially hazardous fluids or mixtures in any volume are not sealed in drums, containers, or electrical equipment, workers shall wear the following:
    - Disposable gloves impermeable to both the hazardous fluid and the clean-up agent in use.
    - Disposable coveralls impermeable to both the hazardous fluid and the clean-up agent in use.
    - Appropriate eye protection to ensure that eyes are protected from liquid splatter or exposure to concentrated vapors or fumes.
    - If appropriate, respiratory protection appropriate for the concentration of the hazardous material(s) and/or atmosphere present. If utilized, supplied air must meet the requirements for Grade D air, at a minimum.
- The Contractor shall provide protective clothing, eye protection, and breathing apparatus, as required, for authorized inspection personnel, the Owner, the Consultant, and/or any other Representative of the Owner upon request.

- The work area shall not be left unattended from the start of work activities until all waste and incidentals have been sealed in approved containers. If immediate transportation to an appropriate storage facility or disposal facility is not feasible, the work area must be secured in a manner approved by the Owner or the Consultant.

- During work procedures and at all times when u-waste or other potentially hazardous fluids or contaminated fluids in any volume are not sealed in drums, containers, or electrical equipment, all personnel entering the work area must don protective clothing and equipment. Upon exiting the work area, all disposable protective clothing shall be stored in appropriate waste storage drums and sealed for subsequent transportation to the on-site storage facility or disposal facility.

- Workers with cuts or scratches shall cover these wounds sufficiently prior to entering the regulated work area to prevent accidental contact with hazardous materials within the regulated work area. Similarly, workers who incur accidental minor cuts or scratches in the course of work activities will immediately leave the work area, cleanse the wound with a medical grade soap, and seal the wound before returning to the work area.

# 4 EXECUTION

## 4.1 Spill Cleanup, Containerization, and Marking

### 4.1.1 Cleanup of Work Area, Waste Materials, and Spills

- After the last light ballast has been removed and all fluids and solids have been cleaned from the fixture, all tools and equipment used in the work shall be decontaminated and properly stored for future use.

- All tools that have come into contact with u-waste, PCBs, or other potentially hazardous materials at any concentration will be thoroughly double washed/rinsed with an appropriate cleaning agent, wiped clean, and properly stored.

- At a minimum, all exterior surfaces of equipment that may have come into contact with u-waste, PCBs, or contaminated solids or fluids either during the course of work activities or due to past leaks will be double washed/rinsed with an appropriate cleaning agent and wiped clean.

- All metal surfaces and surfaces with impermeable liners which have come into contact with u-waste, PCBs, or other potentially hazardous materials and/or mixtures in the course of work or as a result of past leaks shall be thoroughly cleaned using a combination of absorbents and solvents or cleaning agents. Minimum cleaning requirements for these surfaces will include the removal of bulk material and two rinses with the cleaning agent of the affected surfaces. The work area shall be effectively ventilated during operations such that vapors released during decontamination and cleaning are safely exhausted and not vented to occupied building areas. Upon completion of work activities, if fumes or vapors are still present in levels that could impede breathing or be considered toxic under state and/or National Institute of Occupational Safety and Health (NIOSH) standards, the Contractor will provide additional ventilation to accelerate dispersal/drying. If needed, auxiliary/self-contained breathing apparatus may only be used by personnel trained in the use of this equipment

and experienced in conducting related work while wearing such apparatus, which can impede safe work practices.

- The EPA, Region IX, regards soil, asphalt, wood, cement, and concrete as porous materials that absorb u-waste, PCBs, and other potentially hazardous materials/fluids. Where practical, these materials must be removed when they are within the spill or contamination boundary.

- Completion of decontamination activities shall be inspected/assessed by the Contractor's Environmental Monitor, who will collect an appropriate number and type of samples for both the specific u-waste, PCB, and/or other hazardous materials and the surfaces impacted. The Contractor is responsible for all cost associated with spill cleanup and oversight. Results shall be supplied to and reviewed by the Owner and the Consultant.

### 4.1.2 Containerization and Marking

- All liquids generated as a result of work activities and cleanup operations shall be placed in appropriate work containers and the containers sealed.

- All solids, such as absorbents, rags, disposable clothing, soil, and other incidentals, shall be placed in appropriate work containers and the containers sealed.

- All drums and items containers utilized shall be permanently marked as to the specific contents and dated. In addition, each drum and container shall be marked with the standard EPA, UWR, or PCB label, as appropriate (Title 40 CFR 273) and Hazardous Waste label (Title 40 CFR 262).

## 4.2 Drum Handling and Loading

- All drums must be permanently sealed and marked prior to loading on the transport vehicle. Filled drums shall be loaded onto the transport vehicle by the following methods:

  - By a hoist or lift truck capable of utilizing a two-point drum lifter,

  - By a hoist or lift truck provided with a band-around type drum lifter, or

  - By a lift truck lifting the drums from underneath by a pallet attached to the drum(s) by a banding arrangement.

- The drums shall not be lifted by:

  - Any rope, chain, or cloth slings tied about the drums,
  - Placement of drums on bare lift truck forks,
  - Forcing drums between the forks of a lift truck, or
  - Any commercial drum lifter exerting force on the sides of the drums.

- All drums and containers shall be secured to the transport vehicle to prevent movement while in transit.

## 4.3 Transportation

### 4.3.1 General

- All u-waste, PCB waste, and other potentially hazardous items and all drums containing liquids, solids, and incidentals shall be transported to an appropriate off-site, approved, and permitted recycling/disposal facility.
- The Contractor performing this section of the work shall be licensed for the transport and hauling of extremely hazardous waste. The Contractor shall provide a route plan, which clearly identifies the routes that it proposes to follow while transporting waste items from the work site to off-site facilities.
- A minimum of two operators shall be in attendance at all times when waste items are being transported, loaded, and unloaded.
- The specifications in the following sections apply to each motor carrier engaged in the transportation of hazardous materials by a motor vehicle that must be marked or placarded, in accordance with DOT 177.
- This section includes/applies to each officer or employee of the carrier who performs supervisory duties related to the transportation of u-waste, PCBs, or other hazardous materials and each person who operates and who is in charge of motor vehicle(s) transporting u-waste, PCBs, or other hazardous materials.

### 4.3.2 Compliance with Federal Motor Carrier Safety Rules

A motor carrier driver or other person must comply with the all applicable rules when he/she is transporting u-waste, PCBs, or other hazardous materials by a motor vehicle, which must be marked or placarded in accordance with DOT 177.

### 4.3.3 State and Local Laws, Ordinances, and Regulations

Every motor vehicle transporting or storing items containing u-waste, PCBs, or other hazardous materials must be operated and parked in compliance with the law, ordinances, and regulations of the state and local jurisdictions of which it is being operated in, unless they are at variance with specific regulations of the DOT, which are applicable to the operation of that vehicle and impose a more stringent obligation or restraint.

### 4.3.4 Attendance and Surveillance of Motor Vehicles

- A motor vehicle, which contains UWR, PCBs, or other hazardous materials and is located on a public street, highway, or shoulder of a public street/highway, must be attended by its driver. However, the vehicle need not be attended while its driver is performing other duties that are necessary to his/her duties as operator of the vehicle.

- A motor vehicle is attended when the person in charge of the vehicle is awake and in/on the vehicle or within 100 feet of the vehicle and has it within his/her unobstructed field of view.
- A qualified representative of a motor carrier is a person who:
    - Has been designated by the carrier to attend the vehicle;
    - Is aware of the nature of the hazardous material contained in the vehicle he/she attends;
    - Has been instructed in the procedures he/she must follow in the case of an emergency; and
    - Is authorized to move the vehicle and has the means and ability to do so.
- A motor vehicle that contains hazardous materials must not be parked on or within 5 feet of the traveled portion of a public street or highway except for brief periods when the necessities of operation require the vehicle to be parked and make it impractical to stop the vehicle in any other place.

### 4.3.5 Routes

Unless there is no practical alternative, a motor vehicle that contains u-waste, PCBs, or other hazardous materials must be operated over routes which do not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets, or alleys. Operating convenience is not a basis for determining whether it is practical to operate a motor vehicle in a certain area.

### 4.3.6 Fire, Open Flames, and Smoking

- A motor vehicle containing hazardous materials must not be operated near a fire or open flame, unless its driver has first taken precautions to ascertain that the vehicle can safely pass without stopping.
- A motor vehicle containing hazardous materials must not be parked within 300 feet of a fire or open flame.
- No person may smoke or carry a lighted cigarette, cigar, or pipe, on or within 25 feet of any Contractor's vehicle that contains flammable materials (flushing solvents), or an empty tank motor vehicle that has been used to transport flammable materials.

### 4.3.7 Fueling

When a motor vehicle containing hazardous materials is being fueled, its engine must not be operating and a person must be in control of the fueling process at the point where the fuel tank is filled.

### 4.3.8 Tires

- If a motor vehicle containing u-waste, PCBs, or other hazardous materials is equipped with dual tires on any axle, its driver must stop the vehicle in a safe location at least once every two hours or every 100 miles of travel, whichever occurs first, and must examine the tires. The driver is also required to check the tires at the beginning of each trip and each time the vehicle is parked.

- If, as a result of the examination described above or otherwise, a tire is found to be flat, leaking, or improperly inflated, the driver must cause the tire to be repaired, replaced, or properly inflated before the vehicle is driven. However, the vehicle can be driven to the nearest safe place to perform the required repair, replacement, or inflation. If, as a result of an examination a tire is found to be overheated, the tire will be removed and placed a safe distance from the vehicle. The driver shall not operate the vehicle until the cause of the overheating is corrected.

### 4.3.9 Binding and Tie-down

- If a motor vehicle transports u-waste, PCBs, or other hazardous materials, all containers must be properly secured in place to ensure that no equipment, items, or containers can come loose. This may include chaining, roping, strapping, or winching. The driver of the vehicle must stop the vehicle in a safe location at least once during each two hours or 100 miles traveled, whichever occurs first, and inspect the contents of the load/shipment. At the time of inspection, if any form of binding is found to be loose, the driver shall immediately take action to remedy the situation for safe transportation.

- Any equipment, drums, or other items carried in an open, flatbed, or stake-type truck shall be covered with a tarp to protect the items from the elements.

### 4.3.10 Hazardous Waste Instruction and Documentation

A motor carrier that transports “Hazardous Waste” must furnish the driver of each motor vehicle the following documents:

- A copy of these specifications.

- A document containing instructions on procedures to be followed in the case of an accident or delay. The documents must include the names and telephone numbers of the people to be contacted, the types of hazardous wastes being transported, and the precautions taken in emergencies, such as fires, accidents, or leakages.

- Manifest and permit documents described in these specifications and required for waste transport.

### 4.3.11 Marking of Vehicles

- A motor vehicle being operated must be marked if that vehicle is transporting u-waste, PCBs, or other hazardous materials of a kind that require the vehicle be marked or placarded in accordance with DOT 177.

- Commercial vehicles must display the name or trade name of the carrier operating the vehicle. These vehicles must display markings that designate the carrier as being a commercial vehicle “for hire”.

## 4.4 Disposal

The contractor shall treat and dispose of all wastes collected and generated during the execution of the scope of work described in Section 1 of these specifications.

- Except as may be otherwise specifically directed by the Owner or the Consultant, the Contractor shall treat and dispose of all waste materials as governed by 40 CFR 273, California State Regulations, local regulations, and subsequent amendments.
    - All fluids, flushing fluids, and other contaminants falling under the UWR shall be disposed of by incineration or recycling at a facility approved for such use by the EPA, and all other controlling regulatory agencies and bodies of the state, county, and municipality of that facility’s location. If the Contractor so elects, solid wastes may also be incinerated, as suitable and allowed for this type of disposal.
    - All PCB fluids, flushing fluids, waste oils, and other fluid contaminants whose total PCB content is equal to or greater than 5 ppm (and are therefore restricted to this mode of thermal destruction) shall be disposed of by incineration or recycling at a facility approved for such use by the EPA, and all other controlling regulatory agencies and bodies of the state, county, and municipality of that’s facility’s location. If the Contractor so elects, solid PCB wastes may also be incinerated, as suitable and allowed for this type of disposal.
- All wastes generated as part of these operations will likewise be disposed of by the Contractor in a legal manner and the disposal will be included as part of the Contractor’s bid.
- The Contractor shall not sell, transfer, or recover any material from the wastes received from the Owner without their prior written consent.

## 4.5 Manifests and Records

- The Contractor shall provide the Owner with a compliance certificate from the disposal facility verifying that all wastes received by it have been properly treated and disposed.
- The Contractor shall provide the Owner with copies of all manifests, permits, or other documents currently in effect relating to the specific wastes to be transported, treated, and disposed of herein, except as otherwise stated in this section. The Contractor shall also promptly furnish the Owner copies of all new or renewed permits or other documents applicable to this project as soon as the Contractor receives them.
- As the waste generator, the Owner will sign the complete waste manifests, upon approval, for all items/wastes generated during the course of this project. These manifests will accompany the waste loads to disposal and be properly completed by the hauler and disposal agent, as required under federal and state hazardous waste management statutes. The final manifest shall be returned to the Owner by registered mail within the designated time period under federal statutes.

- The project shall not be considered complete, nor will the Owner issue final payment, until the Owner receives certifications of incineration (for fluids) and/or recycling.

## 4.6 Placement in Storage and Records

### 4.6.1 Unloading and Placement in Storage

- Transport vehicles will be unloaded utilizing the same equipment and methods as for loading (Section 4.2).
- Drums and other storage containers will be placed in storage facilities and in locations designated by the disposal site.
- Drums shall be placed on pallets of sufficient strength to withstand double stacking. Drums shall not immediately be stacked at the initial time of storage unless space is limited, as determined by the disposal site (i.e., drums shall be loaded to the ground before future placement and/or stacking). Where stacking of drums is necessary, pallets shall be placed between the drum layers.
- Ample clearance space will be provided around other storage containers in order to facilitate future inspections.
- Immediately following the unloading of the transport vehicle, the cargo area shall be inspected to check for any fluid leaks. If any fluids are found, the source of the leaking drum or other storage container shall be identified and sealed.
- The contaminated cargo area shall be thoroughly washed/rinsed clean with absorbents, solvents, and liquid cleaners. Cleaning agents, solvents, and solids shall be placed in proper drums for disposal.

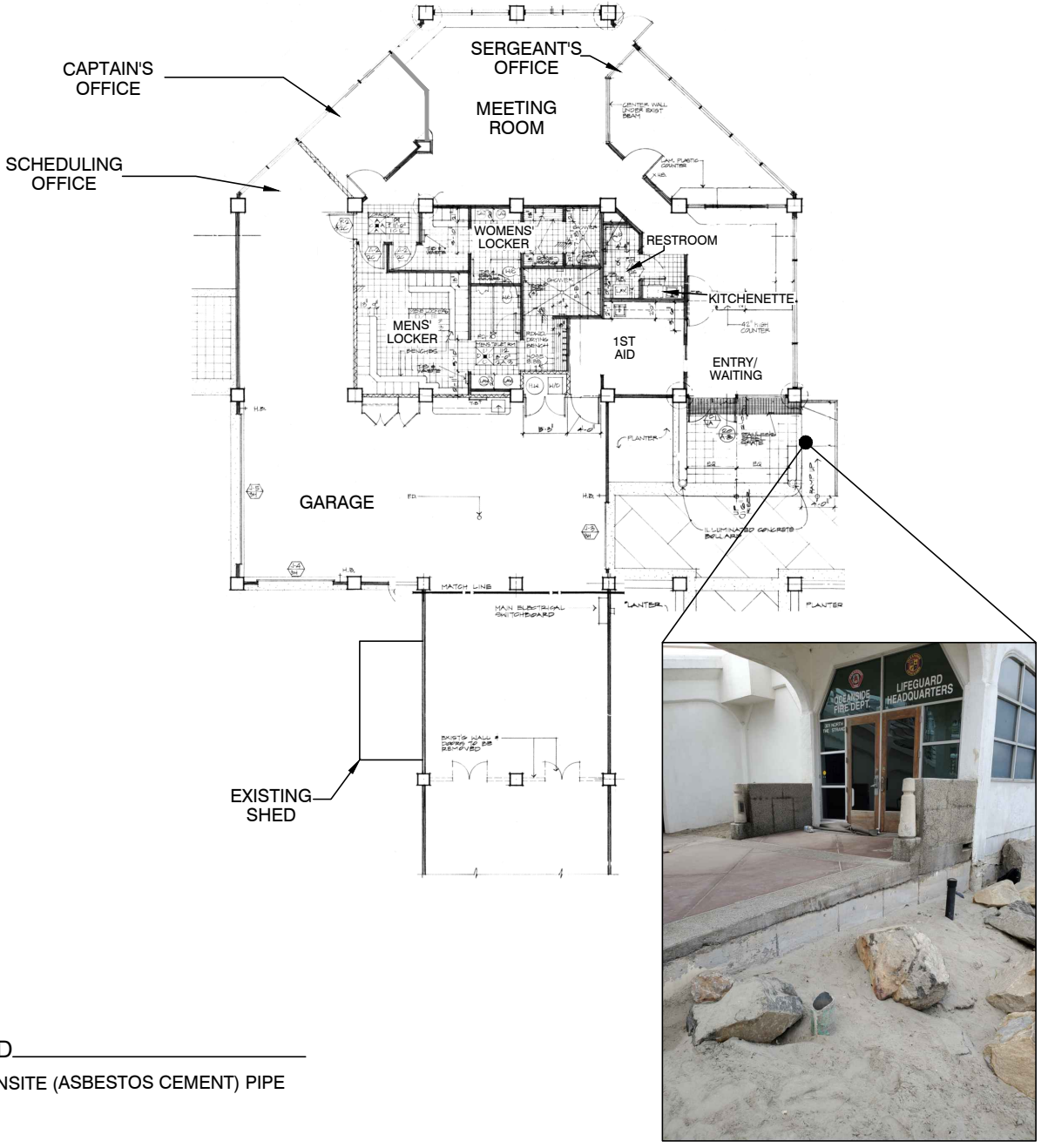
### 4.6.2 Records

Upon completion of all work activities, the Contractor shall provide a complete record of all activities and storage data to the Owner for the wastes removed during the course of the project. The record shall include the following:

- Name of the firm performing the work of this section and employee/technician in charge.
- Number and size of drums and other storage containers.
- Weight and/or volume (in kilograms, pounds, liters, gallons, etc.) of contents for each drum or other storage container.
- Date placed in storage.

# SECTION 4

## Project Drawings, Pier View Way Bridge and Lifeguard Headquarters




LEGEND

● TRANSITE (ASBESTOS CEMENT) PIPE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: DANIELSON DESIGN GROUP, DATED 9/17/85.

FEET
0 20 40

1 109214001 SPL SPEC.DWG AOB

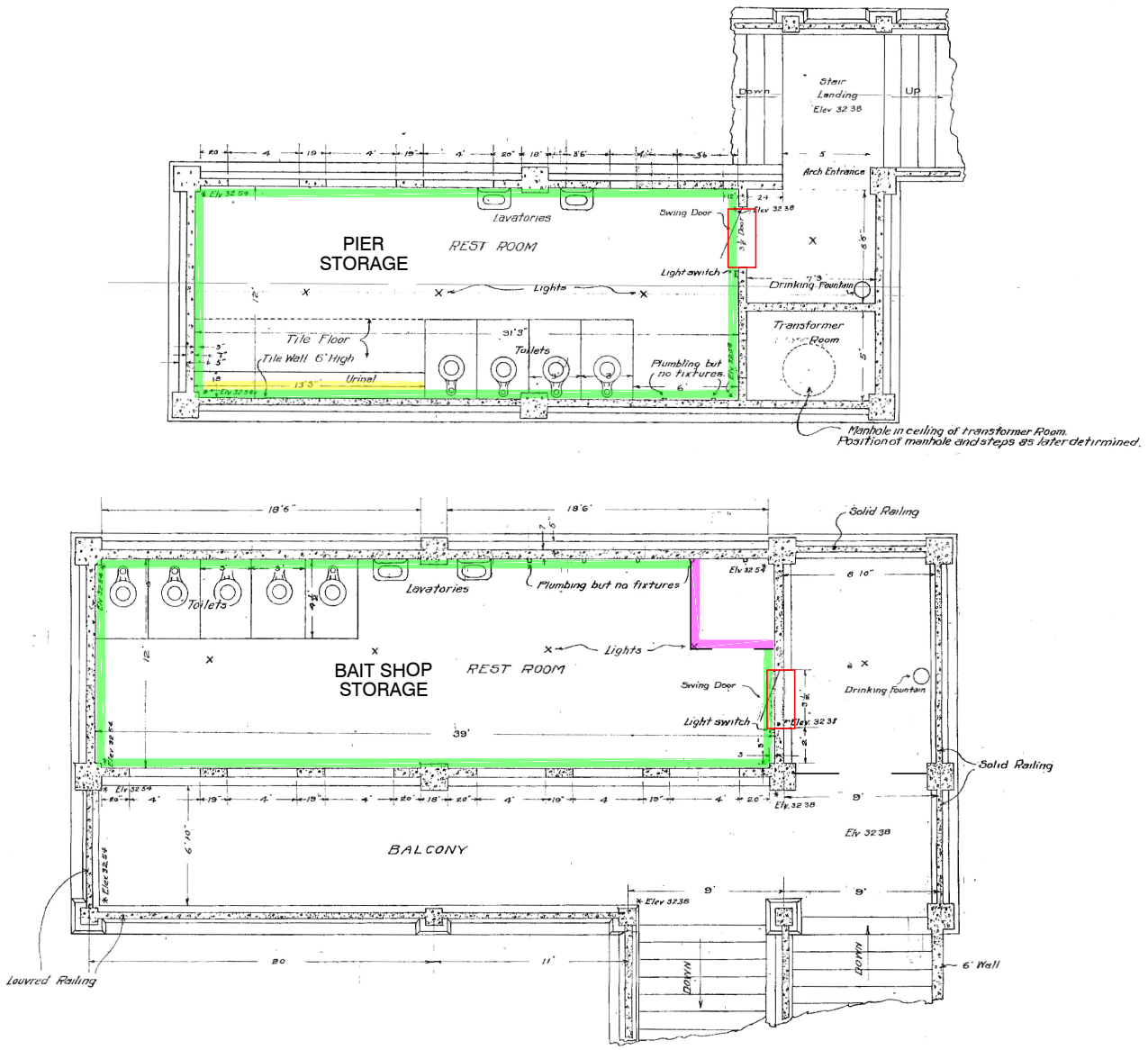
**FIGURE 1**

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

## MATERIAL LOCATIONS, ASBESTOS-CONTAINING MATERIALS

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 I 9/21




LEGEND

- INTERIOR CONCRETE WALLS
- INTERIOR WOOD WALLS
- CERAMIC WALL TILES
- WOOD DOOR FRAME

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: CITY OF OCEANSIDE, DATED 1926.

N

FEET
0 10 20

2 109214001 STORAGE SPEC.DWG AOB

**FIGURE 2**

## MATERIAL LOCATIONS, LEAD-CONTAINING SURFACES

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

109214001 I 9/21

# SECTION 5

## Hazardous Building Materials Survey Report

# Hazardous Building Materials Survey

## City of Oceanside Municipal Pier
## Pier View Way Bridge and Lifeguard Headquarters
## Restoration/Replacement Project
## 301 The Strand North
## Oceanside, California


Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California


May 26, 2021 | Project No. 109214001




Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS


Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

May 26, 2021
Project No. 109214001

Mr. Jared Cole, PE
Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, California 92108

Subject: Hazardous Building Materials Survey
City of Oceanside Municipal Pier
Pier View Way Bridge and Lifeguard Headquarters
Restoration/Replacement Project
301 The Strand North
Oceanside, California 92054

Dear Mr. Cole:

In accordance with your request and authorization to proceed, Ninyo & Moore has performed a hazardous building materials (HBM) survey at the Pier View Way Bridge and Lifeguard Headquarters (subject structures) of the City of Oceanside Municipal Pier, located at the western terminus of Pier View Way and addressed 301 The Strand North in Oceanside, California (subject site). The HBM survey was performed in support of the Restoration/Replacement Project, which is an effort between Moffatt & Nichol and the City of Oceanside to update and improve the subject structures. The attached report presents our methodology, findings, and recommendations regarding the HBM at the subject site.

Sincerely,
**NINYO & MOORE**

**Nicholas Marinello | CAC No. 17-6117**
Project Environmental Scientist

**Stephen J. Waide | CIH, CSP**
Principal Environmental Scientist

NSM/SJW/gg

Distribution: (1) Addressee (via email)
(1) Mr. Matthew Martinez, Moffatt & Nichol (via email)
(1) Ms. Alexandra Ford, Moffatt & Nichol (via email)

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A – Suspect Asbestos-Containing Materials Sampling Protocol

B – Laboratory Analytical Report and Chain-of-Custody Records

C – County of San Diego – Rule 1206 Requirements

D – XRF Testing Methodology

E – CDPH Form 8552 – Lead Hazard Evaluation Report

# 1 INTRODUCTION

Ninyo & Moore has conducted an HBM survey at the Pier View Way Bridge and Lifeguard Headquarters of the Oceanside Municipal Pier, addressed 301 The Strand North within the City of Oceanside and the County of San Diego, California (Figure 1). Our services included an asbestos-containing materials (ACM) survey, a lead-containing surfaces (LCS) survey, and visual identification and quantification of building materials potentially falling under the California Department of Toxic Substances Control (DTSC) Universal Waste Rule (UWR) and other potential hazardous building materials. Our scope included the concrete portions of the Pier, specifically the concrete bridge, stairways, ramp, storage space, and lifeguard headquarters (subject structures). It is our understanding that the Restoration/Replacement Project will develop a plan either to renovate the subject structures to address age and access-related concerns or to demolish and replace the subject structures.

The purpose of this survey was to locate other suspect building materials/surfaces, to sample and/or test the identified suspect materials/surfaces, and to assess conditions and quantities of those materials/surfaces identified as hazardous that may be impacted by the Restoration/Replacement Project. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by the California Department of Public Health (CDPH) and U.S. Department of Housing and Urban Development (HUD), and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

The survey was performed in accordance with established guidelines for the assessment of ACM and LCS, and is based upon conditions at the subject site at the time of our survey update activities.

# 2 OBJECTIVE AND SCOPE OF SERVICES

The purpose of this report is to provide information regarding the current site conditions to assist Moffatt & Nichol and the City of Oceanside in developing and implementing future site improvements to the subject structures. Our scope of work performed for the survey is identified below.

- Conducted a visual reconnaissance of the subject structures to identify and/or document homogeneous areas and locate suspect ACM, LCS, building materials potentially falling under the UWR, and other potential hazardous building materials.
- Collected 58 bulk samples of suspect ACM and submitted them to an independent laboratory for analysis of asbestos content. Samples were analyzed via the U.S. Environmental Protection Agency (EPA)-recommended method of polarized light microscopy (PLM) with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993.

- Collected 264 X-Ray Fluorescence (XRF) readings of potential LCS.
- Visually assessed building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed.
- Prepared this report presenting our data and summarizing our findings and recommendations regarding ACM, LCS, and other potential hazardous building materials for the subject structures.
- Prepared sample location maps showing the locations where suspect ACM were collected and the locations where XRF readings of surfaces with lead concentrations in excess of 1.0 milligrams per square centimeter ($mg/cm^2$) were detected.

# 3 SITE DESCRIPTION

Ninyo & Moore performed survey activities in May of 2021. The subject site is located at the western terminus of Pier View Way, spanning across The Strand North from the intersection with North Pacific Street. The Junior Seau Beach Community Center is located to the north along The Strand and Rotary Park located to the south.

The concrete bridge was constructed in 1926 to connect the bluff to the wooden pier. The structure consists of two parallel spans, a ramp to the beach, stairways on the north and south sides, and storage spaces that were originally restrooms. Restroom use is reported to have ended decades ago when public restrooms were built along The Strand, and restroom fixtures are no longer present in the bridge structure. In 1985, the western portion of the bridge substructure was converted into the Oceanside Fire Department's Lifeguard Division Headquarters. The conversion built office, locker room, and garage space into the bridge.

The concrete bridge has a textured finish on the bent columns, railings, pedestals, and walls. The walking deck, ramp, and stairs are untextured and unpainted concrete. The storage areas generally have concrete ceilings, walls, and floors; the exception is the southwestern portion of the north storage area (formerly a men's restroom) where ceramic tiles are present on the walls and floors.

The Lifeguard Headquarters is generally finished with drop-in ceiling panel, drywall, or plaster ceilings; concrete or drywall walls with vinyl covebase; and carpet or vinyl floor tile floors. The locker room areas are finished with plaster ceilings, drywall and ceramic tile walls, and ceramic tile floors. The garage is finished with concrete and metal ceilings and concrete walls and floors.

# 4 PHYSICAL LIMITATIONS

Survey activities were limited to the aboveground structures within our scope. Underground utilities, such as suspect cementitious water lines or suspect insulated/coated gas or electrical lines, were not assessed during our survey activities.

Physical limitations, such as inaccessible rooms or spaces, were generally not encountered during survey activities. Since non-destructive sampling techniques were used, there is a possibility that additional suspect materials and/or surfaces may be encountered in inaccessible areas (e.g., interstitial wall and ceiling spaces and canopy soffits) during structure renovation and/or demolition activities. For instance, untested thermal system insulation may be present within wall and ceiling cavities and/or behind plumbing and heating fixtures (e.g., sinks, boilers, and radiators). Suspect materials and/or surfaces encountered during structure renovation and/or demolition activities that have not been assessed either may be assumed to be asbestos- and/or lead-containing and handled accordingly, or may be sampled and analyzed to assess whether they are asbestos- and/or lead-containing.

# 5 SAMPLE COLLECTION AND ANALYSES

The subject structures were assessed for the presence of ACM and LCS, and other potential hazardous building materials. The ACM and LCS surveys followed EPA guidelines, or industry standards, within the limitations of the scope of this assessment. Survey activities are discussed below.

## 5.1 Asbestos-Containing Materials Survey

Ninyo & Moore's objective was to collect representative samples of suspect ACM observed in the subject structures. The asbestos survey was performed by a State of California Certified Asbestos Consultant and Certified Site Surveillance Technician. Survey activities included a preliminary visual assessment, bulk sampling of suspect ACM, and logging and mapping of collected samples. Representative samples of suspect ACM were collected after identification of homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction or application date, and general appearance). Material type, location, condition, and friability were noted for each homogeneous area. For the purposes of the assessment, the bridge structures, including the Lifeguard Headquarters and storage spaces, were not subdivided for the identification of homogeneous areas. Fifty-eight (58) samples of suspect ACM were collected using EPA-recommended sampling procedures (Appendix A).

The suspect ACM samples were delivered to EMSL Analytical of San Diego, California and shipped to EMSL Analytical of Las Vegas, Nevada (EMSL) for analysis. EMSL is accredited in the National Voluntary Laboratory Accreditation Program for bulk asbestos fiber analysis. The samples were analyzed for the presence and quantification of asbestos fibers, using PLM with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993. Due to material layering, eighty-six (86) separate PLM analyses were initially performed. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by weight. Currently, the EPA and the State of California stipulate that materials containing greater than 1% asbestos constitute ACM. The State of California further stipulates that materials containing greater than 0.1% asbestos constitute asbestos-containing construction materials (ACCM).

Building materials that were sampled and analyzed for the presence of asbestos in this survey are presented in the attached Table 1, and the locations from which bulk asbestos samples were collected during this survey are shown on Figures 3 and 4. Copies of the laboratory analytical report and chain-of-custody records for this survey are presented in Appendix B. Survey information, as required by the County of San Diego Air Pollution Control District's Rule 1206, is presented in Appendix C.

## 5.2 Lead-Containing Surfaces Survey

Ninyo & Moore's objective was to test suspect LCS observed in the subject structures and to assess the condition of those surfaces found to be lead-containing. The testing was conducted by a CDPH-certified Inspector/Assessor using a portable Viken Detection Pb200i XRF Lead Paint Analyzer, in accordance with accepted environmental science and engineering practices for renovation projects. The testing methodology utilized is presented in Appendix D. Two hundred sixty-four (264) XRF readings (including calibration checks) were collected during the survey. LCS, based on the CDPH and HUD lead-based paint regulatory standards, are surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by CDPH and HUD, and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

Building components that were tested for the presence of lead during this survey are presented in the attached Table 3. The XRF testing orientation (A, B, C, and D wall orientations) utilized during the survey, and the locations from which XRF readings in excess of 1.0 mg/cm$^2$ were detected, are shown on Figures 3 and 4. A copy of CDPH Form 8552 "Lead Hazard Evaluation Report" for the subject buildings is included in Appendix E.

## 5.3 Other Potential Hazardous Building Materials

Ninyo & Moore performed a visual assessment of building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed. For the purposes of this assessment, "Freon" refers to both Freon™, the brand-name refrigerants and aerosols produced by The Chemours Company, and other halocarbon/fluorocarbon refrigerants. **In accordance with the scope of work, positive identification of the suspect hazardous material, via analytical testing, was not performed.** Other potentially hazardous building materials are summarized in Table 5.

# 6 FINDINGS AND RECOMMENDATIONS

The findings of this survey are based on our visual observations and analysis of suspect building materials/surfaces. Our findings are presented below.

## 6.1 Asbestos-Containing Materials

Based on the analytical results from this survey, ACM are located at the subject structures and are summarized in Table 2. Specifically, an approximately six-inch-diameter asbestos cement pipe (also known as transite) was identified emerging from the sand to the northeast of the Lifeguard Headquarters (see below photograph; additional photographs available upon request). The amount of material present is unknown, although approximately one foot was visible. Materials that were not sampled and analyzed as part of this assessment and that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should also be assumed to be asbestos-containing.

The identified ACM should not be disturbed. Given the material's location and accessibility, a protective enclosure of the material is recommended. Prior to future structure renovation and/or demolition activities, a licensed asbestos abatement contractor should remove the ACM in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm ACM locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.**




**Photograph**: Asbestos cement pipe (transite) located northeast of Lifeguard Headquarters.

Should additional suspect materials, not sampled or assessed in this report, be uncovered during building renovation and/or demolition: (a) samples of suspect materials should be collected for laboratory analysis, and all activities that may impact the materials should cease until laboratory analytical results are reviewed; or (b) the materials should be assumed to be asbestos-containing and handled as such. Note that any work involving the disturbance of materials containing asbestos should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

## 6.2 Lead-Containing Surfaces

Based on the results of the XRF assays collected during this survey, surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight, were identified in the subject structures. Specifically, painted surfaces and ceramic tile in the storage spaces/former restrooms were identified as LCS. Surfaces with a lead content exceeding the regulatory standards for lead in surface coatings are summarized in Table 4.

Please note that disturbing surfaces containing lead concentrations below the LCS criteria, as defined by CDPH and HUD, (e.g., lead concentrations less than 1.0 mg/cm$^2$, or 0.5% by weight) may still trigger the California Occupational Safety and Health Administration (Cal-OSHA) lead in construction standard (Title 8 California Code of Regulations Section 1532.1).

The identified LCS should not be disturbed. Prior to structure renovation and/or demolition activities, a licensed abatement contractor should remove the LCS in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm LCS locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.** In addition, please note that LCS condition was based upon Ninyo & Moore's visual observations during survey activities and that LCS conditions may further deteriorate prior to renovation and/or demolition activities.

Should suspect surfaces, not tested or assessed in this report, be uncovered during structure renovation and/or demolition: (a) XRF testing of the surfaces should occur and all activities that impact the suspect surfaces should cease until XRF testing results become available; (b) paint chip or bulk samples of suspect surfaces should be collected for laboratory analysis and all activities that impact the suspect surfaces should cease until laboratory analytical results are reviewed; or (c) the surfaces should be assumed to contain concentrations of lead greater than or equal to 1.0 mg/cm$^2$, or 0.5% by weight, and handled as such. Note that any work involving the disturbance of surfaces containing lead should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

## 6.3 Other Potential Hazardous Building Materials

A visual assessment and quantification of building materials falling under the UWR and other potential hazardous building materials that could be impacted by the Restoration/Replacement Project was performed. Other potential hazardous building materials observed within the subject Structures are summarized in Table 5 and include:

- Fluorescent light tubes and associated ballasts;
- Non-incandescent light bulbs and associated ballasts;
- Potentially americium-containing smoke detectors;
- Potentially Freon-containing refrigeration systems; and
- Gasoline, oil, and paint storage.

Prior to renovation and/or demolition activities that could potentially disturb these materials, building materials falling under the UWR and other potential hazardous building materials should be removed and properly recycled or disposed of by a licensed contractor in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm miscellaneous hazardous building materials quantities and locations present prior to bid submittals and initiating renovation and/or demolition activities for the subject structures.** The Contractor is also responsible for waste characterization for all materials removed from the subject structures.

# 7 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by conducting a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the site evaluated. However, if additional suspect building materials are encountered during renovation and/or demolition activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. In addition, please note that quantities of impacted building materials are approximate. It is the contractor's responsibility to confirm quantities present.

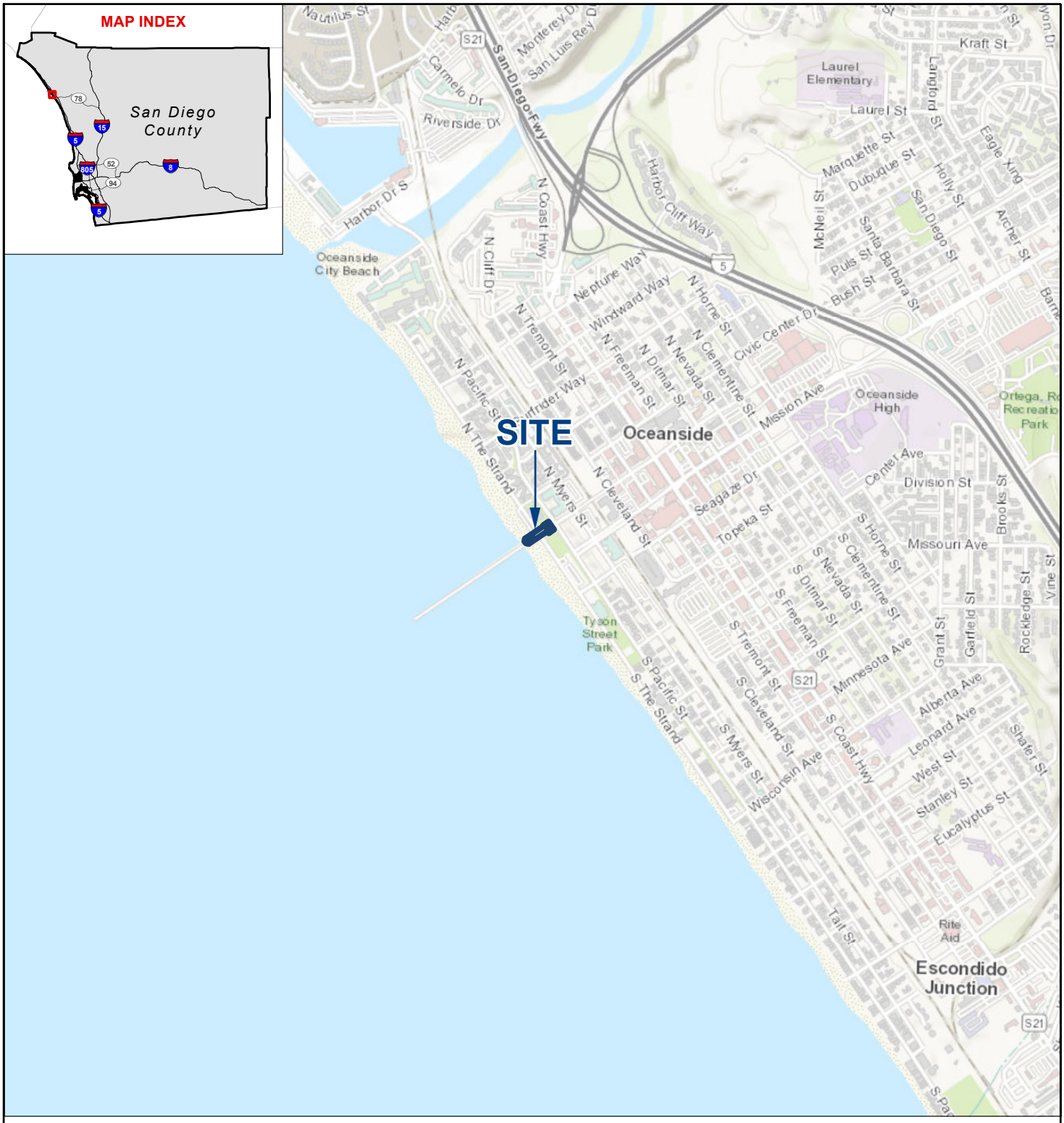
The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory that is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results. Please note the laboratory analytical report states “Due to the magnification limitations inherent in PLM, asbestos fibers below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testings by transmission electron microscopy to confirm asbestos quantities.”

Our findings, opinions, and recommendations are based on an analysis of the observed site conditions. It should be understood that the conditions of the site can change with time as a result of natural processes or the activities of humans at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

# FIGURES




NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: ESRI WORLD TOPO, 2021

1_109214001_SL.mxd 5/19/2021 AOB

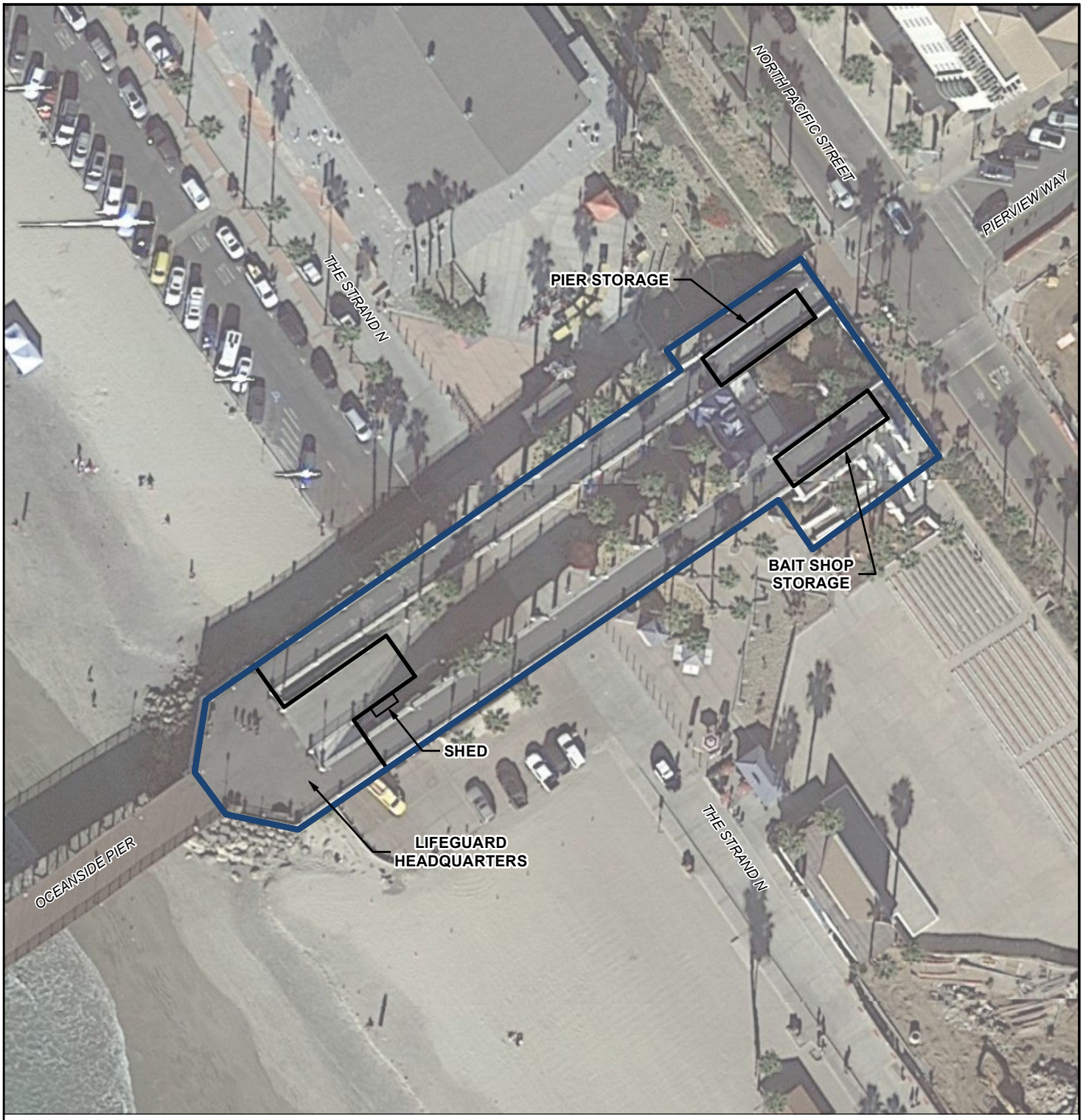
**FIGURE 1**

**SITE LOCATION**

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 | 5/21

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LEGEND

SITE BOUNDARY

AREA/SPACE BOUNDARY

N

FEET

0 60 120

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2021

2_109214001_SP.mxd 5/19/2021 AOB

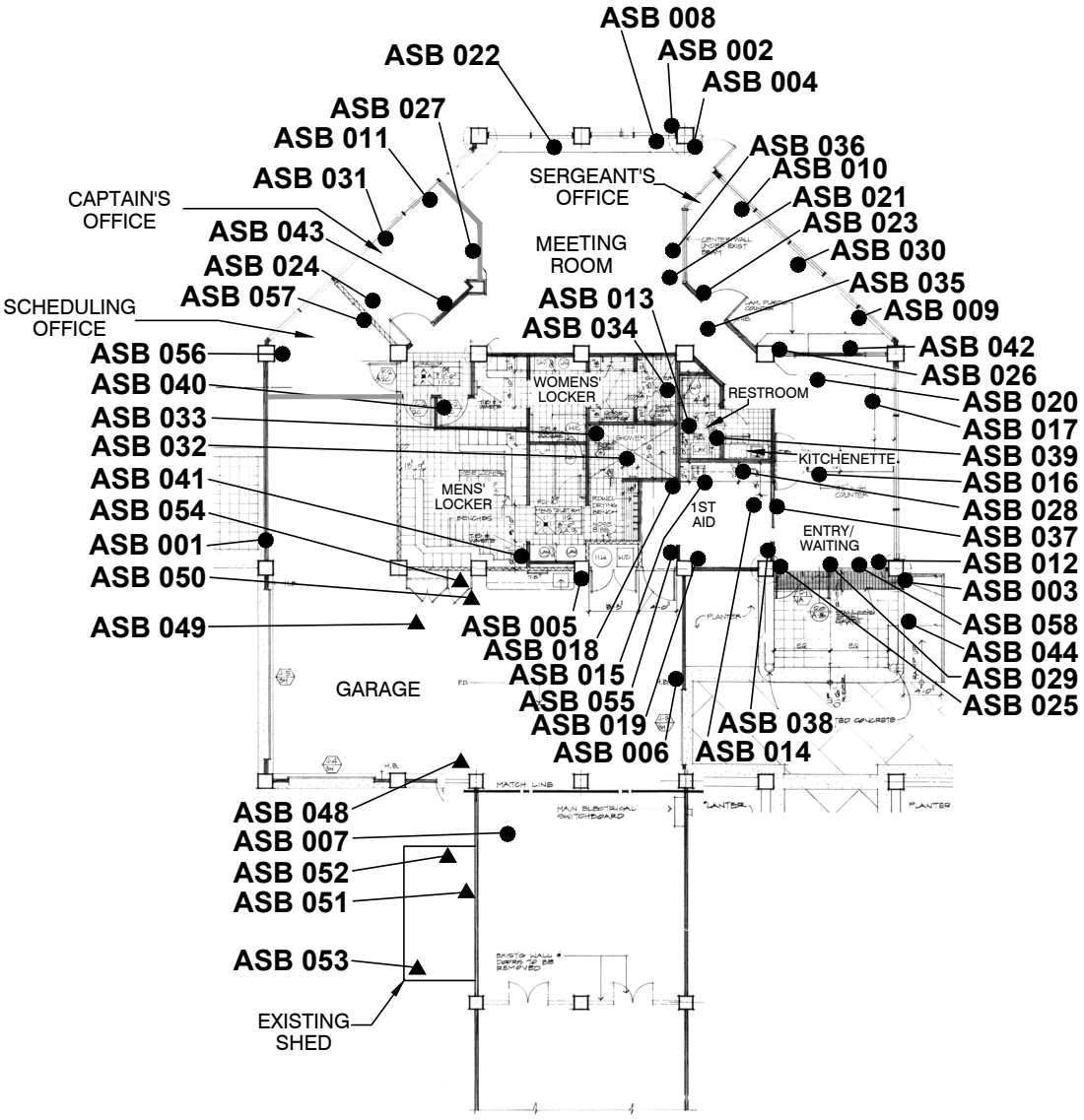
**FIGURE 2**

**SITE PLAN**

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 | 5/21

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LEGEND

● **ASB 058** ASBESTOS SAMPLE

▲ **ASB 054** ASBESTOS ROOF SAMPLE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: DANIELSON DESIGN GROUP, DATED 9/17/85.

FEET
0 20 40

3 109214001 SPL LIFEGUARD.DWG AOB

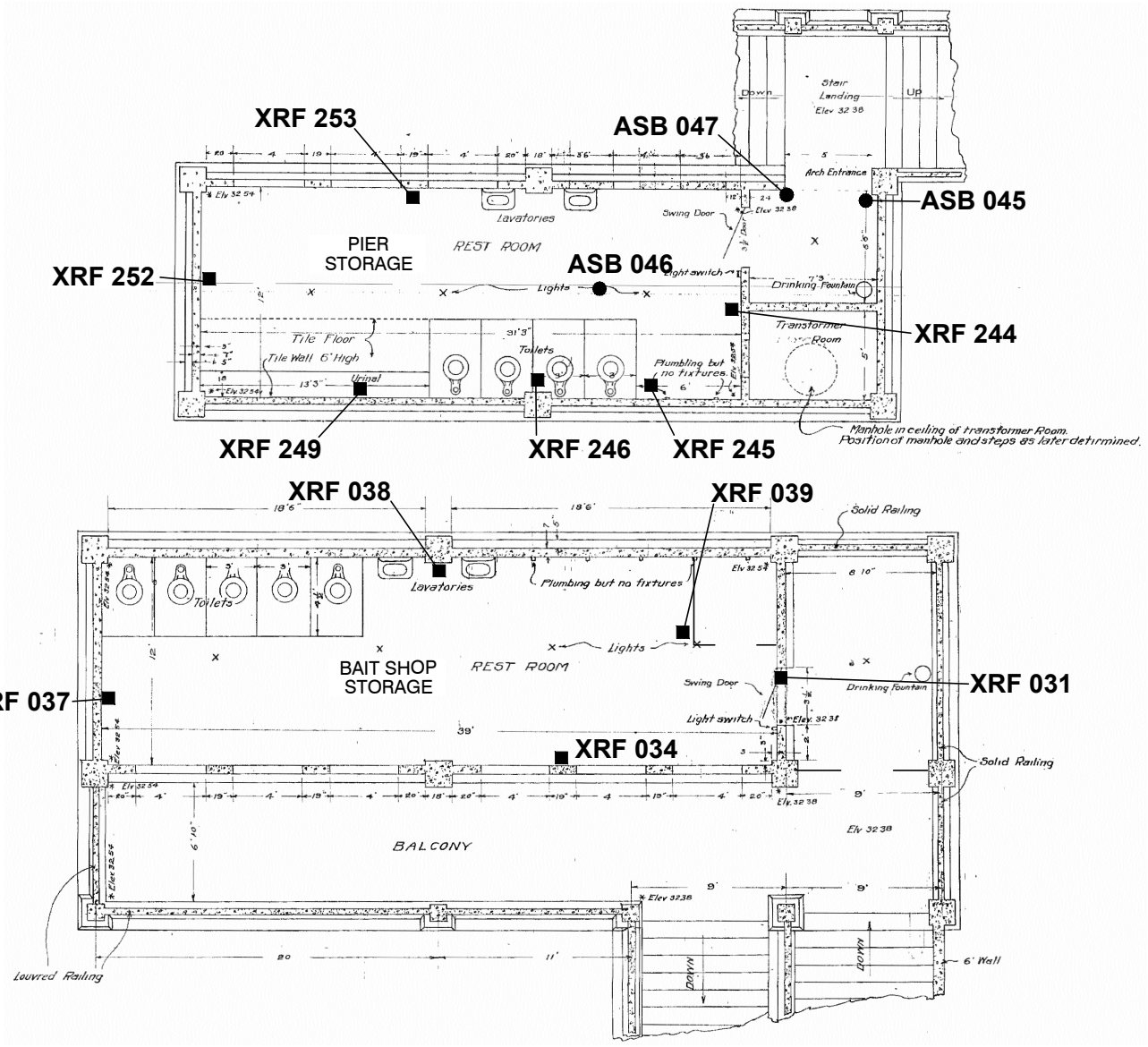
**FIGURE 3**

## SAMPLE LOCATIONS, LIFEGUARD HEADQUARTERS

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

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LEGEND

● **ASB 047** ASBESTOS SAMPLE

■ **XRF 253** XRF ASSAY IN EXCESS OF 1.0 mg/cm$^2$

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: CITY OF OCEANSIDE, DATED 1926.

N

FEET
0 10 20

4 109214001 SPL STORAGE.DWG AOB

**FIGURE 4**

## SAMPLE LOCATIONS, BAIT SHOP AND PIER STORAGE

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

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109214001 I 5/21

# TABLES

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-001 | Lifeguard HQ | Exterior | South wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-002 | Lifeguard HQ | Exterior | West wall | Gray/white stucco | -- | N/A | N/A | ND |
| ASB-002A | Lifeguard HQ | Exterior | West wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-003 | Lifeguard HQ | Exterior | North wall | Gray/white stucco | -- | N/A | N/A | ND |
| ASB-003A | Lifeguard HQ | Exterior | North wall | Brown concrete | -- | N/A | N/A | ND |
| ASB-004 | Lifeguard HQ | Exterior | West doorway | Gray door sealant | -- | N/A | N/A | ND |
| ASB-005 | Lifeguard HQ | Bay Area | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-006 | Lifeguard HQ | Bay Area | North wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-007 | Lifeguard HQ | Bay Area | South ceiling under ramp, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-008 | Lifeguard HQ | Meeting | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-009 | Lifeguard HQ | Sergeants' Office | East wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-010 | Lifeguard HQ | Sergeants' Office | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-011 | Lifeguard HQ | Captain's Office | West wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-012 | Lifeguard HQ | Waiting | East wall, over concrete | Gray texture material | -- | N/A | N/A | ND |
| ASB-013 | Lifeguard HQ | Restroom | South ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-014 | Lifeguard HQ | First Aid | North ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-015 | Lifeguard HQ | First Aid | West sink | White undercoating | -- | N/A | N/A | ND |
| ASB-016 | Lifeguard HQ | Waiting | East floor, under carpet | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-016A | Lifeguard HQ | Waiting | East floor, under carpet | Black mastic | -- | N/A | N/A | ND |
| ASB-017 | Lifeguard HQ | Waiting | North floor, under carpet | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-017A | Lifeguard HQ | Waiting | North floor, under carpet | Black mastic | -- | N/A | N/A | ND |
| ASB-018 | Lifeguard HQ | First Aid | West floor | 12"x12" blue vinyl floor tile | -- | N/A | N/A | ND |
| ASB-018A | Lifeguard HQ | First Aid | West floor | Black mastic | -- | N/A | N/A | ND |
| ASB-019 | Lifeguard HQ | First Aid | East floor | 12"x12" blue vinyl floor tile | -- | N/A | N/A | ND |
| ASB-019A | Lifeguard HQ | First Aid | East floor | Black mastic | -- | N/A | N/A | ND |
| ASB-020 | Lifeguard HQ | Waiting | West floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-021 | Lifeguard HQ | Meeting | North floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-022 | Lifeguard HQ | Meeting | West floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-023 | Lifeguard HQ | Sergeants' Office | East floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-024 | Lifeguard HQ | Captain's Office | South floor | Gold carpet glue | -- | N/A | N/A | ND |
| ASB-025 | Lifeguard HQ | Waiting | East lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-026 | Lifeguard HQ | Sergeants' Office | East lower wall | Tan covebase glue | -- | N/A | N/A | ND |

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-027 | Lifeguard HQ | Captain's Office | North lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-028 | Lifeguard HQ | First Aid | West lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-029 | Lifeguard HQ | Waiting | East windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-030 | Lifeguard HQ | Sergeants' Office | West windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-031 | Lifeguard HQ | Captain's Office | West windows | Gray window sealant | -- | N/A | N/A | ND |
| ASB-032 | Lifeguard HQ | Men's Shower | Center ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-033 | Lifeguard HQ | Men's Shower | West ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-034 | Lifeguard HQ | Women's Shower | North ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-035 | Lifeguard HQ | Meeting/Corridor | North ceiling | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-036 | Lifeguard HQ | Meeting | West wall | Gray/tan plaster | -- | N/A | N/A | ND |
| ASB-037 | Lifeguard HQ | Waiting | South wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-037A | Lifeguard HQ | Waiting | South wall | White joint compound | -- | N/A | N/A | ND |
| ASB-037B | Lifeguard HQ | Waiting | South wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-038 | Lifeguard HQ | First Aid | North wall | White drywall | -- | N/A | N/A | ND |
| ASB-038A | Lifeguard HQ | First Aid | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-038B | Lifeguard HQ | First Aid | North wall | Tan/purple tape | -- | N/A | N/A | ND |
| ASB-039 | Lifeguard HQ | Restroom | North wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-039A | Lifeguard HQ | Restroom | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-039B | Lifeguard HQ | Restroom | North wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-040 | Lifeguard HQ | Women's Shower | South wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-040A | Lifeguard HQ | Women's Shower | South wall | Beige joint compound | -- | N/A | N/A | ND |
| ASB-040B | Lifeguard HQ | Women's Shower | South wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-041 | Lifeguard HQ | Men's Shower | East wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-041A | Lifeguard HQ | Men's Shower | East wall | Tan joint compound | -- | N/A | N/A | ND |
| ASB-042 | Lifeguard HQ | Sergeants' Office | North wall | Brown drywall | -- | N/A | N/A | ND |
| ASB-042A | Lifeguard HQ | Sergeants' Office | North wall | White joint compound | -- | N/A | N/A | ND |
| ASB-042B | Lifeguard HQ | Sergeants' Office | North wall | Tan/green tape | -- | N/A | N/A | ND |
| ASB-043 | Lifeguard HQ | Captain's Office | East wall | White drywall | -- | N/A | N/A | ND |
| ASB-043A | Lifeguard HQ | Captain's Office | East wall | White joint compound | -- | N/A | N/A | ND |
| ASB-043B | Lifeguard HQ | Captain's Office | East wall | Tan/green tape | -- | N/A | N/A | ND |
| **ASB-044** | **Lifeguard HQ** | **Exterior** | **North pipe** | **Gray transite pipe (6" diameter)** | **Unknown (1 LF visible)** | **N** | **Fair** | **12% chrysotile 4% crocidolite** |

## Table 1 - Asbestos Survey Results

| Sample No. | Bldg. No. | Room No. | Sample Location | Sample Description | Approx. Quantity [1] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|---|
| ASB-045 | Pier Stor. | Entry | North wall | Tan/white stucco | -- | N/A | N/A | ND |
| ASB-045A | Pier Stor. | Entry | North wall | Gray concrete | -- | N/A | N/A | ND |
| ASB-046 | Pier Stor. | Main Stor. | Center ceiling | Tan/white stucco | -- | N/A | N/A | ND |
| ASB-046A | Pier Stor. | Main Stor. | Center ceiling | Gray concrete | -- | N/A | N/A | ND |
| ASB-047 | Pier Stor. | Entry | North doorway | White door sealant | -- | N/A | N/A | ND |
| ASB-048 | Lifeguard HQ | Roof | East roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-048A | Lifeguard HQ | Roof | East roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-049 | Lifeguard HQ | Roof | Southwest roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-049A | Lifeguard HQ | Roof | Southwest roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-050 | Lifeguard HQ | Roof | West roof | White/black roofing | -- | N/A | N/A | ND |
| ASB-050A | Lifeguard HQ | Roof | West roof | Black tar felt | -- | N/A | N/A | ND |
| ASB-051 | Lifeguard HQ | Shed Roof | North roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-051A | Lifeguard HQ | Shed Roof | North roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-052 | Lifeguard HQ | Shed Roof | West roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-052A | Lifeguard HQ | Shed Roof | West roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-053 | Lifeguard HQ | Shed Roof | East roof | Gray/black shingle | -- | N/A | N/A | ND |
| ASB-053A | Lifeguard HQ | Shed Roof | East roof | Black tar paper | -- | N/A | N/A | ND |
| ASB-054 | Lifeguard HQ | Roof | West roof | Gray/white edge sealant | -- | N/A | N/A | ND |
| ASB-055 | Lifeguard HQ | First Aid | East ceiling | 2'x4' tan/white acoustic ceiling panel | -- | N/A | N/A | ND |
| ASB-056 | Lifeguard HQ | Scheduling Office | Southwest wall, over concrete | White texture material | -- | N/A | N/A | ND |
| ASB-057 | Lifeguard HQ | Scheduling Office | North lower wall | Tan covebase glue | -- | N/A | N/A | ND |
| ASB-058 | Lifeguard HQ | Waiting | East floor | 12"x12" tan vinyl floor tile | -- | N/A | N/A | ND |
| ASB-058A | Lifeguard HQ | Waiting | East floor | Black mastic | -- | N/A | N/A | ND |

**NOTES:**

Bulk asbestos sample analysis via EPA 600/R-93/116 method using polarized light microscopy, unless otherwise noted.

Results in **BOLD** are ACM, as defined by EPA and the State of California, and results in *ITALICS* are ACCM, as defined by the State of California.

**[1] = Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

LF = Linear feet

N/A = Not applicable

ND = None detected

HQ = Headquarters

Stor. = Storage

## Table 2 - Summary of Asbestos-Containing Materials

| Sample No.(s) | ACM Location [1] | ACM Description | Approx. Quantity [2] | Friable Y / N | Condition | Asbestos Content |
|---|---|---|---|---|---|---|
| ASB-044 | Northeast of Lifeguard Headquarters - Emerging from sand | Transite pipe (6" diameter) | Unknown (1 LF visible) | N | Fair | 12% chrysotile 4% crocidolite |

**NOTES:**

[1] = ACM locations are based upon Ninyo & Moore's visual observations during survey activities. Materials that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should be presumed to be asbestos-containing.

**[2] = Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

LF = Linear feet

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 0.9 | 0.3 |
| 2 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 3 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm$^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 4 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 5 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 6 | -- | Blank Calibration Check | | | | | | | | -- | -0.1 | 0.3 |
| 7 | Lifeguard HQ | 1 | B | Women's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 8 | Lifeguard HQ | 1 | C | Women's Locker | Door | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 9 | Lifeguard HQ | 1 | C | Women's Locker | Door vent | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 10 | Lifeguard HQ | 1 | C | Women's Locker | Door jamb | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 11 | Lifeguard HQ | 1 | C | Women's Locker | Locker | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 12 | Lifeguard HQ | 1 | C | Women's Locker | Soffit | Metal | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 13 | Lifeguard HQ | 1 | C | Women's Locker | Soffit | Metal | Intact | White | NEG | -- | -0.1 | 0.3 |
| 14 | Lifeguard HQ | 1 | C | Women's Locker | Cabinets | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 15 | Lifeguard HQ | 1 | C | Women's Locker | Wall | Metal | Intact | Beige | NEG | -- | -0.3 | 0.3 |
| 16 | Lifeguard HQ | 1 | C | Women's Locker | Wall | Metal | Intact | Blue | NEG | -- | -0.6 | 0.3 |
| 17 | Lifeguard HQ | 1 | -- | Women's Locker | Ceiling | Plaster | Intact | White | NEG | -- | -0.1 | 0.3 |
| 18 | Lifeguard HQ | 1 | -- | Women's Shower | Ceiling | Plaster | Intact | White | NEG | -- | 0.0 | 0.3 |
| 19 | Lifeguard HQ | 1 | D | Women's Shower | Wall | Metal | Intact | Beige | NEG | -- | -0.4 | 0.3 |
| 20 | Lifeguard HQ | 1 | A | Women's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.0 | 0.3 |
| 21 | Lifeguard HQ | 1 | -- | Women's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 22 | Lifeguard HQ | 1 | -- | Women's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 23 | Lifeguard HQ | 1 | A | Women's Locker | Toilet | Metal | Intact | White | NEG | -- | -0.2 | 0.3 |
| 24 | Lifeguard HQ | 1 | A | Women's Locker | Baseboard | Metal | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 25 | Bait Shop Stor. | 2 | A | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 26 | Bait Shop Stor. | 2 | B | Entry | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 27 | Bait Shop Stor. | 2 | B | Entry | Door stop | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |
| 28 | Bait Shop Stor. | 2 | B | Entry | Wall | Wood | Intact | White | NEG | -- | 0.1 | 0.3 |
| 29 | Bait Shop Stor. | 2 | B | Entry | Wall | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 30 | Bait Shop Stor. | 2 | B | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| **31** | **Bait Shop Stor.** | **2** | **C** | **Entry** | **Door frame** | **Wood** | **Intact** | **White** | **POS** | **2 EA** | **6.7** | **0.3** |
| 32 | Bait Shop Stor. | 2 | C | Entry | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 33 | Bait Shop Stor. | 2 | D | Entry | Wall | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| **34** | **Bait Shop Stor.** | **2** | **B** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **1,100 SF** | **4.2** | **0.3** |
| 35 | Bait Shop Stor. | 2 | B | Main Storage | Window frame | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Bait Shop Stor. | 2 | C | Main Storage | Wall | Concrete | Intact | White | NEG | -- | 0.9 | 0.2 |
| **37** | **Bait Shop Stor.** | **2** | **C** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **2.5** | **0.3** |
| **38** | **Bait Shop Stor.** | **2** | **D** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **3.8** | **0.3** |
| **39** | **Bait Shop Stor.** | **2** | **D** | **Main Storage** | **Wall** | **Wood** | **Intact** | **White** | **POS** | **75 SF** | **1.2** | **0.3** |
| 40 | Bait Shop Stor. | 2 | D | Main Storage | Door | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| **41** | **Bait Shop Stor.** | **2** | **A** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 34** | **1.5** | **0.3** |
| 42 | Bait Shop Stor. | 2 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 43 | Bait Shop Stor. | 2 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 44 | Bait Shop Stor. | 2 | D | Closet | Rafter/framing | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 45 | Bait Shop Stor. | 2 | D | Closet | Rafter/framing | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 46 | Bait Shop Stor. | 2 | A | Closet | Shelf | Wood | Intact | White | NEG | -- | -0.1 | 0.3 |
| 47 | Bait Shop Stor. | 2 | A | Closet | Shelf | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 48 | Bait Shop Stor. | 2 | B | Closet | Door | Wood | Intact | Green | NEG | -- | -0.1 | 0.3 |
| 49 | Bait Shop Stor. | 2 | B | Closet | Door | Wood | Intact | Green | NEG | -- | -0.3 | 0.3 |
| 50 | Bridge | 3 | A | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 51 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 52 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 53 | Bridge | 3 | D | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 54 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 55 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 56 | Bridge | 3 | B | South Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 57 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 58 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 59 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 60 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 61 | Bridge | 3 | D | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 62 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 63 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 64 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.3 | 0.3 |
| 65 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 66 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 67 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 68 | Bridge | 3 | B | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | Bridge | 3 | D | South Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 70 | Bridge | 3 | D | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 71 | Bridge | 3 | B | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 72 | Bridge | 3 | C | South Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 73 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.3 | 0.3 |
| 74 | Bridge | 3 | D | South Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 75 | Bridge | 3 | C | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 76 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 77 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 78 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 79 | Bridge | 3 | C | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 80 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 81 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 82 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.4 | 0.2 |
| 83 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 84 | Bridge | 3 | B | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 85 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.4 | 0.3 |
| 86 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 87 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 88 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 89 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 90 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 91 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 92 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 93 | Bridge | 3 | D | North Bridge | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 94 | Bridge | 3 | D | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 95 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 96 | Bridge | 3 | B | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 97 | Bridge | 3 | B | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 98 | Bridge | 3 | D | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 99 | Bridge | 3 | D | North Bridge | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 100 | Bridge | 3 | B | North Bridge | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 101 | Bridge | 3 | B | North Bridge | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 102 | Bridge | 2 | D | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 103 | Bridge | 2 | D | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104 | Bridge | 2 | B | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 105 | Bridge | 2 | B | Center Ramp | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 106 | Bridge | 2 | A | Center Ramp | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 107 | Bridge | 2 | A | Center Ramp | Light post | Metal | Intact | Blue | NEG | -- | -0.1 | 0.3 |
| 108 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 109 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 110 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 111 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 112 | Bridge | 1 | D | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 113 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 114 | Bridge | 1 | B | Ground Level, along Strand | Pipe, vertical | Metal | Intact | White | NEG | -- | 0.5 | 0.2 |
| 115 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 116 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 117 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 118 | Bridge | 1 | B | Ground Level, along Strand | Bent/column | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 119 | Bridge | 1 | B | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 120 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 121 | Bridge | 1 | D | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 122 | Bridge | 1 | D | South Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | -0.2 | 0.3 |
| 123 | Bridge | 1 | D | South Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 124 | Bridge | 1 | B | South Bridge Stairs | Baseboard | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 125 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 126 | Bridge | 1 | D | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 127 | Bridge | 2 | A | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 128 | Bridge | 2 | D | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 129 | Bridge | 2 | D | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130 | Bridge | 2 | C | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 131 | Bridge | 2 | C | South Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 132 | Bridge | 2 | D | South Bridge Stairs | Door | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 133 | Bridge | 2 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 134 | Bridge | 3 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 135 | Bridge | 3 | C | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 136 | Bridge | 3 | A | South Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 137 | Bridge | 3 | A | South Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 138 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 139 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 140 | Bridge | 3 | A | At sidewalk | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 141 | Bridge | 3 | A | At sidewalk | Pedestal | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 142 | Bridge | 3 | D | At sidewalk | Bollard | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 143 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 144 | Bridge | 2 | D | North Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 145 | Bridge | 2 | B | North Bridge Stairs | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 146 | Bridge | 2 | B | North Bridge Stairs | Door casing | Wood | Intact | White | NEG | -- | -0.4 | 0.3 |
| 147 | Bridge | 2 | B | North Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 148 | Bridge | 2 | B | North Bridge Stairs | Wall | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 149 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.1 | 0.2 |
| 150 | Bridge | 2 | D | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 151 | Bridge | 2 | B | North Bridge Stairs | Railing | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 152 | Bridge | 2 | B | North Bridge Stairs | Pedestal | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 153 | Bridge | 2 | D | North Bridge Stairs | Light post | Metal | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 154 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 155 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 156 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 157 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 158 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 159 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 160 | Lifeguard HQ | 1 | A | First Aid | Column | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 161 | Lifeguard HQ | 1 | A | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 162 | Lifeguard HQ | 1 | A | First Aid | Door | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 163 | Lifeguard HQ | 1 | A | First Aid | Door casing | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 164 | Lifeguard HQ | 1 | C | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading (mg/cm$^2$) | Precision (+/- mg/cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | Lifeguard HQ | 1 | C | First Aid | Cabinets | Wood | Intact | Beige | NEG | -- | -0.1 | 0.3 |
| 166 | Lifeguard HQ | 1 | C | First Aid | Cabinets | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 167 | Lifeguard HQ | 1 | C | First Aid | Countertop | Wood | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 168 | Lifeguard HQ | 1 | D | First Aid | Wall | Drywall | Intact | Beige | NEG | -- | -0.1 | 0.3 |
| 169 | Lifeguard HQ | 1 | D | First Aid | Door casing | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 170 | Lifeguard HQ | 1 | D | First Aid | Sliding door | Metal | Intact | Pink | NEG | -- | 0.0 | 0.3 |
| 171 | Lifeguard HQ | 1 | D | First Aid | Door jamb | Metal | Intact | Pink | NEG | -- | 0.1 | 0.3 |
| 172 | Lifeguard HQ | 1 | A | Waiting/Reception | Double door | Wood | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 173 | Lifeguard HQ | 1 | B | Waiting/Reception | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 174 | Lifeguard HQ | 1 | C | Waiting/Reception | Countertop | Wood | Intact | Brown | NEG | -- | 0.0 | 0.3 |
| 175 | Lifeguard HQ | 1 | D | Waiting/Reception | Cabinets | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 176 | Lifeguard HQ | 1 | D | Waiting/Reception | Wall | Concrete | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 177 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | White | NEG | -- | -0.2 | 0.3 |
| 178 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | Brown | NEG | -- | -0.1 | 0.3 |
| 179 | Lifeguard HQ | 1 | A | Corridor | Cabinets | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 180 | Lifeguard HQ | 1 | A | Corridor | Countertop | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 181 | Lifeguard HQ | 1 | B | Corridor | Door | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 182 | Lifeguard HQ | 1 | B | Corridor | Door casing | Metal | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 183 | Lifeguard HQ | 1 | -- | Corridor | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 184 | Lifeguard HQ | 1 | A | Restroom | Wall | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 185 | Lifeguard HQ | 1 | A | Restroom | Wall | Metal | Intact | Blue | NEG | -- | -0.4 | 0.3 |
| 186 | Lifeguard HQ | 1 | A | Restroom | Sink | Metal | Intact | White | NEG | -- | -0.2 | 0.3 |
| 187 | Lifeguard HQ | 1 | B | Restroom | Wall | Drywall | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 188 | Lifeguard HQ | 1 | C | Restroom | Toilet | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 189 | Lifeguard HQ | 1 | -- | Restroom | Floor | Metal | Intact | Beige | NEG | -- | 0.3 | 0.2 |
| 190 | Lifeguard HQ | 1 | A | Sergeants' Office | Wall | Drywall | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 191 | Lifeguard HQ | 1 | B | Sergeants' Office | Wall | Drywall | Intact | Beige | NEG | -- | 0.1 | 0.3 |
| 192 | Lifeguard HQ | 1 | D | Sergeants' Office | Wall | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 193 | Lifeguard HQ | 1 | A | Meeting | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 194 | Lifeguard HQ | 1 | A | Meeting | Column | Concrete | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 195 | Lifeguard HQ | 1 | A | Meeting | Countertop | Wood | Intact | Blue | NEG | -- | 0.0 | 0.3 |
| 196 | Lifeguard HQ | 1 | A | Meeting | Cabinets | Wood | Intact | White | NEG | -- | 0.2 | 0.2 |
| 197 | Lifeguard HQ | 1 | B | Meeting | Wall | Drywall | Intact | White | NEG | -- | 0.0 | 0.3 |
| 198 | Lifeguard HQ | 1 | B | Meeting | Wall | Drywall | Intact | White | NEG | -- | -0.1 | 0.3 |
| 199 | Lifeguard HQ | 1 | C | Meeting | Door | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | Lifeguard HQ | 1 | A | Captain's Office | Wall | Drywall | Intact | White | NEG | -- | -0.1 | 0.3 |
| 201 | Lifeguard HQ | 1 | B | Captain's Office | Wall | Concrete | Intact | Beige | NEG | -- | 0.4 | 0.2 |
| 202 | Lifeguard HQ | 1 | D | Captain's Office | Door | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 203 | Lifeguard HQ | 1 | B | Scheduling Office | Column | Concrete | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 204 | Lifeguard HQ | 1 | -- | Scheduling Office | Ceiling | Drywall | Intact | Brown | NEG | -- | 0.1 | 0.3 |
| 205 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | Brown | NEG | -- | 0.1 | 0.3 |
| 206 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | White | NEG | -- | 0.0 | 0.3 |
| 207 | Lifeguard HQ | 1 | A | Men's Locker | Locker | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 208 | Lifeguard HQ | 1 | A | Men's Locker | Rafter/framing | Wood | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 209 | Lifeguard HQ | 1 | B | Men's Locker | Shelf | Metal | Intact | Beige | NEG | -- | 0.1 | 0.2 |
| 210 | Lifeguard HQ | 1 | C | Men's Locker | Door casing | Metal | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 211 | Lifeguard HQ | 1 | C | Men's Locker | Wall | Drywall | Intact | White | NEG | -- | 0.1 | 0.3 |
| 212 | Lifeguard HQ | 1 | C | Men's Locker | Countertop | Wood | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 213 | Lifeguard HQ | 1 | C | Men's Locker | Urinal | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 214 | Lifeguard HQ | 1 | C | Men's Locker | Toilet | Metal | Intact | White | NEG | -- | 0.0 | 0.3 |
| 215 | Lifeguard HQ | 1 | D | Men's Locker | Wall | Metal | Intact | Blue | NEG | -- | -0.5 | 0.3 |
| 216 | Lifeguard HQ | 1 | D | Men's Locker | Wall | Metal | Intact | Beige | NEG | -- | -0.5 | 0.3 |
| 217 | Lifeguard HQ | 1 | -- | Men's Locker | Floor | Metal | Intact | Beige | NEG | -- | 0.2 | 0.2 |
| 218 | Lifeguard HQ | 1 | -- | Men's Shower | Ceiling | Plaster | Intact | Brown | NEG | -- | -0.2 | 0.3 |
| 219 | Lifeguard HQ | 1 | A | Garage | Ceiling | Plaster | Intact | White | NEG | -- | 0.5 | 0.2 |
| 220 | Lifeguard HQ | 1 | A | Garage | Ceiling | Concrete | Intact | White | NEG | -- | 0.1 | 0.3 |
| 221 | Lifeguard HQ | 1 | A | Garage | Floor | Concrete | Intact | Red | NEG | -- | 0.3 | 0.2 |
| 222 | Lifeguard HQ | 1 | A | Garage | Wall | Drywall | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 223 | Lifeguard HQ | 1 | A | Garage | Wall | Wood | Intact | Beige | NEG | -- | 0.0 | 0.3 |
| 224 | Lifeguard HQ | 1 | A | Garage | Door | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 225 | Lifeguard HQ | 1 | A | Garage | Door casing | Metal | Intact | Gray | NEG | -- | 0.0 | 0.3 |
| 226 | Lifeguard HQ | 1 | B | Garage | Wall | Metal | Intact | White | NEG | -- | -0.4 | 0.3 |
| 227 | Lifeguard HQ | 1 | B | Garage | Rafter/framing | Wood | Intact | Beige | NEG | -- | -0.2 | 0.3 |
| 228 | Lifeguard HQ | 1 | C | Garage | Cabinets | Wood | Intact | Brown | NEG | -- | 0.0 | 0.3 |
| 229 | Lifeguard HQ | 1 | C | Garage | Cabinets | Wood | Intact | Brown | NEG | -- | -0.1 | 0.3 |
| 230 | Lifeguard HQ | 1 | B | Exterior | Wall | Plaster | Intact | White | NEG | -- | 0.1 | 0.2 |
| 231 | Lifeguard HQ | 1 | B | Exterior | Column | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 232 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |
| 233 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 234 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 0.9 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity (1) | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 235 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 236 | -- | Blank Calibration Check | | | | | | | | -- | 0.0 | 0.3 |
| 237 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 238 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 239 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 240 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 241 | -- | Blank Calibration Check | | | | | | | | -- | -0.3 | 0.3 |
| 242 | -- | Blank Calibration Check | | | | | | | | -- | -0.2 | 0.3 |
| 243 | -- | Blank Calibration Check | | | | | | | | -- | -0.1 | 0.3 |
| **244** | **Pier Stor.** | **1** | **A** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **900 SF** | **3.5** | **0.3** |
| **245** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.7** | **0.3** |
| **246** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Column** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **4.3** | **0.3** |
| 247 | Pier Stor. | 1 | B | Main Storage | Wall | Brick | Intact | White | NEG | -- | 0.5 | 0.2 |
| 248 | Pier Stor. | 1 | B | Main Storage | Wall | Brick | Intact | White | NEG | -- | 0.9 | 0.2 |
| **249** | **Pier Stor.** | **1** | **B** | **Main Storage** | **Wall** | **Ceramic** | **Intact** | **White** | **POS** | **90 SF** | **7.2** | **0.3** |
| 250 | Pier Stor. | 1 | B | Main Storage | Floor | Metal | Intact | White | NEG | -- | 0.1 | 0.3 |
| 251 | Pier Stor. | 1 | B | Main Storage | Floor | Metal | Intact | White | NEG | -- | 0.4 | 0.2 |
| **252** | **Pier Stor.** | **1** | **C** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.2** | **0.3** |
| **253** | **Pier Stor.** | **1** | **D** | **Main Storage** | **Wall** | **Concrete** | **Intact** | **White** | **POS** | **See Reading 244** | **3.5** | **0.3** |
| 254 | Pier Stor. | 1 | D | Main Storage | Wall | Wood | Intact | White | NEG | -- | -0.3 | 0.3 |
| 255 | Pier Stor. | 1 | -- | Main Storage | Ceiling | Concrete | Intact | White | NEG | -- | 0.2 | 0.2 |
| 256 | Pier Stor. | 1 | B | Small Storage | Wall | Concrete | Intact | White | NEG | -- | 0.5 | 0.2 |
| 257 | Pier Stor. | 1 | C | Small Storage | Wall | Concrete | Intact | White | NEG | -- | 0.3 | 0.2 |
| 258 | Pier Stor. | 1 | A | Entry Vestibule | Wall | Concrete | Intact | White | NEG | -- | 0.0 | 0.3 |
| 259 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 260 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.0 | 0.3 |
| 261 | -- | PCS Standard Calibration Check - 1.04 +/- 0.064$mg/cm^2$ | | | | | | | | -- | 1.1 | 0.3 |

## Table 3 - XRF Data Sheet

| Reading No. | Building | Floor | Side | Room / Area | Source / Component | Substrate | Condition | Color | Results (POS / NEG) | Approx. Quantity [1] | Lead Reading ($mg/cm^2$) | Precision (+/- $mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |
| 263 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |
| 264 | -- | | | | Blank Calibration Check | | | | | -- | -0.1 | 0.3 |

**NOTES:**

XRF assays were collected using a portable Viken Detection Pb200i XRF Lead Paint Analyzer.

Results in **BOLD** are LCS, as defined by CDPH and HUD.

**[1] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

PCS = Performance Characteristic Sheet, as maintained by HUD. A device-specific document outlining acceptable operating specifications for an XRF analyzer.

POS = Positive

NEG = Negative

INCOM = Incomplete

EA = Each

SF = Square feet

$mg/cm^2$ = milligrams per square centimeter

## Table 4 - Summary of Lead-Containing Surfaces [1]

| Reading No.(s) | Room / Area [2] | Source / Component | Substrate | Condition | Color(s) | Lead Reading(s) ($mg/cm^2$) | Approximate Quantity [3] |
|---|---|---|---|---|---|---|---|
| **Pier Storage Spaces (Formerly Restrooms)** | | | | | | | |
| 31 | Storage Rooms | Door frame (At former swinging door) | Wood | Intact | White | 6.7 | 2 EA |
| 34, 37, 38, and 41 | Bait Shop Storage (South Storage) Main Room | Interior walls (including arches / columns) | Concrete | Intact, but deteriorated at substrate failure | White | 1.5-4.2 | 1,100 SF |
| 39 | Bait Shop Storage (South Storage) Main Room | Interior wall at closet | Wood | Intact | White | 1.2 | 75 SF |
| 244, 245, 246, 252, and 253 | Pier Storage (North Storage) Main Room | Interior walls (including arches / columns) | Concrete | Intact, but deteriorated at substrate failure | White | 3.2-4.3 | 900 SF |
| 249 | Pier Storage (North Storage) Main Room - Southwest corner at former urinals | Interior wall tiles | Ceramic | Intact | White | 7.2 | 90 SF |

**NOTES:**

[1] = Note that the LCS in this table are materials that meet or exceed the criteria of CDPH. LCS in this table does not necessarily identify all materials that could contain lead at concentrations less than 1.0 $mg/cm^2$ or 5,000 milligrams per kilogram (mg/kg), which could trigger the Cal-OSHA lead in construction standard.

[2] = LCS locations are based upon Ninyo & Moore's visual observations during survey activities.

**[3] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

EA = Each
SF = Square feet
$mg/cm^2$ = milligrams per square centimeter

## Table 5 - Summary of Other Potential Hazardous Building Materials [1]

| Building | Fluorescent Light Tubes | Fluorescent Light Ballasts | Non-Incandescent Lights | Smoke Detectors | Mercury Thermostats and Switches | A/C Units | Tritium-Powered Exit Signs | Freon Refrig. Systems | Wet Transformers | Cooling Towers | Lead Acid Batteries | Halon Fire Suppression Systems | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lifeguard Headquarters** | 44 | 32 | 10 | 8 | -- | -- | -- | 3 | -- | -- | -- | -- | Gas/oil storage |
| **Pier Storage Spaces** | 20 | 10 | 4 | 2 | -- | -- | -- | 5 | -- | -- | -- | -- | Paint & gas/oil storage |
| **Exterior** | -- | -- | 35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**NOTES:**

**[1] = Materials summarized are limited to the areas of the buildings that were in the scope of this survey.**

**Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at subject site.**

A/C = Air Conditioning

# APPENDIX A

## Suspect Asbestos-Containing Materials Sampling Protocol

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

# SUSPECT ASBESTOS-CONTAINING MATERIALS SAMPLING PROTOCOL

## Personal Protection Equipment

Inhalation of asbestos fibers during asbestos survey poses a serious health and safety hazard, the use of personal protection equipment (PPE) by building inspectors is recommended during sampling activities. Our building inspectors generally wear a respirator (either a full- or half-face mask) equipped with high-efficiency disposable filter cartridges. If utilized, full-face masks will also prevent eye irritation from dust, fibers, and debris released during sampling activities. When necessary, disposable clothing is worn during sampling activities. Our building inspectors utilize plastic bags to handle the disposal of drop cloths, protective clothing, wet cloths, and debris.

## Sampling Equipment

Our building inspector(s) will need various tools and materials to accomplish their sampling tasks, including those listed below:

- A ladder to access areas and a flash light to aid visibility,
- Airtight, sampling containers (e.g., resealable plastic bags),
- A plastic spray bottle, filled with amended water, to wet the material to be sampled,
- Plastic drop cloths to spread beneath the area to be sampled,
- A utility knife, linoleum cutter, or other tool appropriate for collecting samples,
- A caulking gun and compound for filling holes once a sample has been extracted,
- Spray acrylic or adhesive to encapsulate the small areas from which samples were collected,
- Duct tape for repairing thermal system insulation jackets,
- Cloths and cleaner for decontaminating tools,
- A vacuum cleaner equipped with high efficiency particulate air (HEPA) filters, when necessary,
- Indelible ink pen for labeling sample containers, and
- Camera for photographic documentation, and
- Chain-of-Custody documentation forms.

## Sampling Procedures

ACM are divided into three categories: Surfacing Materials, Thermal System Insulation (TSI), and Miscellaneous Materials. The procedures for sampling these three types of materials are as follows:

**Surfacing Materials**

1. Select a location where the material has been previously damaged or a low profile area.
2. Spread a plastic drop cloth on the floor and set up other equipment, (e.g., ladder).
3. Put on protective equipment (respirator at all times when sampling friable material and protective clothing, when needed).
4. Moisten area where sample is to be collected (spray the area with amended water).
5. Collect sample using a clean knife or other tool appropriate to cut out or scrape off a small piece of the material. Care is taken to ensure that all layers of material are collected, without disturbing any adjacent material.
6. Place the sample in the labeled container and tightly seal it.
7. Wipe the exterior of the container with a wet wipe to remove any residue which may have adhered to the container it during sampling.
8. Clean tools with wet wipes and vacuum area with a HEPA vacuum to clean all debris.
9. Fill hole with caulking compound or appropriate filler (to minimize subsequent fiber release and for appearance).
10. Label container with its sample identification number and fill out location and type of material being sampled on a Chain-of-Custody documentation form.
11. Mark the location and sample identification number on the sample location map.
12. Repeat the above steps at each sample location. Place sample containers in plastic bags.
13. Discard protective clothing, rags, and drop cloth in a plastic bag.

**Thermal System Insulation**

Sampling TSI follows the same procedural sequence as laid out above. Obtain samples from exposed or damaged areas, if possible. However, random sampling will require sampling of some intact material. Sampling holes can be patched with plastic spackling, caulk, or fibrous glass.

**Miscellaneous Materials**

Sampling miscellaneous materials follows the same procedural sequence as laid out above, making sure that a cross section of the materials have been obtained.

**Forwarding Samples to Laboratory**

The samples are transferred, using standard chain-of-custody procedures, to a laboratory accredited in the National Voluntary Laboratory Accreditation Program (NVLAP), for bulk asbestos fiber analysis. The samples are analyzed using polarized light microscopy with dispersion staining (PLM/ds) for the presence and quantification of asbestos fibers, in general accordance with either United States Environmental Protection Agency (USEPA) Method 600/M4-82-020 or USEPA Method 600/R-93/116. The lower limit of reliable detection for asbestos using the PLM/ds method is approximately 1% by volume. California regulations require certain worker protection standards and have certain contractor requirements for disturbing those materials having an asbestos content of greater than one tenth of 1% (0.1%).

# APPENDIX B

## Laboratory Analytical Report and Chain-of-Custody Records

# EMSL Analytical, Inc.

**6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120**
Tel/Fax: (702) 931-3532 / (702) 931-3533
http://www.EMSL.com / lasvegaslab@EMSL.com


**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

**Attention:** Brian Ford
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123

**Phone:** (858) 761-7067
**Fax:** (858) 576-9600
**Received Date:** 05/10/2021 10:30 AM
**Analysis Date:** 05/10/2021
**Collected Date:** 05/03/2021

**Project:** 109214001 / OCEANSIDE, CA

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-001<br>*312101438-0001*<br>*Only concrete present within sample.* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | 10% Glass | 90% Non-fibrous (Other) | None Detected |
| ASB-002-Stucco<br>*312101438-0002* | STUCCO & CONCRETE | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-002-Concrete<br>*312101438-0002A* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-003-Stucco<br>*312101438-0003* | STUCCO & CONCRETE | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-003-Concrete<br>*312101438-0003A* | STUCCO & CONCRETE | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-004<br>*312101438-0004* | DOOR SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-005<br>*312101438-0005* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-006<br>*312101438-0006* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-007<br>*312101438-0007* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-008<br>*312101438-0008* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-009<br>*312101438-0009* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-010<br>*312101438-0010* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-011<br>*312101438-0011* | TEXTURE MATERIAL CONCRETE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-012<br>*312101438-0012* | TEXTURE MATERIAL CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-013<br>*312101438-0013* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 60% Cellulose<br>20% Min. Wool | 20% Non-fibrous (Other) | None Detected |
| ASB-014<br>*312101438-0014* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 60% Cellulose<br>20% Min. Wool | 20% Non-fibrous (Other) | None Detected |

Initial report from: 05/10/2021 19:44:19

**EMSL Analytical, Inc.**
**6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120**
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http://www.EMSL.com / lasvegaslab@EMSL.com

**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-015<br>*312101438-0015* | SINK COATING | White<br>Non-Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-016-Vinyl Floor Tile<br>*312101438-0016* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-016-Mastic<br>*312101438-0016A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-017-Vinyl Floor Tile<br>*312101438-0017* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-017-Mastic<br>*312101438-0017A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-018-Vinyl Floor Tile<br>*312101438-0018* | 12X12 VFT W MASTIC | Blue<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-018-Mastic<br>*312101438-0018A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-019-Vinyl Floor Tile<br>*312101438-0019* | 12X12 VFT W MASTIC | Blue<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-019-Mastic<br>*312101438-0019A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-020<br>*312101438-0020* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-021<br>*312101438-0021* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-022<br>*312101438-0022* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-023<br>*312101438-0023* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-024<br>*312101438-0024* | CARPET GLUE | Gold<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-025<br>*312101438-0025* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-026<br>*312101438-0026* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-027<br>*312101438-0027* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-028<br>*312101438-0028* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-029<br>*312101438-0029* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

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http://www.EMSL.com / lasvegaslab@EMSL.com

**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-030<br>*312101438-0030* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-031<br>*312101438-0031* | WINDOW SEALANT | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-032<br>*312101438-0032*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-033<br>*312101438-0033*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-034<br>*312101438-0034*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-035<br>*312101438-0035*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-036<br>*312101438-0036*<br>*Result includes inseparable base coat and skim coat.* | PLASTER | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-037-Drywall<br>*312101438-0037* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-037-Joint Compound<br>*312101438-0037A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-037-Tape<br>*312101438-0037B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-038-Drywall<br>*312101438-0038* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Fibrous<br>Homogeneous | 15% Cellulose | 85% Non-fibrous (Other) | None Detected |
| ASB-038-Joint Compound<br>*312101438-0038A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-038-Tape<br>*312101438-0038B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Purple<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-039-Drywall<br>*312101438-0039* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-039-Joint Compound<br>*312101438-0039A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-039-Tape<br>*312101438-0039B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |

Initial report from: 05/10/2021 19:44:19

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**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-040-Drywall<br>*312101438-0040* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-040-Joint Compound<br>*312101438-0040A* | DRYWALL/JOINT COMPOUND/TAPE | Beige<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-040-Tape<br>*312101438-0040B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-041-Drywall<br>*312101438-0041*<br>*Joint compound not present within sample.* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-041-Tape<br>*312101438-0041A* | DRYWALL/JOINT COMPOUND/TAPE | Tan<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-042-Drywall<br>*312101438-0042* | DRYWALL/JOINT COMPOUND/TAPE | Brown<br>Fibrous<br>Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| ASB-042-Joint Compound<br>*312101438-0042A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-042-Tape<br>*312101438-0042B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-043-Drywall<br>*312101438-0043* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Fibrous<br>Homogeneous | 15% Cellulose | 85% Non-fibrous (Other) | None Detected |
| ASB-043-Joint Compound<br>*312101438-0043A* | DRYWALL/JOINT COMPOUND/TAPE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-043-Tape<br>*312101438-0043B* | DRYWALL/JOINT COMPOUND/TAPE | Tan/Green<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| ASB-044<br>*312101438-0044* | TRANSITE 6 IN PIPELINE | Gray<br>Fibrous<br>Homogeneous | | 84% Non-fibrous (Other) | 12% Chrysotile<br>4% Crocidolite |
| ASB-045-Stucco<br>*312101438-0045* | STUCCO & CONCRETE | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-045-Concrete<br>*312101438-0045A* | STUCCO & CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-046-Stucco<br>*312101438-0046* | STUCCO & CONCRETE | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-046-Concrete<br>*312101438-0046A* | STUCCO & CONCRETE | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-047<br>*312101438-0047* | DOOR SEALANT | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-048-Roofing<br>*312101438-0048* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |

Initial report from: 05/10/2021 19:44:19

**EMSL Analytical, Inc.**
**6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120**
Tel/Fax: (702) 931-3532 / (702) 931-3533
http://www.EMSL.com / lasvegaslab@EMSL.com

**EMSL Order:** 312101438
**Customer ID:** 32NIN63
**Customer PO:**
**Project ID:**

## *Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy*

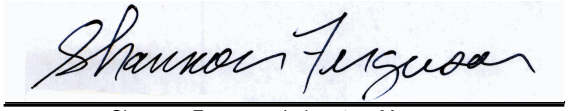
| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| ASB-048-Tar Felt<br>*312101438-0048A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-049-Roofing<br>*312101438-0049* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-049-Tar Felt<br>*312101438-0049A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-050-Roofing<br>*312101438-0050* | ROOF ASSEMBLY | White/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-050-Tar Felt<br>*312101438-0050A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 15% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-051-Shingle<br>*312101438-0051* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-051-Tar Paper<br>*312101438-0051A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-052-Shingle<br>*312101438-0052* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-052-Tar Paper<br>*312101438-0052A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-053-Shingle<br>*312101438-0053* | ROOF ASSEMBLY | Gray/Black<br>Fibrous<br>Homogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (Other) | None Detected |
| ASB-053-Tar Paper<br>*312101438-0053A* | ROOF ASSEMBLY | Black<br>Fibrous<br>Homogeneous | 65% Cellulose | 35% Non-fibrous (Other) | None Detected |
| ASB-054<br>*312101438-0054* | EDGE SEALANT | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-055<br>*312101438-0055* | 2X4 ACP | Tan/White<br>Fibrous<br>Homogeneous | 70% Cellulose<br>10% Glass | 20% Non-fibrous (Other) | None Detected |
| ASB-056<br>*312101438-0056* | TEXTURE | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-057<br>*312101438-0057* | COVEBASE GLUE | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-058-Vinyl Floor Tile<br>*312101438-0058* | 12X12 VFT W MASTIC | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| ASB-058-Mastic<br>*312101438-0058A* | 12X12 VFT W MASTIC | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |

Initial report from: 05/10/2021 19:44:19

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Tel/Fax: (702) 931-3532 / (702) 931-3533
http://www.EMSL.com / lasvegaslab@EMSL.com

| | |
|---|---|
| **EMSL Order:** | 312101438 |
| **Customer ID:** | 32NIN63 |
| **Customer PO:** | |
| **Project ID:** | |

Analyst(s)
*Lori Grenier (86)*



Shannon Ferguson, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV NVLAP Lab Code 600140-0, AZ 0953, CA 3002, NV 050132018-1

Initial report from: 05/10/2021 19:44:19

№ 312101438 Sheet 1 of 4

# ASBESTOS BULK SAMPLE DATA SHEET

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA<br>EMAIL TO KMARINELLO@NINYOANDMOORE.COM | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION: - 50 Samples -

| Relinquished By: (sign / print) | Company | Date | Time (24-hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Bryan Ford BF | Ninyo & Moore | 5/3/21 | 5 DAY TAT | Kim Marinello 5/3/21 | Ninyo-Moore |
| Kim Marinello | KM | 5/5/2021 | 11:30 | Kim Stimson 5.5.2021 @ 11:38am | EMSL-SD |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-001 | Lifeguard H.Q | Exterior | South Wall | Stucco & Concrete | | N | Good |
| ASB-002 | | | West Wall | | | | |
| ASB-003 | | | North Wall | | | | |
| ASB-004 | | | West Door | Door Sealant | | N | Good |
| ASB-005 | | Bay Area | West Wall | Texture Material | | N | Good |
| ASB-006 | | Bay Area | North Wall | Concrete | | | |
| ASB-007 | | Bay Area | South Ceiling | | | | |
| ASB-008 | | Meeting 2 | West Wall | | | | |
| ASB-009 | | Office | East Wall | | | | |
| ASB-010 | | Office 1 | West Wall | | | | Good |
| ASB-011 | | Office 2 | West Wall | | | | |
| ASB-012 | | Waiting | East Wall | | | | |
| ASB-013 | | Rest Room | South Ceiling | 2x4 ACP | | N | Good |
| ASB-014 | | First Aid | North Ceiling | | | | |
| ASB-015 | | First Aid | West Sink | Sink Coating | | N | Good |

Relinquished By: KStimson 5.07.2021 @ 3:22 pm ROW ID: 10039686

Asbestos Sample

OrderID: 312101438

Page 1 Of 4

№ 312101438 Sheet 2 of 4

# ASBESTOS BULK SAMPLE DATA SHEET

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Brianford B. S | Ninyo & Moore | 5/3/21 | 5DAYS | AA 5/10/21 1030 | EMSL-LV |
| | | | | VX | |

| Sample ID | Building Number | Room Number. | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-016 | Lifeguard H.Q. | waiting | East under carpet Floor | 12x12 FT w MASTIC | | N | Good |
| ASB-017 | | waiting | North under carpet Floor | | | | |
| ASB-018 | | First Aid | West Floor | | | | |
| ASB-019 | | First Aid | East Floor | | | | |
| ASB-020 | | waiting | West Floor | Carpet Glue | | N | Good |
| ASB-021 | | breeting | North Floor | | | | |
| ASB-022 | | | West Floor | | | | |
| ASB-023 | | office 1 | East Floor | | | | |
| ASB-024 | | office 2 | South Floor | | | | |
| ASB-025 | | waiting | West Wall | Cove base Glue | | N | Good |
| ASB-026 | | office 1 | East Wall | | | | |
| ASB-027 | | office 2 | North Wall | | | | |
| ASB-028 | | First Aid | West Wall | | | | |
| ASB-029 | | waiting | East Window | Window Sealant | | | |
| ASB-030 | | office 1 | West Window | | | | |



OrderID: 312101438

# ASBESTOS BULK SAMPLE DATA SHEET

№312101438



| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BKF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Bradford Bell | Ninyo & Moore | 5/3/21 | 5DAYS | | |
| | | | | VR | |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-031 | Lifeguard H.Q. | office 2 | WEST Window | window Sealant | | N | Good |
| ASB-032 | | MEN Shower | Center Ceiling | Plaster | | | |
| ASB-033 | | MEN Shower | West Ceiling | | | | |
| ASB-034 | | WOMEN Shower | North Ceiling | | | | |
| ASB-035 | | MEETING | North Ceiling | | | ✓ | ✓ |
| ASB-036 | | ✓ | WEST WALL | | | N | Good |
| ASB-037 | | WAITING | South WALL | DRYWALL w/ JOINT COM. TAPE | | N | Good |
| ASB-038 | | FIRST AID | North WALL | | | | |
| ASB-039 | | REST ROOM | North WALL | | | | |
| ASB-040 | | WOMEN Shower | South WALL | | | | |
| ASB-041 | | MEN Shower | EAST WALL | | | | |
| ASB-042 | | office | North WALL | | | | |
| ASB-043 | ✓ | office 2 | EAST WALL | ✓ | | ✓ | ✓ |
| ASB-044 | ✓ | EXTERIOR | North under pipeline | TRANSITE 6INCH pipeline | | N | Good |
| ASB-045 | Pool Storage | INT. | North STAIRCASE WALL | STUCCO & CONCRETE | | N | Good |



OrderID: 312101438

# ASBESTOS BULK SAMPLE DATA SHEET

312101438 Sheet 4 of 4

| | | | |
|---|---|---|---|
| **Ninyo & Moore**<br>5710 Ruffin Road<br>San Diego, CA 92123<br>Tel: (858) 576-1000<br>Fax: (858) 576-9600 | **Project Name: Pier View Way Bridge**<br>Project No.: 109214001<br>Project Manager: NSM<br>Site Address: Oceanside, CA | Date Sampled: 5/3/21<br>Sampled By: BCF<br><br>Analyze via EPA Method 600/R-93/116<br>Please analyze all layers independently | **Laboratory:**<br>EMSL Analytical, Inc.<br>8145 Ronson Rd., Ste. B<br>San Diego, CA 92111<br>Tel: (858) 499-1303 |

CHAIN OF CUSTODY INFORMATION:

| Relinquished By: (sign / print) | Company | Date | Time (24 hr.) | Received By: (sign / print) | Laboratory |
|---|---|---|---|---|---|
| Brian Ford BCF | Ninyo & Moore | 5/3/21 | 5DA/5 | | |
| | | | | VK | |

| Sample ID | Building Number | Room Number | Sample Location | Sample Description | Quantity (SF/LF/EA) | Friable (Y/N) | Condition |
|---|---|---|---|---|---|---|---|
| ASB-046 | Pier Storage | Int. | Center Ceiling | Stucco w/ Concrete | | N | Good |
| ASB-047 | ↓ | ↓ | North Door | Door Sealant | | N | Good |
| ASB-048 | Lifeguard H.Q | Roof | EAST Roof | Roof Assembly | | N | Good |
| ASB-049 | | Roof | Southwest Roof | | | | |
| ASB-050 | | Roof | WEST Roof | | | | |
| ASB-051 | | Roof | North Skylight Roof | | | | |
| ASB-052 | | Roof | WEST Roof | | | | |
| ASB-053 | | Roof | EAST Roof | ↓ | | ↓ | ↓ |
| ASB-054 | | Roof | WEST Roof | Edge Sealant | | N | Good |
| ASB-055 | | First Aid | EAST Ceiling | 2x4 ACP | | N | Good |
| ASB-056 | | office 3 | Southwest Wall | Texture | | N | Good |
| ASB-057 | | ↓ | North Wall | Cove Base Glue | | N | Good |
| ASB-058 | | Waiting | EAST Floor | 12x12 VFT w/ Mastic | | N | Good |
| ASB-059 | | | | | | | |
| ASB-060 | ↓ | | | | | | |

Page 4 Of 4

OrderID: 312101438

Asbestos Sample

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

**County of San Diego – Rule 1206 Requirements**

(d) (5) (i) Facility Information

- Name of Building(s):
  Pier View Way Bridge and Lifeguard Headquarters
  Oceanside Municipal Pier

- Address of Building(s):
  301 The Strand North
  Oceanside, CA 92054

- Building Owner:
  City of Oceanside
  Engineering Division
  300 North Coast Highway
  Oceanside, CA 92054
  760-435-5106

(d) (5) (ii) Consultant Information

- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

  EPA AHERA Building Inspector
  Design For Health Training Center – Cert. No. 0221BIR188557
  Expires February 19, 2022

(d) (5) (iii) Facility Survey Date

- May 3 & 5, 2021

(d) (5) (vi) Suspect Materials Information

- See Tables 1 and 2

(d) (5) (v) Analytical Laboratory Information

- EMSL Analytical, Inc.
  6325 Harrison Drive, Suites 3 & 4
  Las Vegas, NV 89120
  702-931-3532

(d) (5) (vi) Analytical Laboratory Qualifications

- Laboratory qualification documents can be found on their website below - https://www.emsl.com/Locations.aspx?laboratoryid=64

(d) (5) (vii) Analytical Test Method Used

- Asbestos Analysis of Bulk Materials via EPA Method 600/R-93/116 using Polarized Light Microscopy

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

## XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

After a visual assessment, accessible painted surfaces were screened for lead content with a Viken Detection Pb200i XRF Lead Paint Analyzer. Correction for paint matrix and substrate effects is performed automatically by the XRF analyzer.

XRF readings were made on testing combinations in all room equivalents in an effort to test typical materials that are representative of the room equivalent. Testing combinations were tested non-destructively by holding the shutter of the XRF against the surface being tested. At each XRF assay location, the trigger is depressed to open the shutter, and one reading was made using the standard paint testing mode. Results of each assay were recorded in the memory of the XRF spectrum analyzer and downloaded via the software provided by the manufacturer. In addition, the results of each assay were read and recorded on the XRF Data Sheet field data sheet.

The XRF testing orientation is depicted on the attached sample location maps. The “A” direction was initially assigned to the direction of the street, and the subsequent directions (“B”, “C”, and “D”) were assigned clockwise from the “A” direction. Should the subject site be located on the corner of two streets, the “A” direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three calibration checks were made using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the green 1.06 mg/cm$^2$ Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST).

In addition to the three starts up tests, calibration readings are collected between each building, after four hours, and at the completion of XRF testing. Results of each calibration reading were recorded within the memory of the XRF spectrum analyzer and on the XRF Data Sheet. The quality control tests taken during testing at the subject site were within the acceptable performance range prescribed by the XRF equipment manufacturer. Documentation of the quality control calibration check is included in the XRF Data Sheet, Table 3.

State of California—Health and Human Services Agency | California Department of Public Health

# LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** 05/03-05/2021

**Section 2 — Type of Lead Hazard Evaluation (Check one box only)**

☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

| Address [number, street, apartment (if applicable)] | City | County | Zip Code |
|---|---|---|---|
| 301 The Strand N. (Pier Bridge & Lifeguard HQ) | Oceanside | San Diego | 92054 |

| Construction date (year) of structure | Type of structure | | Children living in structure? | |
|---|---|---|---|---|
| 1926-1985 | ☐ Multi-unit building | ☐ School or daycare | ☐ Yes | ☑ No |
| | ☐ Single family dwelling | ☑ Other Muni. Pier Bridge | ☐ Don't Know | |

**Section 4 — Owner of Structure (if business/agency, list contact person)**

| Name | Telephone number |
|---|---|
| City of Oceanside - Engineering Div. | 760-435-5106 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 300 N. Coast Highway | Oceanside | CA | 92054 |

**Section 5 — Results of Lead Hazard Evaluation (check all that apply)**

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

**Section 6 — Individual Conducting Lead Hazard Evaluation**

| Name | Telephone number |
|---|---|
| Nicholas Marinello | 858-576-1000 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 5710 Ruffin Road | San Diego | CA | 92123 |

| CDPH certification number | Signature | Date |
|---|---|---|
| LRC-00003568 | | 5/6/2021 |

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

**Section 7 — Attachments**

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)

# APPENDIX C

## County of San Diego – Rule 1206 Requirements

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

**County of San Diego – Rule 1206 Requirements**

(d) (5) (i) Facility Information

- Name of Building(s):
  Pier View Way Bridge and Lifeguard Headquarters
  Oceanside Municipal Pier

- Address of Building(s):
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- Building Owner:
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  Engineering Division
  300 North Coast Highway
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  760-435-5106

(d) (5) (ii) Consultant Information

- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

  EPA AHERA Building Inspector
  Design For Health Training Center – Cert. No. 0221BIR188557
  Expires February 19, 2022

(d) (5) (iii) Facility Survey Date

- May 3 & 5, 2021

(d) (5) (vi) Suspect Materials Information

- See Tables 1 and 2

(d) (5) (v) Analytical Laboratory Information

- EMSL Analytical, Inc.
  6325 Harrison Drive, Suites 3 & 4
  Las Vegas, NV 89120
  702-931-3532

(d) (5) (vi) Analytical Laboratory Qualifications

- Laboratory qualification documents can be found on their website below - https://www.emsl.com/Locations.aspx?laboratoryid=64

(d) (5) (vii) Analytical Test Method Used

- Asbestos Analysis of Bulk Materials via EPA Method 600/R-93/116 using Polarized Light Microscopy

# APPENDIX D

## XRF Testing Methodology

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

## XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

After a visual assessment, accessible painted surfaces were screened for lead content with a Viken Detection Pb200i XRF Lead Paint Analyzer. Correction for paint matrix and substrate effects is performed automatically by the XRF analyzer.

XRF readings were made on testing combinations in all room equivalents in an effort to test typical materials that are representative of the room equivalent. Testing combinations were tested non-destructively by holding the shutter of the XRF against the surface being tested. At each XRF assay location, the trigger is depressed to open the shutter, and one reading was made using the standard paint testing mode. Results of each assay were recorded in the memory of the XRF spectrum analyzer and downloaded via the software provided by the manufacturer. In addition, the results of each assay were read and recorded on the XRF Data Sheet field data sheet.

The XRF testing orientation is depicted on the attached sample location maps. The “A” direction was initially assigned to the direction of the street, and the subsequent directions (“B”, “C”, and “D”) were assigned clockwise from the “A” direction. Should the subject site be located on the corner of two streets, the “A” direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three calibration checks were made using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the green 1.06 mg/cm$^2$ Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST).

In addition to the three starts up tests, calibration readings are collected between each building, after four hours, and at the completion of XRF testing. Results of each calibration reading were recorded within the memory of the XRF spectrum analyzer and on the XRF Data Sheet. The quality control tests taken during testing at the subject site were within the acceptable performance range prescribed by the XRF equipment manufacturer. Documentation of the quality control calibration check is included in the XRF Data Sheet, Table 3.

# APPENDIX E

## CDPH Form 8552 – Lead Hazard Evaluation Report

State of California—Health and Human Services Agency | California Department of Public Health

# LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** 05/03-05/2021

**Section 2 — Type of Lead Hazard Evaluation (Check one box only)**

☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

| Address [number, street, apartment (if applicable)] | City | County | Zip Code |
|---|---|---|---|
| 301 The Strand N. (Pier Bridge & Lifeguard HQ) | Oceanside | San Diego | 92054 |

| Construction date (year) of structure | Type of structure | | Children living in structure? | |
|---|---|---|---|---|
| 1926-1985 | ☐ Multi-unit building | ☐ School or daycare | ☐ Yes | ☑ No |
| | ☐ Single family dwelling | ☑ Other Muni. Pier Bridge | ☐ Don't Know | |

**Section 4 — Owner of Structure (if business/agency, list contact person)**

| Name | Telephone number |
|---|---|
| City of Oceanside - Engineering Div. | 760-435-5106 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 300 N. Coast Highway | Oceanside | CA | 92054 |

**Section 5 — Results of Lead Hazard Evaluation (check all that apply)**

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

**Section 6 — Individual Conducting Lead Hazard Evaluation**

| Name | Telephone number |
|---|---|
| Nicholas Marinello | 858-576-1000 |

| Address [number, street, apartment (if applicable)] | City | State | Zip Code |
|---|---|---|---|
| 5710 Ruffin Road | San Diego | CA | 92123 |

| CDPH certification number | Signature | Date |
|---|---|---|
| LRC-00003568 | | 5/6/2021 |

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

**Section 7 — Attachments**

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)




5710 Ruffin Road | San Diego, California 92123 | p. 858.576.1000

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants