

Appendix 3-4
Preliminary Archaeological Review



SAN FRANCISCO PLANNING DEPARTMENT

Environmental Planning Preliminary Archeological Review: Checklist

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

A. GENERAL PROJECT INFORMATION:

Date: September 9, 2013 (revised 7/2/2014) Reviewer: Allison Vanderslice

Project name: Mission Rock Pier 48 and Seawall Lot 337 Project

Case No: 2013.0208E

Application type: EE CatEx CPE

Project address: Pier 48 and Seawall Lot 337

EP planner: Tania Sheyner

APN: 8719/002 and 9900/048

Cross streets: East of 3rd Street and north of Mission Rock Street

Site in CA Liquefaction Hazards Zone? Y N

Brief Project Description: The project consists of the creation of a new mixed-use neighborhood extending eastward from Mission Bay and consisting of approximately 3.6 million sq ft of development. The project would also include rehab and reuse of Pier 48, a contributor to the National Register Port of San Francisco Embarcadero Historic District. The 500 feet of seawall associated with Pier 48 is also a contributor to the historic district.¹ As currently proposed, the seawall will be retained and is not further addressed in this review of archeological resources.

None of the proposed buildings will have basements. One below grade parking garage is proposed beneath the location of Mission Rock Square, near the center of the project site. Proposed excavation for the garage is 29 feet bgs. Based on the 2011 report by Treadwell & Rollo, a deep foundation system consisting of 14" steel piles driven to bedrock (between 160 to 270 feet) is recommended for the seawall lot. Treadwell & Rollo also recommends rapid impact compaction (RIC) of soils within the top 15 feet of the seawall lot.

Proposed foundations and work associated with the rehab of Pier 48 are discussed in the geotech report by Langan Treadwell Rollo dated March 5, 2014. Soil improvements consisting of stone columns and/or deep soil mixing, are recommended for a 35-50 foot area to the west of the seawall.

¹ Port of San Francisco Embarcadero Historic District, January 2006, Section 7, page 10.

Project site is located in study area of EIR for:

- | | |
|--|--|
| <input type="checkbox"/> Market & Octavia Neighborhood Plan | <input type="checkbox"/> Rincon Hill Plan |
| <input type="checkbox"/> Eastern Neighborhoods Rezoning and Areas Plan | <input type="checkbox"/> Balboa Park Station Area Plan |
| <input type="checkbox"/> Glen Park Area Plan | <input type="checkbox"/> Transit Center District Plan |
| <input type="checkbox"/> Hunter's Pt Shipyard Phase II-Bayview-Candlestick Pt Plan | |
| <input type="checkbox"/> Treasure Island Development Plan | <input type="checkbox"/> Parkmerced Plan |
-

B. FINDINGS OF EP PRELIMINARY ARCHEOLOGICAL REVIEW

1) NO EFFECTS TO ARCHEOLOGICAL RESOURCES EXPECTED:

- 1. Effects limited to previously-disturbed soils
- 2. Effects limited to culturally sterile soils
- 3. Effects shallow (_____b.s.g.). No expected significant archeologist resources within effected soils.
- 4. Effects would occur to _____depth. Based on review of in-house EP archeological documentation, no CEQA-significant archeological resources expected within project-affected soils.

2) PROJECT MAY AFFECT CEQA-SIGNIFICANT ARCHEOLOGICAL RESOURCES:

- Low potential to adversely affect archeological resources may be avoided by implementation of the EP 1st Standard Archeological Mitigation Measure (Accidental).
 - The potential of the project to adversely affect archeological resources may be avoided by implementation of the EP 2nd Standard Archeological Mitigation Measure (Archeological Monitoring)
 - The potential of the project to adversely affect archeological resources may be avoided by implementation of the EP 3rd Standard Archeological Mitigation Measure (Archeological Testing).
 - CEQA evaluation of the project requires preparation of an archeological research design and treatment plan (ARDTP) by a qualified archeological consultant. See attached scope of work for the ARDTP.
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C. PHASE 1 ARCHEOLOGICAL REVIEW: Potential Soils Disturbance/Modification Effects

A) POTENTIAL EFFECTS TO SOILS

LAND-BASED PROJECT:

- | Yes | No | |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Excavation (basement, elevator, utilities, seismic retrofit, etc).
Depth: 29 feet bgs for parking garage |
| <input type="checkbox"/> | <input type="checkbox"/> | Shallow Building Foundation (Mat, Spread Footings, etc.)
Depth: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Piles & Grouting |
| <input type="checkbox"/> | <input type="checkbox"/> | Caisson (Drilled Pier/Pile) foundation – 14” piles to bedrock (approx. 200 feet) |
| <input type="checkbox"/> | <input type="checkbox"/> | Micropiles, Minipiles, Pin Piles, Needle Piles, etc. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Stone columns – recommended for landside of seawall, associated with Pier 48 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Compact Grouting/deep soil mixing – recommended for landside of seawall, associated with Pier 48 |
| <input type="checkbox"/> | <input type="checkbox"/> | Jet Grouting |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Dynamic Compaction: RIC for top 15 feet recommended for seawall lot |
| <input type="checkbox"/> | <input type="checkbox"/> | Vibrofloatation |
| <input type="checkbox"/> | <input type="checkbox"/> | Site remediation/UST removal |
| <input type="checkbox"/> | <input type="checkbox"/> | Site Grading |
| <input type="checkbox"/> | <input type="checkbox"/> | Demolition |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction staging area |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction of project access road |
| <input type="checkbox"/> | <input type="checkbox"/> | Project spoils area |
| <input type="checkbox"/> | <input type="checkbox"/> | Installation of pipe, underground vaults, water channel, septic tank system |
| <input type="checkbox"/> | <input type="checkbox"/> | Geotechnical testing: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Public infrastructure (pipeline, vaults, cisterns, open conduits, etc):
Other: |

WATER-BASED PROJECT:

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | New pilings/piling replacement |
| <input type="checkbox"/> | <input type="checkbox"/> | New breakwater (mole) |
| <input type="checkbox"/> | <input type="checkbox"/> | Floating Docks |
| <input type="checkbox"/> | <input type="checkbox"/> | New rip rap |
| <input type="checkbox"/> | <input type="checkbox"/> | Seawall |
| <input type="checkbox"/> | <input type="checkbox"/> | Excavation |
| <input type="checkbox"/> | <input type="checkbox"/> | Wharf construction |
| <input type="checkbox"/> | <input type="checkbox"/> | Geotechnical testing (corings, trenches, pits) |
| <input type="checkbox"/> | <input type="checkbox"/> | Pipeline |

B) PREVIOUS SOILS DISTURBANCE:

Question: Is the area and location of potential project soils disturbance/modification entirely within an area & location previously disturbed by any of the following?

LAND-BASED PROJECT:

- | | | |
|--------------------------|--------------------------|--|
| Yes | No | |
| <input type="checkbox"/> | <input type="checkbox"/> | Existing Basement |
| | | Depth: |
| <input type="checkbox"/> | <input type="checkbox"/> | Existing Foundation (footings, perimeter, piles, etc.) |
| <input type="checkbox"/> | <input type="checkbox"/> | Micropiles, Minipiles, Pin Piles, Needle Piles, etc. |
| <input type="checkbox"/> | <input type="checkbox"/> | Compact Grouting |
| <input type="checkbox"/> | <input type="checkbox"/> | Jet Grouting |
| <input type="checkbox"/> | <input type="checkbox"/> | Dynamic Compaction |
| <input type="checkbox"/> | <input type="checkbox"/> | Vibrofloatation |
| <input type="checkbox"/> | <input type="checkbox"/> | Site remediation/UST removal |
| <input type="checkbox"/> | <input type="checkbox"/> | Site Grading |
| <input type="checkbox"/> | <input type="checkbox"/> | Demolition |
| <input type="checkbox"/> | <input type="checkbox"/> | UST installation/removal |

WATER-BASED PROJECT:

- | | | |
|-------------------------------------|--------------------------|---|
| Yes | No | |
| <input type="checkbox"/> | <input type="checkbox"/> | Dredging: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Piling installation, upgrades to Pier 48 in 1997 and 2002 |
| <input type="checkbox"/> | <input type="checkbox"/> | Wharf construction |
| <input type="checkbox"/> | <input type="checkbox"/> | Riprap |
| <input type="checkbox"/> | <input type="checkbox"/> | Seawall construction |

C) GEOTECH AND OTHER REPORTS:

Geotechnical Report Y N

Preparer: Treadwell & Rollo

Name of report: Preliminary Geotechnical Investigations Seawall Lot 337 – Mission Bay, San Francisco, California.

Date of GTP: 8 Sept 2011 GTR prepared for current project? Y N

Core samples taken? Y N On Project site: Y N

Boring log included? Y N Geotechnical trenching? Y N

No. of trenches? n/a Size of trenches n/a

Depth of fill: btw 0 - 13 and 37 ft bg

Depth to bedrock? 160 – 260 ft bg Site historically submerged? yes

Soils profile (thickness unless noted):

Fill (heterogeneous with brick, rock, debris):	13 to 37 ft
Bay Mud	46 to 72 ft
Old Bay Clay [Old Bay Mud]	68 to 74 ft
Sand layer (in some areas)	165-180 ft bgs
Bedrock surface	160 ft bgs (nw corner) to 260 ft bgs (ne corner)

Recommended building foundation type(s):

The geotechnical consultant recommends for Seawall Lot 337 a deep foundation system consisting of 14" steel piles driven to bedrock (between 160 to 270 feet). Treadwell & Rollo also recommend rapid impact compaction (RIC) of soils within the top 15 feet of the project area.

Remarks:

Treadwell & Rollo recommend further geotech investigations.

Geotechnical Report Y N

Preparer: Langan Treadwell Rollo

Name of report: Geotechnical Evaluation of Shoreline Conditions at Pier 48, Mission Rock Development, Seawall Lot 337 and Pier 48, San Francisco, California.

Date of GTP: 5 March 2014 GTR prepared for current project? Y N

Core samples taken? Y N On Project site: Y N

Boring log included? Y N Geotechnical trenching? Y N

No. of trenches? n/a Size of trenches n/a

Depth of fill: 40 ft bg

Depth to bedrock? Approx 190 ft bg Site historically submerged? yes

Soils profile (thickness unless noted):

Fill (heterogeneous with brick, rock, debris):	35-40 ft bgs
Bay Mud	35 to 47 ft
Colma (approx. 120 ft east of seawall)	65-75 ft bgs
Old Bay Clay [Old Bay Mud]	60 to 80 ft
Bedrock surface	190 ft bgs

Recommended building foundation type(s):

The geotechnical consultant recommends stone columns and/or deep soil mixing for 35 to 50 feet west of the seawall. Seismic upgrades to the pier were completed in 2002.

Remarks:

Report states it is likely that the top 20-25 feet of the bay mud was excavated out during the filling of the site in the early 20th century.

Soils Characterization Study? Y N

Preparer: _____

Name of report: _____

Date of GTP: _____ GTR prepared for current project? Y N

Core samples taken? Y N On Project site: Y N

Boring log included ? Y N Geotechnical trenching? Y N No. of
trenches? _____

Size of trenches _____ Soil profile: Depth of fill: _____

Depth to bedrock? _____ Site historically submerged? _____

Soils profile:

Remarks:

D. EVALUATION FOR POTENTIAL ARCHEOLOGICAL RESOURCES.

Site History

Based on a review of historical maps, it appears that the project site was within the open water of the bay into the early 20th century. Prior to the 1860s this area was undeveloped and was southeast of Steamboat Point, east of Mission Bay, and northwest of Mission Rock. USCS maps from the 1850s show that the project area was underwater by approximately 2-3 feet along the western edge and 21 feet (3.5 fathoms) at eastern edge of seawall lot and as deep as 32 feet (8 fathoms) at the eastern edge of Pier 48.

The Long Bridge was constructed in 1869 just to the west of the project area, along the general alignment of Fourth Street today. The Salt Marsh & Tidelands Map of 1869 shows the China Basin area, which includes the project area, defined as approximately 49 acres set aside for Docks, Piers, Slips and Basins for commerce. The 1877 State Board of Harbor Commissioners' waterfront plan still designates the area as China Basin and the area remained unimproved at that time. Based on the 1887 and 1899 Sanborn maps, the project area is still within the Bay and the Mission Bay Warehouse No. 1, a grain storage warehouse, stood on piles just to the west of the project area.² In 1900, the Atchison Topeka & Santa Fe Railroad (ATSF) signed a 50-year lease for the unimproved and still-submerged China Basin, which included the project site.³ Within a few years, ATSF began constructed their rail yard including building a seawall around the current seawall lot, filling in the lot, and constructed a car ferry slip. The majority of the fill material consisted of serpentine rock and soil quarried from land owned by the railroad near Potrero Hill.⁴

² 1887 Sanborn Map, Sheet 28I, 1899 Sanborn Map, Sheet 232.

³ VerPlanck Historic Preservation Consulting, Draft Historic Resource Evaluation, Seawall Lot 337 & Pier 48 Mixed Use Development Project, San Francisco, California, March 2014.

⁴ Ibid.

According to the HRE for project area, “[w]ooden trestles were built across the enclosed site to allow rail cars driven out over the water to dump their loads of rock and debris tipped into the San Francisco Bay. The trestles were left in place after filling, becoming part of the ‘made ground.’”⁵ After filling was complete, two freight sheds were built on the property. This development of the seawall lot (Block 8719) consisting of freight slips and the ATSF rail yard is shown on 1913 Sanborn Maps. Pier 48 (which includes the bulkhead wharf, pier and sheds on the pier) were constructed during the late 1920s.

Site Formation:

It appears that project site was not submerged below the bay until the Early or Middle Holocene or between approx. 4000 to 9000 B.P. (See Geoarchaeological Investigations and Buried Site Sensitivity Assessment in the Transit Center District Plan ARDTP and the Geoarchaeological Potential Assessment in the Central SOMA Plan Area ARDTP). After that time and until the early 20th century, the project site was located within the waters of the bay, with the northwest corner of the project area situated approximately eight hundred feet from southeastern corner of Steamboat Boat (the nearest land). The location of Mission Rock is beneath Pier 50, approximately 1200 feet to the east of the project area’s eastern edge. As mentioned above, based on the early 1850 USCS maps, the project area was under approximately 2 to 32 feet of water. The area was not filled until the construction of the New Seawall completed in the early 20th century. Borings by the project geotechnical consultant indicate fill deposits to depths between 13-37 ft. bgs. The geotech consultant raised the possibility that the top 20-25 feet of bay mud was removed in some areas of the project site and replaced with fill. Based on Board of State Harbor Commissioners reports, construction of Pier 48 required the depositing of 76,000 cubic yards of second class rock in order to support the foundation piles.⁶

Previous archeological documentation for project site:

None.

Recorded/documented archeological sites within/in the vicinity of the project site:

There are no known archaeological sites within the project area. The nature of the material used to fill in the seawall lot was primarily serpentine rock. Based on archaeological investigations nearby, significant archaeological resources are not anticipated (Pastron, Allen et al. *Behind the Seawall*. 1981). While not anticipated, buried ship hulls or remains of ship wrecks may exist within the project area. There are three known ship wrecks to the north, off of Steamboat Point, these include the Mary Ellen, Philadelphia, and Despatch. The exact locations for these shipwrecks are not known. The King Street ship was recorded at the foot of King Street near Second Street during monitoring in 1978 (Pastron, Allen et al. *Behind the Seawall*. 1981. p. 73-74).

⁵ Ibid, 34.

⁶ See *Port of San Francisco Embarcadero Historic District National Register Nomination*, Section 7. http://www.sfport.com/ftp/uploadedfiles/about_us/divisions/planning_development/EmbarcaderoRegisterNominationSec7.pdf

Archeological Sensitivity:

Deeply buried and submerged prehistoric deposits. In order to aid this review, a geoarcheological assessment was undertaken by ICF International geoarcheologist J. Tait Elder following the scope of work outlined below:

- Perform geologic and geoarcheological background research to establish local geoarcheological context. Work with EP archaeology staff to obtain relevant archeological reports with local geoarcheological contexts (such as Transbay Terminal ARDTP).
- Analyze existing bore log data for the project area and other nearby development projects to determine depth of fill and presence/absence of sediments associated terrestrial coastal landforms. Input synthesized bore log data into GIS database.
- Review historical shoreline and historical ecology data easily obtained from sources such as the San Francisco Estuary Institute, David Rumsey map collection, and EP GIS layers. Integrate this mapping with the ancient shoreline data developed by Far Western.
- Describe the results of the analysis in a technical report or memorandum. The goal of the analysis is to determine the potential for archeologically sensitive geological units with the project area. If this determination cannot be made based on existing information, the report should define what further work is necessary.

The assessment determined that the project area was not sensitive for deeply buried or submerged prehistoric resources. No additional work was identified. Based on this analysis there is a low potential for significance prehistoric resources with the project area and no further archeological review is required.

Historic-period resources. As outlined in this PAR, the presence of potentially significant historic-period archaeological resources with the project area is unlikely due to the late development of the project area and the lack of any identified piers or wharfs within the project area prior to the construction of the seawall lot in the early 1900s and the extant pier. Fill at the site is anticipated to be primarily serpentine rock. While some infrastructure associated with the filling the lot and with the early 20th century rail yard may be present at the site, these are unlikely to be significant archeological deposits.

There is the possibility for ship hulls or ship wrecks within the project area, although none have been recorded in the project area. The likely removal of the top 20 to 25 feet of bay mud for at least a portion of the project area during the early 20th century further reduces the likelihood of encountering significant historic-period resources within the project area. The accidental discovery mitigation measure adequately mitigates the low potential for encountering potentially significant maritime resources.