

Transmittal

CS Transmittal No. 2080

To: Mr. Alexander Smith U.S Department of Transportation Federal Transit Administration 201 Mission Street, Suite 1650 San Francisco, CA 94105 Date: October 10, 2012	From: John Funghi Project No./Contract No.: M544.1, Contract No. CS-149 Task No./Title: Task 1-10.04 – Mitigation Measures Phase: Final Design Subject: Archaeological Testing Plan for Utilities 2, Stations, and Tunnels Rev. 1
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Item No.	Copies	Description	Rev. No.	Date
1	2	Archaeological Testing Plan for Utilities 2, Stations, and Tunnels - Hard Copy	1	7/16/2012
2	2	Archaeological Testing Plan for Utilities 2, Stations, and Tunnels – CD	1	7/16/2012
3	1	Draft Letter to SHPO from FTA	N/A	TBD

If enclosures are not as noted, kindly notify us at once.

Remarks: Enclosed for your information please find copies of the above reports. Please fill out information highlighted in yellow on draft letter (a soft copy version will be emailed to you) to SHPO from FTA and transmit to SHPO with attachments.

Please contact Jenny Vodvarka at (415) 701-5265 or jenny.vodvarka@sfmta.com should you have any questions or require additional information.



John Funghi
Senior Program Director

JF:jlw

cc: File No. M544.1.6. 1001

FTA LETTERHEAD

October XX, 2012

Carol Rowland-Nawi
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Ref: FTAO80501A

Attn: Trevor Pratt

Subject: Final Archaeological Testing Plan for Utilities 2, Stations, and Tunnels – Revision
1 Dated July 16, 2012 - Central Subway Project, San Francisco

Dear Ms. Rowland-Nawi,

This is to transmit the Final version of our Archaeological Testing Plan (ATP) for Utilities 2, Stations, and Tunnels Revision 1 dated July 16, 2012. It has been revised to address comments from Trevor Pratt in his letter of 13 July 2012.

As you know, the Federal Transit Administration (FTA) and San Francisco Municipal Transportation Agency (MTA) are constructing the Central Subway Project as the second phase of the Third Street Light Rail Project. In response to FTA's Finding of Adverse Effect, an MOA was signed in 2008 pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended. The Project's Historic Properties Treatment Plan requires that an Archaeological Testing Plan be prepared to guide archaeological investigations at locations where archaeological resources are known or suspected to be present.

If you have any questions about this matter, please contact me at XXXXXXXXXXXX.

Sincerely,

NAME
TITLE

Encl:

Hard Copy of ATP for Utilities 2, Stations, and Tunnels Rev 1 Dated July 16, 2012
CD Copy of ATP for Utilities 2, Stations, and Tunnels Rev 1 Dated July 16, 2012



Technical Memorandum

Contract CS-149

Task 1100402

1-10.04 Construction Management –
Mitigation Measures

Archaeological Testing Plan for
Utilities 2, Stations, and Tunnels

Revision 1

July 16, 2012

Prepared for:

SFMTA

CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
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In association with:

C S P — Central Subway Partnership
creativity stewardship performance

Technical Memorandum

Contract CS-149

Task 1100402

1-10.04 Construction Management – Mitigation Measures

**Archaeological Testing Plan for
Utilities 2, Stations, and Tunnels**

Revision 1

July 16, 2012


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Prepared by:  Date: 7-16-12


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John Funghi
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EXECUTIVE SUMMARY

This Archaeological Testing Plan (ATP) for the San Francisco Central Subway Project presents a strategy to identify, evaluate, and treat historic properties that will be affected by construction of five Project components: utility relocations, portals and tunnels, Union Square/Market Street Station, Chinatown Station, and Moscone Station. This Plan includes an Archaeological Data Recovery Plan (ADRP) to allow the archaeological process to move seamlessly from identification to data recovery.

The archaeological strategies for each Project component are summarized below.

Archaeological Strategies for each Project Component

PROJECT COMPONENT & LOCATION	POTENTIAL HISTORIC PROPERTY TYPE	IMPACT DEPTH & SENSITIVITY	STRATEGY
Utilities 2 Utilities relocation Stockton between Post/Market	<u>Historic</u> : Gold Rush site <u>Prehistoric</u> : Residential site	Surface to 8 feet: low to moderate sensitivity	Monitor Opportunistic testing
Union Square/Market Street Station (UMS) Station construction Stockton between Maiden/Ellis	<u>Historic</u> : Gold Rush site <u>Prehistoric</u> : Shell Mound, Residential site	Surface to 100 feet: low to moderate sensitivity	Geoprobe. Hand auger &/or mechanical excavation Monitor Opportunistic testing
Chinatown Station (CTS) Station construction Stockton/Clay, & Washington	<u>Historic</u> : Pre-Gold Rush sites, Gold Rush site, Domestic Occupation site, Commercial site, Combined Domestic/Commercial site <u>Prehistoric</u> : Residential site, Non-Residential site	Surface to 120 feet at 933-949 Stockton: high sensitivity 45 to 120 feet: low sensitivity	Monitor demolition and expose historic surface ID/evaluation/data recovery consolidated Trench for prehistoric site
Moscone Station (MOS) Station construction Fourth between Folsom/Howard, Folsom/Clementina	<u>Historic</u> : Domestic Occupation site, Commercial site <u>Prehistoric</u> : Residential site CA-SFR-175	Surface to 80 feet: low to high sensitivity	Monitor demolition and expose historic surface ID/evaluation/data recovery consolidated Monitor, selective data recovery at CA-SFR-175 Geoprobe for deep prehistoric site
Tunnels & Portal <u>Portal</u> : Fourth between Harrison/Bryant <u>Tunnel</u> : Portal to North Beach <u>Retrieval Shaft</u> : North Beach	<u>Historic</u> : Commercial site, urban infrastructure <u>Prehistoric</u> : Residential site, Non-Residential site, Shell Mound	<u>Portal</u> : surface to 30 feet: low sensitivity <u>Tunnel</u> : 30 to 110 feet: low to moderate sensitivity <u>Retrieval Shaft</u> : surface to 40 feet: low sensitivity	No testing Monitor Portal and Retrieval Shaft

This draft ATP was distributed for review to the following individuals:

- Randall Dean, Archaeologist, City of San Francisco Planning Department
- Jakki Kehl (Mutsen Ohlone)
- Romona Garibay (Ohlone)
- Andrew Galvan (Ohlone Indian Tribe)
- Jean-Marie Feyling (Amah/Mutsen)
- Irene Zwierlein (Amah/Mutsen)
- Ann Marie Sayers (Indian Canyon Mutsun Band of Costanoan)
- Sue Lee, President, Chinese Historical Society of America (CHSA). Project personnel met with Sue Lee at the CHSA museum to review the draft Plan.

Randall Dean submitted comments on behalf of the City of San Francisco. This draft reflects his changes. Sue Lee declined to comment, stating that she had no concerns with the ATP. None of the other individuals offered comments on the draft ATP.

GLOSSARY

Term/Acronym

ACHP	Advisory Council on Historic Preservation
ADI	Area of Direct Impact
ADRP	Archaeological Data Recovery Plan
AMP	Archaeological Monitoring Plan
APE	Area of Potential Effects
ARDTP	Archaeological Research Design and Treatment Plan
ASC	Anthropological Studies Center
ATP	Archaeological Testing Plan
CEQA	California Environmental Quality Act
Crosscut cavern	The mined cavern (large cave) starts from the open-cut excavation and is the initial construction phase of the mined cavern operation at Chinatown Station. In the final station configuration this cavern crosses the longitudinal station cavern, hence the term "crosscut."
Crossover cavern	The mined cavern to the south of Chinatown Station houses the crossover tracks (allowing movement of trains to switch tracks), hence the term "crossover."
CSP	Central Subway Partnership
CTS	Chinatown Station
CU	Control Unit
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
ERO	Environmental Review Officer
FTA	Federal Transit Administration
Headhouse	Station entrance building
HCASR	Historic Context and Archaeological Survey Report

HPTP	Historic Property Treatment Plan
MLD	Most Likely Descendant
MNI	Minimum Number of Items
MOA	Memorandum of Agreement
MOS	Moscone Station
NHPA	National Historic Preservation Act
NEPA	National Environmental Policy Act
NPS	National Park Service
NRHP	National Register of Historic Places
Platform cavern	The mined cavern of Chinatown Station houses the boarding platform to the Muni trains in addition to non-public ancillary spaces located at platform level, hence the term "platform cavern."
Secant piles	Cased secant piles are non-driven piles that can be used for ground support in soft ground and hard ground. Secant pile walls are formed by constructing interlocked concrete piles reinforced with either steel rebar or beams. Secant pile walls are commonly used for shafts and stations in saturated soil conditions. The steel reinforcement in the form of reinforcing bar or wide-flange sections can be dropped or vibrated into place.
SEIS/SEIR	Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report
SEM	Sequential Excavation Method: a mined method of tunnel construction for small to large openings in a variety of ground types ranging from rock to soil. The objective of the method is to control deformations and hereby mobilize and maximize the self-supporting capacity of the surrounding rock or soil. The tunnel excavation is carried out in increments (headings or rounds) in numerical sequence that are supported with sprayed concrete immediately after exposure, followed by installation of additional steel and shotcrete support elements until a safe stable opening is created.
SFEP	San Francisco Environmental Planning (formerly SFMEA, San Francisco Major Environmental Analysis)
SFMTA	San Francisco Municipal Transportation Agency
SHPO	State Historic Preservation Officer
STU	Shovel Test Unit
TBM	Tunnel Boring Machine
TOD	Transit-oriented development
UMS	Union Square/Market Street Station
U.S. Census	United States Bureau of the Census

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1. PURPOSE AND DESCRIPTION

This Archaeological Testing Plan (ATP) is prepared as part of the Central Subway Partnership (CSP) team's Program Management contract for the Central Subway Project in San Francisco. The purpose of the ATP is to determine the presence or absence of archaeological resources and to evaluate whether any archaeological resource encountered constitutes a historic property. Only one archaeological resource (CA-SFR-175) is recorded within the Project areas under study, which are entirely covered by functioning modern buildings and surfaces. Significant archaeological resources are anticipated in two portions of the Project area. The nature of the construction project, as well as the desire to cause the least disturbance to existing businesses and transportation avenues, means that the usual procedures of archaeological identification, evaluation, and treatment will not be logistically feasible. This ATP also includes an Archaeological Data Recovery Plan (ADRP) for the anticipated and known resources such that the archaeological project may move quickly from identification, to evaluation, to data recovery using a consolidated approach.

The ATP establishes policies, procedures, schedules, and reporting requirements for the archaeological testing program. For each Project component, the ATP overlays Project plans on a vertical and horizontal conceptualization of the archaeologically sensitive areas where Project impacts coincide with archaeological research potential. The ATP provides a feasible strategy to guide testing in these sensitive areas, including maps of test locations and methods to guide the work. The ADRP describes how important values contained in the archaeological properties will be extracted, analyzed, and documented during data recovery; it identifies what data classes the resources are expected to possess, and how the expected data classes would address the applicable research issues.

This ATP specifically covers Contract 1251 for utility relocations for the Union Square/Market Street Station (Utilities 2), Contract 1252 for the portal and tunnels, Contract 1253 for the Union Square/Market Street Station (UMS), Contract 1254 for the Chinatown Station (CTS), and Contract 1255 for the Moscone Station (MOS). This ATP is designed to coordinate with an archaeological monitoring program (Anthropological Studies Center [ASC] 2011a). Engineering, logistical, and cost factors play a role in these planning documents.

1.1 PROJECT DESCRIPTION

San Francisco Municipal Transportation Agency (SFMTA) plans to construct the Central Subway, Third Street Light Rail, Phase 2 Project (Figure 1.1). The Central Subway Project (Phase 2 of the Third Street Light Rail Project) extends the Third Street Light Rail Initial Operating Segment (T-Third) from King Street in the South-of-Market area to Chinatown. This undertaking will consist of several miles of underground tunnels, one surface station and three underground subway station facilities, ventilation shafts, and support facilities (Figure 1.2). The proposed North Beach Construction Variant calls for the tunnel-boring machine (TBM) tunnels to be driven beyond the Chinatown Station to a temporary retrieval shaft in North Beach in the vicinity of Washington Square.

The complex construction program, mainly within heavily traveled downtown streets, is scheduled over a period of many years. This enables a multi-phased archaeological program that can work in tandem with construction to identify and evaluate archaeological properties, and mitigate impacts to those properties deemed significant. Utility relocation and station construction provide the best opportunities to identify and test for significant archaeological properties. Conversely, the deep tunnels will generally either pass beneath archaeologically sensitive areas or be constructed by a TBM in such a way that precludes identification during construction. The archaeological sensitivity of most tunnel locations is low. The sensitivity of the remaining areas remains unknown, but can be explored during construction work preceding the tunnels.

Figure 1.1. Project location, San Francisco, California.

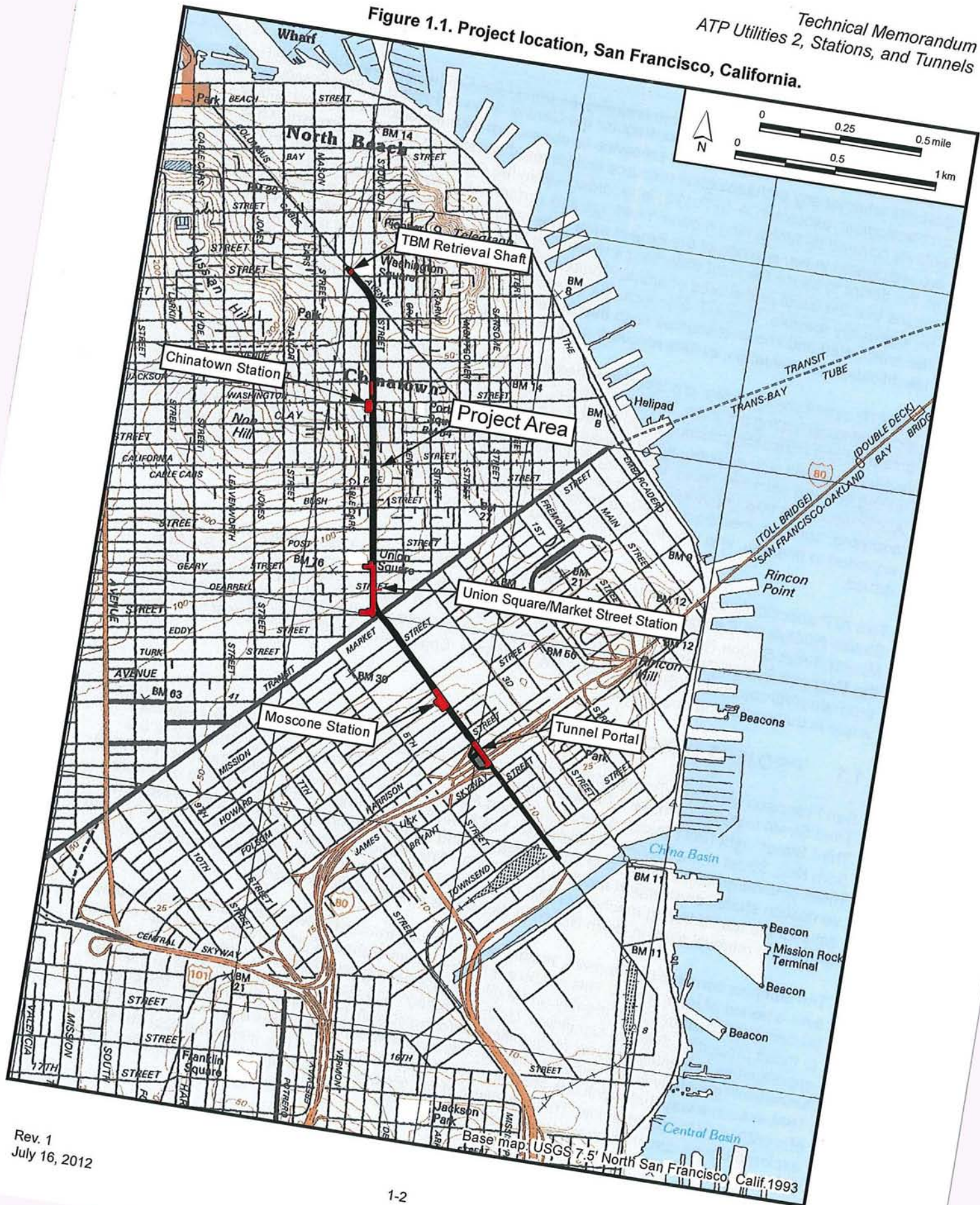
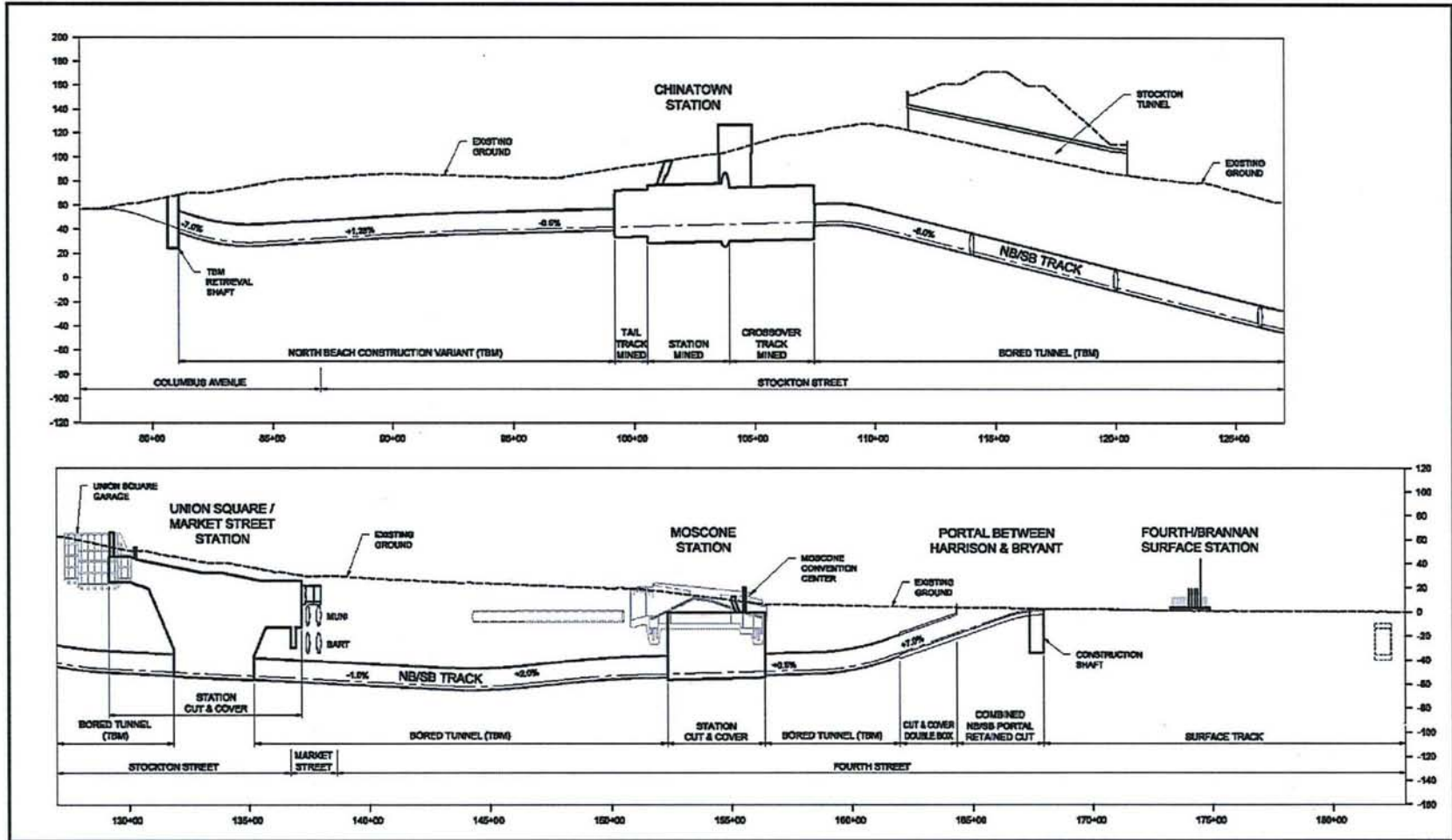


Figure 1.2. Fourth/Stockton alignment profile (from Central Subway Final SEIS/SEIR – Vol. I).



Source: PB Wong
Not to scale

Four archaeological planning documents have been prepared for this phase of the Central Subway to date by the ASC. In May 2010, the ASC finalized a Project-level Archaeological Monitoring Plan (AMP) for Contract 1250—Utilities 1 (ASC 2010a). During implementation of this AMP, archaeologists discovered an extensive prehistoric midden deposit on Fourth Street between Howard and Folsom streets in front of the Moscone Center, recorded as CA-SFR-175 (Appendix A). ASC prepared a Site Specific Archaeological Research Design, Evaluation, and Data Recovery and Treatment Plan (ASC 2010b) in connection with this site. The plan was implemented between October 2010 and March 2011; analysis and reporting are currently in progress. ASC submitted a Program-Level Archaeological Research Design and Treatment Plan (ARDTP [ASC 2011a]) for the entire Central Subway Project in March 2011. ASC submitted an AMP for Utilities 2, Stations, and Tunnels (2011b) in June 2011.

Contract 1250, the first step in the planned construction, is to relocate utilities and sewers on Fourth Street between Welsh and Howard streets outside of future construction zones in preparation for the Moscone Station and the subway portal on Fourth Street between Harrison and Bryant streets. This work is nearly complete and has provided an invaluable opportunity to understand the construction process and refine the first AMP so that archaeological monitoring can take advantage of the open, visible trenches to undertake archaeological identification and evaluation during an early phase in the construction process.

1.2 REGULATORY CONTEXT

The Project is subject to federal and state laws and their supporting regulations that are designed to assess and treat project effects on archaeological resources. These include the following:

- The California Environmental Quality Act (CEQA), as amended (PRC Section 2100 et seq.), and its implementing regulations (CCR 14 Section 15000 et seq.);
- The National Environmental Policy Act (NEPA), as amended (42 USC 4321-43470), and its implementing regulations (40 CFR 1500-1508);
- Section 106 of the National Historic Preservation Act (NHPA), as amended (16 USC 470f) and its implementing regulations (36 CFR 800); and
- City and County of San Francisco Environmental Planning (SFEP [formerly SFMEA]) Standard Archaeological Mitigation Measure III.

1.2.1 Planning Background and Requirements

In compliance with 36 CFR 800, the Federal Transit Administration (FTA) began consultation with the California State Historic Preservation Officer (SHPO) in 1997. This project consisted of two phases: the Initial Operating Segment and the Central Subway Project. FTA, the City of San Francisco Planning Commission, and SFMTA approved the Project's Final EIS/EIR in 1998. A Programmatic Agreement for the undertaking was signed by the Advisory Council on Historic Preservation (ACHP), the SHPO, FTA, and the San Francisco Public Transportation Department in 1999, pursuant to 36 CFR 800.6. In June 2005 the SFMTA designated the Fourth/Stockton Alignment, as the Locally Preferred Alternative. It had the portal between Townsend and Brannan streets and three subway stations and is now known as Option 3A. Within the next several months Option 3B was proposed, placing the portal under I-80 at Bryant and Harrison streets, with three subway stations, and a surface platform on Fourth Street north of Brannan. The two new alignment options with two-way tracks on Fourth Street rather than the old one on Third Street, plus station entries located off-street, and off-street ventilation shafts were changes that required a Supplemental Environmental Impact Statement/ Supplemental Environmental Impact Report (SEIS/SEIR).

In addition to the SEIS/SEIR, the alternative and its associated changes necessitated the creation of a revised Area of Potential Effects (APE) and additional cultural resources inventory. A Historic

Context and Archaeological Survey Report (HCASR) was created to provide baseline archaeological data and analyses in support of these efforts (ASC 2007). The HCASR identifies known and potential historic properties within the APE. The historic context uses primary and secondary sources to ascertain the kinds of archaeological properties that were created within the APE and to place these property types in their respective contexts. The context presents the broad patterns of prehistory and history in which these properties were created as well as specific themes that can be used to assess a resource's structure, content, integrity, and ability to address research questions. The HCASR identified where historic properties are likely to be found and what these properties might relate to, so that future documents could focus attention on these locations and themes.

The Record of Decision adopted by SFMTA and the final SEIS/SEIR were issued in 2008 (FTA and City and County of San Francisco Planning Department 2008). Pursuant to Section 106 of the NHPA, FTA submitted a Finding of Adverse Effect to the SHPO. The outcome of this Finding was the creation of a Memorandum of Agreement (MOA; Appendix B) and a Historic Property Treatment Plan (HPTP) for the project, which was signed by FTA, SHPO, and SFMTA in 2008 (FTA 2008).

1.2.2 Historic Property Treatment Plan

An element of the Project MOA, the HPTP outlines how historic properties that may be affected by the undertaking will be treated. It refers to both program- and project-level studies. The goal of the former is to provide background material, program-level data, and general guidance for the latter. Conversely, project-level studies address the ongoing needs of the project, such as the creation of a data recovery program to treat effects on some as-yet unidentified resource. As the HPTP includes the mitigation measures specified in the SEIS/SEIR, adhering to the Plan ensures that the project will conform to the requirements of CEQA and NHPA.

The HPTP provides mitigation measures for archaeological resources in a Post Review Discovery Plan. These include creation and implementation of a Program-Level ARDTP, of AMPs, and ATPs.

The HPTP requires that an archaeological testing program be designed and undertaken by a qualified archaeologist. Working from the HCASR and the ARDTP, the ATP shall identify the property types of expected archaeological resources that potentially could be affected by the Project, the testing methods to be used, and the locations recommended for testing. The HPTP requires that the plan take into account the results of consultation with Native American representatives and that the feasibility and scope of the testing plan be determined in consultation with FTA, SFMTA, and the San Francisco Planning Department Environmental Review Officer (ERO). The goal of testing, according to the HPTP, will be to determine the presence or absence of cultural deposits and their site boundaries within impact areas. If archaeological deposits are discovered, the program may be expanded to determine site structure and content, integrity, and potential National Register of Historic Places (NRHP) eligibility.

On the Central Subway Project, archaeological sites will be identified through targeted testing programs and during construction monitoring. ATPs will focus the sensitivity studies and identify where archaeological testing and evaluation should take place prior to construction activities, taking into account scheduling, engineering, and logistical concerns. AMPs may incorporate testing into the monitoring process whereby construction contractors and archaeologists work together during construction to identify, evaluate, and treat archaeological properties in a timely fashion. Both planning documents draw on theoretical and methodological constructs presented in the ARDTP.

1.2.3 Archaeological Research Design and Treatment Plan

The Central Subway Project corridor is entirely covered by modern surfaces. Archaeological sites have been found in the immediate vicinity prior to and during construction, but no known sites were recorded in the Project's APE in 2009. The Project's effects on archaeological resources remain

largely unknown due to the buried nature of recorded and predicted archaeological sites. Thus the identification phase focused on historic maps and knowledge of local geology and prehistory, from which the ARDTP (ASC 2011a) characterized the general prehistoric and historic archaeological sensitivity of the Project area. Working from the property types identified in the HCASR, the ARDTP provides a detailed research design with which to evaluate and treat sites found during archaeological testing and archaeological monitoring. The research design is broad, to acknowledge the full range of phenomena that may be encountered and because not all discoveries (such as most isolated artifacts) are potentially significant. The ARDTP establishes the methodological and theoretical groundwork for archaeological investigations to be carried out during the project. It presents an overall strategy for identification, evaluation, and treatment of archaeological properties, as well as establishing definitions and data thresholds by which to distinguish between those archaeological discoveries that possess and those that lack legal importance.

1.3 REPORT ORGANIZATION

This report is organized as follows:

- Section 1 provides an introduction to the Project including description and regulatory context.
- Section 2 provides general methods and reporting requirements.
- Section 3 describes the testing program for Utilities 2 in the area of the Union Square/Market Street Station.
- Section 4 describes the testing program for Union/Market Street Station.
- Section 5 describes the testing program for Chinatown Station, including a data recovery plan should significant historic-period deposits be encountered.
- Section 6 describes the testing program for Moscone Station, CA-SFR-175—a prehistoric midden deposit known to extend into the station footprint—and for significant historic-period deposits should they be encountered.
- Section 7 describes the testing program for the Tunnels and Portal.

Appendices include the following:

- Project MOA for archaeology
- Historical Research Tables for Chinatown and Moscone stations

1.4 ACKNOWLEDGEMENTS

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- Adrian Praetzellis, Ph.D., RPA: Principal Investigator
- Mary Praetzellis, M.A., RPA: Project Manager
- Bryan Mischke, graphics
- Maria Ribeiro, report production
- Dana Shew, M.A., historical research
- Robert Douglass, M.A., RPA, editing

The following individuals provided comments/review on the document:

- David Greenaway, SFMTA
- Randall Dean, SFEP

2. GENERAL METHODS AND REPORTING REQUIREMENTS

Archaeological sites undergo a three-step process of Identification, Evaluation, and Treatment as part of the process to comply with Section 106 of NHPA. Due to environmental, construction, logistical, safety, and cost constraints, as the potential Central Subway sites are located under very busy streets and sidewalks in downtown San Francisco, the process is more complicated than it would be in a non-urban setting.

This section provides general strategies, methods, and guidelines for the treatment of the information potential (Criterion D) values of archaeological properties discovered within the Area of Direct Impact (ADI), which is the portion of the APE that will be disturbed by the undertaking. This section moves from general principles regarding personnel, consultation, and safety to specific field, lab, and reporting guidelines relevant to each step required by legal guidelines and the Project MOA.

The principles are targeted to specific project-level construction impacts on known or expected archaeological resources; they will be employed and revised where necessary to take into account future findings.

2.1 STANDARDS AND PROJECT PERSONNEL

All archaeological work will be conducted in accordance with guidelines set forth in *Archeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines* (National Park Service [NPS] 1983: 48 FR 44716–44742). Investigations of prehistoric or historic deposits will be performed under the supervision of prehistoric and historical archaeologists whose education and experience meet or exceed the Secretary of the Interior's Professional Qualifications (NPS 1983: 48 FR 44738–44739).

2.2 NATIVE AMERICAN PARTICIPATION

The locally affiliated Native American groups and individuals identified by FTA as its consulting partners have been asked to contribute their perspectives to the evaluation and treatment of a potentially NRHP-eligible prehistoric midden deposit (CA-SFR-175) discovered during construction monitoring. A Native American monitor is present during ground-disturbing work in areas deemed by the Native American to be sensitive for prehistoric deposits. In addition, a Native American monitor was present to monitor archaeological excavation of SFR-175 and the wet-screen processing of these deposits at the archaeological consultant's lab. The Native American monitor completes daily logs and submits a weekly report to MTA, which MTA distributes to the interested locally affiliated Native American groups and individuals. The Native American monitors working in the field and lab with the consultant crew are Ohlone. The archaeological consultant also submits weekly reports to MTA, which are then distributed. Project planning documents are submitted to the same interested parties for review prior to submittal to the SHPO.

The Central Subway Project will follow, at a minimum, these established protocols in future project components.

2.3 FIELD SAFETY AND SECURITY

Archaeologists must work closely with the construction contractors due to the nature of the Central Subway Project with its deep construction activities and the deeply buried nature of potential archaeological deposits the Project may encounter. Working alongside heavy equipment in deep trenches in crowded urban areas is inherently dangerous and crew safety will be a primary concern. The archaeologists will work under the general contractor's Site Health and Safety Plan. All field crew will participate in both general contractor and archaeological contractor safety meetings that will be

held on a regular basis. All field crew will wear safety vests, hard hats, and hard-toed boots and will be familiar with the general contractor's Health and Safety Plan.

No hazardous soils have been identified in archaeologically sensitive areas to date. Should the archaeological field crew need to work in such areas, each crewmember will be required to have 40-hour HAZMAT training. The archaeologists will follow the general contractor's guidance in this matter. If the archaeological field director believes hazards exist on a site, the director will (a) cease archaeological investigations until and unless it is demonstrated that no hazards exist, or (b) proceed with appropriate safeguards and personal protective equipment as the situations requires.

The security of archaeological deposits during off-work hours is often a concern in urban areas where archaeological excavation activities are visible to the public, some of whom engage in looting or bottle-hunting. These activities destroy the information potential of archaeological sites in addition to being very dangerous to the perpetrators, who could be severely injured in deep excavations. Off-hours security is often needed in these situations. The archaeological work is so integrated into the Central Subway Project, however, that the security of discovered archaeological deposits will be ensured by the general contractor's usual procedures, such as the installation of steel plates at the end of each workday.

2.4 COMBINING IDENTIFICATION, EVALUATION, AND TREATMENT OF POST-REVIEW DISCOVERIES

Archaeological identification, testing, evaluation, and data recovery will be scheduled and accomplished within the construction schedule. Utility relocations and geophysical testing present the perfect opportunities for presence/absence testing and for characterization of the stratigraphic sequence. The archaeologists will work with the engineers and construction crews to identify opportunities and implement testing within the construction context. Open area excavations, where recommended at the Moscone and Chinatown stations, will take place quickly in target areas between demolition of existing facilities and construction proper.

The identification process will require close coordination between the archaeological and construction teams. SFMTA will insert provisions into the construction contract to ensure that the archaeologists have the necessary time and opportunity to carry out this process.

The Project Post-Review Discovery Plan, an element of the Project's MOA, states that following a discovery "FTA or its designee shall consult with SHPO concerning the appropriate treatment strategy for resources determined to be historic properties including, as appropriate, archaeological data recovery" (FTA 2008:6). However, the nature of the construction process and its attenuated schedule cannot accommodate this process.

The following sections describe the processes by which properties that are discovered during construction will be evaluated for their NRHP eligibility and how decisions regarding their treatment will be made. Historical archaeology is considered at the Chinatown and Moscone stations. The process, by which prehistoric remains that may be present at the Chinatown Station location will be evaluated and treated, is also discussed. The approach to CA-SFR-175, the known prehistoric site at the Moscone Station location is described in Section 6.6.2.2.

As this process in effect delegates SHPO's responsibility to evaluate potential historic properties, SHPO will be provided the opportunity to review the qualifications of the archaeological consultant appointed to carry out these investigations. No archaeological fieldwork will be carried out until SHPO has notified FTA or its designee that SHPO concurs with the appointment of the archaeological consultant.

2.4.1 Evaluation and Treatment Decision Process for Historical Archaeology at the Chinatown and Moscone stations

Resource types anticipated at these locations include Domestic Occupation Sites, Commercial Sites, and Pre-Gold Rush and Gold Rush-era sites, as described in the Program Research Design. These types may be expressed as caches of artifacts in sheet deposits and hollow/filled features as well as architectural features represented (ASC 2011a). Both Chinatown and Moscone stations are highly sensitive for historical archaeology.

The following sequence of actions will be taken to identify, evaluate, and treat resources:

- Archaeologists direct heavy equipment to expose the historic ground surface in sensitive areas after removal of existing structures and surfaces.
- Archaeologists hand-expose and map hollow/filled features and other resources.
- Archaeologists expose and cross-section features that appear to meet the data requirements in the Program Research Design.
- City Archaeologist and Principal Investigator (PI) for archaeology visit the site to examine the exposed features. Associations and data requirements for variety and quantity of artifacts will be summarized in advance for their use.
- City Archaeologist and PI apply the Criteria for Evaluation to determine which features are in/eligible to CRHR/NRHP and document the basis of the determinations by means of a Decision Memo to FTA and SHPO. The Memo is transmitted to FTA and SHPO within 24 hours of the field visit.
- If the City Archaeologist and the PI cannot make a determination, the resource is treated as if eligible. In this case, the feature is excavated and the final eligibility decision deferred until the relevant data have been reviewed.
- Resources deemed eligible to CRHR/NRHP are excavated or sampled, the materials collected for further processing at the lab, documented in a data recovery report, and submitted for permanent curation.
- If the City Archaeologist considers that the remains have significant public interpretive potential, the City Archaeologist may require the creation of interpretive product(s) in addition to the technical report. The City Archaeologist makes this decision in consultation with the appropriate descendant community.

2.4.2 Evaluation and Treatment Decision Process for Prehistoric Archaeology at the Chinatown Station

Prehistoric property types may include either residential or non-residential sites (ASC 2011a: Section 7). Although Chinatown Station has a low sensitivity for prehistoric archaeology, resources may be present either at the historic ground surface or on buried surfaces.

- If Native American archaeological remains are uncovered, subsequent work on these remains are monitored by the Project's Native American consultant. Native American human remains are treated according to the requirements of State law and the Project MOA. SHPO will be notified immediately if human remains are discovered.
- City Archaeologist and PI visit the site to examine the discovery.
- Prehistoric archaeological remains other than isolated objects (such as pieces of debitage, shell, etc.) are assumed eligible to CRHR/NRHP under Criterion D. The City Archaeologist, FTA or designee, and the PI consults with the Project Native American consultant prior to determining if the remains may be important under other criteria.
- Following consultation with the Native American consultant and FTA or designee, City Archaeologist and PI devise appropriate treatment, including data recovery and

documentation as appropriate. The treatment is documented in a Decision Memo and transmitted to SHPO within 24 hours of the field visit.

- Midden will be bagged for processing off-site.
- If the City Archaeologist considers that the remains have significant public interpretive potential, the City Archaeologist may require the creation of interpretive product(s) in addition to the technical report. The City Archaeologist makes this decision in consultation with the descendant community.

2.5 FIELD METHODS

This section presents basic field methods for prehistoric and historic-period archaeology for the three-step process of Identification, Evaluation, and Treatment.

2.5.1 Prehistoric Archaeology Field Methods

2.5.1.1 Identification

A sensitivity study based on geoarchaeological principles, landscape evolution, known site locations, and geotechnical core data informed the initial Identification phase of work and provided potential prehistoric site location information. Implementation of a Project-level AMP for Contract 1250 utility relocation work identified a large prehistoric midden deposit, CA-SFR-175, under Fourth Street between Howard and Folsom streets.

Prehistoric deposits are now known to exist in the Project APE at depths of between 2 and 15 ft. and are possible at depths of up to 45 ft. The identification and treatment of prehistoric deposits will be complicated by the construction techniques used to excavate the subway tunnel. The TBM and SEM (Sequential Excavation Method), in particular, will preclude archaeological investigation of the surrounding soils during construction.

The excavation of exploration trenches using a backhoe or excavator is often appropriate to identify buried archaeological deposits. The maximum depth that can be reached with a backhoe or excavator and OSHA requirements limit the investigator's ability to observe, explore, and sample deeply buried deposits such as those expected along the Central Subway corridor. In addition, exploration will be further limited in the most sensitive area for prehistoric resources—the South of Market—where high groundwater will increase the physical difficulties of recovering and sampling saturated deposits, and increase the potential of caving trench walls. For this reason, a subsurface coring device will be used to more safely and effectively explore deeply buried deposits that are suspected of containing archaeological remains.

Geophysical testing is carried out with a Geoprobe or similar hydraulic coring device. Soil samples are recovered and stored in PVC liners that capture a continuous core rather than the 'skip' interval samples. Samples are air-dried, described, and sub-sampled. Although relatively small, Geoprobe samples are large enough to yield material for radiocarbon dating and to allow the determination of the structure and content of subsurface deposits. Particularly it could refine the knowledge of the cultural basement for portions of the APE and rule out geologic units that are too old to contain archaeological resources. This will be especially beneficial where it is unclear which geologic unit represents this cultural boundary, such as is the case of the Chinatown Station where the cultural basement lies between 3 and 42 ft. below surface. Geoprobes could also identify intact historic-era archaeological deposits and determine where the historic surface has been truncated to the extent that there is no potential for finding important remains.

On the basis of Geoprobe results, additional identification efforts may take place in accessible areas near the surface, either prior to construction or in tandem, piggybacking with the construction

activities such that the archaeological work is the first step in the construction process. The Project-level AMP (ASC 2011a) pinpoints target areas sensitive for prehistoric archaeological sites in work areas where soils are accessible (i.e., not where TBM or SEM are used) to ensure that potential deposits are identified, evaluated, and treated. Once the nature and extent of the possible prehistoric record within areas crossed by the TBM and SEM excavations are known, treatment options will be refined.

2.5.1.2 Evaluation

Prehistoric deposits are rare in much of San Francisco. They are often deeply buried and are usually discovered in site preparation work prior to or during construction. Evaluative studies generally take place to determine site size, structure, contents, integrity, and research potential, leading to the application of the Criteria for Evaluation. For this Project, evaluation will be done in consultation with Ohlone representatives. As most prehistoric sites in San Francisco are considered NRHP-eligible under Criterion D for their research potential, evaluation often leads to data recovery. In the past, only sparse, disturbed, or redeposited prehistoric sites have not been considered NRHP-eligible and in many of these cases, the evaluation phase has exhausted the site's information potential without further studies.

Most archaeological excavation for the Central Subway Project will need to work in tandem with the general contractor. While advance planning will be very important to the successful treatment of identified archaeological deposits, the actual window for evaluation and treatment will be small. Thus, the evaluation phase will focus on defining site integrity, structure, and content sufficient to warrant moving to data recovery, should the deposit be deemed eligible under Criterion D.

2.5.1.3 Data Recovery

Archaeological excavation will take place only within the ADI. If an archaeological deposit (including a buffer) extends below the ADI, the deposit will be protected in place and covered with landscape fabric for ease of identification in the future. Any further construction excavation in the area will be monitored by an archaeologist. Corridors of various widths and lengths for the Project utility trenches or tunnels will define the archaeological excavation units in some areas. Elsewhere, Project components such as the stations may provide the potential for larger, open area excavation. While utility trenches and tunnels will probably be excavated in tandem with the construction contract and therefore will be shored to Cal/OSHA standards, open areas may require that the excavation areas be specially shored or graded to 1:1.5 slopes.

Mechanical excavation will be needed to remove modern surfaces and overburden. The archaeologist will direct the heavy equipment until the interface (buried paleosol) that marks the prehistoric deposit has been identified. Hand excavation commences immediately above the interface such that the prehistoric deposit remains intact. Mechanical excavation may also be used in sparse deposits to expose or identify additional features when the data recovery excavations are nearly complete and/or to verify that the bottom of the deposit has not been obscured by an intervening sterile layer.

Buried paleosols may be recognized in the field on the basis of color, structure, horizon development, bioturbation, lateral continuity, and the nature of the upper boundary or contact with the overlying deposit, as described by Birkeland, Machette, and Haller (1991) and Retallack (1988). The A horizon of buried paleosols often exhibits darker color values produced by organic matter. In the case of truncated paleosols, the A horizon has been removed by erosion or cultural processes. Generally, the accumulation of clay or carbonates in the paleosol creates a B horizon that exhibits higher color chromas and a distinct angular blocky structure. Paleosols often exhibit inactive root or insect holes and other indications of bioturbation. Since paleosols form during periods of land stability, the surface of a buried paleosol represents a stratigraphic unconformity that is often marked by an abrupt upper

boundary, or in some cases, stone lines. Paleosols often have extensive horizontal continuity that permits them to be traced laterally as stratigraphic markers.

As a general principle, hand excavation will take place in the most expedient manner taking into account the nature of the deposit and its research potential as defined by the research design in the ARDTP. Thus, a simple midden with no cultural features or human remains may be removed by shovel scraping in defined increments; trowels and whiskbrooms may be more appropriate in other locations. The goal is to maintain appropriate scientific controls. All units will be excavated using vertical and horizontal control, generally arbitrary 10- or 20-cm levels, unless natural contours or stratigraphic markers are present. Spatial control will be maintained in relation to a sidewall if available or using appropriate GPS mapping equipment. Each unit/level will be assigned a context number and recorded separately. The bottom of the scientific excavation will be augered and probed to the depth of construction impact, if possible, to insure that additional prehistoric deposits are not encountered by continuing construction. Sites will be mapped vertically and horizontally. If possible, a stratigraphic profile drawing showing the relationship between the cultural deposit and its surrounding matrix will be prepared.

Archaeological features—hearths, house floors, burials, pits—will be excavated with greater attention, spatial control, and more rigorous recording sampling and recording techniques. Each feature will receive a unique feature context number. Features will be excavated stratigraphically with each stratum being assigned a layer context number. Features will be drawn, photographed, and mapped.

Depending upon field conditions and research goals, excavation units may be of various sizes and arrangements. Deposits may be excavated in their totality or sampled. The nature of project components will help define sampling techniques. Utility relocation areas, for example, vary from small manholes to long trenches. Prehistoric midden deposits discovered in a small, defined location may be subject to 100% hand excavation, while midden continuing in a long trench may be sampled. In all cases, the methods employed will be designed to ensure that any human remains that may be present are recognized and treated appropriately.

Shovel Test Units (STUs) and Control Units (CUs) are commonly used to quickly and cost-efficiently sample prehistoric deposits. STUs are typically 1 × 0.5 m in size, often set at regular intervals along a linear transect or grid pattern. Excavated in arbitrary 10-cm levels, STUs can define site boundaries and provide insight into material culture variability. CUs are typically 1 × 1 m, 1 × 2 m, or 2 × 2 m in size, located on the basis of previous findings with the goal of recovering a representative and statistically valid sample of artifacts and ecofacts. They may be excavated according to natural contours, stratigraphy, or arbitrary 10-cm levels, depending on field conditions.

Soil and sediment samples will be collected from selected locations so that detailed analysis and description can be performed in the laboratory. This analysis may assist investigators in identifying depositional environments, assessing the degree of pedogenesis, and facilitating the correlation of depositional units, as well as sampling plant macrofossils. The absolute age of certain deposits may be determined by submitting selected samples for radiocarbon dating.

Archaeological remains will be collected so that cleaning, cataloging, and analysis can be conducted in the laboratory. For the Contract 1250 utility relocation work and probably other project components, there was insufficient open space available to screen the soil matrix near the construction site. The unscreened midden deposit was placed into 5-gallon plastic bags, labeled with provenience, and transported back to the lab, where it was processed through 1/16-, 1/8-, or 1/4-in. screens. Methods for this process are described in Section 2.6.1.

If human remains are identified, they will be treated in accordance with the MOA.

2.5.1.4 Treatment of Human Remains

The project MOA describes how human remains shall be treated, as follows

The MOA parties agree that the treatment of human remains and associated or unassociated funerary objects discovered during any project activity shall comply with applicable State (Section 7050.5[b] of the California Health and Safety Code) and Federal laws. This shall include immediate notification to the Coroner of the City and County of San Francisco if human remains are discovered. In the event the Coroner determines that the human remains are Native American, the Coroner shall notify the California State Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, FTA or its designee, and the MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects [FTA 2008:4].

The notification procedures described above will be completed for each separate discovery of human remains. In addition, SHPO will be notified immediately if human remains are discovered. The ERO will represent the City of San Francisco Planning Department in the development of an agreement for the appropriate treatment of human remains, if these remains are discovered. Other interested Ohlone individuals and groups should be contacted in the development of the plan for the treatment of human remains. A preference for reburial within San Francisco was stated at the Native American consultation meeting. By State law, the landowner, in this case the City and County of San Francisco, makes the final decision regarding disposition of human remains and associated burial goods. MTA will identify the individual within the City government who would participate in such decisions should human remains be discovered.

2.5.2 Historical Archaeology Field Methods

2.5.2.1 Identification

Archival and map studies for the HCASR identified a number of historic-period resource types that may survive along the Central Subway Project corridor. The majority of the APE has been roadway or sidewalk throughout the historic period, substantially reducing the probability that important resources were created or have survived. The off-street parcels purchased for the Moscone and Chinatown stations, however, are both considered highly sensitive for historic-period deposits, although those at the Moscone Station may have been destroyed by the construction/operation of a gas station.

In the twelve months that archaeologists have monitored utility relocations along Fourth Street, not a single important historic-period deposit has been encountered. Monitors have recorded sheet refuse, fill, isolated artifacts, and infrastructure features, none of which possessed the qualities required by the Project ARDTP (ASC 2011a).

2.5.2.2 Testing/Evaluation

Historic archaeological sites are more likely to be discovered where the Project corridor widens at the Station locations. These locations should also be more accessible for archaeological investigations. Combining site-specific research and the information from available Geoprobes, areas will be identified for an archaeological testing program to be undertaken in advance of construction of the Stations.

A backhoe will be used to open the area targeted for excavation and to remove the overburden. As cultural features and stratification are identified, they will be exposed in plan by hand, photographed, and mapped with a GPS or total station. The evaluation phase involves determining each feature's structure and stratigraphic integrity, its approximate date of deposition, and range and quantity of artifacts. To assess each feature's content and integrity, an appropriate portion of each will be hand excavated, stratigraphically. In the case of an artifact-filled privy, for example, the feature will be cross-sectioned and part of each layer excavated. The proper level of effort for each feature will be determined by the field director as it is investigated. All units of excavation will be recorded on detailed field forms on which the excavator and/or field supervisor will note site structure and/or content. Field forms are based on those developed by the Museum of London, Department of Urban Archaeology (Museum of London 1980, 1994).

Excavated soil will be passed through 1/8- or 1/4-in. screens, as appropriate, to document the presence of all classes of artifacts. Artifacts will be initially identified and, when possible, dated in the field. Those belonging to features potentially eligible for the NRHP will then be returned to the consultant's archaeological laboratory for verification of the initial description and subsequent cataloging. Materials from features determined to be ineligible for the NRHP in the field by reason of their clearly disturbed nature, paucity of artifacts, or modern date, need not be removed from the site. At the discretion of the field director, they may be reburied in the features from which they were excavated or removed to the Project's off-site disposal area so as not to be mistaken for intact deposits during later construction.

If it is not feasible to screen the excavated soil on site, it will be bulked bagged and processed at the archaeology lab.

Because of the engineering and right-of-way constraints, historic wells may present particular excavation problems. A well is a narrow, confined space. To excavate a well safely, a large trench may be excavated around it by backhoe so that the well structure can be exposed as a pedestal and excavated from the outside. Depending on the depth to which the well has been sunk, safety trenches can be up to 30 ft. wide. This, however, will not be possible in some areas of the Central Subway Project due to limited space. It is also possible to shore inside a well and excavate it from within. The shoring makes the confined space even smaller and the excavation more difficult to achieve with the required degree of stratigraphic accuracy. Such a procedure will only be undertaken where a well's content is considered to be of the highest potential importance, such as a Gold Rush period well with a substantial quantity of artifacts.

2.5.2.3 Data Recovery

For hollow/filled features—wells, privies, cisterns—data recovery will involve excavating the entire feature according to the methods described above. Soil samples will be collected for special studies as appropriate. In the case of fill or sheet refuse, a sampling method would be devised to quickly remove an appropriate quantity for analysis in relation to the research questions. Architectural, industrial, or infrastructural features will be photodocumented, mapped, and described.

2.6 LABORATORY METHODS

This section presents separate laboratory methods for prehistoric and historic-period sites by work phase.

2.6.1 Prehistoric-Period Artifact Cataloging and Analysis Procedures

For prehistoric sites whose matrix is bagged and returned to the lab for processing, the lab crew will use pressurized water to pass the midden through screens of various sizes ranging from 1/4- to 1/16-in. mesh, as deemed appropriate by the lab supervisor. The proportion of screen sizes to be used will depend upon the presence of small artifacts/ecofacts such as beads and diagnostic fish bone. The goal will be to recover a statistically adequate sample of the various classes of artifacts/ecofacts. During wet-screening, care will be taken to prevent damage to fragile items and to adjust screen size as needed for full recovery. The material will be air dried and inspected for diagnostic artifacts and human remains that could alter the course of the investigation.

If possible, soils will be screened in the field through 1/4- to 1/8-in. mesh. A sample from each level will be returned to the lab and processed using a flotation device to recover charred seed or other botanical remains, as well as fish or other small bones. A sample of soils wet-screened at the lab will also be processed through a flotation device.

The resulting residue from wet-screening or flotation—rocks, shell fragments, non-cultural detritus, bone, and artifacts will be bagged for sorting at a later date. As shell middens are composed of vast quantities of tiny shell fragments, not every piece of shell will be retained from the screened or floated matrix. As the goal of lab work is to obtain a statistically valid sample, only complete shells or fragments from which an MNI can be developed (such as bivalve hinges) will be retained during sorting. Non-diagnostic shell fragments and non-cultural material will be discarded.

Cultural materials from wet or dry screening will be cleaned using a soft brush and/or water spray bottle, if needed. All recovered artifacts and ecofacts will be cataloged on the basis of provenience, artifact group and class, part and condition, material, quantity, weight, and other characteristics pertinent to the research questions. Each artifact, or group of similar artifacts from the same provenience, will be assigned a unique catalog number. These information sets will be entered into an electronic database designed for the management and analyses of prehistoric materials.

Following initial cataloging and descriptive analysis, selective data sets (obsidian, faunal remains, archaeobotanical remains, etc.) will be provided to specialists for more detailed study. Separate, more detailed, databases will be created for specific data sets such as the attributes of particular artifact types, obsidian hydration results, radiocarbon dating results, and osteological metric and nonmetric measurements, etc.

If formally interred human burials are encountered, all artifacts—such as beads, bone tools, groundstone, and projectile points—that were found with or near (within 10 cm above and below) the burials will be classified as "burial associations" in the catalog so that they can be easily identified. Other items found nearby that appear to be associated with the remains shall be considered as such.

All other cultural remains will be packaged for permanent curation in new sealed 4-mm thick plastic bags, labeled using archivally stable materials, and placed in archival-quality boxes.

2.6.2 Historic-Period Artifact Cataloging and Analysis Procedures

Some historic-period archaeological deposits may be easily evaluated as ineligible to the NRHP based on lack of integrity and focus. This particularly applies to fill and sheet-refuse deposits with sparse, unassociated artifacts and to truncated, disturbed, or sparse hollow/filled features. Generally,

an MNI of 35 is needed for analysis, including a range of dateable materials reflecting an activity assignable to a time and place, per the data requirements specified in the ARDTP. Artifacts from features and strata evaluated as NRHP ineligible in the field will not be returned to the lab for processing or curation.

Some materials may be brought back to the lab prior to being evaluated as ineligible. In that case, they will be handled as described below under Data Recovery.

A provenience-based cataloging system will be used to inventory artifacts. Artifacts are cataloged according to archaeological provenience and material. The catalog number, which is marked on each object, is made up of three elements: the accession number, the provenience reference, and the lot number. The intent of the system will be to integrate the material specialist's information with that of the catalogers to form a detailed catalog. Basic catalog information will be written onto the catalog sheets by the cataloger, entered into a database program (Microsoft Access), printed, added to and edited by the specialists, revised, and printed as an appendix to the final report.

Specialists also will divide materials into appropriate categories for presentation in their analyses. For interpretation and synthesis, the catalog of historic-period artifacts is reorganized according to the general function categories devised by South (1977) as modified and expanded for other researchers for later periods and western U.S. contexts (e.g., Hardesty 1988; Praetzellis and Praetzellis 1990). These categories include activities, domestic, indefinite, industrial, personal, storage, structural, and unidentified use. Artifacts that are cataloged in this way are stored according to material and provenience (see Gibson 1995).

Historic-period artifacts recovered from the Central Subway Project excavations will be analyzed with two goals in mind: to allow the investigators to address questions identified in the research design and to generate comparative data for other researchers to use. The utility of the data to be obtained and the cost of analysis will be the determining factors in the decision to initiate a particular form of analysis.

The enormous range of consumer goods available in late-19th-century California makes it impractical to specify the analytical procedures that may be carried out on all types of material that may occur. Rather, four of the most common classes will be described here. These pertain to ceramics, glass containers, buttons, and ferrous metal artifacts. Although particularistic issues can be tackled by the examination of individual classes of artifacts, it is emphasized that many of the identified research questions require insights that are obtained from a synthesis using data from several classes.

Ceramics will be sorted and tabulated by functional type, fabric, form, decorative treatment, and, where possible, place of origin. The MNI represented will be calculated as will the proportion of each type of the total class represented. Ceramic analysis can contribute to the determination of the date of deposition by using a variant on South's mean dating method that employs pieces that bear dated makers' marks. The relative cost of the collection may be estimated using price and availability data, such as Miller's (1980) economic scale. In the case of domestic table and decorative ceramics, the estimated dates of purchase and deposition may be used to estimate how the purchasers/users of the material responded to changes in taste and fashion, and their participation in certain culturally significant social rituals.

Glass will be sorted by functional category, color, and type. The definitions and methods developed by Parks Canada (Jones et al. 1985) will be employed. Design elements and makers' marks will also be noted. The material for each provenience will be described by vessel part, body form, possible function or contents, technological characteristics, size, and decorative detailing. The MNI will be calculated, as will the proportion of each type of the total class represented. Chronologically sensitive aspects of glassware, such as the use of the Rickett's mold or the automatic bottle-making machine, will be noted. Chronological information will be combined with ceramic and other artifact

data to determine deposition dates. As with ceramics, the proportion of the various functional types of glassware in each provenience will be tabulated to help estimate the nature of the domestic or commercial entity that created the deposit.

Buttons will be sorted by size (in British lines and in inches), form, construction, and material type. Design elements and patent and makers' marks will also be noted. The marks provide useful information to help date archaeological deposits, while material, attachment type, form, and size are good indicators of garment type and function. Buttons may be associated with articles of gender- and age-specific clothing. The numbers and relative frequencies of button types can suggest site function.

Metal artifacts are often the most problematic archaeological finds since they are generally fragmentary, in poor condition, and bulky. These materials are sorted by function and material. It is anticipated that most will be of ferrous metal and a minority of copper alloy. Food containers (tin canisters) tend not to survive in some urban archaeological contexts. Should tin canisters survive in the Central Subway Project deposits, they will be identified and described according to the recording system developed by J. Rock (1987). Along with glass and ceramics, tin canisters provide information on dating, foodways, and consumer behavior, and contribute to the reconstruction of past ways of life.

2.7 SPECIAL STUDIES

A variety of special studies or additional research and analysis will be undertaken if needed to address the research questions.

2.7.1 Prehistoric Materials

If appropriate and present in sufficient quantities, a variety of individual artifacts may be subjected to special studies, including obsidian-hydration analysis, X-ray fluorescence, radiocarbon dating of bone and shell, shellfish speciation, and taxonomic identifications of mammal, bird, and fish bones. Soil analysis may be conducted to determine clay content, in order to address research questions regarding site locations and dune stability. Seeds and plant material may be analyzed to determine seasonal occupation of the site and preferences for certain food resources.

Native American representatives will be consulted regarding the appropriateness of destructive analyses of artifacts.

2.7.2 Analysis of Historic-Period Zooarchaeological Remains

If at least 100 identifiable pieces of food bone are recovered from a historic-period feature, these bones will be analyzed according to meat cut and meat to understand diet and economics. Data on provenience, taxon, element, portion, side, epiphyseal fusion status, butchering cuts, tool marks, taphonomic factors, and evidence of heat alteration will be recorded for each specimen using a computerized data-entry system based on that developed by Sherri Gust (1995) for the Cypress Freeway archaeology project. Comparative collections such as those of the ASC at Sonoma State University and at the California Academy of Sciences in San Francisco will be used for identification. The butchering units and pounds of meat weight will be calculated. Economic ranking of meat cuts according to late 19th-century retail values will follow Schulz and Gust (1983a, 1983b) and Gust (1996).

2.7.3 Historical Research

Historical research is an essential part of evaluation and data recovery. Archaeological data gain in importance as their context is refined and enlarged by information from the documentary record. Not all the data needed to address the research questions are archaeological. In order to understand deposits from Central Subway Project sites, a more precise understanding of the social and economic

correlates of the various neighborhood businesses and residents may need to be developed during treatment phases. It may also be necessary to undertake archival research to collect additional site-specific and contextual data.

2.8 CURATION, DISCARD AND DEACCESSION POLICY

Upon completion of cataloging and analysis, artifacts will be sealed in new 4-mm, clear plastic bags that are labeled accordingly and placed in archivally stable boxes at the David A. Fredrickson Archaeological Collections Facility at Sonoma State University. A copy of the artifact catalog will accompany the artifacts so the collection may be used for research in the future.

2.8.1 Discard and Deaccession Policy

Important Features. Some types of materials from NRHP-eligible collections will be discarded after they have been analyzed, catalogued, counted, and weighed, and a sample taken, as appropriate. Identification of these materials will be based on lack of long-term research values, excessive quantity, poor condition, and/or health and safety risks. The discarded types may include the following:

- Window glass
- Glass lamp chimney body fragments, non-diagnostic bottle fragments, non-diagnostic and amorphous glass fragments
- Nails (after being identified by type and given MNI totals)
- All leather and textiles (after being analyzed by a specialist). Leather requires treatment with potentially hazardous and flammable material in order to be preserved. (Only leather artifacts with clear interpretive value would be treated in this way and retained.)
- Metal scraps, sheets, strips, amorphous lumps, and wire
- Corroded, non-temporally diagnostic ferrous items including wire, pipes, cans and lids, bolts, tubes, pans, and straps
- Furnace waste and slag

Other Features and Strata. During laboratory analysis, specific soil layers, and occasionally entire features, are frequently evaluated as failing to meet the research design criteria. Artifacts from these strata or features will be discarded. Prior to discard, individual items or classes of artifacts from these proveniences will be retrieved if they exhibit educational potential.

2.9 REPORTING

Upon completion of all analyses, a comprehensive technical report will be prepared that describes the project's goals and methods, and presents its findings and interpretations. The report will contain the following:

- Executive Summary;
- Introduction, including regulatory framework for the study;
- Summary of previous research;
- Research goals and strategies;
- Summary of field and laboratory methods;
- Results of the field and analytical research;
- A discussion of the findings, research themes, and questions;
- Conclusions and thoughts on future research;
- References cited;
- Appendices: artifact catalogs and tables, reports of technical analyses.

A copy of the draft report will be provided to the MOA signatories—FTA, MTA, and SHPO—to SFEP's ERO, and in the case of prehistoric sites, to the Native American representatives for review. The final report will be submitted to the reviewers, the Northwest Information Center of the California Historical Resources Information System, and other repositories to ensure widespread distribution. In the case of discoveries with unusual public interpretive value, the ERO may require additional outreach products.

3. UTILITIES 2

Utilities 2 is the second stage in the construction process. It is scheduled to begin in early 2011 and will continue through March 2012.

3.1 PROJECT DESCRIPTION

Utilities will be relocated out of the Union Square/Market Street Station construction zone on Stockton Street between Post and Market streets (Figure 3.1). Union Square is in many ways the heart of San Francisco. It is a very busy, congested, and intensively developed area.

The work will be done at the following locations: Stockton Street from Geary to O'Farrell Street; Stockton Street from O'Farrell to Ellis Street; Ellis Street east of Stockton; beneath the Apple Store at the corner of Stockton and Ellis streets; beneath southeast corner of Union Square; and adjacent areas.

3.2 HISTORIC CONTEXT

Union Square has functioned as a public area since the Mexican period, but only received official designation as such in 1850 when Colonel John Geary transferred title to the City "with the stipulation that it be held in perpetuity for park purposes." Over the next 20 years the square was used for various activities, such as sandlot baseball games and pro-Union army rallies. Two different Mechanics' Pavilions stood in the square, the second of which could host 8,000 people for fairs, dances, musical events and public meetings. By 1880 Union Square had become a formally landscaped City park (Nuno 1993:22-23).

Originally sand hills blocked Stockton Street from Market to Post. City builders leveled the dunes, cutting as much as 20 ft. in some areas to fill up to 12 ft. in others. Contractors graded this portion of Stockton and paved the intersections in 1860, adding sewers in 1865, and a cobbled roadway in 1867. This portion of Stockton Street rapidly developed with multi-story brick commercial buildings.

3.2.1 Potential Historic Era Property Types

The 1857 U.S. Coast Survey map shows a building within the current alignment of Stockton Street between O'Farrell and Ellis streets. At that time sand hills still blocked Stockton Street at Market, but trails within the street alignments extended from the intersection west on Market and Ellis, south on Fourth, and north on Stockton to this building at the base of the sand hill (Figure 3.2). By 1869 the block was fully developed. It is unclear whether this building would have been destroyed or buried by the reengineering of the sand hills. It is unknown if this building housed residential or commercial activities or both; while remains of the building itself are unlikely to have survived, artifact caches in a privy or well could be expected. These would be studied under the "Pre-Gold Rush and Gold Rush-Era Sites" property type (ASC 2011a:Section 11.10).

3.3 PREHISTORIC CONTEXT

While several prehistoric archaeological sites are recorded in the vicinity, they are all south of Market Street closer to marsh and bay resources. No prehistoric sites have been recorded north of Market. This may be due in part to greater opportunities for discovery in the South of Market where numerous large-scale construction projects have occurred within the past three decades.

The project geologic cross-section (dated 8-2010) and boring log CS-6 (P) taken at the intersection of Stockton and O'Farrell depict the stratigraphy of this area as modern surfaces and artificial fill extending to 8 ft. below surface, underlain by dune sand to a depth of 24 ft. A thin layer of bay mud/

Figure 3.1. Union Square/Market Street Station, area utilities.

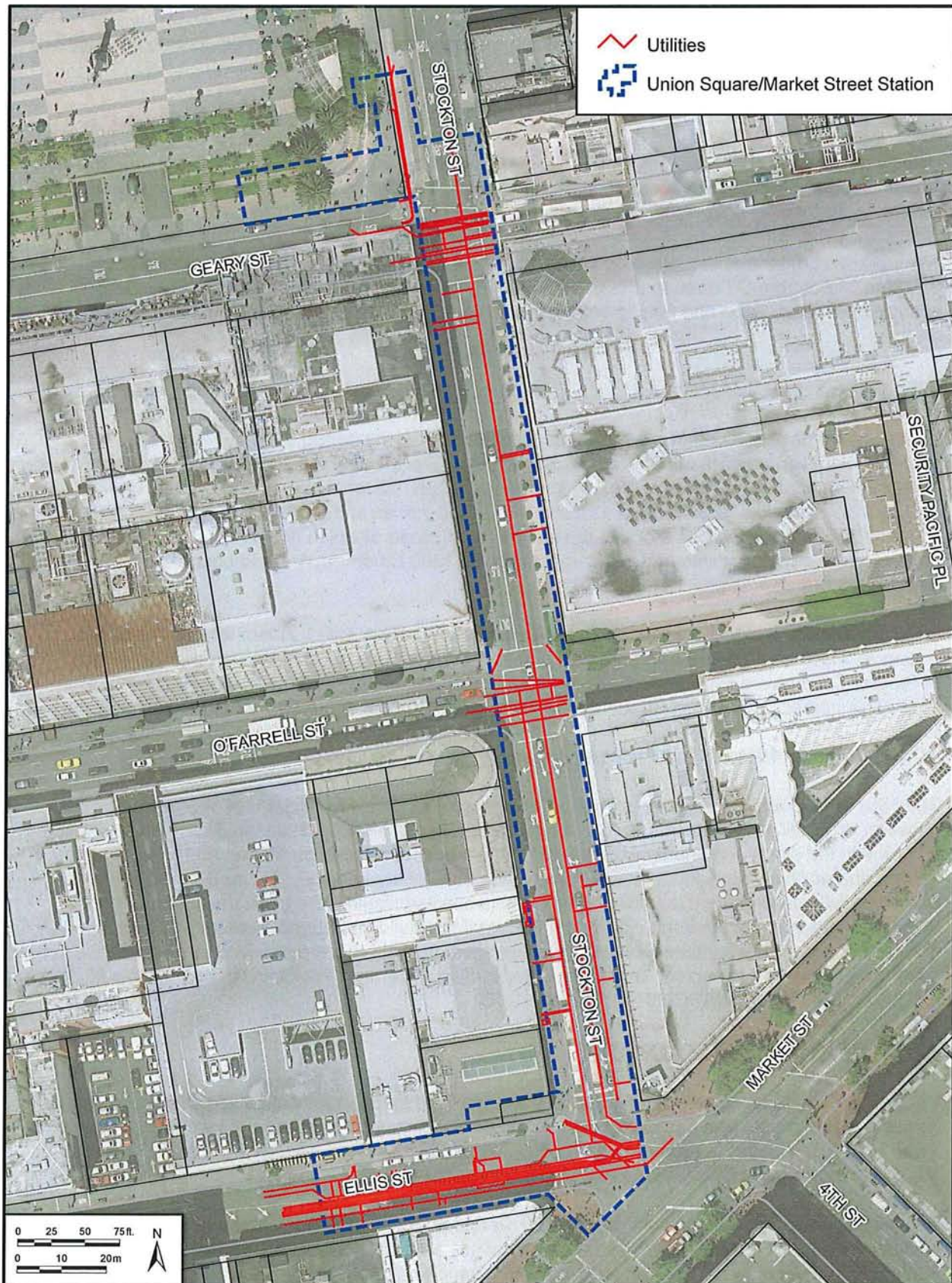
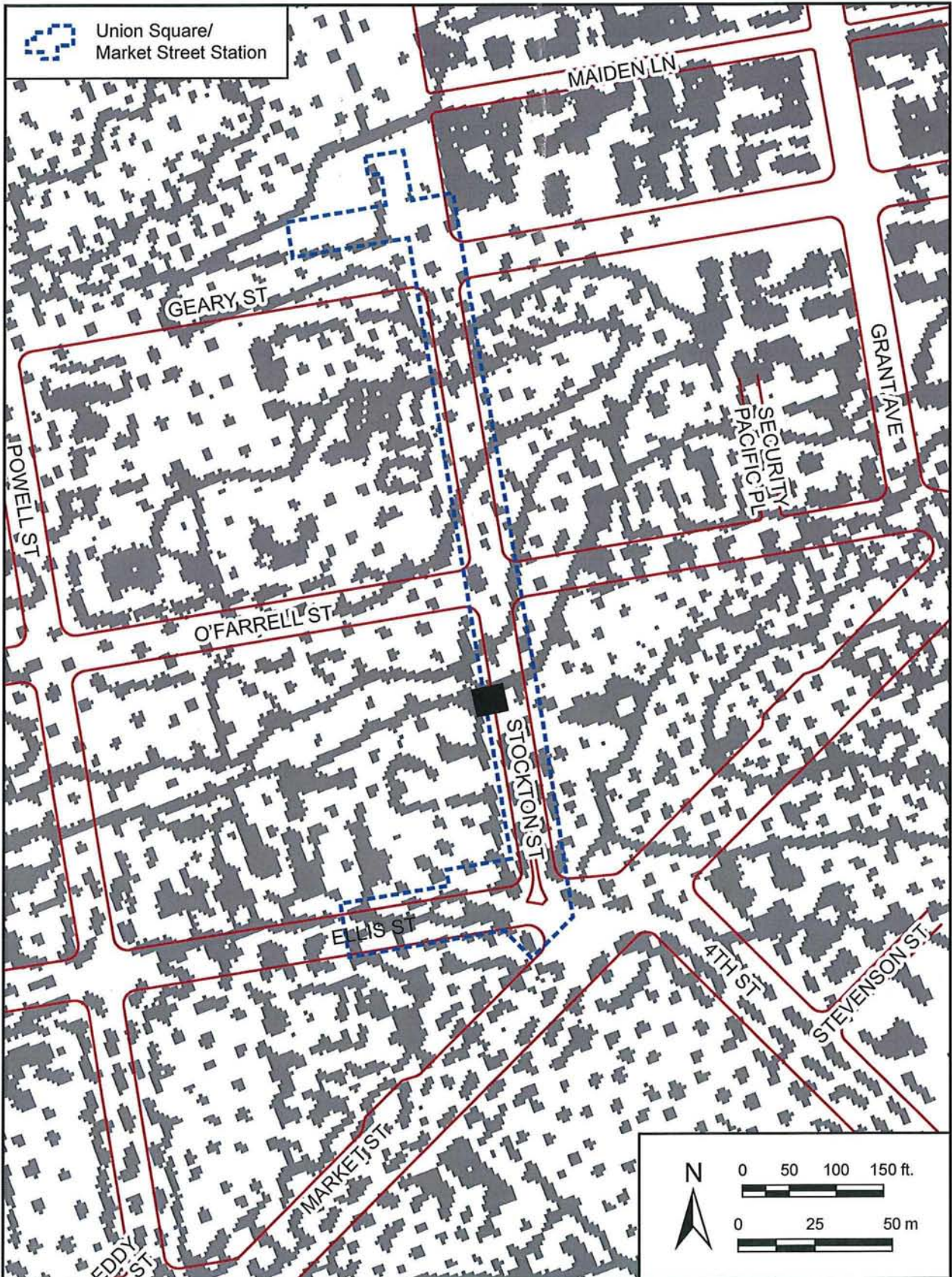


Figure 3.2. Location of Stockton Street building on 1857 U.S. Coast Survey map.



marsh deposits underlies this from 24 to 26 ft. and is, in turn, underlain by alluvium to a depth of 42 ft., below surface where it contacts the Colma Formation. Buried sand dunes are considered sensitive for Late Holocene prehistoric deposits in San Francisco. The alluvium is considered sensitive for older prehistoric sites. Thus, the entire corridor is moderately sensitive for prehistoric deposits between depths of about 8 and 45 feet.

3.3.1 Potential Prehistoric Property Types

Residential (ASC 2011a:Section 7.2) is the most likely prehistoric property type to be encountered within the project corridor at depths below 8 feet.

3.4 ARCHAEOLOGICAL SENSITIVITY AND PROJECT IMPACTS

Contract 1251 includes modifications to public and private utilities for electrical and communication distribution systems, natural gas distribution system, low pressure water supply systems, storm and sanitary sewer systems, and other work as shown or specified on Project plans. At least some of the utilities are in vaults in the streets/sidewalks or existing basements and/or will be moved to other such vaults. This process will not involve earthmoving or impact archaeological deposits. All work will take place within Stockton or Ellis streets. Trenching activity will generally not go deeper than 8 ft. below ground surface.

From current construction plans, it appears that the Gold Rush-era building is not in the construction footprint; but experience indicates that utility relocation plans are fluid and early maps inexact. Only the very deepest trenches have the potential to encounter prehistoric deposits.

3.5 ARCHAEOLOGICAL IDENTIFICATION/FIELD TEST LOCATIONS

No archaeological testing will take place prior to construction for Utilities 2. No known resources within the APE will be impacted by the Project and most archaeologically sensitive areas are beneath the limits of planned excavations.

The open excavations provided by utility relocation will be used, when the opportunity presents itself, to test for the Gold Rush era building and prehistoric deposits as part of testing for the Union Square/Market Street Station and the tunnel in this area.

3.5.1 Methods

The archaeological monitor should be alert for opportunities to test for the presence of resources if trenching takes place in the vicinity of the Gold Rush-era building and at the bottom of any construction-related excavation where it is logistically possible to reach greater depths through a hand auger or mechanical excavation. The goal of this work will be to determine presence or absence of archaeological deposits and to characterize the stratigraphic sequence such that better predictions may be made regarding archaeological potential. If the archaeologist believes that additional work may be necessary to identify important archaeological remains, the archaeologist should make a recommendation to the ERO.

4. UNION SQUARE/MARKET STREET STATION

The UMS serves Union Square and will connect directly to BART's Powell Street Station. Construction is scheduled begin in March 2012 and be completed by December 2016.

4.1 PROJECT DESCRIPTION

The UMS, located on Stockton Street between Maiden Lane and Ellis Street, will be constructed using top-down, cut-and-cover methods. Major elements of the UMS are the Platform Box, the North Concourse that connects to Union Square, and the South Concourse that connects to the Powell Street BART Station and the Ellis Street Annex. Overall, the station footprint extends 870 ft. along Stockton Street from Union Square to Market Street. Station impacts may extend to a maximum depth of 100 ft. below surface (Figure 4.1).

The shallow concourse at the north and south end walls will be constructed with conventional cut-and-cover secant piles and the deep platform section will be constructed with inclined contiguous secant piles.

Construction monitoring will be carried out during the construction of UMS.

4.2 HISTORIC CONTEXT

UMS shares the same parcel-specific historic context as Utilities 2, with the exception that the station extends outside the alignment of Stockton and Ellis streets to include the southeast corner of Union Square and the corner of Stockton and Ellis beneath the Apple Store. Both of these corners house underground parking garages.

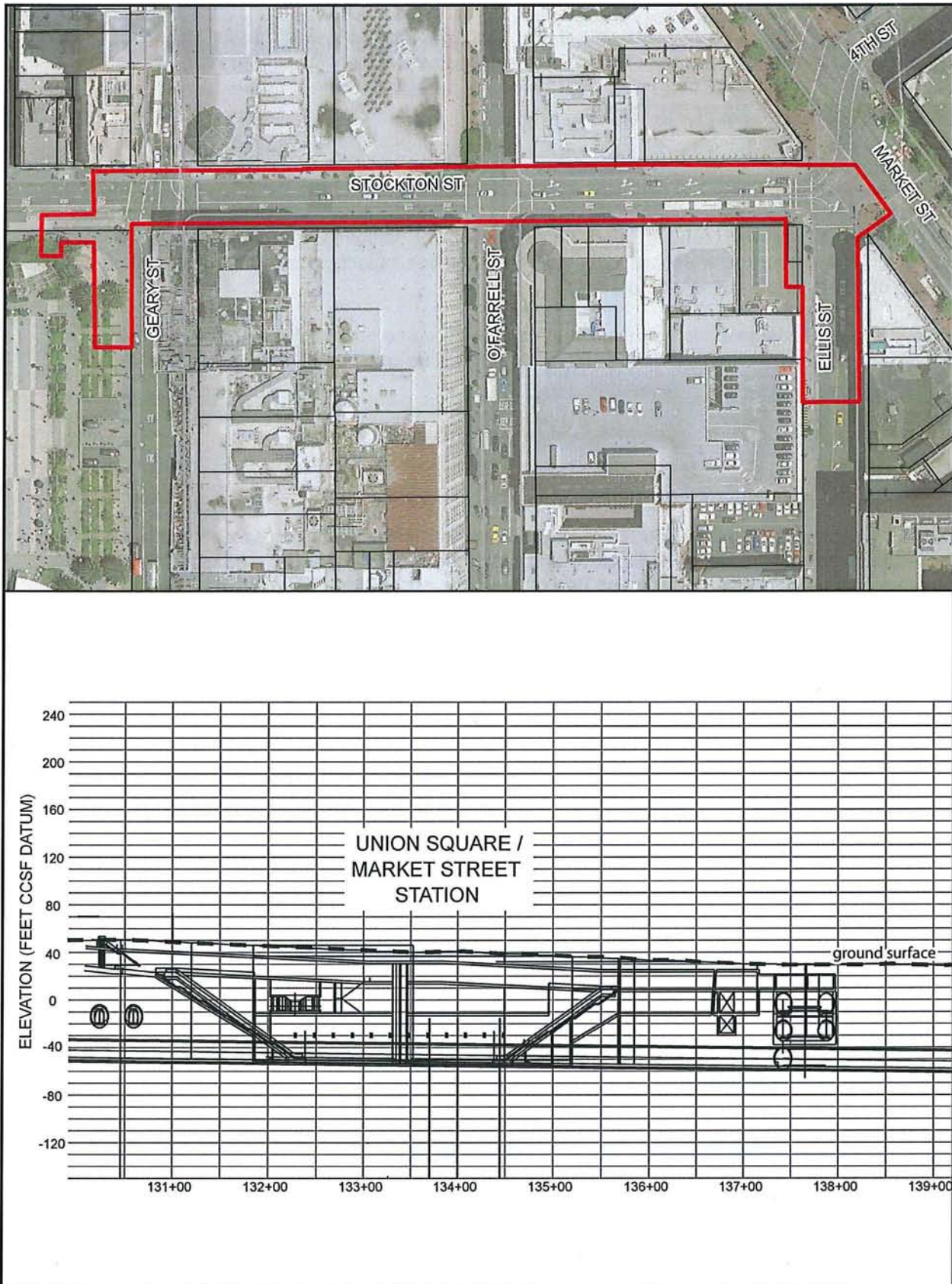
Union Square has functioned as a public area since the Mexican period, but only received official designation as such in 1850 when Colonel John Geary transferred title to the City "with the stipulation that it be held in perpetuity for park purposes." Over the next 20 years, the square was used for various activities, such as sandlot baseball games and pro-Union army rallies. Two different Mechanics' Pavilions stood in the square, the second of which could host 8,000 people for fairs, dances, musical events and public meetings. By 1880 Union Square had become a formally landscaped City park (Nuno 1993:22-23).

Originally sand hills blocked Stockton Street from Market to Post. City builders leveled the dunes, cutting as much as 20 ft. in some areas to fill up to 12 ft. in others. Contractors graded this portion of Stockton and paved the intersections in 1860, adding sewers in 1865, and a cobbled roadway in 1867. This portion of Stockton Street rapidly developed with multi-story brick commercial buildings.

4.2.1 Potential Historic Era Property Types

The 1857 U.S. Coast Survey map shows a building within the current alignment of Stockton Street between O'Farrell and Ellis streets. At that time sand hills still blocked Stockton Street at Market, but trails within the street alignments extended from the intersection west on Market and Ellis, south on Fourth, and north on Stockton to this building at the base of the sand hill (see Figure 3.2). By 1869 the block was fully developed. It is unclear whether this building was destroyed or buried by the reengineering of the sand hills, or if it housed residential or commercial activities, or both. Remains of the building itself are unlikely to have survived, however, artifact caches in a privy or well are possible. These would be studied under the "Pre-Gold Rush and Gold Rush-Era Sites" property type (ASC 2011a: Section 11.10).

Figure 4.1. Union Square/Market Street Station location (surface disturbance).



4.3 PREHISTORIC CONTEXT

While several prehistoric archaeological sites are recorded in the vicinity, they are all south of Market Street closer to marsh and bay resources. No prehistoric sites have been recorded north of Market. This may be due to greater opportunities for discovery in the South of Market where numerous large-scale construction projects have occurred within the past three decades.

The Project geologic cross-section (dated 8-2010) and boring log CS-6 (P) taken at the intersection of Stockton and O'Farrell depict the stratigraphy of this area as modern surfaces and artificial fill extending to 8 ft. below surface, underlain by dune sand to a depth of 24 feet. A thin layer of bay mud/marsh deposits underlies this from 24 to 26 ft. and is, in turn, underlain by alluvium to a depth of 42 ft., below surface where it contacts the Colma Formation. Buried sand dunes are considered sensitive for Late Holocene prehistoric deposits in San Francisco. The alluvium is considered sensitive for older prehistoric sites. Thus, the entire corridor is moderately sensitive for prehistoric deposits between depths of about 8 and 45 feet.

4.3.1 Potential Prehistoric Property Types

Shell mound or residential sites (ASC 2011a:Section 7) are the most likely prehistoric property types to be encountered within the Project corridor at depths below 8 feet.

4.4 ARCHAEOLOGICAL SENSITIVITY AND PROJECT IMPACTS

The UMS extends 870 ft. along Stockton Street from Union Square to Market Street. Station impacts may extend a maximum of 100 ft. below surface. The station will be constructed with top-down, cut-and-cover methods. The entire corridor is equally sensitive for prehistoric deposits between depths of about 8 and 45 ft. within either buried sand dunes or alluvium or at the interface with the Colma Formation. Remains associated with a Gold Rush building may exist on Stockton between O'Farrell and Ellis streets below modern fills and relocated sand dunes at about 10 to 20 ft. below surface.

4.5 ARCHAEOLOGICAL IDENTIFICATION/FIELD TEST LOCATIONS

No known resources will be impacted by the UMS Project and, except for the Gold Rush building, the areas are equally sensitive for archaeological deposits. Archaeological testing at UMS will take place during construction activities for Utilities 2 and whenever opportunities present themselves in the early planning/construction phases of the station itself. Additionally, a Geoprobe program will be undertaken to better understand the potential for buried prehistoric archaeological deposits.

4.5.1 Testing during Monitoring

The archaeological monitor for Utilities 2 will be on alert for opportunities to test for the presence of resources should trenching takes place in the vicinity of the Gold Rush era building and at the bottom of any construction-related excavation where it is logistically possible to reach greater depths through a hand auger or mechanical excavation. The goal of this work will be to determine presence or absence of archaeological deposits and to characterize the stratigraphic sequence such that better predictions may be made regarding archaeological potential. Most importantly, it will help us to better understand the depth of modern fill, the thickness of dune sand, and any buried surfaces that may contain remains of human occupation.

4.5.2 Geoprobe Testing

Prior to fieldwork all existing geotechnical and archaeological monitoring data will be reviewed for information pertinent to the geological sequence within the UMS Station footprint.

Geoarchaeological fieldwork will take place over a one-week period with a tractor-mounted Geoprobe. The size of the Geoprobe and the diameter of the continuous core samples have yet to be determined. Either a Geoprobe 8040DT, which can more easily achieve deeper cores through difficult material, with 3-in. diameter samples or the smaller Geoprobe 6600 with 1-3/4-in. diameter samples will be used. The location and number of cores will be determined by choice of equipment and field conditions.

All cores should be taken off-site for soil analysis, and samples of selected paleosols sent for radiocarbon dating. The goal of this investigation is to identify possible deeply buried prehistoric archaeological resources and to characterize the subsurface stratigraphy of the UMS Station area, including identifying and dating paleosols. This methodology will identify where buried prehistoric archaeological resources may be present, in addition to identifying stratigraphically which areas are too old, or too young, to contain buried prehistoric archaeological resources.

Fieldwork will be coordinated with other Project activities. If artifacts are encountered during this investigation, they will be documented and returned to the archaeology lab for processing. The results of this investigation will be documented in a technical report that will be submitted within two months or fieldwork completion.

Based on findings, the archaeologist may recommend to the ERO that additional studies should be undertaken or that the UMS AMP should be updated.

5. CHINATOWN STATION

CTS, located on the corner of Stockton and Washington streets will require demolition of buildings currently standing at 933–949 Stockton Street. Station construction will begin in September 2012 and be completed by March 2017.

5.1 PROJECT DESCRIPTION

The vicinity of CTS is one of the most densely populated areas in San Francisco, with many existing buildings and underground utilities. CTS will be excavated as a mined cavern beneath Stockton Street, approximately between Jackson and Clay streets (Figure 5.1). Its main elements are the Platform Cavern, Crosscut Cavern, Crossover Cavern, Headhouse, and two emergency egresses. The Headhouse will occupy an off-street parcel at the southwest corner of Washington Street; the Crosscut Cavern will extend under Stockton Street from the Headhouse; and the Platform Cavern and the Crossover Cavern will extend north and south under Stockton Street respectively from the Crosscut Cavern. The north emergency egress is a vertical shaft located above the roof of the north end of the Platform Cavern. The south emergency egress is a sloping shaft that is located above the roof near the north end of the Crossover Cavern and leads to the sidewalk outside of the Headhouse. Following station construction, it is anticipated that transit-oriented development (TOD) will be constructed on the parcel.

Construction on the off-street parcel will be monitored by an archaeologist. Monitoring will not be possible during the work in the mined cavern beneath Stockton Street.

5.2 HISTORIC CONTEXT

Earliest Euro-American settlement centered on Yerba Buena Cove and a maritime focus. An early lithograph shows scattered buildings around the cove and the surrounding hillsides (Figure 5.2). One of these holdings, the Paty Hinckley property, extended across what became Stockton Street as shown on the Hendry and Bowman (1940) O'Farrell Swing Map into the CTS project area (Figure 5.3).

At the time of the Gold Rush in 1848, San Francisco's population was slightly more than 800 people living in the original townsite of Yerba Buena, north of Market Street, centered around Portsmouth Square, the commercial center for much of the sparsely settled Pacific Coast (Figure 5.4). San Francisco's population increased rapidly to as many as 30,000 people in 1850 (Soule, Gihon, and Nisbet 1855:216). By 1850 gambling saloons surrounded much of Portsmouth Square and the financial district moved south toward Market Street (Choy and Yip 1979:1). In 1852, 933–949 Stockton Street contained three buildings and by 1857 nearly the entire parcel was covered by buildings. By the middle 1880s, except for the continued presence of an Italian wood and coal dealer, the parcel was occupied by Chinese who engaged in a variety of businesses including a laundry and a lodging house.

5.2.1 The Chinese in California

San Francisco's Chinatown holds the distinction of being the oldest and largest in the nation. Its history begins not long after the fateful discovery of gold in the California hills in 1848. Like the many immigrants from other countries who poured into the port of San Francisco in the 1850s, the Chinese came seeking wealth and fortune. Chinese immigrants, however, were also escaping desperate situations in their native homeland. During the second half of the 19th century China was a country in disarray, plagued by natural disasters like floods and famine as well as by bandits, warlords and an ineffective government. Most of the immigrants who made their way to America were from Guangdong Province in the southern part of China, the area hardest hit by the country's political

Figure 5.1. Chinatown Station location (surface disturbance).

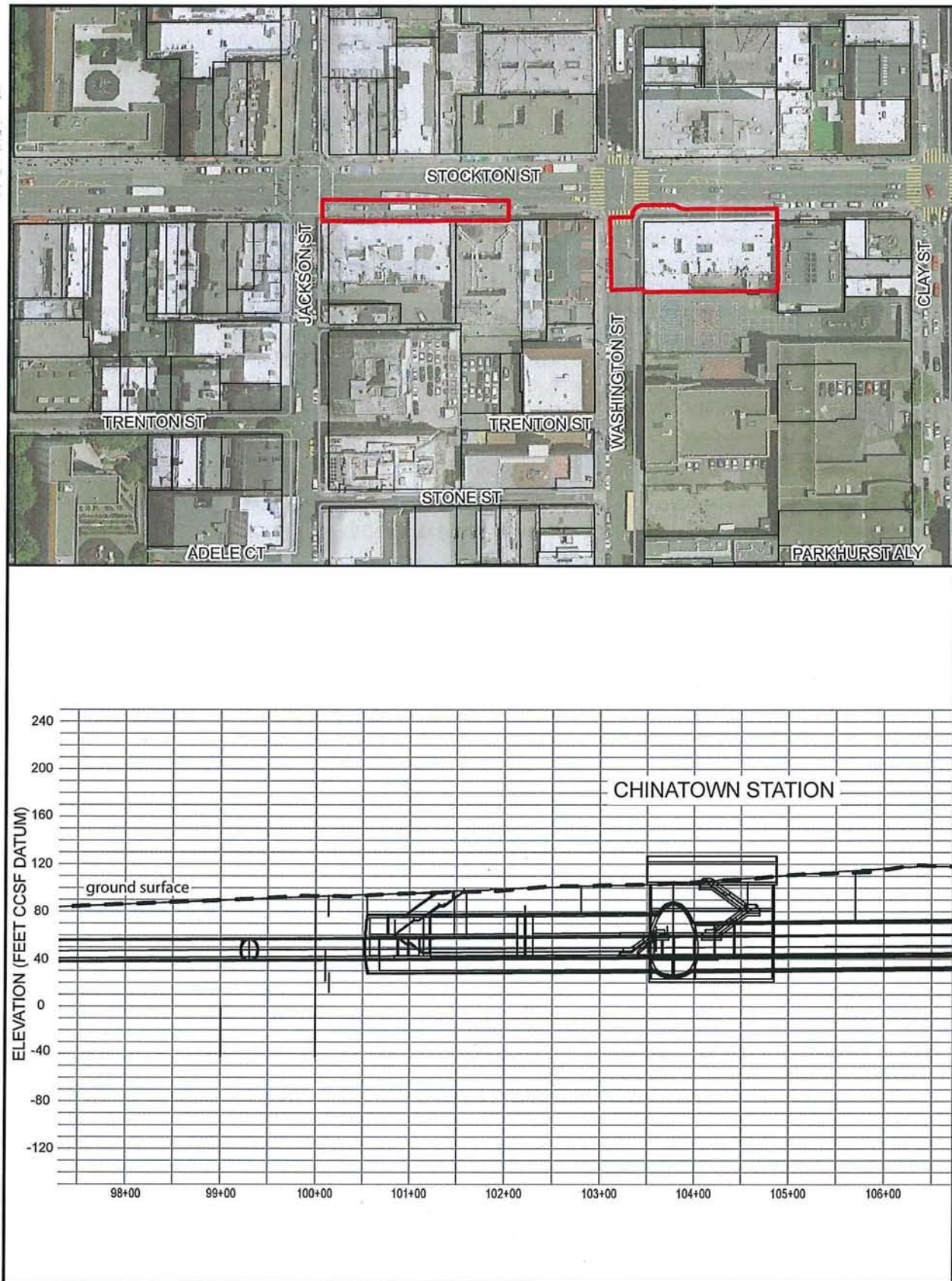


Figure 5.2. Lithograph titled "View of San Francisco, formerly Yerba Buena, in 1846-7. Before the Discovery of Gold."
(Illustration courtesy of Library of Congress Prints and Photographs Division, LC-DIG-pga-00251).

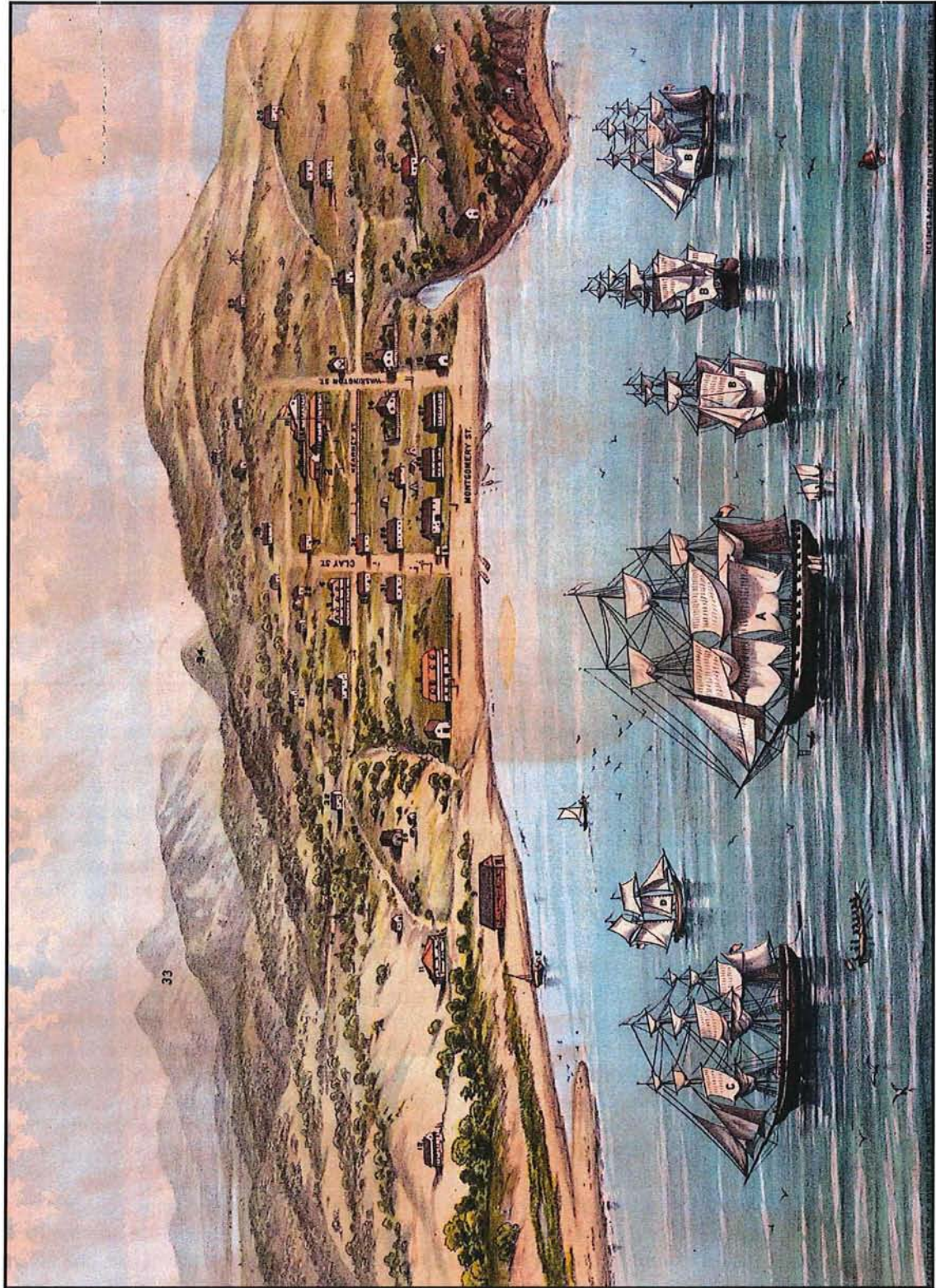
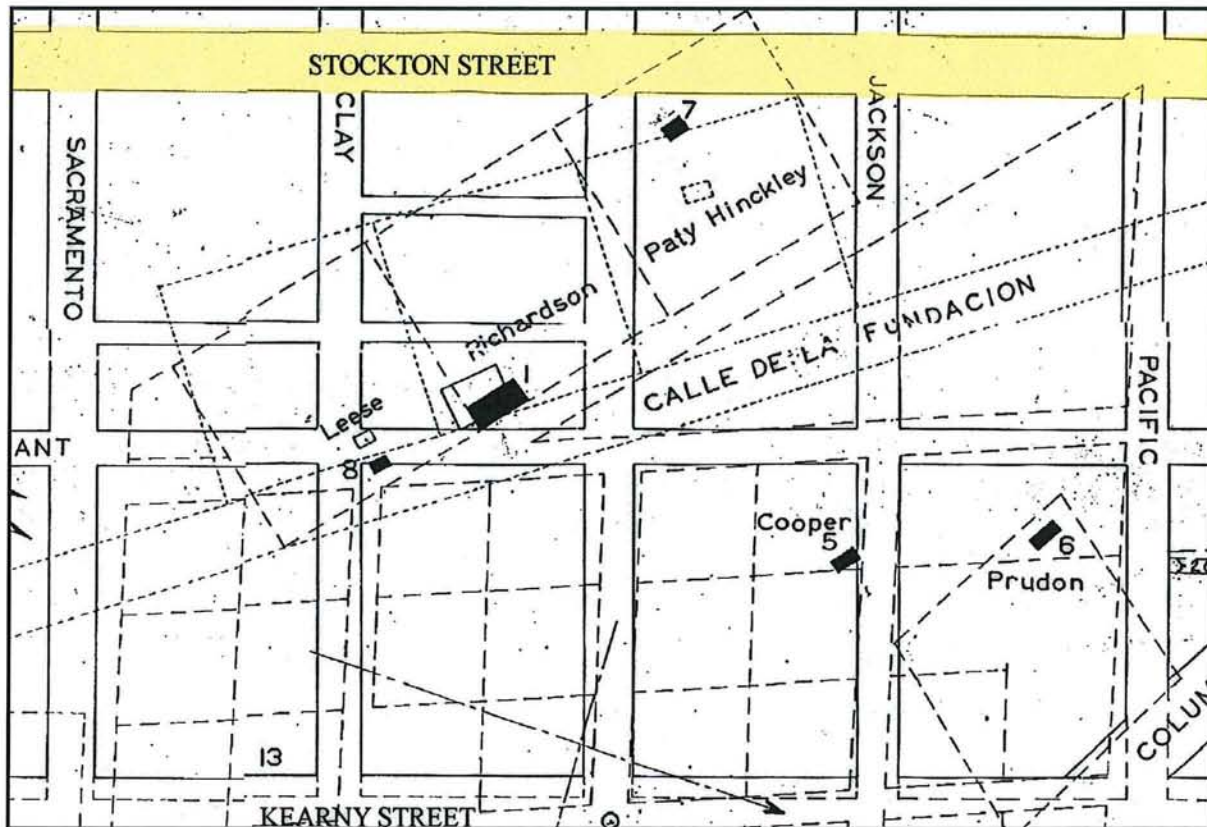


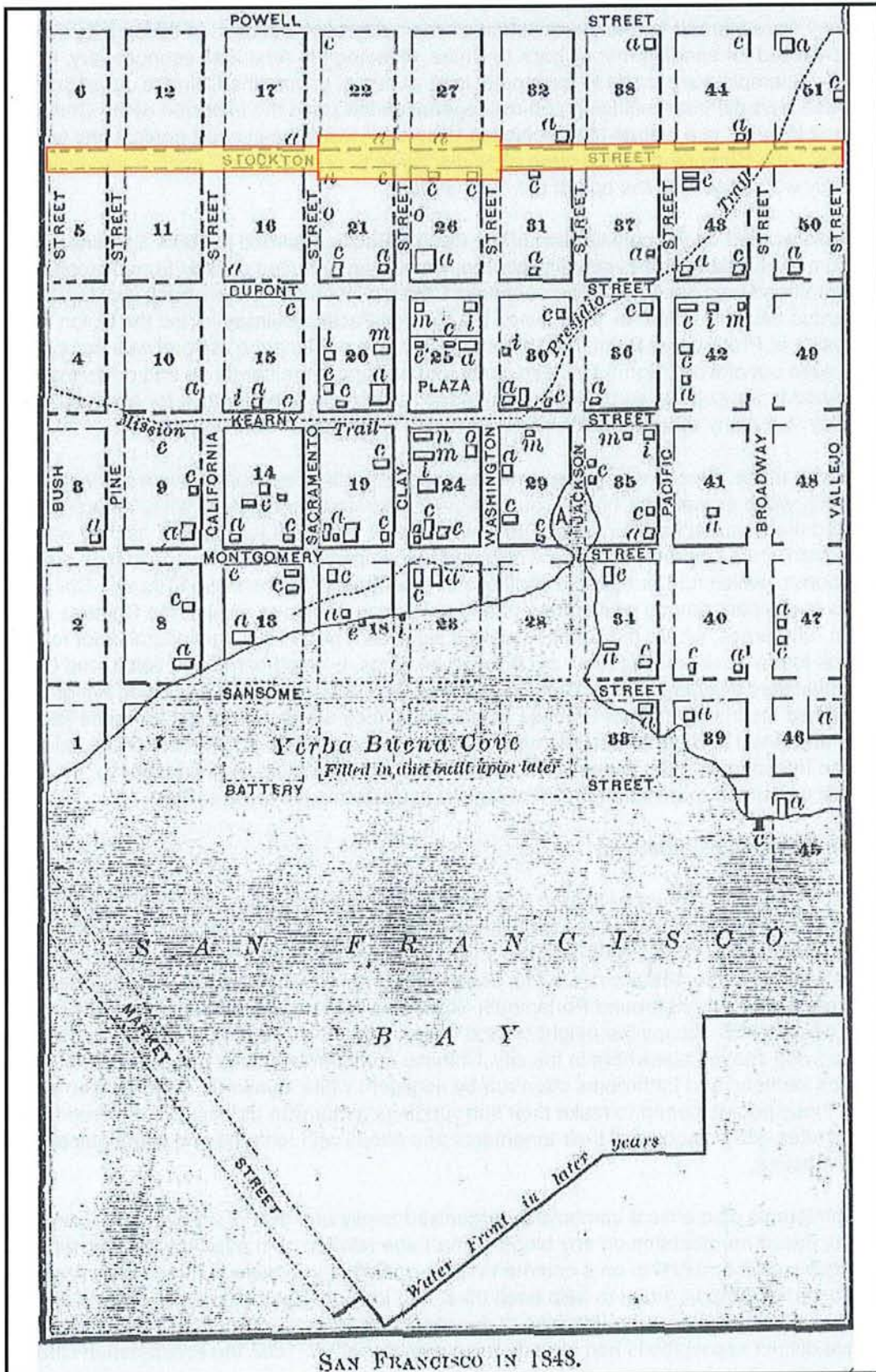
Figure 5.3. Central Subway Project alignment overlaid on Hendry and Bowman's 1940 O'Farrell Swing Map.



turmoil. The people of southern China were generally less educated than the people of the north and were mostly farmers, struggling to harvest enough rice to pay rent and feed the family (Chinn 1989; Nee and Nee 1973). In order to survive, many southern Chinese families had no choice but to sell their youngest child to wealthier families as servants or if it was a girl, into prostitution. At least one son in a family would also be sent to Hong Kong or abroad in order to make money to send back to the family. It was these young sons who flocked to California during the Gold Rush, working and living in the fields, building the railroads, and establishing a bachelor society that typified Chinese immigration for nearly a century.

The Chinese who first arrived in 1849 were welcomed into San Francisco because they were willing to undertake the much-needed tasks of cooking and laundering. Like the Chinese, the Caucasian miners who streamed in from all parts of the country were mostly men who had temporarily left their families in an attempt to strike it rich and return home wealthy. The absence of women left a large void of labor for performing essential everyday tasks. The Chinese, eager to earn a wage, stepped in to fill this void. Eventually the Chinese immigrants also began trying their hands at mining, putting themselves in direct competition with white miners. Anti-foreign sentiment by white American miners was evident very early on. Anti-foreign laws were passed as early as 1850, starting with the Foreign Miners' License Law that imposed a \$20 a month tax on all foreign miners (Nee and Nee 1973; Norton 1924). This law was repealed the next year but by then it had already done a great deal of damage. By 1852 the Mexican, French, and Chilean miners had all been driven out and the force of the anti-foreign movement became clearly focused on the most conspicuous of foreigners, the Chinese.

Figure 5.4. Central Subway Project alignment and Chinatown Station on Stockton Street overlaid on 1848 map of San Francisco (author unknown; courtesy of Bancroft Library).



Anti-Chinese sentiment continued in the mid-1850s. As the mines slowly began decreasing their yields miners began returning to San Francisco looking for work, competing with hundreds of other unemployed men for scarce jobs. The presence of thousands of Chinese in the city made them easy targets—they were blamed for the current state of unemployment, accused of taking jobs at too low a wage and criticized for sending money back to China, bleeding the American economy dry. In the next decade many attempts were made to pass petty laws aimed at driving the Chinese out of the U.S. Some of these laws did pass including anti-miscegenation laws and the inclusion of the Chinese with "Negroes and Indians" in a statute that prohibited them from testifying in court against any white man (Norton 1924). Anti-Chinese attitudes were often displayed through physical conflict and violence that would steadily worsen toward the end of the 19th century.

Many Chinese worked on the construction of the Central Pacific Railroad in 1865. Ex-miners were recruited from the hillsides and eventually laborers were even recruited directly from Canton. The work on the railroad was dangerous and countless Chinese lost their lives as track was laid over the treacherous Sierra Nevada. In 1869, when the Central Pacific Railroad joined the Union Pacific at a celebration at Promontory Point, no Chinese were present. Once the railroad was completed thousands were out of work. Some Chinese continued working on railroads up and down the West Coast or turned to agriculture; some were recruited to reclaim the tule marshes for agriculture in the Central Valley and many returned to the rapidly growing Chinatown in San Francisco.

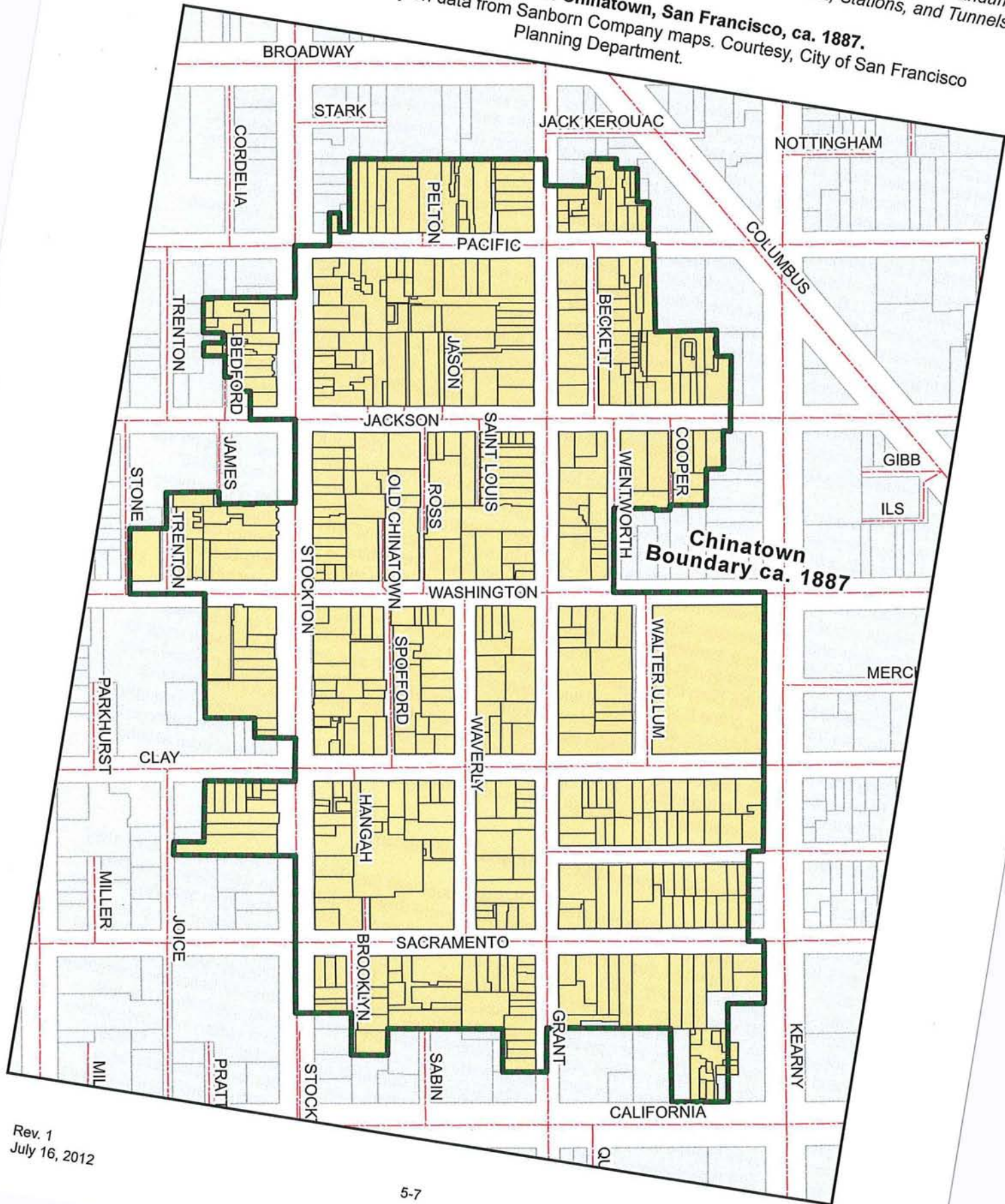
The completion of the railroad did not have the expected effects of economic boom but instead left many workers, white as well as Chinese, out of work. Frustrated unemployed white laborers once again blamed the Chinese for their state. The Chinese were more apt to get hired as they were paid lower rates than white laborers. They were also used by employers to break wage strikes organized by white laborers, which further agitated conflict and resentment. By the late 1870s anti-Chinese sentiment was rampant among white laborers and politicians. Violence against the Chinese was common. In rural areas, where the Chinese were a significant part of the agricultural labor force, white laborers took to physically driving them out through beatings, burning barns and fields, and bullying employers until they discharged their Chinese workers. The passage of the Exclusion Act of 1882, which prohibited the immigration of Chinese laborers and their wives, fueled anti-Chinese sentiment rather than appeased it. Riots and raids continued as the Chinese were driven out of the fields and factories and forced to work as laundrymen, cooks, vegetable peddlers, and houseboys, the same jobs that had welcomed them when they first arrived in California 40 years earlier.

5.2.2 San Francisco Chinatown

In 1882, San Francisco's Chinatown, then a twelve block area bordered by Kearny Street on the east, Stockton Street on the west, California Street to the south, and Broadway to the north, was home to 15,000 Chinese (Yung 2006) (Figure 5.5). The population had been steadily growing denser since its beginnings in the 1850s when a few Chinese settled near Portsmouth Square. The Chinese population rapidly expanded around Portsmouth Square as the longshoremen and non-Chinese merchants who used to occupy the neighborhood gave up their run-down apartments for newer, more comfortable living spaces elsewhere in the city. Chinese immigrants moved into cramped buildings with common kitchens and bathrooms often run by negligent white slumlords. Despite their poor living conditions, these people began to make their surroundings as familiar as possible decorating the Victorian facades and balconies of their tenements and shops with lanterns and signs painted with Chinese characters.

The new immigrants also almost immediately organized family and district associations. Family associations based membership on any blood or marriage relation no matter how distant, while district associations based membership on a common village or district and dialect. These organizations formed as a sort of support group to help each other find lodging, health care, monetary assistance and they raised money to have the remains of deceased immigrants shipped back to China for burial. By 1852 five district associations had already been established. In 1853 the Presbyterian Church of

Figure 5.5. Boundaries of Chinatown, San Francisco, ca. 1887.
Map based principally on data from Sanborn Company maps. Courtesy, City of San Francisco
Planning Department.



Chinatown, the first Chinese church in North America, was erected on Stockton Street. The Chinese School was built by 1859 and by the 1870s there were at least four Chinese theatres in Chinatown and two additional churches (Choy 1981; Yung 2006).

The Chinese also established several industries within Chinatown. Though many jobs and opportunities were closed to them, Chinese immigrants found success in cigar making, boot and shoe manufacturing, and clothing manufacturing. In the 1860s and 70s Chinese boot, shoe, clothing, and cigar factories thrived in Chinatown. Cigar manufacturing in San Francisco was dominated by the Chinese and nearly half of the state's boot and shoe production came from Chinatown factories. The Chinese also became very involved in the garment industry and established numerous clothing factories throughout Chinatown. In addition to manufacturing the Chinese also found success in several types of businesses. The Chinese had been involved in the laundry business since their arrival in the U.S. during the Gold Rush and continued operating laundries for many years. Business directories of the late 1800s reveal that Chinese laundries were by far the most common type of business in Chinatown. Restaurants and groceries were also thriving industries that served the Chinatown community and eventually a tourist population. Storefronts were opened to display fresh produce and meats, street peddlers walked the streets pushing all sorts of goods from chickens to shoes to umbrellas, waiters delivered food from house to house, and the fortuneteller set up his stand on the sidewalk ready to help the illiterate write letters home (Yung 2006). The Chinese immigrants very quickly transformed what looked architecturally like an American frontier town into a bustling, self-sustaining Chinese village that contained all of the resources they needed to survive.

The Chinatown that is familiar to tourists and locals today reflects very little of its original 19th century Western architecture. The exotic pagodas, doorframes, and beams carved with intricate designs are all a product of the white architects who helped rebuild Chinatown after it was almost completely destroyed by the earthquake and fire of 1906. Working together to thwart plans by the City to move Chinatown to the mudflats of Hunter's Point, the Chinese merchants and white landlords quickly began rebuilding Chinatown in its original location. Look Tin Eli, the Chinese Chamber of Commerce manager and entrepreneur, is credited with the idea to create a new "Oriental" looking Chinatown in order to attract more tourists and non-Chinese business. Eli hired the Caucasian architect and engineer team of Ross and Bungren, who used images in books and their imaginations, to create a Chinese look for the Sing Chong bazaar on the corner of Grant and California. The designers adorned the corner of the building's roof with a three-tiered pagoda, and bay windows were used to display Oriental furniture and other Chinese curios. Many other merchants jumped on board with Eli's plan including Tong Bong who had the same designers create a similar look for the Sing Fat bazaar across the street from Sing Chong (Yung 2006). The "Oriental" elements sprinkled throughout Chinatown, though a product of the romantic imaginations of Caucasian designers, have become the iconic look that aesthetically defines San Francisco Chinatown and still draws tourists from around the world.

5.2.3 The Southwest Corner of Stockton and Washington

Chinatown's boundaries, determined using Chinese business directories and Sanborn maps of 1887 and 1900, place the southwest corner of Washington and Stockton just within Chinatown's western edge. Like the properties surrounding it, the parcel of land on the corner of Stockton and Washington was developed in the early 1850s. Combining both residential and commercial space, the corner of Stockton and Washington held a diverse mix of tenants. Early residents included families and single lodgers from France, Prussia, Mexico, and Italy. The property at 907 Washington was a residence and wood and coal yard first operated by an Englishman followed by a series of Italian businessmen from 1867 to 1905. The second story of 919 Stockton operated as a lodging house from the late 1870s into the 1880s where renters from all parts of the world engaged in a variety of working-class jobs resided. Underneath the lodging house a grocery operated from the 1880s into the 1890s, continuing to occupy a smaller store even after the first floor was split into three separate retail spaces. The residences adjacent to the lodging house were homes to several families and lodgers

including a French family and several Prussian families. These families also ran businesses and offered services out of their homes such as a French laundry, embroidery, and stamping and pleating.

From the 1850s into the 1880s, the property on the southwest corner of Washington and Stockton served as the home and business place for a working class and merchant population, mostly from European backgrounds. While several of the renters were families, the majority of the tenants were single men and women, a mix of laborers, waiters, painters, domestics, and a few pursuing more glamorous careers like acting. Though the First Presbyterian Church of Chinatown was established adjacent to the Stockton and Washington parcel in 1853 the corner parcel continued to house non-Chinese residents and businesses into the 1880s. It is not until around 1885 that the non-Chinese tenants were replaced by Chinese.

According to the 1885 Sanborn map and the 1885 Municipal Report, at least half of the businesses on the east side of Stockton Street were Chinese at that time (San Francisco 1885). On the west side of the street there were several Chinese businesses next to the church but the business on the southwest corner of Stockton and Washington remained a non-Chinese grocery. The tenements above the grocery were most likely inhabited by Chinese tenants but the neighboring residences were probably non-Chinese renters. However, over the next 15 years these businesses and residences became almost exclusively Chinese as evidenced by the 1900 United States Bureau of the Census (U.S. Census) records that list all of the residents on Stockton Street as being Chinese. Only the old wood and coal yard at 907 Washington was not Chinese-run and stayed in operation at least through 1904.

In the late 1860s and early 1870s the Chinese were producing half of the boots and shoes made in California and dominated cigar making in San Francisco (Chinn 1989). Traces of Chinese involvement in these industries can be seen on this corner of Stockton and Washington even after the period of Chinese domination had faded. A cigar manufacturer operated at 921 Stockton in 1895 and there were shoe factories at 937 and 949 Stockton Street after 1906. After the earthquake and fire of 1906 the buildings on the corner parcel were rebuilt or remodeled. The first floor was divided into smaller retail spaces with new addresses and living spaces on the second floor. The wood and coal yard on Washington became a clothing factory and Chinese laundry adjacent to an overall factory and a cleaning company.

The Chinese shops and businesses that filled the retail space on the corner of Stockton and Washington varied throughout the years. They ranged from common and typical early Chinatown businesses like laundries, clothing factories, restaurants, and import shops to the real estate, travel agencies, coffee shops, and beauty parlors that have taken over in more recent times. The Presbyterian Church of Chinatown is still next door on Stockton Street and the Gordon J. Lau Elementary School annex (formerly the Commodore Stockton School), built in 1924, sits directly behind the property to the west. The parcel of land on the southwest corner of Stockton and Washington is now fully immersed within an active and busy Chinatown (Figure 5.6).

See Appendix C for documentary research tables.

Figure 5.6. Existing building at 933-935 Stockton Street.

5.3 POTENTIAL HISTORIC ERA PROPERTY TYPES

The parcel at 933–949 Stockton Street is very sensitive for significant historic-period archaeological deposits dating between the late 1840s and the early 20th-century (Figure 5.7). Remains of pre-1906 habitation may survive in hollow/filled features or as deep artifact deposits beneath the existing buildings that were constructed without basements almost immediately following the earthquake and fire of 1906. Expected archaeological property types include Domestic Occupation Sites (11.1), Commercial Sites (11.3), Combined Domestic/Commercial sites (see below), and Pre-Gold Rush and Gold Rush-era sites (11.10). These may contribute to on-going research questions for a number of themes, particularly Creating the Townsite, Services, Mercantile, and Residential (ASC 2011a: Sections 11 and 12).

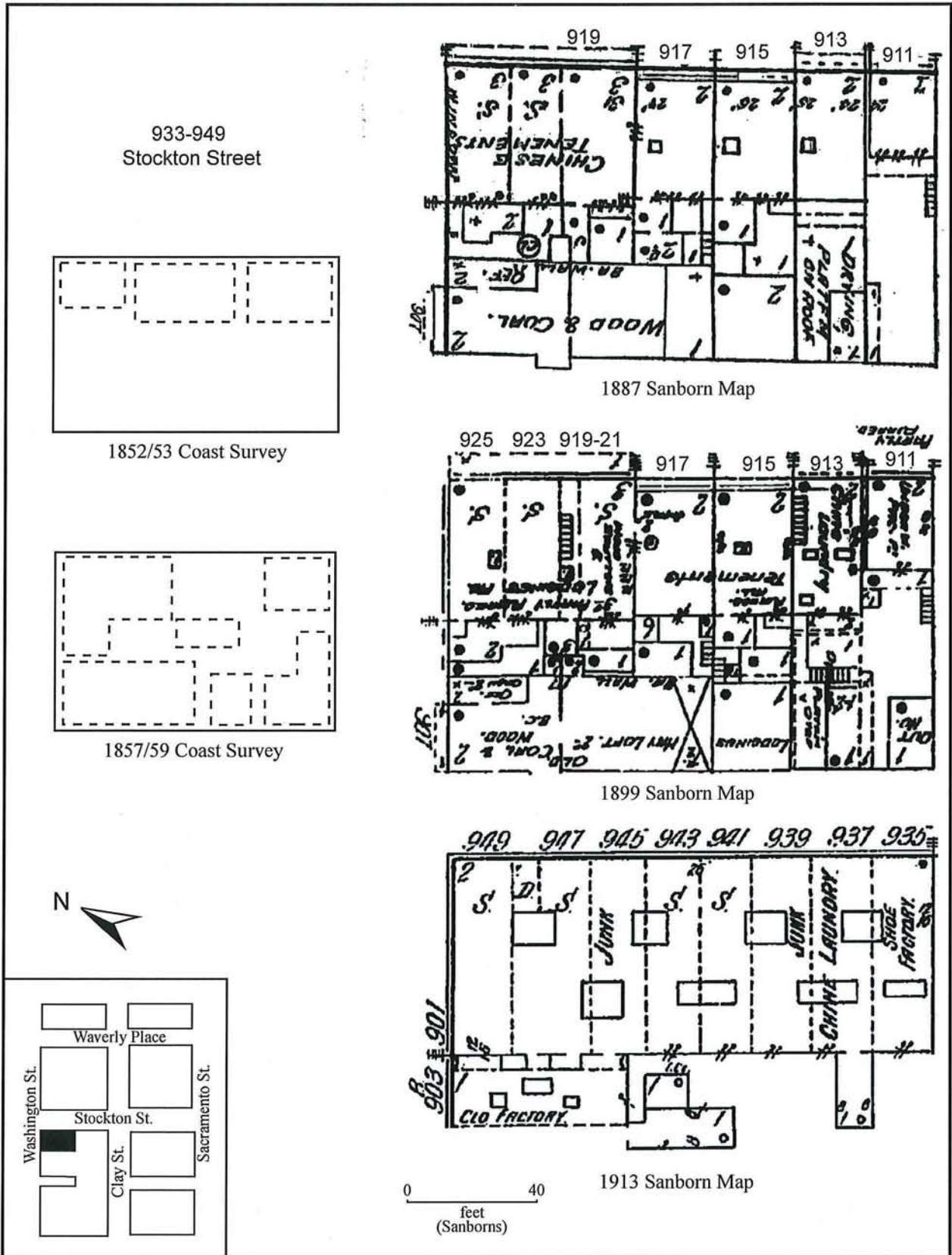
5.3.1 Combined Domestic/Commercial Sites

This property type consists of the combined byproducts of domestic life and commercial/industrial activities commonly discarded in hollow/filled features and on open surfaces. Hollow/filled features include wells, cisterns, subterranean basements, outhouse or privy vaults, and refuse pits; in addition to sheet deposits, these are sources of historic-period artifact collections. Examples of this property type may occur in association with stores, laundries, factories, and other facilities where employees live at their place of work.

5.4 PREHISTORIC CONTEXT

No prehistoric archaeological sites have been recorded in the area; the nearest are South of Market. The prehistoric archaeological profile of this area is unknown. The Project geological profile and Geoprobe cores indicate that about 5 ft. of modern fill overlay a thick alluvial deposit that interfaces with the Colma Formation at about 35 ft. below ground surface. The alluvium and the top few feet

Figure 5.7. Historical development of Chinatown Station off-street parcel
(historically 933-949 Stockton).



of the Colma have moderate sensitivity for prehistoric deposits. It is unclear which represents the cultural basement in the area.

5.4.1 Potential Prehistoric Property Types

Prehistoric property types may include either residential or non-residential sites (ASC 2011a: Section 7).

5.5 ARCHAEOLOGICAL SENSITIVITY AND PROJECT IMPACTS

There is nothing known about the prehistoric settlement patterns in this portion of San Francisco. It attracted the first Euroamerican settlers to the area, however, and can be considered a suitable place for habitation. Prehistoric living surfaces that may contain archaeological remains could exist below the 5 ft. of modern fill that covers the area, down to about 35 ft. below surface within the Colma Formation.

The 19th-century historic-period living surface will be found in the upper 5 ft., just beneath the rubble remains of the 1906 earthquake and fire. While remains could be found beneath Stockton Street, the most important artifact-filled deposits can be expected on the off-street parcel at 933–949 Stockton. These features could be up to about 15 ft. deep.

The off-street area of approximately 11,200 sq. ft. will serve as a staging area and later as part of the underground station itself. Construction of the Chinatown Station, crossover tunnel, and tail track will be carried out from an off-street shaft on this parcel. The CTS itself will be constructed entirely using SEM. Impacts from the SEM construction will be from about 45 to 120 ft. below surface. Following station construction, it is anticipated that TOD will be constructed on the parcel. Thus 933–949 Stockton will be subject to impact from ground surface to approximately 120 ft. below surface. This zone includes areas highly sensitive for historic period remains associated with early pre-Gold Rush, Gold Rush, and Chinatown residents and businesses.

The Stockton Street portion of the underground station will not involve surface impacts, except along the emergency exit. The station ceiling is about 45 ft. below ground surface, except for the off-street station stairs and Headhouse that reach the surface. Thus, Stockton Street itself will be subject to impacts from about 45 to 120 ft. below surface. These impacts are well below any anticipated archaeological resources.

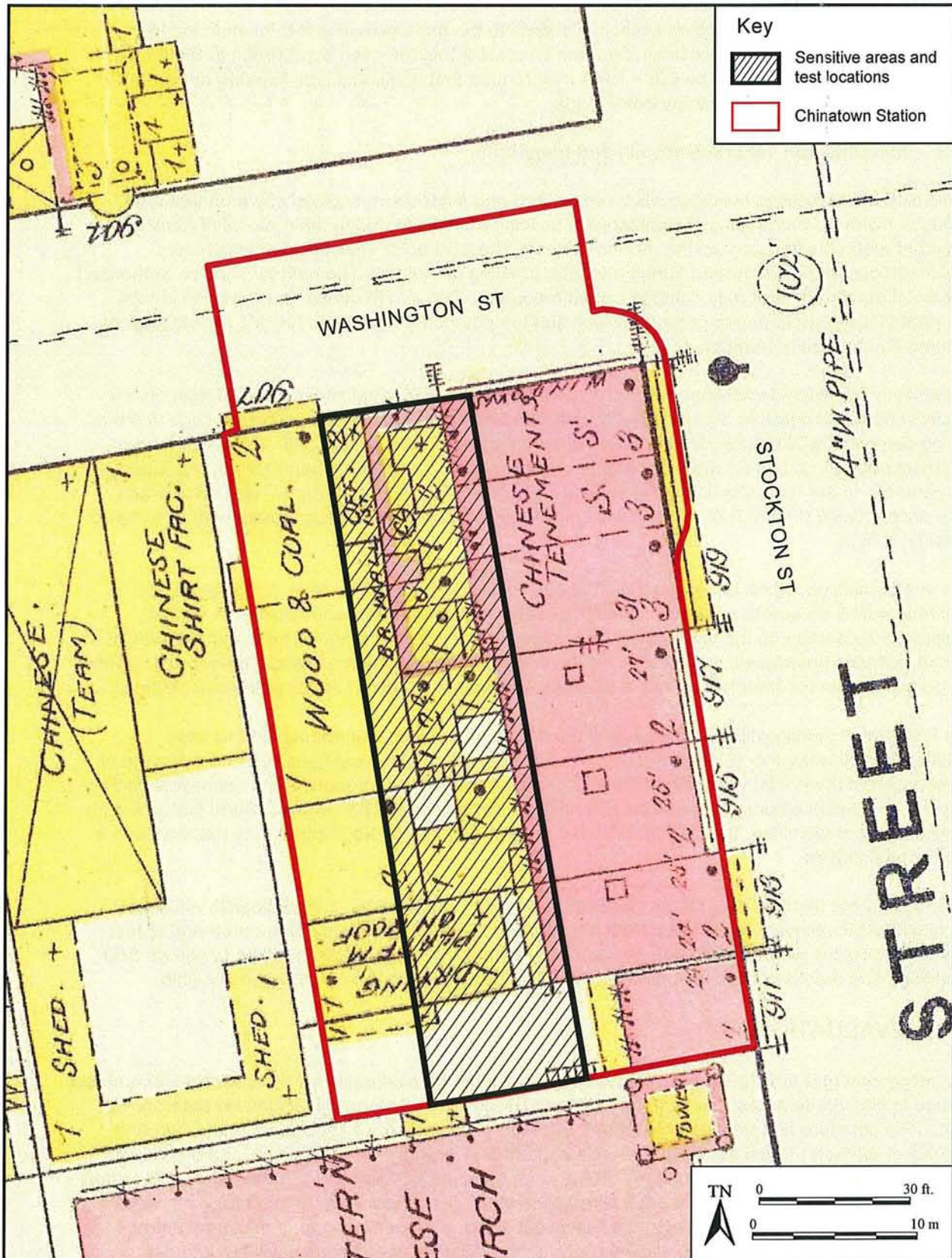
5.6 ARCHAEOLOGICAL IDENTIFICATION/FIELD TEST LOCATIONS

5.6.1 Constraints and Opportunities

Businesses and residents currently occupy the building on Stockton Street. There is a shortage of similar, vacant properties in Chinatown. The occupants will be moved and resettled just prior to demolition. As the construction schedule is very tight and delays expensive, there will not be time for an extended archaeological study with numerous stopping points for conventional agency reviews. Instead, the testing plan describes a consolidated approach in which testing, evaluation, and data recovery, if necessary, are accomplished quickly using agreed upon significance thresholds and treatment protocols. The results of this process will be reported on a weekly basis to the review agencies. Section 2.4.2 contains more information on this process.

The quick movement from demolition to archaeological treatment will protect the archaeological features from looters who would otherwise descend upon the site immediately. The construction contractor will fence the site and provide security as required to prevent unauthorized access. The

Figure 5.8. Chinatown Station sensitive areas and test locations for historical archaeological resources, shown on the 1885 Sanborn map.



construction contractor will provide heavy equipment and logistical support to the archaeologists, enabling the work to proceed in an efficient and safe environment.

Project archaeologists will be given exclusive access to the archaeological test location for 15 contiguous days. This period will begin after the contractor has removed overburden to the project archaeologist's specification. The City's ERO may require that additional time is made available if discoveries of exceptional importance are made.

5.6.2 Identification Testing Methods and Locations

Demolition of the existing buildings will be monitored and followed immediately by archaeological testing. A historical archaeologist shall monitor building demolition during the removal of foundations and other elements that contact the ground surface. The contractor shall avoid driving heavy equipment over exposed ground during and after building demolition. The monitor shall be authorized to redirect equipment that may damage buried resources. The aim of monitoring will be to identify and protect the historic-period ground surface and the potentially significant historic archaeological features cut through or beneath it.

Immediately following demolition and prior to construction, archaeological testing will begin on the off-street parcel. If possible, demolition will be accomplished sequentially, by address, such that the testing can begin well before demolition has been completed as individual addresses are cleared. The most sensitive areas for historical archaeological deposits in densely populated urban areas are generally in the rear of buildings where back porches, kitchens, "outhouses," and open areas were once located (Figure 5.8). Testing will emphasize the exposure of broad areas where research potential is high.

After the demolition debris is cleared to just above the historic ground surface, test scraping or trenching will be done with a hydraulic backhoe/loader with a flat 36-in.-wide bucket or similar equipment depending on the depth of fill. The immediate object of testing will be to expose previous ground surfaces (interfaces) in plan view. At the completion of a portion of trench, the tops of features will be exposed in the trench floor, not in its sides. Evaluation will occur at this point (see section 5.7).

The first goal of testing will be to investigate the nature of previous disturbance, in this case construction following the 1906 earthquake. As the destruction of the old buildings and subsequent construction of the present building occurred over the same period throughout the southwest corner property, disturbance/survival should be relatively similar across the parcel. As cultural features and stratification are identified, they will be exposed in plan by hand, photographed, and mapped with a GPS or total station.

After historic-era deposits have been identified, evaluated, and treated, archaeologists will direct the mechanical excavation of a deep trench to explore the geoarchaeology of the area and to test for buried surfaces where prehistoric deposits may be discovered. Trenching will be based on field conditions and results of the previous work, avoiding disturbed areas to the degree possible.

5.7 EVALUATION

It is anticipated that most archaeological remains that must be evaluated will be collections of artifacts located in discrete features. The evaluation phase described in Section 2.4.2 involves determining a feature's structure and stratigraphic integrity, its approximate date of deposition, and range and quantity of artifacts. To assess each feature's content and integrity, an appropriate portion of each will be hand excavated, stratigraphically. In the case of an artifact-filled privy, for example, the feature will be cross-sectioned and part of each layer excavated. The proper level of effort for each feature will be determined by the field director as it is investigated. As a general rule, a minimum amount of excavation will be performed to allow the evaluation. All units of excavation will be recorded on

detailed field forms on which the excavator and/or field supervisor will note site structure and/or content. Field forms are based on those developed by the Museum of London, Department of Urban Archaeology (Museum of London 1980, 1994).

Excavated soil will be passed through 1/8- or 1/4-in. screens, as appropriate, to document the presence of all classes of artifacts. Artifacts will be initially identified and, when possible, dated in the field. Those belonging to features potentially eligible for the NRHP will then be returned to the consultant's archaeological laboratory for verification of the initial description and subsequent cataloging. Materials from features determined to be ineligible for the NRHP in the field by reason of their clearly disturbed nature, paucity of artifacts, or modern date, need not be removed from the site. At the discretion of the field director, they may be removed to the Project's off-site disposal area so as not to be mistaken for intact deposits during later construction.

5.7.1 Evaluation Procedures and Criteria

Archaeological properties that are discovered during testing will be evaluated for integrity and ability to meet the data requirements in the Program ARDTP (ASC 2011a).

5.7.1.1 Integrity

Integrity is an essential prerequisite for NRHP-eligibility. For most archaeological properties integrity is a matter of research potential. The research questions in the ARDTP (ASC 2011a:Section 12) have archaeological data requirements that include an adequate archaeological context in the form of archaeological strata, interfaces, and features. To possess research potential, these types of phenomena must have adequate physical integrity in the form of what James Deetz (1977) called archaeological "focus." By focus, Deetz referred to the level of clarity with which the archaeological remains can be seen to represent a particular phenomenon. Remains that represent a number of activities or other characteristics that cannot be separated out from one another are said to lack focus. Where focus is lacking as the result of disturbance, a property also lacks integrity.

The following criteria will be used to assess integrity

1. Does the property have focus? That is, is it possible to interpret the behaviors that are represented by it?
2. Does the property have integrity of location and setting with respect to the arrangement of the remains? That is, does the property retain a significant portion of its original contents and condition, and is it in its original location?

5.7.1.2 Archaeological Data Sets

As archaeological data sets are the sources of the important information required for eligibility to NRHP under Criterion D, an evaluation must make the case that a site contains or is likely to contain these data sets. Depending on the questions, relevant data sets might consist of types of artifacts (such as pottery or butchered food bones), features (such as discrete artifact caches or building remains), or the relationship between these and other site elements. Data sets are not merely facts about archaeological site content or structure, but information applied to research questions.

Archaeological data sets include potential features, such as foundations, other structural remains, and landscaping, as well as deposits containing artifacts. The latter may take the form of hollow artifact-filled features and sheet refuse reflecting individual, family, household, group of workers, neighborhood, or community activities. These features should have depositional integrity, known function, and identifiable associations. Archaeological data sets may be applicable to more than one research theme or question. Data requirements include the following broad terms: deposits with sufficient quantity and variety of materials to support statistically valid analyses; deposits with

identifiable functions, ethnic affiliations, and/or periods of use; hollow, refuse-filled features with distinguishable depositional integrity and identifiable association; horizontal distributions of features indicating spatial organization or sheet refuse indicative of specific activities; refuse features associated with individual or group disposal patterns; landscape features; specialized activity areas such as outdoor ovens, kitchen gardens, cellars, recreational areas; and layout of features and deposits indicating different residential and/or commercial activity areas.

The content of archaeological sites form other classes of important data sets needed to inform research issues, including artifacts and ecofacts. Data requirements for archaeologically-derived artifacts may include: presence in identifiable features or deposits; variety of distinctive materials; MNI; recognizable period of deposition; frequency/proportion to support interpretation; materials reflecting specific behaviors such as self-sufficiency (e.g., canning jars, homemade items, repairs, etc.), health (e.g., medicine bottles); materials reflecting gender or age (e.g., toys); materials associated with specific activities (e.g., hunting); and so forth. Ecofacts include faunal and floral remains that provide important data sets related to diet, health, self-sufficiency, and use of space.

5.7.1.3 General Principles

The ARDTP (ASC 2011a) emphasizes deposits from 1906 and earlier. It is anticipated that numerous features predating 1906 will be found beneath the existing 1908 building. Features that possess integrity and archaeological data requirements will be additionally evaluated according to the following general principles.

Integrity: All else being equal, an archaeological phenomenon that retains good integrity will have more research potential than one whose integrity has been compromised.

Content: All else being equal, the research potential of a cache of archaeological materials from a single context will increase with the number of items and the variety of types present.

Historical Associations: All else being equal, the research potential of an archaeological deposit that has reliable historical associations will be higher than one whose associations are less certain.

Relative Rarity. All else being equal, remains from a time period, social, ethnic, or economic group that is poorly represented in the sample universe will be more important, because of their rarity, than remains that relate to a well-represented time period or entity.

5.7.1.4 Reporting

Evaluations will be documented in a series of brief letter reports to the review agencies per Section 2.4.2 during fieldwork.

5.8 DATA RECOVERY

For hollow/filled features—such as wells, privies, and cisterns that contain artifact collections—data recovery will involve excavating and recording the entire feature stratigraphically. Where physical layers of deposition are not present, excavation will be controlled by means of successive 10 cm (or thinner) arbitrary levels. In the case of fill or sheet refuse, a sampling method would be devised to quickly remove an appropriate quantity for analysis in relation to the research questions. Architectural, industrial, or infrastructural features will be photodocumented, mapped, and described.

All soil matrix will be bagged according to provenience and returned to the off-site archaeology lab for processing. Lab, analysis, and reporting methods will follow those listed in Sections 2.6 through 2.9.

6. MOSCONE STATION

MOS is located on Fourth Street between Folsom and Howard streets. It has an off-street component along Fourth between Folsom and Clementina that now houses a gas station. Station construction is scheduled to begin in November 2012 and be completed by December 2016.

6.1 PROJECT DESCRIPTION

The gas station will be demolished and the site and adjoining portion of Clementina Street will serve as the staging area for the station and temporary construction shaft. The off-street portion of the station will include emergency ventilation ducts, a station entry, and an elevator to the concourse level (Figure 6.1). The station and track will be constructed under Fourth Street along with an emergency exit. The station will be constructed from the surface down about 80 ft. using the cut-and-cover method.

The two major elements of the station are the Platform Box (334 × 55 ft.), which is to be excavated entirely within Fourth Street, and the adjoining Headhouse (182 × 60 ft.), which will occupy a portion of Clementina Street and the off-street parcel. TOD is planned over the Headhouse.

The gas station parcel itself is larger than the MOS footprint. Buildings will be demolished and the pavement will be removed within the excess portion of the parcel. The area will then be covered with gravel.

Construction monitoring will be carried out during construction of the MOS.

6.2 HISTORIC CONTEXT

In 1852/53 a diagonal ridge of sand ran through the intersection of Fourth and Howard. The only building shown on the Coast Survey map of that year was mid-block on the west side, situated well back from the street's edge. By 1854 the intersection at Howard had been cut 15 ft. to an elevation of 20 ft., and the corner of Folsom raised 4 ft. to an elevation of 6 ft. The roadway and intersections were all paved with cobbles; the roadway in 1865, the intersection at Howard in 1870, and the intersection at Folsom in 1872. Both sides of the street were fully developed by 1869.

In 1887 the west side was developed with two- to four-story commercial buildings that included an array of businesses: barber/baths, restaurant, candy factory, picture framing, cigar factory, cigar store, and the London House Lodgings over a saloon. The east side was filled with two- to three-story commercial buildings that included paints, a restaurant, and a cigar factory. By 1899 the west side showed little change. The businesses listed included saloons and the candy factory. Buildings on the east had been replaced and the frontage included four-story buildings. Listed businesses included lodgings and saloons. The block was consumed by fire in 1906.

In 1913 about two-thirds of the west side had been rebuilt with one- to four-story commercial buildings: lodgings, saloons, a cleaning press, and restaurants, two of which had doughnut kettles. In 1949 there were two large vacant lots on the west side, amid commercial buildings that included lodgings and a drug wholesaler. With the exception of a marine engine-repair building with one story and a mezzanine, all the buildings had two to four stories. Several of the buildings were constructed of reinforced concrete.

The off-street parcel housed numerous small stores and lodging houses by the late 1850s. The area became densely settled with small shops on the bottom floor and lodgings on the one or two stories above (Figure 6.2). The managers of some shops lived in the residences above with their families, while single working-class individuals of both sexes generally lived in the lodging houses. The

Figure 6.1. Moscone Station location (surface disturbance).

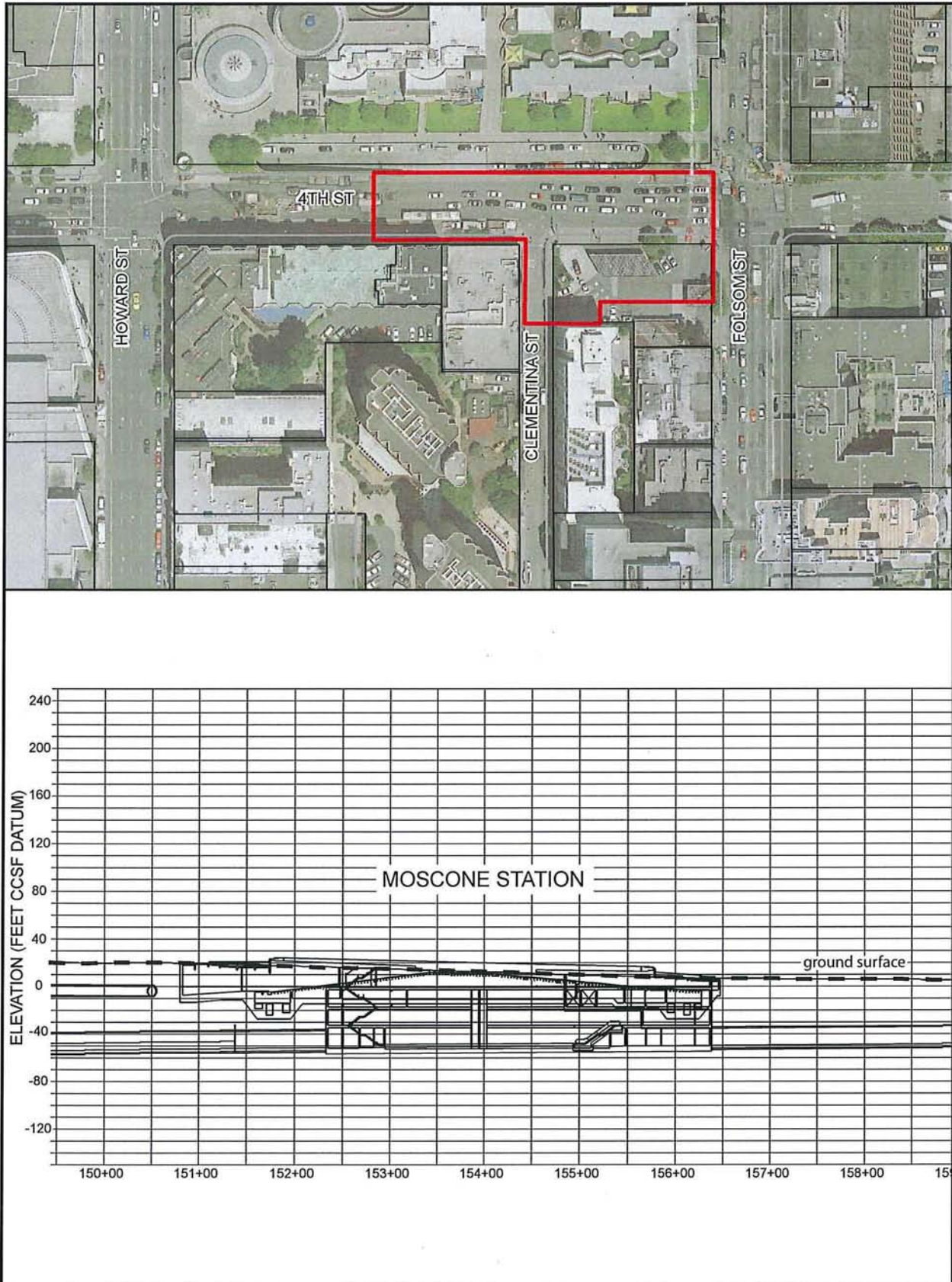
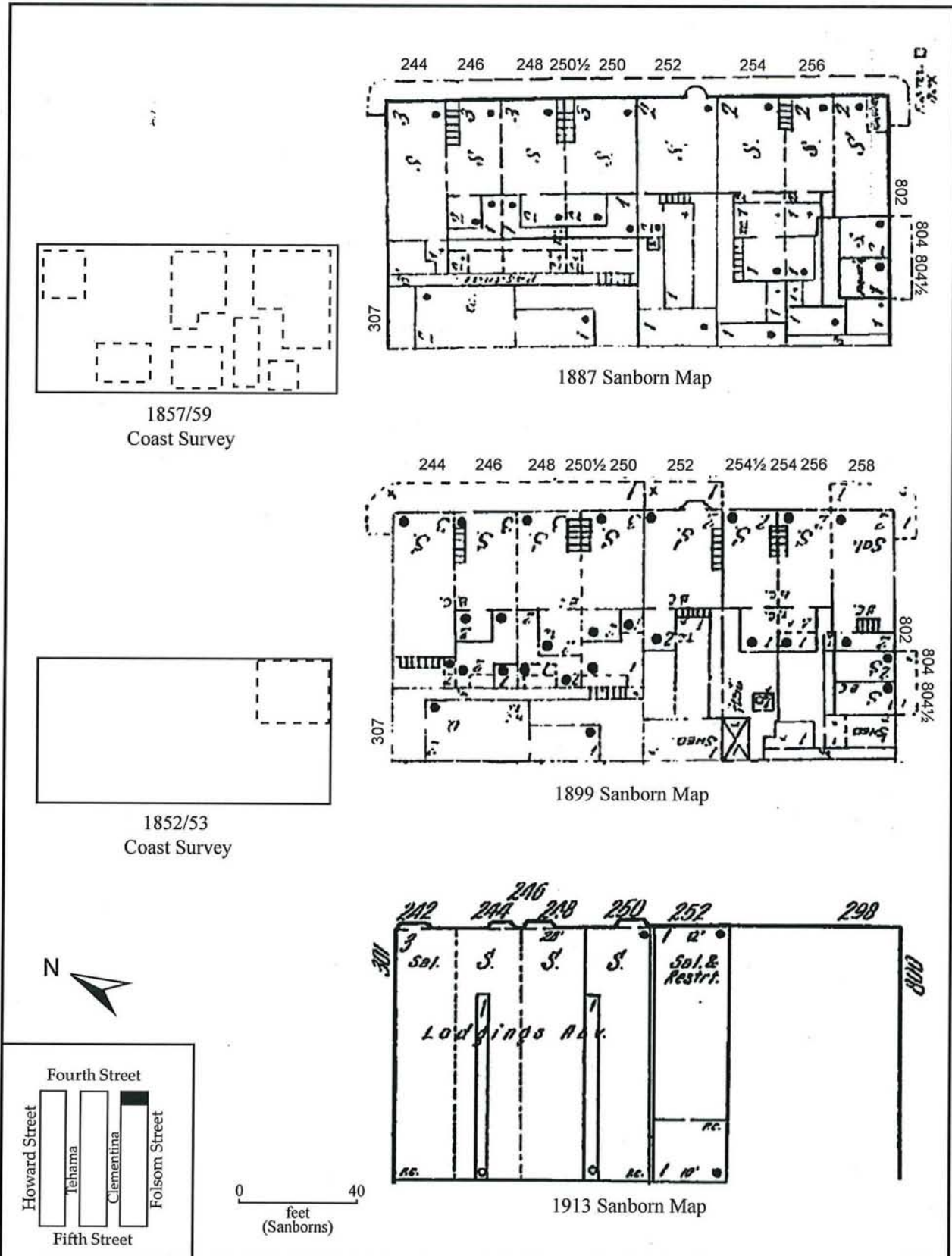


Figure 6.2. Historical development of Moscone Station off-street parcel
(historically 244–258 Fourth, 802–804 Folsom, and 307 Clementina).



earthquake and fire destroyed all buildings on the off-street parcel in 1906. By 1913 the earlier mix of stores with lodgings above had been reconstructed on the Fourth/Clementina half of the block.

6.2.1 The Dwelling at 307 Clementina

The first building on the 307 Clementina parcel was a small square building at the rear of the lot, according to the 1857/59 U.S. Coast Survey map. By 1887 the lot was 25 × 80 ft. and contained a two-story residence, 20 × 35 ft., set 10' back from the street. A one-story addition, 10 × 22 ft., was attached to the rear of the dwelling. A 5-ft.-wide alley ran along the east side of the lot, separating it from the rear of the 244–250 4th Street properties. The building remained the same for at least 12 years as revealed by the 1899 Sanborn map. The 1913 Sanborn map reveals many changes to the 307 Clementina property and the 242–250 4th Street properties, all owned by S. Abram. These changes may have been necessitated by damage caused by the fire and earthquake of 1906. By 1913 the dwelling at 307 Clementina no longer existed and the 242–250 4th Street building extended across the Clementina lot. The new 4th Street building was three-story, 80 × 80 ft., and was subdivided into four different sections. The structure of this building remained the same through 1948, changing only its addresses from 242–250 4th Street to 266–282 4th Street.

The dwelling at 307 Clementina was occupied by several different families and lodgers from as early as 1862 until it became part of the building on 4th Street sometime after 1899. In 1862, the City Directory lists Samuel Abrams as a resident on the South side of Clementina between Fourth and Fifth Streets. In 1863 he is listed as a commission merchant whose dwelling is on the south side of Clementina near 4th Street. In 1864 Abrams' residence is listed as 305 Clementina, perhaps the first address the building was assigned. By 1866 Abrams, then a real estate agent, is listed as living at 307 Clementina. He continues to be listed as a real estate agent with the company Abrams & Greenberg and a resident of 307 Clementina through 1870. In 1871 the Levy family began their occupation of the dwelling and remained there until 1883. It is unclear who lived at the house between 1884 and 1888. In 1889 Nicholas E. Tracey, a speculator, and John Wilsliw, a driver, were both listed as residents of 307 Clementina. The next year, according to the Voter Register, William Hand, a billiard room worker, and Dennis McCarthy, a clerk, were living at the property. City Directories continue to list William Hand as residing at 307 Clementina for another four years until 1894.

At this time the Block Book also shows S. Abram as the owner of the parcel on the corner of Fourth and Clementina; it includes 307 Clementina as well as 242–250 4th Street. This S. Abram may be Samuel Abrams, real estate agent and first inhabitant of 307 Clementina. In 1897 the City Directory lists Michael Dalton as a resident at the address. He continues to be listed as a resident through 1903. The 1900 U.S. Census also lists his wife, Margaret and four lodgers that include Michael Sullivan, Joseph Smith, William Hesseran and his daughter, Katie Hesseran.

The corner parcel at Fourth and Clementina was likely affected by the earthquake and fire of 1906. The dwelling at 307 Clementina probably suffered great damages or was destroyed. The building no longer existed by 1913 and its lot was used to expand the 242–250 4th Street property. The first floor of the 4th Street building was subdivided into four sections, three of them containing stores and the one on the corner housing a saloon. The saloon was owned by Richard Donovan and operated at the same address beginning in 1911. The addresses most likely changed to 266–282 around 1915 as Richard Donovan is listed in the business section of the City Directory that year under "Liquors" at 266 4th Street. Donovan continues operating the saloon at 266 4th Street until 1922, listed under "Refreshments" rather than "Liquors" after Prohibition. The upper floors of the building, designated as 246/274 4th Street are labeled "Lodgings" on the 1913 Sanborn Map. From 1908 to 1948 it was intermittently listed in the City Directory as the Carleton Hotel or Hotel Carleton. It is labeled "Lodgings" on the 1948 Sanborn Map and a "Hotel Off." is present at 270 4th Street. The corner section that once held the saloon is labeled, "Sheet Metal Wks.", and was occupied by Theo Filirides beginning in 1943. The other first floor sections continued to house a variety of retail stores.

6.2.1.1 The Levy Family

Lazard Levy and his family lived at 307 Clementina from 1871 through 1883. Lazard Levy, head of the household, was born in 1820 in France. He and his family were working and living in San Francisco as early as 1859. He is listed in the 1859 City Directory as a clothing retailer. The 1860 U.S. Census includes his wife, Amelia (Emily), also born in France and of the same age or slightly younger and their daughter, Adele, born in France in 1847. In 1860 they lived at 151 Kearny and Lazard continued to work in clothing. They moved to 615 Kearny in 1861 and lived there until 1863. The family moved again in 1864 to 313 Clementina after which point Lazard is less specifically listed in the City Directory as a merchant. By 1868, August Straus is also listed as a resident at 313 Clementina. He and Adele were married in 1869. Straus, born in Belgium in 1847, worked briefly as a dry dock rigger and then worked many years as a jeweler and a watchmaker. In 1871 the Levys and Strauses moved to 307 Clementina. The same year Adele and August Strauss had their first child, Emily. Their second child, August was born in 1873. The elder August Straus also had a younger sister, Josephine Straus, who resided at the Clementina house in 1880. Josephine was also born in Belgium and worked as a teacher. The 1880 U.S. Census also lists a 27-year-old servant from France, Maxine Carrerre. The Levys and Strauses lived at 307 Clementina a total of 13 years before moving to 591 Ellis in 1884.

See Appendix D for documentary research tables.

6.3 POTENTIAL HISTORIC ERA PROPERTY TYPES

The off-street parcel along Fourth Street between Folsom and Clementina streets, is moderately sensitive for historic archaeological resources dating between the 1850s and 1906. Remains of pre-1906 habitation may survive in hollow/filled features. Expected archaeological property types include Domestic Occupation Sites (11.1) and Commercial Sites (11.3). These may contribute to ongoing research questions for a number of themes, particularly Creating the Townsite, Services, and Mercantile, and Residential (ASC 2011a: Sections 11 and 12).

6.4 PREHISTORIC CONTEXT

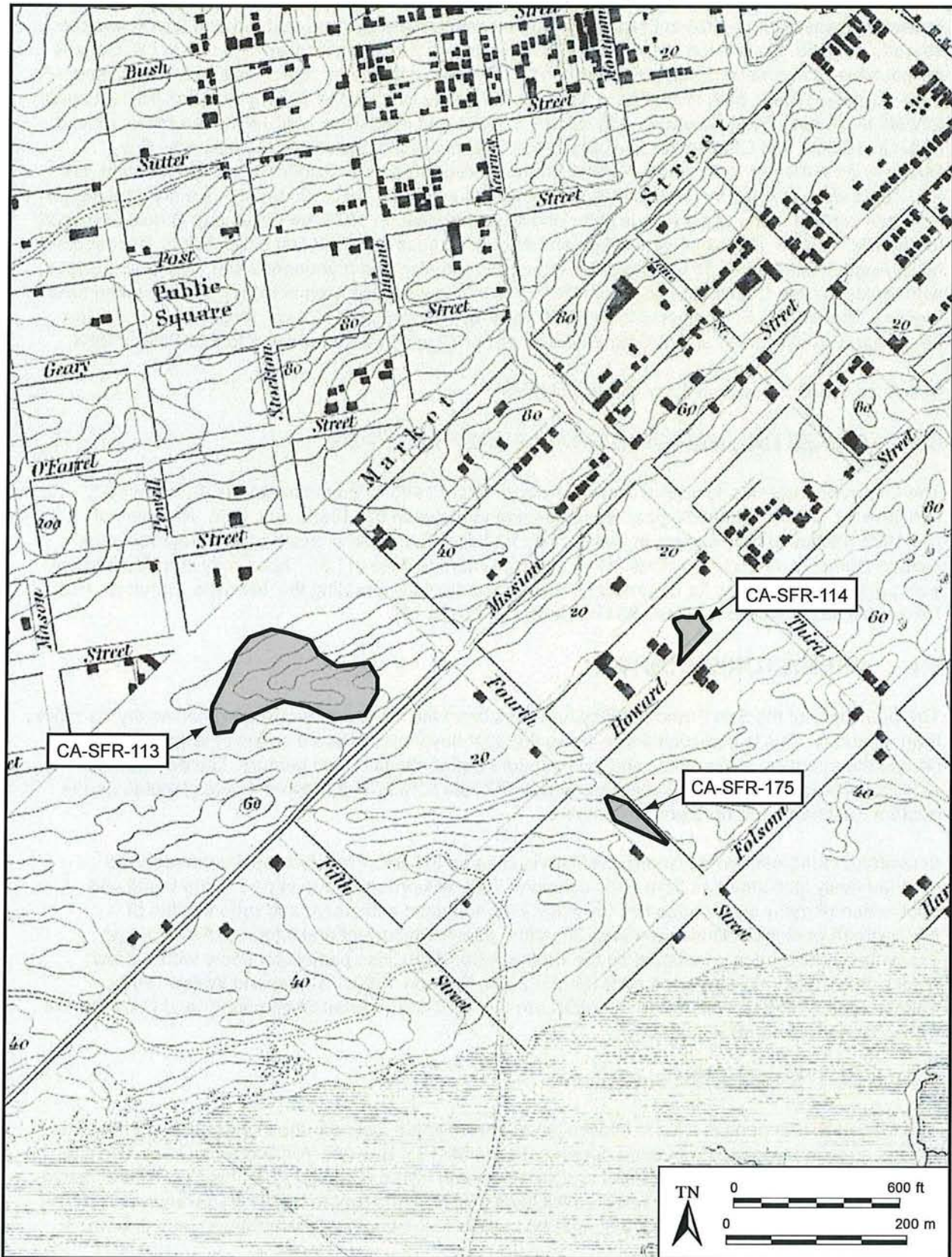
The prehistory of the San Francisco Bay Area has been the subject of archaeological inquiry for more than a century. This is particularly true along the east bayshore, where a series of large shellmounds caught the attention of the public and investigators during the late 19th century. The earliest field studies focused primarily on developing a body of basic data from a number of sites located on the eastern, southern, and northern bay shores.

In contrast to the eastern bayshore, prehistoric sites on the San Francisco peninsula received comparatively little attention from early scholars. This was probably due in part to the burial and destruction of many sites caused by the early Euroamerican settlement and urbanization of the northern peninsula. During the past 25 years, several important prehistoric archaeological excavations have been conducted on the northern San Francisco peninsula, some within a few blocks of the Central Subway corridor (Martin 2006; Pastron 1990; Pastron and Walsh 1988a, 1988b, 1888c). The two closest to the MOS are CA-SFR-113 (Market Shellmound) and CA-SFR-114 (Moscone Shellmound) (Figure 6.3).

6.4.1 CA-SFR-113 (Market Shellmound)

The Market Shellmound is a buried collection of shell midden loci near the intersection of Fifth and Market streets associated with sand dunes between Mission Bay and Yerba Buena Cove. The site was found during construction-related augering beneath layers of sterile sand, historic fill, and native dune sands about 15 ft. (4.5 m) below street level (Pastron and Ambro 2005). Excavation revealed several features; a roughly 9:1 ratio of mussel-to-clam in the shellfish assemblage; faunal remains

Figure 6.3. Prehistoric sites CA-SFR-113, -114, and -175 shown on the 1853 U.S. Coast Survey Map.



of small, medium, and some large mammals; and the remains of a variety of waterfowl species that indicated a mixed littoral/estuarine catchment. Other artifacts included mostly flaked-stone and groundstone tools and debitage, as well as ocher, baked clay, asphaltum, and obsidian artifacts and debitage from Napa Valley, Annadel, and Casa Diablo sources. Obsidian-hydration rim values for Napa Valley specimens ranged from 2.4 to 4.5 microns. Radiocarbon data indicate that site was used from about 100 B.C. to 150 A.D.

During construction work in 2004 additional buried deposits of shell midden and non-midden remains were uncovered between Mission and Market streets (Pastron and Ambro 2005) and site boundaries were adjusted accordingly. One locus of shell midden (designated C) has produced two apparently stratigraphically distinct radiocarbon dates: 170 and 30 A.D. The latter date, from the upper deposit, appears to be contemporaneous with that of nearby Locus A, which is a non-midden, burned area that produced two nearly identical radiocarbon dates of approximately 30 B.C. This area yielded 114 small Napa Valley obsidian flakes with consistent hydration-rim readings of 2.6 and 2.7 microns ($n = 12$), indicative of a single obsidian flaking event. Hydration-derived obsidian dates of about 850 and 750 B.C., however, present a point of temporal disjuncture that warrants further consideration (Pastron and Ambro 2005:49).

6.4.2 CA-SFR-114 (Moscone, Yerba Buena, or Surprise Shellmound)

The Moscone Shellmound is a buried shell midden northwest of Howard Street, midway between Third and Fourth streets associated with a group of sand dunes south of the former Yerba Buena Cove and about a block north of Mission Bay. The site was discovered in the mid-1980s during construction-related augering (Walsh 1988) at depths of 10 to 20 ft. (3 to 6.3 m) below street surface, or 6 to 15 ft. (2 to 4.5 m) below mean sea level. Investigations produced an array of artifact types and faunal remains, a possible sweathouse feature, and at least 11 human burials, some of which contained numerous *Olivella* beads, abalone pendants, and other funerary objects (Archeo-Tec 1990; Walsh 1988). Two excavation samples produced mussel-to-clam ratios of 33:45 and 16:49, and two radiocarbon dates of approximately 950 and 350 A.D. (Pastron, Gottsfield, and Vanderslice 2004:27); shell bead types and the depth of deposits indicate that occupation occurred between roughly 950 A.D. and 550 B.C.

6.4.3 Potential Prehistoric Property Types

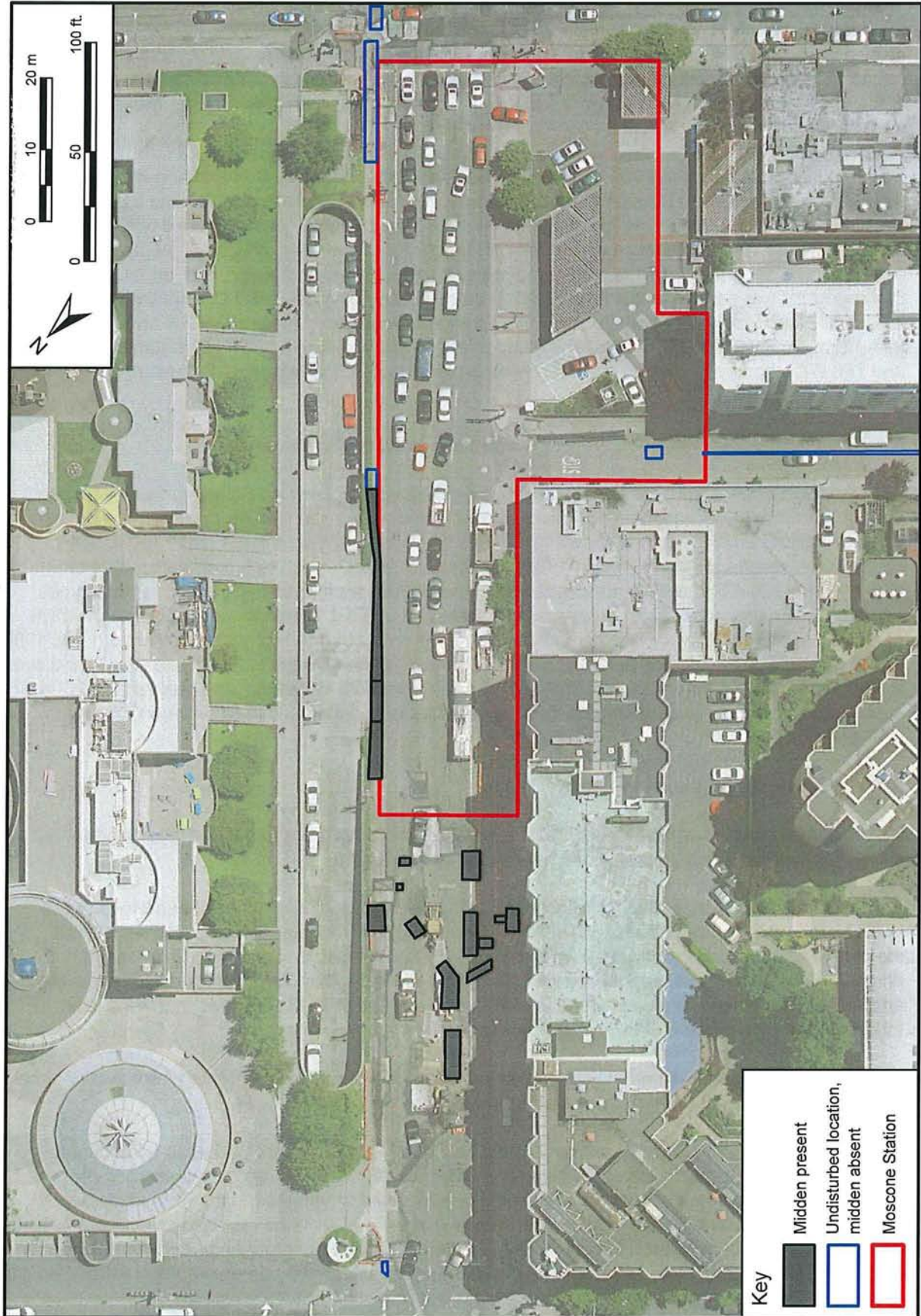
Prehistoric archaeological site CA-SFR-175 exists within the MOS footprint. There is also the possibility that more deeply prehistoric deposits may be present.

Archaeological monitoring of utility relocations along Fourth Street encountered numerous areas of prehistoric midden, recorded as CA-SFR-175, within utility trenches. These areas have been excavated and are under analysis. Two trenches, ASC-2 and ASC-5, are in the Joint Trench immediately adjoining the proposed station. Only the midden within utility trenches was excavated and the deposit's boundary was not defined (Figure 6.4). CA-SFR-175 extends into the station footprint at depths of about 3 to 12 ft. below surface.

CA-SFR-175 is a Native American residential site. Samples of collagen extracted from three animal bones indicate that the site was occupied between about 540 and 680 A.D.

The matrix consists of a layer of anthropogenic sediment, sands that are darkened by accumulated charcoal and other organic materials derived from human activity. This sediment—commonly called “midden”—is as much as 2.6 ft. thick. The midden was found at varying depths from immediately below the street surface to as deep as 11 ft. below grade. This variation reflects both the prehistoric topography and the processes of cutting and filling by which 19th-century engineers leveled the land. Although portions of the site had been truncated, much was sealed by an undisturbed A-horizon—an

Figure 6.4. CA-SFR-175: Moscone Station prehistoric deposits.



organic-rich layer of soil that forms on the ground surface. Organic material from this layer has been dated to 680–880 A.D.

SFR-175 contains a variety of artifacts including: obsidian, chert, and basalt stone tools and waste flakes; baked clay fragments with basketry impressions; animal bone modified into tools such as basketry awls; food bone from a variety of land and marine mammals and birds; and shells of many species of ocean-dwelling mollusks and arthropods.

Radiocarbon dating shows that CA-SFR-175 was occupied around 540–680 A.D. and had gone out of use by 880 A.D. The clustering of the three bone collagen dates indicates that these data are not anomalous. This places CA-SFR-175 at about the same time and a little later than other known sites in the South of Market district such as CA-SFR-113 and CA-SFR-114 described above. The site appears to have been in use during the Upper Archaic period and abandoned immediately before the warmer, drier period known as the Medieval Climatic Anomaly.

Information from CA-SFR-175 will help us to understand how the Native population adapted to population growth in a time of climate change. Some archaeologists suggest that local groups expanded the range of natural resources they exploited from a relatively few species to many. This affected the resources themselves as some valued food sources became scarce and others may have been overexploited to the point of local extinction. The ratio of mussel-to-clam remains in CA-SFR-175 and evidence that people were harvesting immature shellfish, for example, may show both the effect of climate change and human response to it.

6.5 ARCHAEOLOGICAL SENSITIVITY AND PROJECT IMPACTS

Station construction will impact from the surface to a depth of about 80 feet. Archaeological sensitivity varies by depth and location.

6.5.1 CA-SFR-175

The MOS will almost certainly impact portions of CA-SFR-175, whose site boundaries have yet to be defined. The site is at least 260 ft. in diameter, as measured along Fourth Street. At the southeast end of Trench 5 the site begins to slope down significantly, following the prehistoric topography, and becomes shallow. The site may end not far to the southeast from this point but unquestionably extends to the southwest, into Fourth Street and the proposed Moscone Station footprint. No midden was observed in manhole excavations in Clementina Street and near the corner of Clementina and Fourth (although this location had been previously disturbed). This suggests that the site may not extend past a line extended northeast across Fourth Street from the west side of Clementina.

6.5.2 Deeply Buried Prehistoric Sites

Geologic cross sections depict modern surfaces and artificial fill to a depth of about 3 ft. below surface, underlain by sand dunes to a depth of 29 feet. The dune sand interfaces with Bay mud/marsh, which is in turn underlain by alluvium at 35 ft. that contacts the Colma Formation at about 40 feet. The alluvium deposits are moderately sensitive for prehistoric deposits. Thus, there is the potential to encounter deeply buried, older archaeological deposits at between about 33 and 44 ft. below surface.

6.5.3 Historic Period

The off-street gas station parcel may contain significant historic archaeological deposits associated with pre-1906 businesses and households. The impact of 20th-century basements and the existing gas station on the parcel's archaeology is unknown, although the underground tanks have surely destroyed some historic deposits (Figure 6.5).

Archaeological monitoring of utility relocation in Fourth Street itself encountered no significant historic-period archaeological deposits. Fourth and Clementina streets have low sensitivity for historic-period deposits.

6.6 ARCHAEOLOGICAL IDENTIFICATION/FIELD TEST LOCATIONS

A phased testing program will be carried out during MOS construction.

6.6.1 Constraints and Opportunities

A gas station currently occupies the off-street MOS parcel. It will remain active up to immediately prior to demolition. As the construction schedule is very tight and delays expensive, there will not be time for an extended archaeological study with numerous stopping points for conventional agency reviews. Instead, the testing plan describes a consolidated approach in which testing, evaluation, and data recovery, if necessary, are accomplished seamlessly by applying the National Register criteria and the General Principles (5.7.1.3), and treatment protocols. The results of this process will be reported on a weekly basis to the review agencies.

The quick movement from demolition to archaeological treatment will protect the archaeological features from looters who would otherwise descend upon the site immediately. The construction contractor will fence the site and provide security as required to prevent unauthorized access. The construction contractor will provide heavy equipment and logistical support to the archaeologists, enabling the work to proceed in an efficient and safe environment.

Project archaeologists will be given exclusive access to (1) the archaeological test location within Fourth Street for 10 contiguous days and (2) the location at the corner of Fourth and Clementina formerly occupied by a gas station for 5 contiguous days. In both cases, the period of access will begin after the contractor has removed overburden to the project archaeologist's specification. The City's ERO may require that additional time is made available if discoveries of exceptional importance are made.

6.6.2 CA-SFR-175

6.6.2.1 Data Potential of CA-SFR-175

Data recovery excavations in 2010 and 2011 removed 100% of the site matrix encountered by the Joint Trench as well as smaller excavations in Fourth Street, more than 55.50 cubic yards (42.49 cubic meters) of midden. The entire matrix except for flotation samples was wet screened through 1/16- to 1/4-in. mesh. All artifacts and ecofacts were retained and cataloged. Faunal remains were being identified and cataloged at the time of writing.

The site's structure (except for its extent) is now well understood. It consists of a layer of finely bedded Aeolian sand, up to 2.6 ft. thick. Portions of the site have been truncated, although much was sealed by an undisturbed A-horizon dated 680–880 A.D. No archaeological features were discovered during the excavation.

The site's content is also well understood. The excavated portion contained a variety of artifacts and ecofacts including:

- 119 obsidian, chert, and basalt stone tools and waste flakes
- 50 baked clay fragments with shell impressions
- 26 modified animal bones, some formed into recognizable tools
- shell bead fragments

- food bones from land and marine mammals, birds, and both ocean and freshwater fish
- shells of many species of ocean-dwelling mollusks and arthropods

This site appears to represent the remains of habitation and food processing on the dunes immediately adjacent to the shore of Mission Bay, which in former times extended closer to Market Street than today. Samples of collagen extracted from three animal bones indicate that the site was occupied for a relatively brief period, between about 540 and 630 A.D. No human remains have been found.

The research themes identified in the site-specific ARDTP (ASC 2010b:30–43) are:

- human occupation and landscape evolution
- cultural chronology
- culture history
- interaction and social change
- shell mounds as social centers

The data needs associated with these themes require datable materials from well-defined contexts. Samples of these materials have been extracted from the site and the first series of AMS results confirm field observations that the site has stratigraphic integrity. The site does not appear to contain the range of technologically specialized artifacts and exotic source materials required to address issues of social interaction. However, existing data will allow us to address questions that concern the cultural and environmental context of this site.

Additional research themes are:

- vertebrate archaeofauna variability
- invertebrate archaeofauna variability
- resource intensification and adaptive change

The data needs associated with these themes require a range of shellfish species, faunal remains, and artifacts from stratigraphically defined contexts. The volume of midden subjected to systematic screening may be unprecedented in archaeological investigations South of Market. This work has extracted a substantial sample of clam, mussel, and other ocean species that will be sufficient to address these issues.

The foregoing has examined the potential research value of additional artifacts and ecofacts from the site matrix. In addition to this stratigraphically undifferentiated midden, however, archaeological features may be present that have values that have not been exhausted by the excavation to date. Although no archaeological features were discovered in the 2010–2011 excavations, several types may be present: building and structure remains indicated by postholes, floor surfaces, hearths, etc. as well as activity areas indicated by task by-products such as concentrations of lithic flakes, shell bead blanks, animal bones, etc. Any archaeological features would be of great research value. The result of discrete, functionally and chronologically defined activities, features and their content may be the only means we have to address questions of intra-group social relationships, technology, and life on the small-scale. It is important to recognize the importance of this class of remains and to build identification and treatment into any investigation plan.

Although no human remains were found in the 2010–2011 excavations, they may be present in the portion of CA-SFR-175 within the MOS footprint. Human remains may be present as individual bones, disarticulated from the skeleton of which they were part; as complete or partial skeletons; or as cremations. Intentional burials are often accompanied by funerary objects. Although these materials have scientific research potential, their principal significance is the value they hold for contemporary

Native American people. Any investigation plan must make provision to recognize and recover human remains and associated objects, and to ensure they are treated respectfully in accordance both with State law and the wishes of the descendant community. SHPO will be notified immediately if human remains are discovered.

6.6.2.2 Treatment Plan for CA-SFR-175

Sufficient data have been removed from CA-SFR-175 to address most research questions posed in the site-specific ARDTP (ASC 2010b). The remaining questions concern site boundaries and structure. The site's northern boundary has been destroyed by construction of the Moscone Center; the northeastern boundary may have been defined by the current work; the western boundary extends outside the APE; but the southeastern boundary should be definable within Fourth Street within the MOS footprint. The site excavated to date did not contain features and only a relatively small quantity of artifacts. Does this pattern continue in the remaining accessible portion of the site? Work at CA-SFR-175 will focus on defining the site's extent to the southeast and determining the variability of constituents and structure in this portion of the site. At the beginning of the construction process, archaeologists will direct pavement and fill removal on the Moscone Center edge of the construction zone, where CA-SFR-175 is recorded, down to just above the top of the midden. Under the direction of the archaeologists, a backhoe(s) or similar equipment with a flat blade will carefully remove fill down to the top of the midden for an unknown areal extent, but likely the area within the MOS footprint northwest of a line extending across Fourth Street along the centerline of Clementina Street.

The archaeologists will then have exclusive access to that portion of the construction zone for a period of up to 10 working days. During this time, the archaeologists will fully expose the midden by hand, looking for features such as housepits, hearths, or burial cuts. Once the midden area is delineated, it will be mapped and photographed. The archaeologists will hand-auger in a grid pattern to determine the depth of midden and to look for features. Additional samples will be taken for radiocarbon dating should an A-horizon be present. Should a feature be discovered, it would be excavated, recorded, and its content removed for processing off-site according to the site-specific ARDTP (ASC 2010b). The ERO may require additional time be made available under exceptional circumstances.

With the goal of recovering a 10 percent sample of the identified site matrix, archaeologists will use the coring data to determine the volume of midden to be destroyed by MOS construction. If additional scientific excavation is needed to reach the 10 percent threshold, archaeologists will direct a backhoe in the excavation of a trench across the site and proceed to scientifically excavated controlled units in a grid pattern in the most productive areas until the 10 percent threshold is achieved. Scientifically excavated midden will be processed off-site as described in the site-specific ARDTP (ASC 2010b).

Once the 10 percent sample has been achieved and any features have been excavated, the remaining midden will be removed mechanically. Under the direction of an archaeologist, the heavy equipment will carefully scrape away the midden in 3-in. lifts. Should archaeological features be discovered the equipment will shift to another area of the midden while the feature is subject to data recovery per the site-specific ARDTP. This could require up to an additional 10 field days for data recovery. If human remains are discovered, provisions in Section 2.5.1.4 will be followed. Artifacts that are observed during this process will be mapped and collected.

At the end of this process the archaeologist will direct the backhoe to dig a 10-ft.-deep trench through the site area to test for buried archaeological deposits. At the conclusion of this process, the midden removal will be complete and the contractor will dispose of the soil off-site.

6.6.3 Deeply Buried Prehistoric Sites

A Geoprobe program will be employed to characterize the subsurface stratigraphy of the Moscone Station area and identify the potential for deeply buried prehistoric archaeological deposits. This will include identifying and dating buried soils.

Prior to fieldwork all existing geotechnical and archaeological monitoring and excavation data will be reviewed for information pertinent to the geological sequence within the Moscone Station footprint.

Geoarchaeological fieldwork will take place with a tractor mounted Geoprobe. Either a Geoprobe 8040DT, which can more easily achieve deeper cores through difficult material, with 3-in. diameter samples or the smaller Geoprobe 6600 with 1-3/4-in. diameter samples will be used, depending on field conditions.

The location and number of cores will be determined by choice of equipment and field conditions. All cores will be taken off-site for soil analysis and samples of selected paleosols will be sent for radiocarbon dating. The goal of this investigation is to identify other, more deeply buried prehistoric archaeological resources that may be present in the Moscone Station area. Additionally, this investigation will characterize the subsurface stratigraphy of the Moscone Station area, including identifying and dating paleosols. This methodology will identify where buried prehistoric archaeological resources may be present, in addition to identifying stratigraphically which areas are too old, or too young, to contain buried prehistoric archaeological resources.

The information will be incorporated into ongoing project monitoring and testing plans per the Program ARDTP (ASC 2011a). Should a deeply buried prehistoric site be identified, a treatment plan will be developed to undertake data recovery during the construction process when the contractors reach the site's depth.

6.6.4 Historic Period Sites

Gas station demolition will be monitored and followed immediately by archaeological testing. A historical archaeologist shall monitor building demolition during the removal of foundations, gas tanks, and other elements that contact the ground surface. The monitor shall be authorized to redirect equipment that may damage buried resources. The aim of demolition monitoring will be to identify and protect the historic-period ground surface and the potentially significant historic archaeological features cut through by or beneath it.

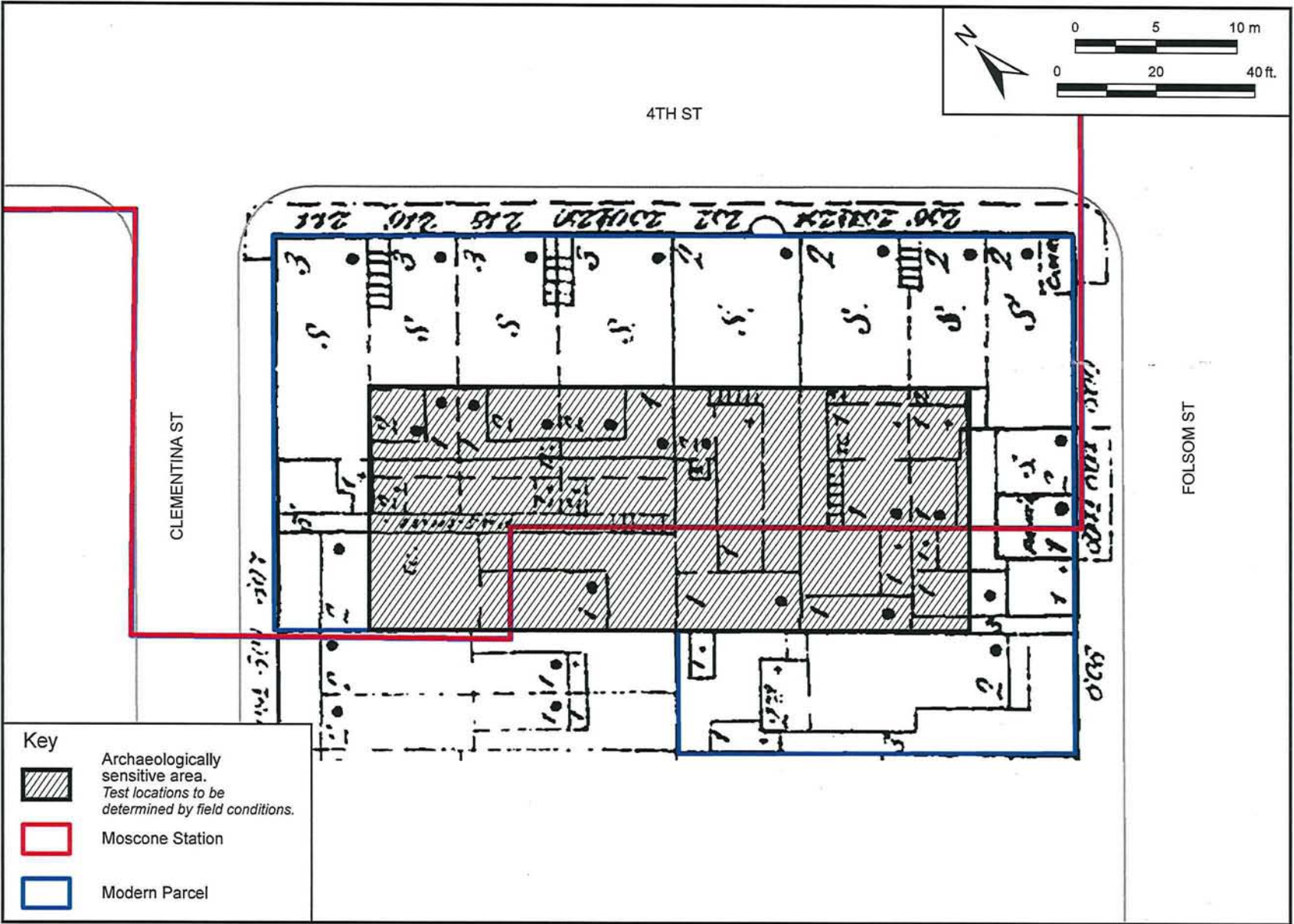
The most sensitive areas for historical archaeological deposits in densely populated urban areas are generally in the rear of buildings where back porches, kitchens, "outhouses," and open areas were once located (Figure 6.6). Testing will emphasize the exposure of broad areas where research potential is high and modern disturbance is low, specifically, the rear of 19th-century buildings facing Fourth Street and Clementina Street within the MOS footprint and/or the gas station parcel.

After the demolition debris is cleared to just above the historic ground surface, test scraping or trenching will be done with a hydraulic backhoe/loader with a flat 36-in.-wide bucket or similar equipment, depending on the depth of fill. The immediate object of testing will be to expose previous ground surfaces (interfaces) in plan view. At the completion of a portion of trench, the tops of features will be exposed in the trench floor, not in its sides.

The first goal of testing will be to investigate the nature of previous disturbance, in this case the gas station and buildings construction since the 1906 earthquake. As cultural features and stratification are identified, they will be exposed in plan by hand, photographed, and mapped with a GPS or total station. Evaluation will occur at this point. Evaluation and Data Recovery will follow the same steps/protocols as CTS; see Sections 5.7 through 5.8.

After historic-era deposits have been identified, evaluated, and treated, archaeologists will direct the mechanical excavation of a deep trench to explore the geoarchaeology of the area and to test for buried surfaces where prehistoric deposits may be discovered. Trenching will be based on field conditions and results of the previous work.

Figure 6.6. Moscone Station sensitive areas and test locations for historical archaeological resources, shown on the 1888 Sanborn map.



7. TUNNELS AND PORTAL

The underground tunnel will be constructed in four reaches with stations in between, beginning at the Portal and ending at the Retrieval Shaft in North Beach. Tunnel construction is estimated to begin at the portal in March 2012 and end at the retrieval shaft in June 2014.

7.1 PROJECT DESCRIPTION

The Portal will be an excavation 580 by 50 ft. by up to 30 ft. deep in Fourth Street beneath the I-80 freeway between Harrison and Bryant streets. Two parallel TBMs will be lowered into the portal and retrieved through a shaft beyond the CTS terminus in Columbus Avenue near Washington Square in North Beach. Construction monitoring will be carried out at the portal and retrieval shaft locations.

The underground segment between Harrison Street and the Chinatown Station will be constructed by TBM as twin, approximately 20-ft.-diameter, single-track bores. A TBM consists of a rotating cutterhead within a cylindrical steel shell that is pushed forward along the axis of the tunnel while excavating the ground with the cutterhead. The steel shield supports the excavated ground as required until the preliminary or final tunnel lining is built in the rear of the shield. The shield is propelled using hydraulic jacks that thrust against the erected tunnel lining system. The TBM is used in conjunction with a prefabricated ground support system, which most commonly consists of pre-cast concrete segments that are bolted and gasketed to form a watertight lining. Monitoring is not possible during the TBM operation process.

From the launch box, the TBM will create a tunnel from Harrison Street to the MOS at Folsom Street, beginning at about 33 ft. below ground surface and dipping to about 40 ft. below ground surface at the station. The tunnel will be about 20 ft. from ceiling to floor, or about 53 to 60 ft. below surface (Figures 7.1 and 7.2). Exiting MOS, the tunnel will be at a depth of 50 to 80 ft. below surface. The tunnel depths increase to 70 to 100 ft. below surface at the UMS Station (Figure 7.3). Exiting UMS Station, the tunnel will be at of depth of 80 to 110 ft. below ground surface. Running under Nob Hill depths increase to 130 to 160 ft. below surface, and rise slightly to 60 to 90 ft. below surface at the entrance to CTS (Figure 7.4). Exiting CTS, the tunnel will be at a depth of about 40 to 60 ft. below ground surface. The access ramp to the TBM Retrieval Shaft will be up to 20 ft. deep. The shaft itself will be 30 by 50 by up to 40 ft. deep (Figure 7.5).

7.2 HISTORIC CONTEXT

The tunnels will span the entire length of the Project area and as such the larger Historic Contexts included in the HCASR (ASC 2007) and ARDTP (ASC 2011a) apply. The reader is referred to those documents.

7.2.1 Potential Historic Era Property Types

The Portal is located within Fourth Street, except for the access opening in the construction yard that is within a larger block investigated by archaeologists in connection with the SF-80 Bayshore Viaduct Seismic Retrofit Project (Praetzellis 2004) and the San Francisco–Oakland Bay Bridge West Approach Project (Praetzellis and Praetzellis, eds. 2007), although the opening area itself was not part of either.

The area was within marshlands until it was filled and built up during the mid-1860s. William Ralston built the Kimball Carriage Works on the corner of Bryant and Fourth streets in 1867–1868. The business closed in 1876 and the plant was divided into a number of woodworking and upholstery shops with the West Coast Furniture Company occupying much of the parcel in 1887 (Figure 7.6). The 1906 fire destroyed all structures in this area. Freeway construction in the 1930s, 1950s, and

Figure 7.1. Key to geological profiles.

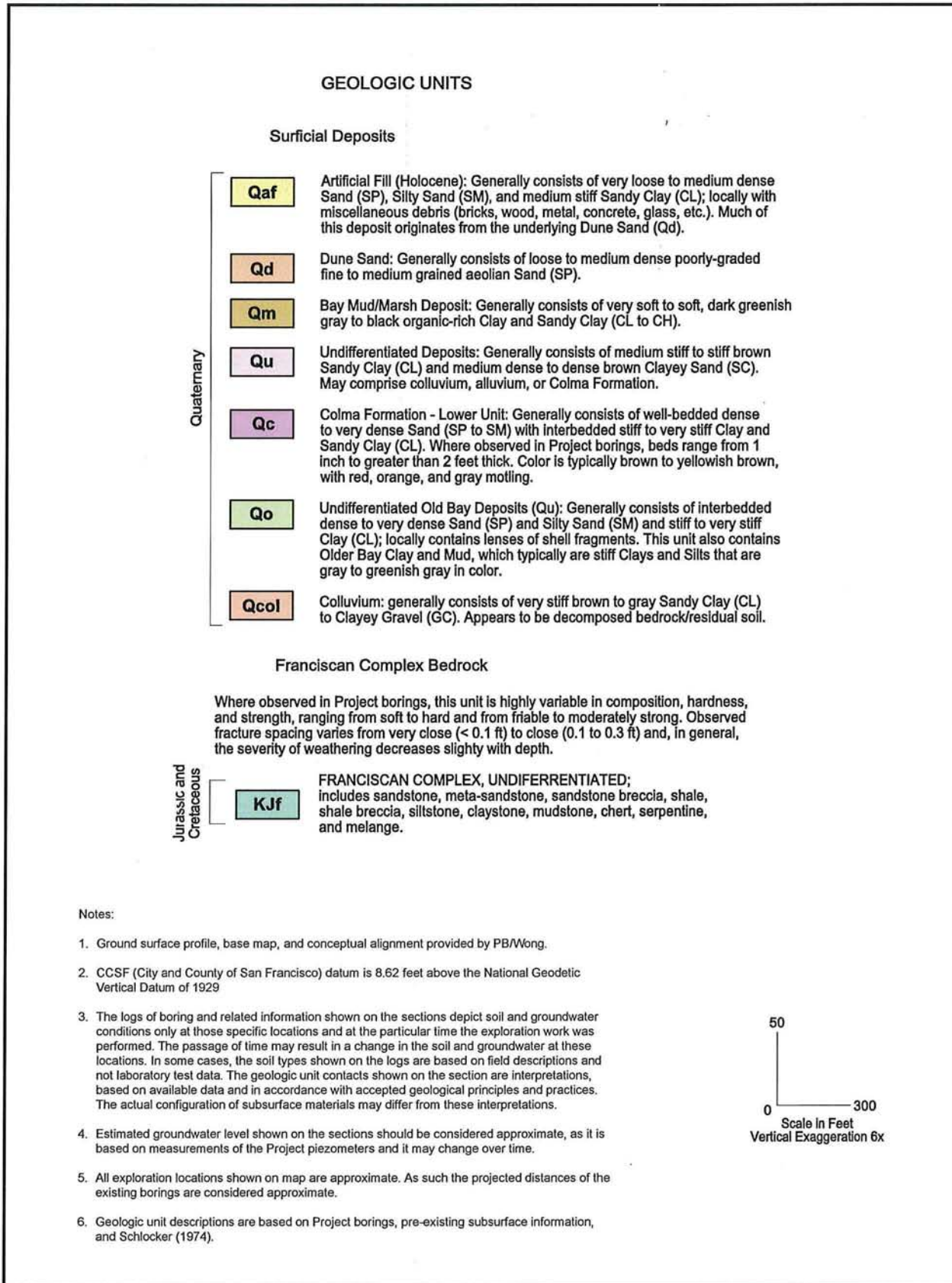


Figure 7.2. Geologic profile of launch box to Moscone Station.

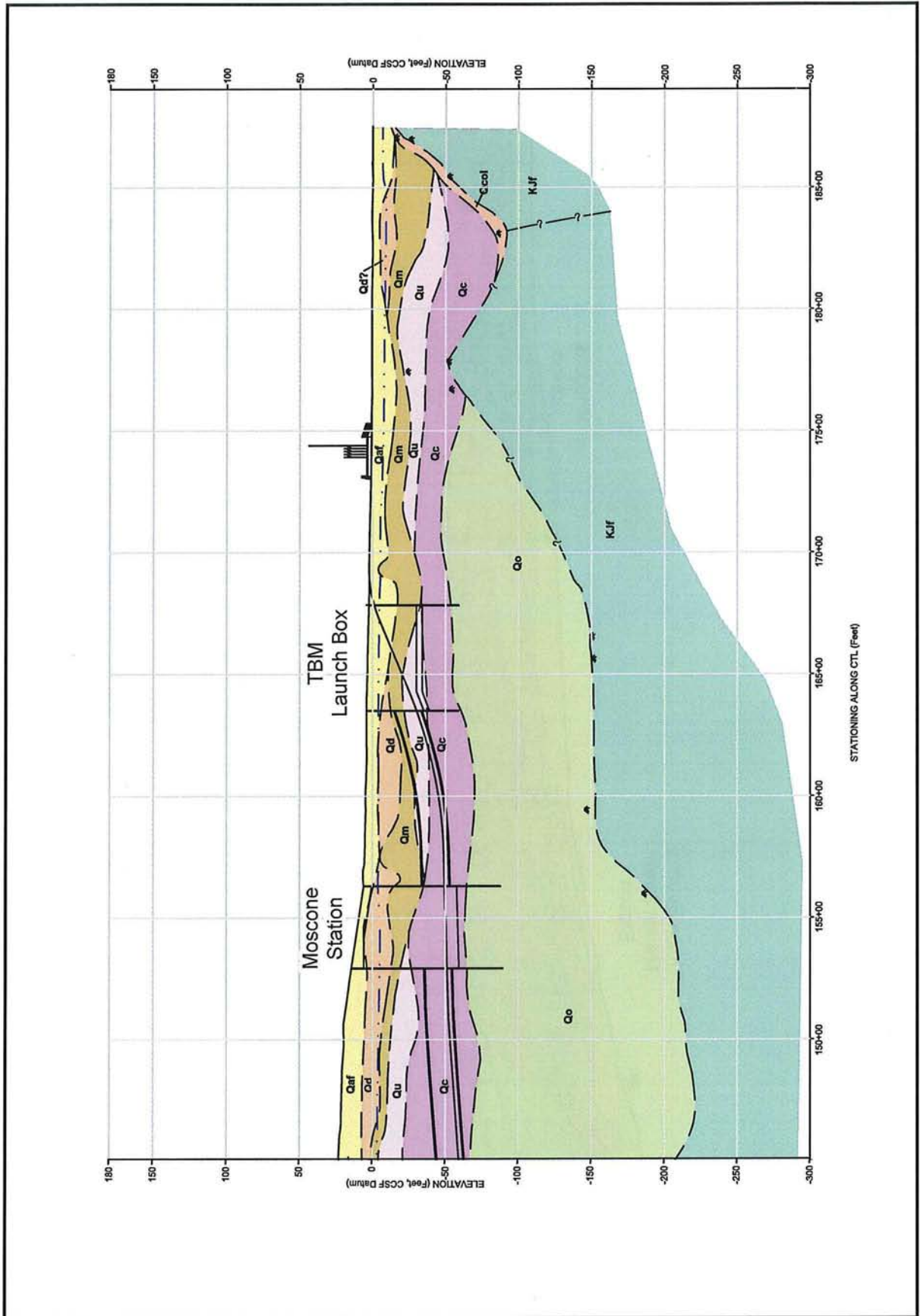


Figure 7.3. Geologic profile of Moscone Station to Union Square/Market Street Station.

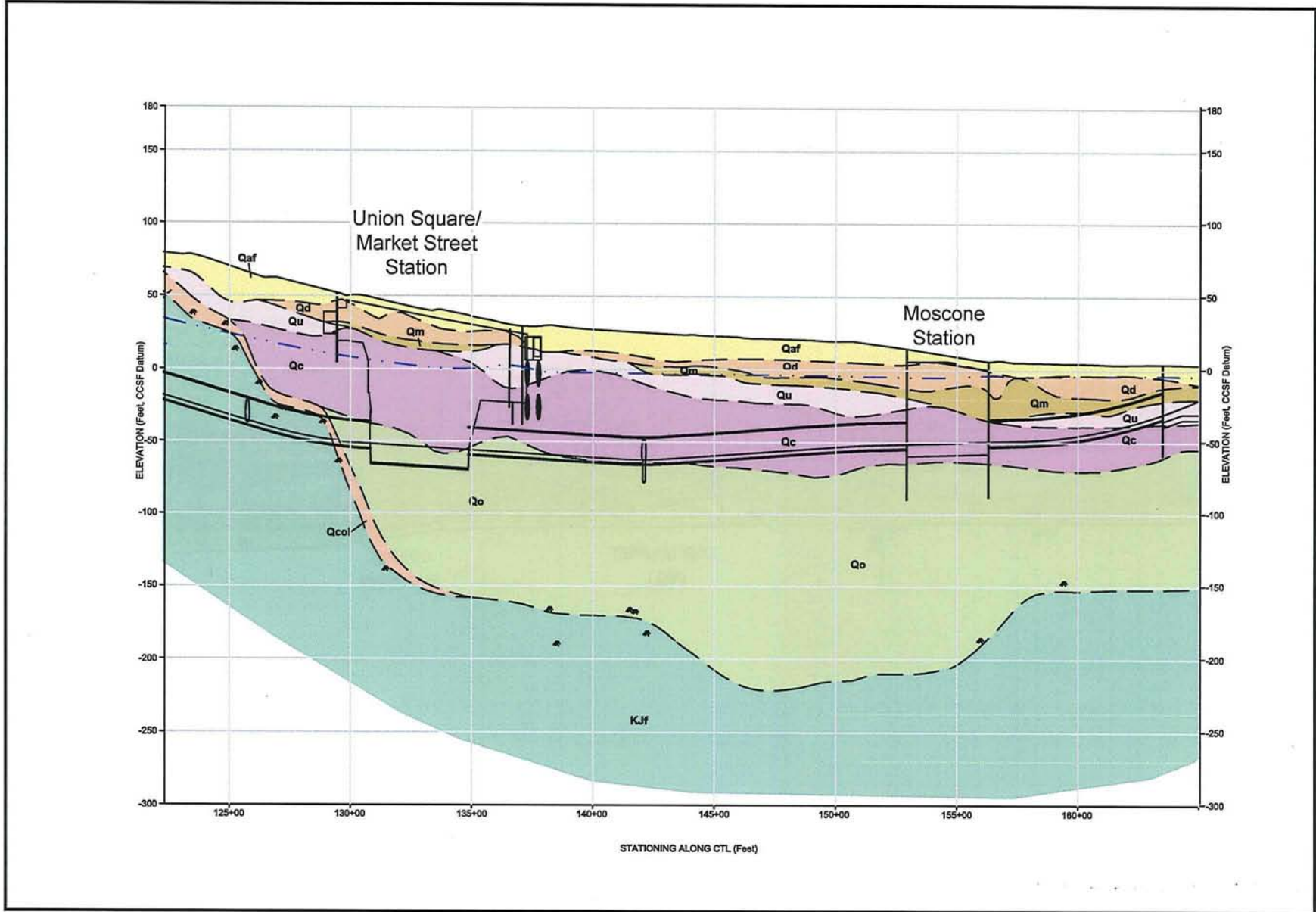


Figure 7.4. Geologic profile of Union Square/Market Street Station to Chinatown Station.

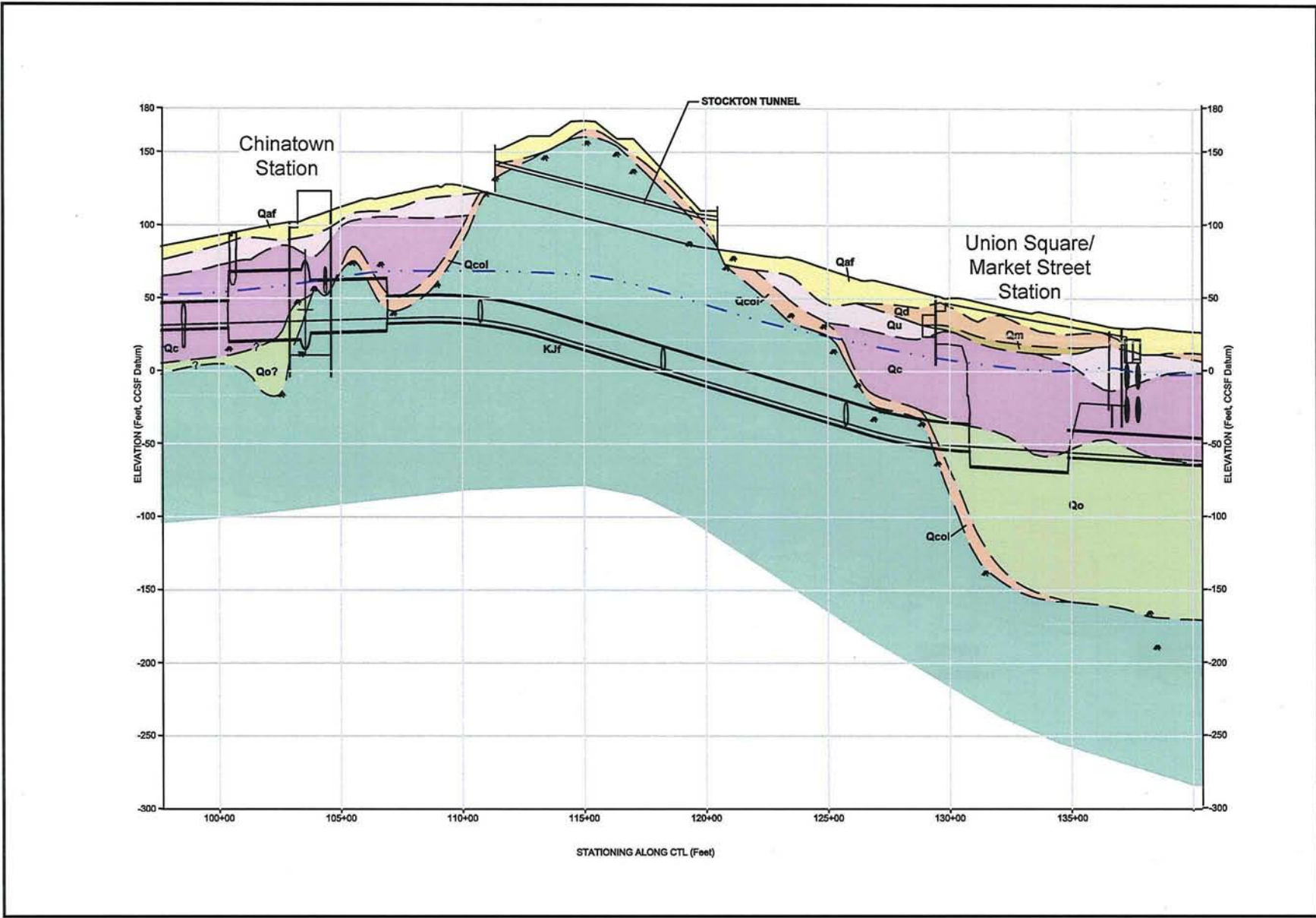


Figure 7.5. Geologic profile of Chinatown Station to TBM retrieval shaft.

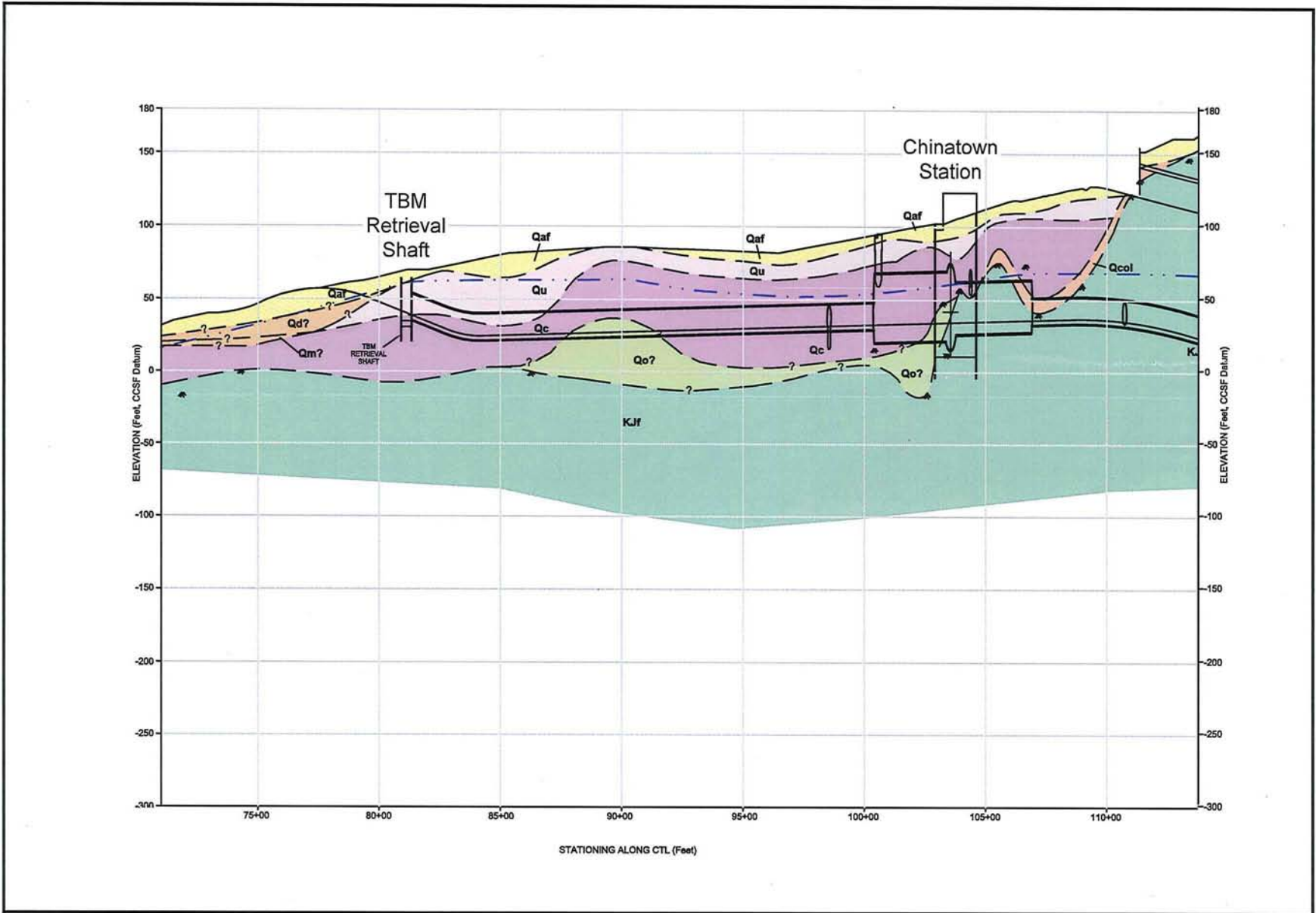
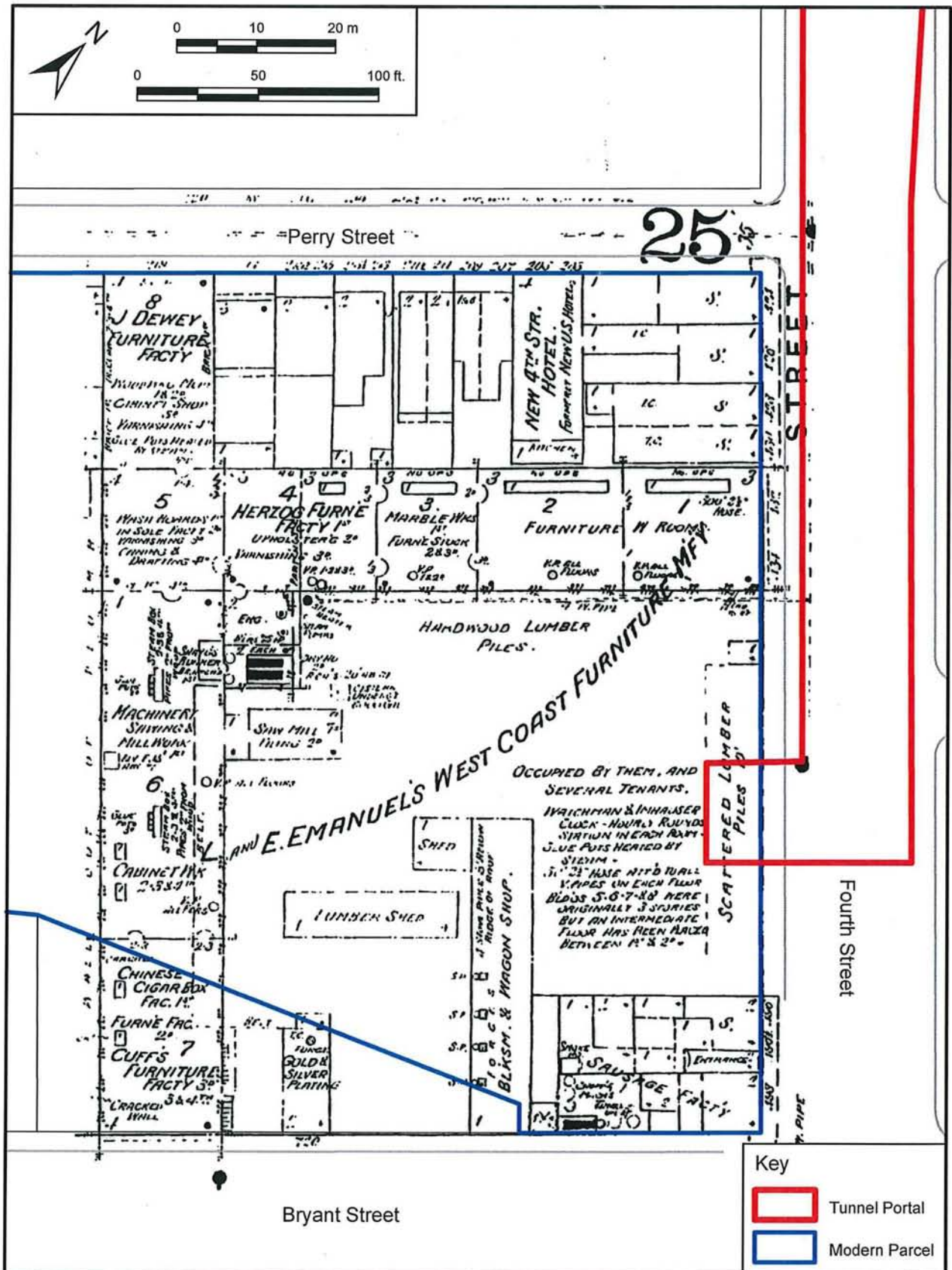


Figure 7.6. Portal Off-Street Parcel in 1887.



2000s disturbed additional areas. The access opening for the Portal is within a location that had housed the lumber shed of a furniture company in 1887. Deposits and/or features associated with that structure within the APE are a possibility.

With two very unlikely exceptions described below, the tunnels run beneath streets where significant historic-period archaeological deposits probably do not occur, and are deeper than historical archaeological deposits would normally be expected.

The 1852/53 Coast Survey Map shows about 10 buildings within the future alignment of Columbus Avenue. The 1857/59 Coast Survey Map shows even more development with a cistern for firefighting constructed at the intersection of Green and Stockton/Columbus. This portion of the block was paved by 1878, potentially burying these resources. Cisterns for firefighting were constructed in the 1850s at the intersections of Stockton and Green, Vallejo, Broadway, Pacific, and Washington streets.

The TBM Retrieval Shaft in Columbus Avenue is within the boundary of Washington Square as laid out in 1848 and in use until the avenue cut through it in 1873. Deposits associated with the park may be present beneath the roadway.

7.3 PREHISTORIC CONTEXT

The tunnels span the entire length of the Project area and as such the larger Prehistoric Contexts included in the HCASR (ASC 2007) and ARDTP (ASC 2011a) apply. The reader is referred to those documents.

7.3.1 Potential Prehistoric Property Types

Non-residential, residential, and shell mound sites may be expected, buried within the project corridor at various depths and coinciding with various geological formations and paleosols. Buried dune deposits, alluvium, and contact interfaces with the Colma Formation are considered sensitive for buried prehistoric deposits as surfaces available for human occupation. Bay mud, below the Colma interface, and bedrock are considered not to have been available for human habitation.

7.4 ARCHAEOLOGICAL SENSITIVITY AND PROJECT IMPACTS

The Portal, tunnels, and Retrieval Shaft have low sensitivity for historic-period archaeological deposits. Deposits associated with remains of an 1887 lumber shed that may survive in the Portal access area are not expected to possess research potential required for significance.

The tunnel is too deep to affect any near-surface surviving deposits associated with the early buildings potentially buried under Columbus; only the very bottom of deep back-filled wells could possibly be encountered by tunneling. The top of the tunnel is about 15 ft. below ground surface where it enters the retrieval shaft and slopes rapidly to 35 ft. or more below surface. It is unlikely that the tunnels will encounter even the very bottom of a 19th-century well. Likewise, the tunnels are too deep, between 30 and 40 ft. below ground surface, to encounter important deposits at the intersections where historic cisterns may have survived.

Archaeologists have monitored approximately 550 ft. of sewer-line trench excavation on each side of Fourth Street in advance of Portal construction to a depth of up to 11 ft. No prehistoric deposits have been encountered during this work.

A recent geoarchaeological study found the portal area consists of four stratigraphic units: historic fill, overlying former Bay Mud/marsh deposits, overlying near shore deposits, overlying a truncated terrestrial landform. Stratigraphic evidence obtained from six core samples throughout the Portal

area indicates that the potential for intact archaeological resources to be present in the Portal area is relatively low (Scher 2011).

The geology on the tunnel segment from the portal to MOS is a complex interfingering of alluvium, bay mud/marsh deposits, overlaying the Colma Formation. While the Bay mud/marsh deposits have a low sensitivity for prehistoric deposits themselves, they indicate the presence of the former bay margin nearby and may cap archaeological deposits at the interfaces with the alluvial deposit and the Colma Formation. Both interfaces are considered to have a moderate sensitivity for buried soils that may contain prehistoric deposits.

The tunnel segments from the MOS to the retrieval shaft pass through Colma Formation and bedrock. These segments have a very low to no sensitivity for prehistoric archaeological deposits. The retrieval shaft goes through a moderately sensitive area as it approaches the surface, at the contact of alluvium with the Colma Formation.

7.5 ARCHAEOLOGICAL IDENTIFICATION/FIELD TEST LOCATIONS

No known archaeological resources will be impacted by the Portal/tunnels/shaft. An identification program for the Portal using Geoprobe coring (Scher 2011) provided negative findings; no further testing is planned for that segment of the Project. No testing will be carried out on the tunnel route. In the remote chance that an archaeological deposit was identified, neither data recovery nor monitoring will be possible due to the nature of the construction method. Monitoring will be undertaken at the Portal and Retrieval Shaft.

8. REFERENCES

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APPENDIX A – CA-SFR-175 SITE RECORD

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial CA-SFR-175
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

Page 1 of 5

*Resource Name or #: ASC 71/10-1

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County San Francisco

and

*b. USGS 7.5' Quad San Francisco North, Calif. Date 1956 (pr 1968 and 1973) T 2S; R 6W; Pueblo Lands of San Francisco; M.D. B.M.

c. Address 4th Street, between Howard and Folsom

City San Francisco

Zip 94103

d. UTM: Zone 10; 552,800 mE/ 4181700 mN

e. Other Locational Data: The site was identified beneath street pavement in seven separation locations; more may exist in unexplored areas.

*P3a. **Description:** The site is a prehistoric midden deposit. The midden is characterized by a matrix of darkened sandy soil with moderate- to high-density marine shell, light-density faunal remains, and occasional lithic debitage and lithic and bone tools. Nearly all of the nearby shell mounds date to the Late Archaic and it is presumed that this site is associated, probably with CA-SFR-114 located a few hundred meters away. No temporally diagnostic tools have been found; carbon dating of mammal bone and charcoal from a portion of the site has provided dates of 1480–1240 B.P. Obsidian hydration is planned for later analysis. The site lies upon undulating sand dunes that represent the Holocene-era topography and geology of the San Francisco Bay perimeter. Dune sand also overlays much of the site, shifted into place during historic-period earth moving activities associated with the development of the city of San Francisco. Due to this capping of the site with dune sand, portions of the site appear to have been undisturbed throughout the massive historic-and modern-era construction projects that have shaped San Francisco's South of Market district. The site was identified in 2010 during utility trench excavations for the San Francisco Metropolitan Transportation Agency's Central Subway Project; intact midden deposits were observed in several excavated trenches within the Fourth Street roadbed. It is believed that areas of intact deposit exist outside of the specific locations observed during these

*P3b. **Resource Attributes:** AP15. Habitation debris

*P4. **Resources Present:** Building Structure Object Site District Element of District Other (Isolates, etc.)
P5b. Description of Photo:

*P6. **Date Constructed/Age and**

Sources: Historic

Prehistoric Both

Portions of site date to 1480-1240 B.P.

*P7. **Owner and Address:**

City and County of San Francisco
1 Dr. Carlton B. Goodlett Place,
San Francisco, California, 94102

*P8. **Recorded by:**

Anthropological Studies Center
Sonoma State University
1801 East Cotati Avenue, Bldg 29
Rohnert Park, CA 94928

*P9. **Date Recorded:**

2/8/2011

*P10. **Survey Type:** Subsurface investigation

*P11. **Report Citation:** Excavation report is in progress

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Page 2 of 5

*Map Name: San Francisco North, Calif.

Primary #

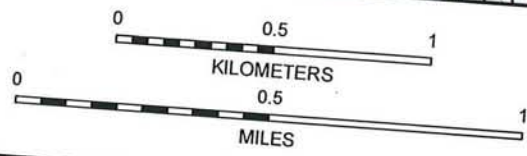
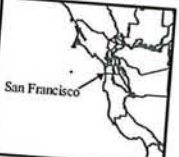
HRI #

Trinomial CA-SFR-175

*Resource Name or #: ASC 71/10-1

*Date of Map: 1993

*Scale: 1:24,000



DPR 523J (1/95)

*Required information

ARCHAEOLOGICAL SITE RECORD

Page 3 of 5

*Resource Name or #: ASC 71/10-1

*A1. **Dimensions:** a. Length 80 m (263 ft) × b. Width 20 m (65 ft) Dimensions represent overall extent of excavated areas only (see Sketch Map)

Method of Measurement: Paced Taped Visual estimate Other: GPS data collected with Trimble GeoXH unit and Trimble Total Station

Method of Determination (Check any that apply.): Artifacts Features Soil Vegetation Topography
 Cut bank Animal burrow Excavation Property boundary Other (Explain):

Reliability of Determination: High Medium Low Explain: Midden is known to exist outside of specific locations identified during Central Subway project utilities trenching, as midden was observed in unexcavated sidewalls adjacent to excavated trenches; however, actual extent of midden is unknown. The area of midden depicted on sketch map and dimensions given above only reflect what was seen within trenches.

Limitations (Check any that apply): Restricted access Paved/built over Site limits incompletely defined
 Disturbances Vegetation Other (Explain):

A2. Depth: varies; highest points approx. 80 cm below ground surface. Thickness of deposit varies from 15 cm to 40 cm

None Unknown Method of Determination: Excavation

*A3. **Human Remains:** Present Absent Possible Unknown (Explain): Nearby (within 300 m) archaeological site CA-MRN-114 contained burials (Walsh 1988).

*A4. **Features:** One feature was observed: a cluster of three large stones, situated at the interface of midden and underlying dune sand and covered over by midden; possibly a base for a post.

*A5. **Cultural Constituents:** Marine shell (specimens are both whole and crushed); faunal remains including marine mammal, small and medium-sized land mammals, and fish; groundstone tools; obsidian debitage and flaked tools; shaped bone tools.

*A6. **Were Specimens Collected?** No Yes Artifacts curated at Anthropological Studies Center, Sonoma State University

*A7. **Site Condition:** Good Fair Poor:

*A8. **Nearest Water:** San Francisco Bay, presently 0.75 mile to east. Prior to the early 1850s, site would have been near edge of bay marsh.

*A9. **Elevation:** 20 ft. amsl

A10. **Environmental Setting:** The deposit lies at or near the natural shoreline of the San Francisco Bay as it existed prior to historic-era landfill deposition, known historically as Mission Bay. Stratigraphy observed during excavation suggests that the underlying land formation consists of undulating sand dunes which slope down toward the bay. Prior to historic-era development, vegetation likely consisted of dune scrub, dominated by low shrubs. Soils would have been subject to shearing winds, resulting in frequent shifting of dune formations.

A11. **Historical Information:** The site is located in what was, at the time of the European contact, the ethnographic territory of the Ohlone (Levy 1978:485). The nearest recorded village was *Sitlintac*, a summer village on Mission Bay. By 1817, most of the native people in the region had been removed to live near Spanish missions. After this time, the South of Market area was primarily used as grazing land for Spanish and Mexican livestock. Historic-era cut and fill of the area's sand dunes began in the early 1850s, with construction of substantial buildings and infrastructure such as streets and utilities coming soon after.

*A12. **Age:** Prehistoric Protohistoric 1542-1769 1769-1848 1848-1880 1880-1914 1914-1945
 Post 1945 Undetermined Middle Archaic Period

A13. **Interpretations:** The site may be a satellite resource processing site or western edge of CA-SFR-114, though further excavation would need to be done to verify whether this site is physically connected to SFR-114. Mammal bone recovered from a portion of midden dates to 1480–1320 B.P, approximately contemporaneous with dates from CA-SFR-114 (Archeo-Tech 1990:57). A well-developed "A" horizon noted in some areas of the deposit, dating to about 1240 B.P, suggest prehistoric-era occupation of the site followed by abandonment, then a period of time in which the site lay exposed before historic-era sand dune grading covered it over. The presence of the intact "A" horizon indicates physical integrity of at least some portions of the deposit.

A14. **Remarks:** Due to anaerobic conditions, preservation of faunal specimens was very good.

A15. **References:**

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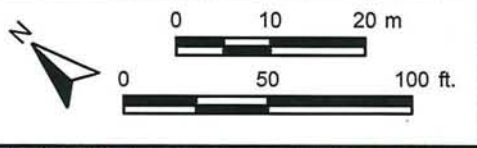
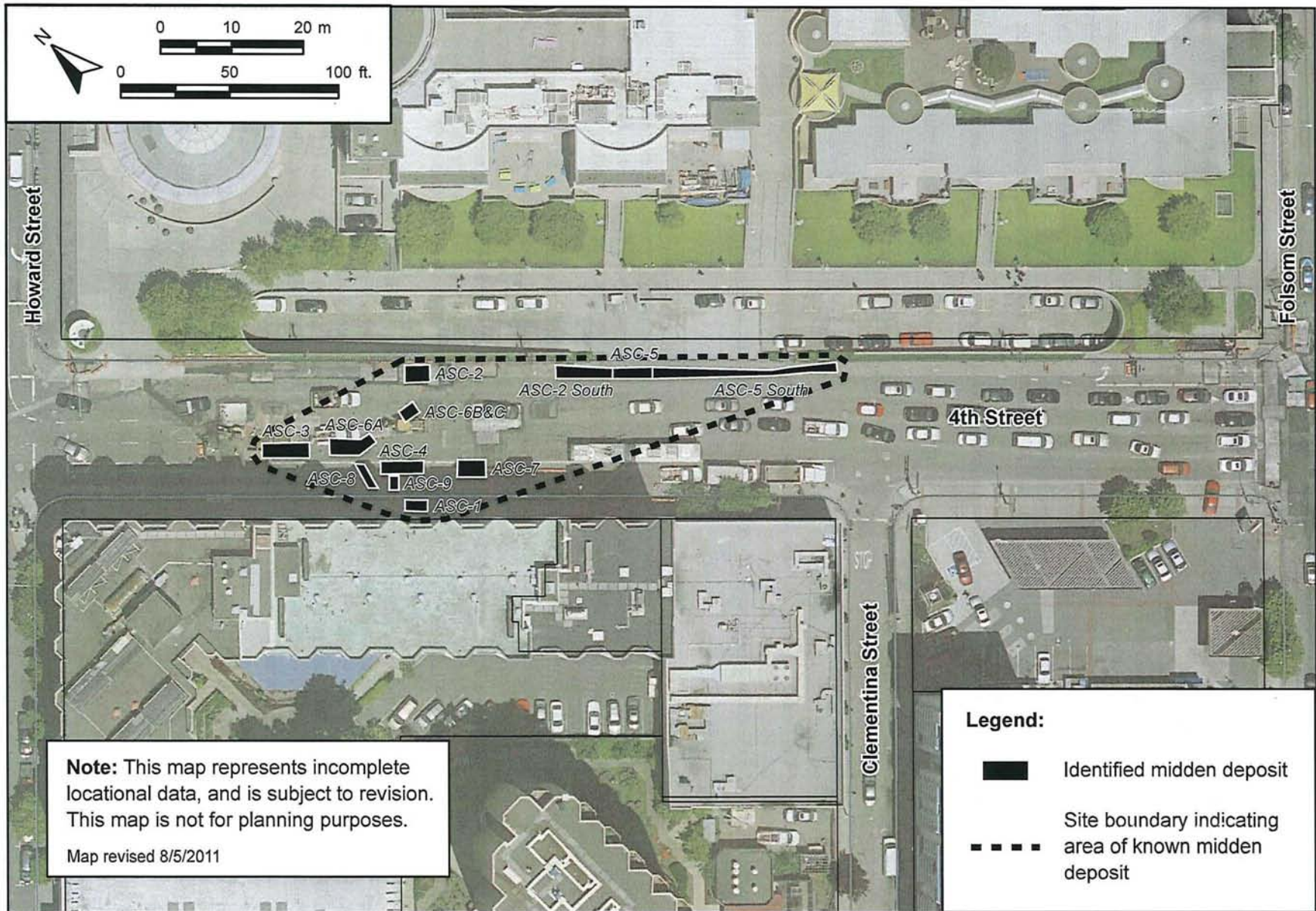
A16. **Photographs:**

Original Media/Negatives Kept at: Anthropological Studies Center

*A17. **Form Prepared by:** S. Massey

Date: February 2011

Affiliation and Address: Anthropological Studies Center, 1801 East Cotati Avenue, Rohnert Park, CA 94928



Howard Street

Folsom Street

Clementina Street

4th Street

ASC-1
ASC-2
ASC-2 South
ASC-3
ASC-4
ASC-5
ASC-5 South
ASC-6A
ASC-6B&C
ASC-7
ASC-8
ASC-9

APPENDIX B – MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT
between the
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION
and the
CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
and the
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
regarding the
CENTRAL SUBWAY/THIRD STREET LIGHT RAIL PHASE 2,
IN THE CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA

WHEREAS, A Programmatic Agreement among the Federal Transit Administration, the California Historic Preservation Officer and the Advisory Council on Historic Preservation for the construction of the Third Street Light Rail/New Central Subway was included as part of the Record of Decision for the 1998 Final EIS/EIR; and

WHEREAS, The Federal Transit Administration (FTA) plans to assist the San Francisco Municipal Transportation Agency (SFMTA) to implement the Central Subway, Phase 2 of the Third Street Light Rail (undertaking) pursuant to the New Starts Funds process under Section 5309 of Title 49 of the United States Code, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and

WHEREAS, 36 CFR 800 et seq. requires that federal agencies take into account the effects of their projects on historic properties; and

WHEREAS, The undertaking consists of the construction of an underground subway, one surface station and three subway station facilities, to connect the existing T-Third light rail system at Fourth and King Streets with the Bay Area Rapid Transit District (BART) at Market Street and under Stockton Street into Chinatown; and

WHEREAS, FTA and SFMTA have thoroughly considered alternatives to the Undertaking, including a No-Build Alternative (Alternative 1) and three Build Alternatives (2, 3A, and 3B) that have been analyzed in the Draft and Final Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/SEIR); and

WHEREAS, On February 19, 2008, the SFMTA Board of Directors selected Alternative 3B as the Locally Preferred Alternative; and

WHEREAS, FTA has defined the undertaking's Area of Potential Effects (APE) as described in Attachment A; and

WHEREAS, FTA has determined that the undertaking may have an adverse effect on the historic properties described in Attachment B, several of which are listed in and others eligible for listing in the National Register of Historic Places, as well as additional archaeological properties as yet unidentified, and has consulted with the California Historic Preservation Officer (SHPO) pursuant to 36 CFR 800 of the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f). One historic architectural resource (814-828 Stockton Street for Alternative 3A or 933-949 Stockton Street for Alternative 3B- the Locally Preferred Alternative), identified as a contributor to the NRHP-eligible Chinatown Historic District, would be demolished, constituting an adverse effect to historic properties; and

WHEREAS, Upon full execution of this MOA, SFMTA will administer the undertaking with the guidance and approval of FTA; and

WHEREAS, SFMTA and the San Francisco Planning Department Major Environmental Analysis section (SF-MEA) have participated in this consultation and have been invited to sign this MOA as concurring parties; and

WHEREAS, SF- MEA has consulted with the San Francisco Architectural Heritage Commission, the San Francisco Landmarks Preservation Advisory Board, and the Chinatown Community Development Center regarding the effects of the undertaking on historic properties; and

WHEREAS, In accordance with 36 CFR 800.6(a)(1), FTA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation and has invited the ACHP to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii). The ACHP has declined to participate.

NOW, THEREFORE, FTA, the SHPO and SFMTA agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the adverse effect of the Undertaking on historic properties and further agree that these Stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated.

STIPULATIONS

FTA shall ensure that the following measures are carried out:

I. ADMINISTRATIVE PROVISIONS

A. STANDARDS

1. **Definitions.** The definitions provided at 36 CFR 800.16 are applicable throughout this MOA.
2. **Professional Qualifications.** All activities regarding history, historic preservation, historic architecture, architectural history, historical archaeology, and prehistoric archaeology that are performed pursuant to this MOA will be carried out by or under the direction of persons meeting, at a minimum, the Secretary of the Interior's Professional Qualification Standards (48 FR 44738-9) in the appropriate discipline.
3. **Documentation Standards.** Written documentation of activities regarding history, historic preservation, historic architecture, architectural history, historical archaeology, and prehistoric archaeology that are carried out pursuant to this MOA will conform to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-44740) as well as to the applicable standards and guidelines established by the ACHP and the California Office of Historic Preservation.
4. **Archaeological Curation and Curation Standards.** Records and archaeological materials resulting from all archaeological investigations and other treatments that are carried out pursuant to this MOA will be curated in accordance with Curation of Federally-Owned and Administered Archeological Collections (36 CFR 79).

II. TREATMENT OF HISTORIC PROPERTIES

FTA shall ensure that the adverse effects of the Undertaking on archaeological resources and historic buildings and structures are resolved by implementing the Mitigation Measures and Historic Properties Treatment Plan (HPTP) specified in the Final Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/SEIR) and included as Attachment C to this MOA. FTA or SFMTA will not authorize the execution of any Undertaking activity that may affect (36 CFR Section 800.16(i)) historic properties in the Area of Potential Effects (APE) prior to the completion of the processes that the HPTP in Attachment C of this MOA prescribes. Future changes to the HPTP would not require an amendment to this MOA.

III. NATIVE AMERICAN CONSULTATION

FTA or designee shall ensure that all State and federal laws and regulations regarding Native American concerns are strictly enforced. Prior to construction, FTA or its designee shall initiate consultation with a representative of the Native American group having traditional authority over the APE. The goal of this consultation will be to come to agreement on protocols to be followed if prehistoric resources are discovered. A consultant from this Native American group shall be solicited and, if possible, engaged to monitor all testing and excavation on prehistoric archaeological sites. Though there is no federally recognized tribe whose traditional territory includes San Francisco, the area was traditionally Ohlone. The practice for projects in San Francisco is to contact an individual who is listed as Ohlone on the State of California Native American Heritage Commission's contact list.

IV. TREATMENT OF HUMAN REMAINS

The MOA parties agree that the treatment of human remains and associated or unassociated funerary objects discovered during any project activity shall comply with applicable State (Section 7050.5(b) of the California Health and Safety Code) and Federal laws. This shall include immediate notification to the Coroner of the City and County of San Francisco if human remains are discovered. In the event the Coroner determines that the human remains are Native American, the Coroner shall notify the California State Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, FTA or its designee, and the MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines, Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

V. CONFIDENTIALITY

The MOA parties acknowledge that the historic properties covered by this MOA are subject to the provisions of Section 304 of the National Historic Preservation Act of 1966 and Section 6254.10 of the California Government code (Public Records Act), relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with said sections.

VI. POST REVIEW DISCOVERIES

If previously unidentified historic properties are discovered or unanticipated effects on known historic properties are found, FTA shall implement the Post-Review Discovery Plan described in Appendix C.

VII. MONITORING AND REPORTING

FTA or designee shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms annually on the anniversary of the execution of this MOA until it expires or is terminated. This report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FTA's efforts to carry out the terms of this MOA.

VIII. DISPUTE RESOLUTION

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FTA shall consult with such party to resolve the objection. If FTA determines that such objection cannot be resolved, FTA will:

A. Forward all documentation relevant to the dispute, including FTA's proposed resolution, to the ACHP. The ACHP shall provide FTA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FTA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. FTA will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FTA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FTA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

C. FTA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

IX. AMENDMENTS

Any signatory party to this MOA may propose that this MOA be amended, whereupon all signatory parties shall consult for no more than thirty (30) days to consider such amendment. The amendment will be effective on the date a copy signed by all of the original signatories is filed with the ACHP. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with Stipulation X below. Potential changes to the HPTP described in Appendix C would not require an amendment to this MOA.

X. TERMINATION

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation IX, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, FTA must either (a) execute an MOA pursuant to 36 CFR 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. FTA shall notify the signatories as to the course of action it will pursue.

Execution of this MOA by the FTA and SHPO and implementation of its terms evidence that FTA has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

XI. ANTI-DEFICIENCY ACT

FTA's obligations under this MOA are subject to the availability of appropriated funds, and the stipulations of this MOA are subject to the provisions of the Anti-Deficiency Act. FTA will make reasonable and good faith efforts to secure the necessary funds to implement this MOA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs FTA's ability to implement the stipulations of this agreement, FTA will consult in accordance with the amendment and termination procedures found at Stipulations IX and X of this agreement.

XII. BUDGET AND FISCAL PROVISIONS

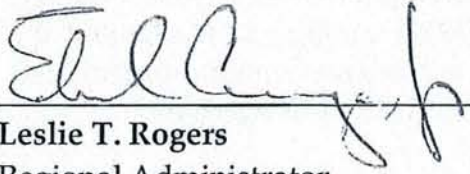
SFMTA's obligations under this MOA are subject to the budget and fiscal provisions of the Charter of the City and County of San Francisco. SFMTA will make reasonable and good faith efforts to secure the necessary funds to implement this MOA in its entirety. If compliance with the Charter alters or impairs SFMTA's ability to implement the stipulations of this agreement, SFMTA will consult in accordance with the amendment and termination procedures found at Stipulations IX and X of this agreement.

XIII. EFFECTIVE DATE AND DURATION

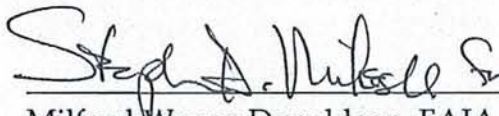
This MOA will take effect on the date that it has been executed by FTA, SFMTA and the SHPO. Execution of this MOA and filing with the ACHP in accordance with 36 CFR 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR 800.6(c), that FTA intends this MOA as the vehicle by which adverse effects of the Undertaking are to be resolved, and shall further evidence that FTA has afforded the ACHP an opportunity to comment on the Undertaking and its effect on historic properties, and that SFMTA has taken into account the effect of the Undertaking on historic properties. This MOA will be null and void if its terms are not carried out within fifteen (15) years from the date of execution.

SIGNATORIES:

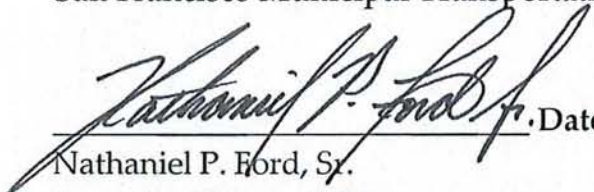
FEDERAL TRANSIT ADMINISTRATION


Date 10/23/08
For Leslie T. Rogers
Regional Administrator

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

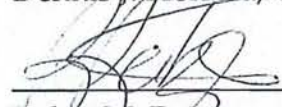

Date 11/5/08
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

CITY AND COUNTY OF SAN FRANCISCO
San Francisco Municipal Transportation Agency


Date 10/15/08
Nathaniel P. Ford, Sr.
Executive Director/CEO

Approved as to Form:

Dennis J. Herrera, City Attorney


Robin M. Reitzes
Deputy City Attorney

APPENDIX C – CHINATOWN STATION DOCUMENTARY RESEARCH TABLES

APPENDIX C

CHINATOWN STATION DOCUMENTARY RESEARCH TABLES

911 [911-1/2; 935-949] STOCKTON STREET

ABSTRACT

Building:

1852/53	Rectangular building at front of lot
1857/59	Rectangular building at front of lot. L-shaped building at rear of lot
1887	20 × 85 ft. lot. Two-story residence flush with sidewalk. Windows on both floors in rear. Stairs lead to rear porch. Small one-story outbuilding in rear lot
1899	[911-1/2 Stockton] – Lot same dimensions. Same two-story residence with additional outbuilding labeled "Outhouse" at rear of lot. Small one-story addition to rear of main building. Property labeled "Partly Furred." Property separated from adjacent 913 Stockton by wood fence
1905	[911-1/2 Stockton] – Lot same dimensions. Same brick two-story residence. Small wood framed one-story addition to rear of main building. No longer an "Outhouse" at rear of lot. Property labeled "Partly Furred." Property no longer separated from adjacent 913 Stockton by wood fence
1913	[935-949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1948	[935-949 Stockton Street] – Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

Residents/Occupation/Use:

1900	Two Chinese "Family" Groups: 1. Wong You, a tailor, and his three partners, who are pant makers; 2. Wong Yuk Woo, his wife, and daughter
1910	Mixed commercial use [911-1/2-925 become 935-949]
1913-1948	Mixed commercial use

Ownership:

1894	Jas Freeborn
1906	Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1909	Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]

DOCUMENTARY TIME LINE

1852/53	U.S. Coast Survey – Rectangular building at front of lot
1857/59	U.S. Coast Survey – Rectangular building at front of lot. L-shaped building at rear of lot

Documentary Research Table, 911 [911-1/2; 935-949] Stockton (continued)

1867	Voter Register – Address not listed
1880	U.S. Census – Address not found (ED 51)
1887	Sanborn Map – 20 × 85 ft. lot. Two-story residence flush with sidewalk. Windows on both floors in rear. Stairs lead to rear porch. Small one-story outbuilding in rear lot.
1889	City Directory – N. P. Chew r. 911 Stockton; Chinese Young Men's Christian Association, 911 Stockton [Next door at church? unclear when address changed from 911 to 911-1/2]
1890	City Directory – Alexander J. Kerr, missionary Presbyterian Chinese Church and Mission, r. 911 Stockton [Next door at church? unclear when address changed from 911 to 911-1/2]
1890	Voter Register – Address not listed
1891	City Directory - no listing for Kerr or Chew
1892	City Directory – Alexander J. Kerr, missionary Presbyterian Chinese Church, study at the church, 911 Stockton; Presbyterian Chinese Church and Mission, Ws[ide] Stockton bet Clay and Washington; Ng Poon Chew [pastor, organist, janitor of Presbyterian Church—4 yrs with church] [by this time the address is most likely 911-1/2. The church is listed at 911 until 1911 when it changes to 925]
1894	Block Book –Jas Freeborn [large parcel including 911-1/2–925 Stockton and 907–911 Washington];
1899	Sanborn Map – 911-1/2 Stockton. Lot same dimensions. Same two-story residence with additional outbuilding labeled "Outhouse" at rear of lot. Small one-story addition to rear of main building. Property labeled "Partly Furred." Property separated from adjacent 913 Stockton by wood fence
1900	U.S. Census – <u>911-1/2 Stockton</u> . Family 1. Head: Wong You, Chinese, male, 43, married 24 years, tailor, China, immigrated 1878, literate, cannot speak English; Partners: Chen Hook Ye, 53, married 30 years, immigrated 1860, pants maker, literate, cannot speak English; Look Pik, 33, married 15 years, immigrated 1885, pants maker, unemployed 2 months, can read but not write, cannot speak English; Dung Sic, 53, married 25 years, immigrated 1864, pants maker, unemployed 2 months, literate, cannot speak English; all Chinese, male, China Family 2. Head: Wong Yuk Woo, Chinese, 53, married 25 years, China, immigrated 1864, [no occupation listed], literate, cannot speak English; Wife: Lee She, Chinese, 41, married 25 years, 1 of 1 child living, China, immigrated 1881, illiterate, cannot speak English; Daughter: Wong Fung Hai, 13, single, CA (ED 219, Sheet 4A–4B) <u>911 Stockton</u> . [Next door at the church?] Family 1. Head: Leung Yuk Hung, Chinese, 29, single, China, immigrated 1881, janitor, literate, cannot speak English, rents house (ED 219, Sheet 4B)
1905	Sanborn – [911-1/2 Stockton] Lot same dimensions. Same brick two-story residence. Small wood framed one-story addition to rear of main building. No longer an "Outhouse" at rear of lot. Property labeled "Partly Furred." Property no longer separated from adjacent 913 Stockton by wood fence
1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]; Foreign Mission Protestant Church – 911 Stockton
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]

Documentary Research Table, 911 [911-1/2; 935-949] Stockton (continued)

1909	San Francisco Home Telephone Directory – Japanese Suits Cleaning Co., 947 Stockton
1910	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; (Lee Gow Kee Quong Co., Hdw, 941 Stockton); Excelsior Cigar, 943 Stockton; (Japanese Suits Cleaning Co.—SF Chinatown Tel. Dir.) Jung Hong & Co., dyeing & cleaning, 947 Stockton [addresses 911-1/2-919 change to 935-949 sometime during 1910]
1913	Sanborn Map – [935-949 Stockton Street] 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1920	San Francisco Telephone Directory – Jone Sai Co., merchant, 935 Stockton; Lee Chong Lung, merchant, 937 Stockton; Man Fung Lung & Co., merchant, 949 Stockton;
1930	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Chau & Jue, employment, 943 Stockton; Sing Lung & Co., laundry, 945 Stockton
1948	Sanborn Map – [935-949 Stockton Street] Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

913 [935-949] STOCKTON STREET**ABSTRACT**

Building:

- 1852/53 Rectangular building at front of lot
- 1857/59 Rectangular building at front of lot. L-shaped building at rear of lot
- 1887 20 × 85 ft. lot. Two-story building with small rear porch. Skylight on upper floor. Small one-story outbuilding in rear lot. Property labeled "Drying Platform on Roof"
- 1899 Lot same dimensions. Two-story building with interior staircase, three skylights on upper floor, and rear windows on both floors. Small two-story rear porch. Building labeled "Chinese Laundry." Small one-story outbuilding adjacent to porch. Stairs leading to one-story building at rear of lot labeled "Platform Over." Property separated from adjacent 911-1/2 Stockton by wood fence
- 1905 Lot same dimensions. Two-story building with interior staircase, three skylights on upper floor, and rear windows on both floors. Single story wood-framed addition at back. Outbuilding, porch and platform gone. No fence separating adjacent properties
- 1913 [935-949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
- 1948 [935-949 Stockton Street] – Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

Residents/Occupation/Use:

- 1867 Edward Cohn, a furrier
- 1880 Hobbins Beatty, a plasterer; his wife, a lodger, and a Chinese servant; also Jesus Briceno
- 1887 Possibly a laundry; drying platform on roof
- 1899 Chinese Laundry
- 1900 Three Chinese "Family" Groups: 1. Chen Jung Ying, a cannery foreman, and his family; 2. Kong Horn, a laborer, and his wife; 3. Huey Suey and six partners, all laundry men
- 1910 Mixed commercial use [911-1/2-925 become 935-949]
- 1913-1948 Mixed commercial use

Ownership:

- 1894 Jas Freeborn
- 1906 Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
- 1909 Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]

DOCUMENTARY TIME LINE

- 1852/53 **U.S. Coast Survey** – Rectangular building at front of lot
- 1857/59 **U.S. Coast Survey** – Rectangular building at front of lot. L-shaped building at rear of lot
- 1867 **Voter Register** – Cohn, Edward, 37, Prussia, furrier, 913 Stockton, naturalized Sept. 16, 1858 at San Francisco U.S. Circ, registered June 6, 1866
- 1880 **U.S. Census** – 913? Stockton. **Beatty Family. Head:** Hobbins, 43, married, plaster, OH, father Ireland, mother Prussia; **Wife:** Annie, 32, married, keeping house, Hamburg; **Lodger:** Max Barletto, 32, single, musician, Prussia; **Servant:** Ching Kung, Chinese, 14, single, servant, China (ED 51, Page 3)
- 1880 **City Directory** – Jesus Briceno, r.913 Stockton
- 1880–1883 **City Directory** – no listing for Beatty, Barletto or Kung.
- 1887 **Sanborn Map** – 20 × 85 ft. lot. Two-story building with small rear porch. Skylight on upper floor. Small one-story outbuilding in rear lot. Property labeled “Drying Platform on Roof”
- 1889–1890 **City Directory** – Address not listed
- 1890 **Voter Register** – Address not listed
- 1894 **Block Book** – Jas Freeborn [large parcel including 911–925 Stockton and 907–911 Washington]
- 1899 **Sanborn Map** – Lot same dimensions. Two-story building with interior staircase, three skylights on upper floor, and rear windows on both floors. Small two-story rear porch. Building labeled “Chinese Laundry.” Small one-story outbuilding adjacent to porch. Stairs leading to one-story building at rear of lot labeled “Platform Over.” Property separated from adjacent 911 1/2 Stockton by wood fence
- 1900 **U.S. Census** – 913 Stockton. **Family 1. Head:** Chen Jung Ying, 38, married 5 years, China, immigrated 1874, foreman cannery, unemployed 6 months, literate, can speak English, rents house; **Wife:** Ah Moo, 30, 1 of 1 child, CA, parents China, illiterate, cannot speak English; **Daughter:** Chen So, 2, CA; all Chinese

Family 2. Head: Kong Horn, 39, married 5 years, immigrated 1820, laborer, unemployed 3 months, literate, cannot speak English, rents house; **Wife:** Ah N’Go, 36, married 5 years, no children, immigrated 1877, illiterate, cannot speak English; both Chinese, China

Family 3. Head: Huey Suey, 36, single, immigrated 1882, laundry man, literate, can speak English, rents house; **Partners:** Huey Gon, 49, single, immigrated 1870, laundry man, literate, cannot speak English; Huey N’Gu, 49, single, immigrated 1866, laundry man, literate, cannot speak English; N’G Wok, 36, single, immigrated 1882, laundry man, literate, cannot speak English; Huey Chung, 38, single, immigrated 1881, laundry man, literate, cannot speak English; Wong Ark, 28, married 10 years, immigrated 1897, laundry man, literate, cannot speak English; Horn N’G, 53, married 20 years, immigrated 1881, laundry man, literate, cannot speak English; all Chinese, male, China
- 1905 **Sanborn Map** – Lot same dimensions. Two-story building with interior staircase, three skylights on upper floor, and rear windows on both floors. Single story wood framed addition at back. Outbuilding, porch and platform gone. No fence separating adjacent properties

Documentary Research Table, 913 [935–949] Stockton (continued)

1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1910	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Excelsior Cigar, 943 Stockton; Jung Hong & Co., dyeing & cleaning, 947 Stockton; Union Pacific Restaurant, 949 Stockton; [addresses 911-1/2–925 change to 935–949 sometime during 1910]
1913	Sanborn Map – [935–949 Stockton Street] 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled “Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore].” Section labeled laundry has one-story brick addition at rear. Second store from north has small subdivided section in front designated as dwelling
1920	San Francisco Telephone Directory – Jone Sai Co., merchant, 935 Stockton; Lee Chong Lung, merchant, 937 Stockton; Man Fung Lung & Co., merchant, 949 Stockton
1930	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Chau & Jue, employment, 943 Stockton; Sing Lung & Co., laundry, 945 Stockton
1945/46	City Directory – Chong W.L., grocers-retail, 941 Stockton; Wing L. Chong, gro, 941 Stockton; Lung Sing, laundries-Chinese, 1007 Larkin & 945 Stockton;
1948	Sanborn Map – [935–949 Stockton Street]: Same building as above. All “S[tore],” except 943/945 labeled “Chine Laundry”
1948/49	City Directory – Sing Lung Steam Laundry, laundries-Chinese, 945 Stockton; Mutual Enterprise Co., grocers-retail, 947 Stockton; Mutual Enterprise Co. (Tony & Dean Woo) gro, 947 Stockton; Dean (Dereking) (Mutual Enterprise Co.) h 1414 Pacific av; Tony (King Sau) (Mutual Enterprise Co.) h 1108 Pacific av

915 [935-949] STOCKTON STREET**ABSTRACT**

Building:

1852/53	Rectangular building at front of lot
1857/59	Two small rectangular buildings at center and rear of lot
1887	Four buildings on 23 × 85 ft. lot. Front building set back several feet from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. Small outbuilding attached to rear. Two small one-story buildings in center of lot. Two-story 23 × 23 ft. building at rear of lot
1899	Lot same dimensions. Front and center lot buildings same as above. Labeled "Tenements." Rear building one-story with staircase labeled "Lodgings"
1905	Two-story brick building with skylight. Windows at rear on both floors. "Tenements" is labeled across 915 and 917 Stockton. Single story wood framed building at back of lot labeled "Lodgings"
1913	[935-949 Stockton Street] – 140 × 60 ft two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1948	[935-949 Stockton Street] – Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

Residents/Occupation/Use:

1867	William Fox Brandreth, an agent
1879-1880	Stamping and Pleating Business; David Aaron, stamping and pleating, and his family
1890	Peter Anderson, a waiter
1895	Yuen Sin, cigar maker
1900	Two Chinese "Family" Groups: 1. Chen Sing, his two wives, a son, and two lodgers, both print makers; 2. Ah Young, a laborer, and nine lodgers with various occupations
1910	Mixed commercial use [911-1/2-925 become 935-949]
1913-1948	Mixed commercial use

Ownership:

1894	Jas Freeborn
1906	Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1909	Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]

DOCUMENTARY TIME LINE

1852/53	U.S. Coast Survey – Rectangular building at front of lot
1857/59	U.S. Coast Survey – Two small rectangular buildings at center and rear of lot

Documentary Research Table, 915 [935-949] Stockton (continued)

1867	Voter Register – Brandreth, William Fox, 24, NY, agent, 915 Stockton, registered July 17, 1866
1879	City Directory – Mrs. David Aaron, pleating and stamping, 915 Stockton [no r. listed]
1880	City Directory – David Aaron, embroidery stamp manuf, 133 Sixth, r. 915 Stockton; Mrs. Mary Aaron, pleating and stamping, 915 Stockton;
1880	U.S. Census – 915 Stockton. Aaron Family. Head: David, 50, married, stamping and pleating, Prussia; Wife: Mary, 38, married, keeping house, Prussia; Daughters: Fanny, 15, works in bakery, TN; Pauline, 9, at school; Kate E, 2; both CA; Sons: Louis, 13, works in an office; Victor, 7; Harry, 6; all attended school during census year, CA (ED 51, Page 3)
1887	Sanborn Map – Four buildings on 23 × 85 ft. lot. Front building set back several feet from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. Small outbuilding attached to rear. Two small one-story buildings in center of lot. Two-story 23 × 23 ft. building at rear of lot
1889	City Directory – Address not listed
1890	City Directory – Peter Anderson, waiter Merchants' Club, r. 915 Stockton
1890	Voter Register – Address not listed
1894	Block Book – Jas Freeborn [large parcel including 911-1/2-925 Stockton and 907-911 Washington]
1895	City Directory – cigars – manufacturers & dealers, Yuen Sin, 915 Stockton
1899	Sanborn Map – Lot same dimensions. Front and center lot buildings same as above. Labeled "Tenements." Rear building one-story with staircase labeled "Lodgings"
1900	U.S. Census – 915 Stockton. Family 1. Head: Chen Sing, 66, married 30 years, China, immigrated 1857, [no occupation listed], literate, cannot speak English, rents house; Wife [#1]: Lay Gum, 55, married 30 years, 1 of 1 child living, China, immigrated 1865, illiterate, cannot speak English; Wife [#2]: N'Gum Fong, 28, married 14 years, 1 of 1 child living, China, immigrated 1878, illiterate, cannot speak English; Son: Chen Sung, 7, CA, parents China, at school Lodgers: Leung Chaung, 52, married 22 years, immigrated 1882, basket weaver, unemployed 6 months, literate, cannot speak English; Joung Moi, 49, widowed, immigrated 1873, printmaker, unemployed 4 months, literate, can speak English; all Chinese, male, China (ED 219, Sheet 4A) Family 2. Head: Ah Young, 45, single, immigrated 1873, laborer, unemployed 6 months, literate, cannot speak English, rents house Lodgers: Young Kim, 53, married 34 years, immigrated 1870, laborer, unemployed 6 months, literate, cannot speak English; Young Jaw, 34, single, immigrated 1874, junk shop, unemployed 2 months, literate, cannot speak English; Moon Juong, 57, single, immigrated 1854, junk shop, unemployed 2 months, literate, cannot speak English; Young Chun, 53, single, immigrated 1869, laborer, unemployed 6 months, literate, cannot speak English; Wong Sing, 44, married 25 years, immigrated 1867, [no occupation listed], literate, can speak English; Chew Heng, 50, married 20 years, immigrated 1880, cook, can read but not write, cannot speak English; all Chinese, male, China (ED 219, Sheet 4A)

Documentary Research Table, 915 [935-949] Stockton (continued)

1900	Lodgers: Lee Sung, 49, married 25 years, immigrated 1875, agent-employee, unemployed [illegible] months, literate, can speak English; Wong Sue, 57, single, immigrated unknown date, laborer, unemployed 4? months, literate, cannot speak English; Lee Mong, Chinese, 47, single, immigrated 1870, cook, unemployed 2 months, literate, can speak English, rents house; all Chinese, male, China [Additions to household listed on ED 279, Sheets 7B-8A)
1905	Sanborn Map – Two story brick building with skylight. Windows at rear on both floors. "Tenements" is labeled across 915 and 917 Stockton. Single story wood framed building at back of lot labeled "Lodgings"
1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1910	San Francisco Telephone Directory – Hop Wo Co. Assn., 915 Stockton; The Youth Weekly, 915 Stockton
1910	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Excelsior Cigar, 943 Stockton; Jung Hong & Co., dyeing & cleaning, 947 Stockton; Union Pacific Restaurant, 949 Stockton; [addresses 911-1/2-919 change to 935-949 sometime during 1910]
1913	Sanborn Map – [935-949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1920	San Francisco Telephone Directory – Jone Sai Co., merchant, 935 Stockton; Lee Chong Lung, merchant, 937 Stockton; Man Fung Lung & Co., merchant, 949 Stockton
1930	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Chau & Jue, employment, 943 Stockton; Sing Lung & Co., laundry, 945 Stockton
1948	Sanborn Map – [935-949 Stockton Street] Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

917 [935–949] STOCKTON STREET**ABSTRACT**

Building:

- 1852/53 Rectangular building at front of lot
- 1857/59 Two small rectangular buildings at center and rear of lot
- 1887 23 × 60 ft. lot. Front building 23 × 40 ft., set back 3 ft. from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. Small outbuilding with attached staircase. Two small one-story buildings and one small two-story building at rear of lot
- 1899 Lot same dimensions. Front building, attached outbuilding, and staircase same as above. Labeled "Tenements." One-story building at rear. Two-story rear building shown as one-story
- 1905 Lot same dimensions. Front building 23 × 40 ft., set back 3 ft. from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. "Tenements" labeled across 915 and 917 Stockton. No longer any attachments or additional structures on lot.
- 1913 [935–949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
- 1948 [935–949 Stockton Street] – Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

Residents/Occupation/Use:

- 1867 George Albert Low, merchant
- 1880–1885 Francois Angonett, laundry keeper, and his family
- 1900 Two Chinese "Family" Groups: 1. Young Yer, a sewing machine operator, and his wife; 2. Inan Yin, a cigar maker; his wife, two partners, both pant makers; and a lodger who is a servant
- 1910 Mixed commercial use [911-1/2–925 become 935–949]
- 1913–1948 Mixed commercial use

Ownership:

- 1894 Jas Freeborn
- 1906 Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
- 1909 Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]

DOCUMENTARY TIME LINE

- 1852/53 **U.S. Coast Survey** – Rectangular building at front of lot
- 1857/59 **U.S. Coast Survey** – Two small rectangular buildings at center and rear of lot

Documentary Research Table, 917 [935–949] Stockton (continued)

1867	Voter Register – Low, George Albert, 32, NY, merchant, 917 Stockton, registered June 24, 1866
1880	U.S. Census – 917 Stockton. Angonnett Family. Head: Francois, 54, married, keeps laundry, France; Wife: Benita, 41, married, keeping house, Chile; Daughters: Mary 21 at home, rheumatism; Clara, 19, at home; Martha, 11, at home; Benita, 18, at home; Charlotte, 13, at school; all CA; Sons: Frank, 16, at home; Charles, 10, at school; Bernard, 8, attended school during census year; all CA (ED 51, Page 3)
1880	City Directory – Mrs. Benita Angonnet, laundry, 811 Stockton
1882	City Directory – Mrs. B Angonnet, French laundry, 917 Stockton; Frank Angonnet, laundryman, r. 917 Stockton; Frank Angonnet Jr., clerk, r. 917 Stockton
1883	City Directory – Mrs. Benetta Angonnet—same as previous; Frank P. Angonnet—same as previous; Frank P. Angonnet Jr.—same as previous; Miss Lottie Angonnet, r. 917 Stockton
1884	City Directory – Benita Angonnet, laundress, r. 917 Stockton; Frank P. Angonnet—same as previous; Frank Angonnet Jr.—same as previous; Miss Lottie Angonnet, dressmaker, 917 Stockton; Mrs. Mary Angonnet, hair dresser, r. 917 Stockton; dressmakers, Lottie Angonnet, 917 Stockton; laundries, Frank P. Angonnet, 917 Stockton
1885	City Directory – Frank, Frank Jr. and Lottie Angonnet, 927 Washington, rear
1886	City Directory – no listing for 917 Washington
1887	Sanborn Map – 23 × 60 ft. lot. Front building 23 × 40 ft., set back 3 ft. from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. Small outbuilding with attached staircase. Two small one-story buildings and one small two-story building at rear of lot
1899	Sanborn Map – Lot same dimensions. Front building, attached outbuilding, and staircase same as above. Labeled “Tenements.” One-story building at rear. Two-story rear building shown as one-story
1889–1890	City Directory – Address not listed
1890	Voter Register – Address not listed
1894	Block Book – Jas Freeborn [large parcel including 911-1/2–925 Stockton and 907–911 Washington]
1900	U.S. Census – 917 Stockton. Family 1. Head: Young Yer, 42, married 24 years, immigrated 1879, sewing machine operator, unemployed 4 months, literate, cannot speak English, rents house; Wife: Choy Gum, 51, married 24 years, 1 of 1 child living, immigrated 1877, illiterate, cannot speak English; both Chinese, China Family 2. Head: Inan Yim, 44, married 10 years, immigrated 1882, cigar maker, unemployed 4 months, illiterate, cannot speak English, rents house; Wife: Dai Nimm, 30, married 10 years, no children, immigrated 1884, illiterate, cannot speak English; Partners: Ho Young, 16, single, immigrated 1898, pant maker, unemployed 7 months, literate, cannot speak English, rents [sic?]; Chen Juen, 31, married unknown years, immigrated 1890, pants maker, unemployed 7 months, literate, can speak English; all Chinese, China (ED 219, Sheet 4A) Lodger: Chen Wai, Chinese, male, 15, single, CA, parents China, servant, literate, cannot speak English (ED 279, Sheet 7B)

Documentary Research Table, 917 [935–949] Stockton (continued)

1905	Sanborn Map – Lot same dimensions. Front building 23 × 40 ft., set back 3 ft. from sidewalk. Two stories with skylight on upper floor and rear windows on both floors. “Tenements” labeled across 915 and 917 Stockton. No longer any attachments or additional structures on lot.
1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1910	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Excelsior Cigar, 943 Stockton; Jung Hong & Co., dyeing & cleaning, 947 Stockton; Union Pacific Restaurant, 949 Stockton; [addresses 911-1/2–919 change to 935–949 sometime during 1910]
1913	Sanborn Map – [935–949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled “Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore].” Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1920	San Francisco Telephone Directory – Jone Sai Co., merchant, 935 Stockton; Lee Chong Lung, merchant, 937 Stockton; Man Fung Lung & Co., merchant, 949 Stockton;
1930	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Chau & Jue, employment, 943 Stockton; Sing Lung & Co., laundry, 945 Stockton
1948	Sanborn Map – [935–949 Stockton Street] – Same building as above. All “S[tore],” except 943/945 labeled “Chine Laundry”

919 [919-921; 923; 925; 935-949] STOCKTON STREET**ABSTRACT****Building:**

- 1852/53 Rectangular building
- 1857/59 Large L-shaped building
- 1887 [919 Stockton] – 55 × 60 ft. lot. Front building (55 × 40 ft.) divided into three sections. Three stories with ground level stores. Front porch on second floor. Windows on all three floors in rear and ground level street side. Labeled "Chinese Tenements." Three small one-story and one two-story building at rear
- 1899 Lot same dimensions. Same front building with staircase between two sections. Labeled "3rd Partly Furred. Lodgings"
- 1905 Lot same dimensions. Same front building with staircase between two sections. Labeled "3rd Partly Furred. Lodgings". The section on the corner of Stockton and Washington is labeled "Rest". The section to the south is a store labeled "Clo. Fac." The last section is a store labeled "Shoe Fac."
- 1913 [935-949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled "Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore]." Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
- 1948 [935-949 Stockton Street] – Same building as above. All "S[tore]," except 943/945 labeled "Chine Laundry"

Residents/Occupation/Use:

- 1879-1883 919 Stockton. "Normandie" Lodging House run by Albert Thiesse; occupants are multi-national, but not Chinese, with a wide range of occupations
- 1880 921 Stockton. Martin D. Meyer, retail grocer, and lodger, a store clerk
- 1880-1881 SW cor Stockton & Washington. Matthias D. Meyer, groceries & liquors
- 1882-1884 SW cor Stockton & Washington. Meyer & Wiebusch, groceries and liquors,
- 1885 SW cor Stockton & Washington. Otto Sagebiel, groceries-retail
- 1886-1895 SW cor Stockton & Washington. John F. Zierenberg, groceries & liquors; John A Schroder also listed as a grocer from 1889-1893; [possible address change by 1892. First floor corner lot designated as 923? Tenements on second floor 919, 921, and 925?]
- 1890 923 Stockton. Christian Haas, clerk, resident
- 1896-1897 923 Stockton. John A. Schroeder, groceries-retail
- 1900 919-925 Stockton. Chinese tenements containing numerous families, some with children; many lodgers; occupations include shoemakers, seamstresses, sewing machine operators, cannery workers, cooks, and laborers
- 1905 921 Stockton. Quong On, pants maker
- 1910 Mixed commercial use [911-1/2-925 become 935-949]
- 1913-1948 Mixed commercial use

Documentary Research Table, 919 [919-921; 923; 925; 935-949] Stockton (continued)**Ownership:**

1894	Jas Freeborn
1906	Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1909	Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]

DOCUMENTARY TIME LINE

1852/53	U.S. Coast Survey – Rectangular building
1857/59	U.S. Coast Survey – Large L-shaped building
1867	Voter Register – Address not listed
1879	City Directory – [Under Lodging] John Thiesse (Normandie House) 919 Stockton
1880	U.S. Census – <u>919 Stockton. Thiesse Family. Head:</u> Albert John?, 36, married, keeps lodging house, France; [Wife?] [was listed under lodgers in the middle of the list]: Lucy C. Thiesse, 40, married, seamstress, Mexico; Lodgers: Adrian Tence, 58, single, watchmaker, France; Matthew Wilson, 36, single, printer, France; Charles Bush, 21, single, tinner, OH; Ernest Zimmerman, 38, widowed, musician, England, parents Prussia; Rey Castillo, 48, single, fortune teller, Peru; William A. Cella, 21, single, painter, CA, father France; George B. Eastman, 26, widowed, painter, Prussia; Margaret Mahenney, 21, single, seamstress, CA, parents Ireland; William Mallett, 48, single, shoemaker, Canada, parents France; Edward J. Bolin, 32?, single, labor, NY, parents Ireland; James Ryan, 27, married, lawyer, NY, parents Ireland; George Gresel, 28, single, machinist, France; John Cradelbauch 40, widowed, merchant, Prussia; Paschilla Olney, female, 25, married, lodger, Mexico; Sons: [of lodger, not Thiesse]: James Olney, 7, attended school during census year; William B. Olney, 5; both CA, parents Mexico (ED 51, Page 7) <u>921 Stockton. Meyer Family. Head:</u> Martin D., 39, married, retail grocer, Prussia; Lodger: Henry Wiebusch, 38, single, clerk in store, Hanover (ED 51, Page 3)
1880	City Directory – Albert Thiesse, furnished rooms, 919 Stockton; Lodgings – Albert Thiesse, 919 Stockton Matthias D. Meyer, groceries & liquors, SW cor Stockton & Washington, r. 913 Greenwich; Henry Wiebusch, clerk M.D. Meyer, r. 901 Washington; [lodging second floor, grocery on first floor]
1881	City Directory – Albert Thiesse, propr Normandie Lodging House, 919 Stockton; Matthias D. Meyer—same as previous; no listing for Henry Wiebusch
1882-1883	City Directory – Albert Thiesse: same as previous, Matthias D. Meyer (Meyer & Wiebusch) and groceries and liquors, SW cor Stockton & Washington, r. 2001 Taylor; Meyer & Wiebusch (Matthias D. Meyer and Henry Wiebusch) groceries & liquors, 1525 Mission; Henry Wiebusch (Meyer & Wiebusch) r. 1525 Mission; grocers-retail, Matthias D. Meyer, SW cor Stockton & Washington; Meyer & Wiebusch, 1525 Mission
1884	City Directory – Matthias D. Meyer: same as previous; Meyer & Wiebusch: same as previous; Henry Wiebusch: same as previous; no listing for exact address; Albert Thiesse, French Ben. Soc., 510 Jackson
1885	City Directory – Otto Sagebiel, groceries-retail, SW cor Stockton & Washington; no listing for exact address

Documentary Research Table, 919 [919-921; 923; 925; 935-949] Stockton (continued)

1886	City Directory – John F. Zierenberg, groceries & liquors, SW cor Washington & Stockton, r. 3 Hopeton Terrace; no listing for 919 Stockton
1887	Sanborn Map – [919 Stockton] – 55 × 60 ft. lot. Front building (55 × 40 ft.) divided into three sections. Three stories with ground-level stores. Front porch on second floor. Windows on all three floors in rear and ground level street side. Labeled “Chinese Tenements.” Three small one-story and one two-story building at rear
1887–1888	City Directory – John F. Zierenberg, groceries & liquors, SW cor Washington & Stockton; no listing for exact address
1889	City Directory – John A Schroder, groceries & liquors, SW cor Washington & Stockton; groceries-retail, John F. Zierenberg, SW cor Washington & Stockton; no listing for exact address
1890	City Directory – John A Schroder: same as previous; Christian Haas, clerk J. A. Schroder, r. 923 Stockton
1890	Voter Register – Address not listed
1892	City Directory – John A. Schroder, groceries & liquors, 923 Stockton, r. 812 Jackson [first floor corner lot designated as 923? Tenements on second floor 919, 921, and 925?]
1893	City Directory – groceries-retail, John A. Schroder, SW cor Washington & Stockton; groceries-retail, John F. Zierenberg, 923 Stockton
1894	City Directory – John F. Zierenberg, groceries, 923 Stockton
1894	Block Book – Jas Freeborn [large parcel including 911-1/2–925 Stockton and 907–911 Washington]
1895	City Directory – John F. Zierenberg, groceries & liquors, 923 Stockton; cigars – manufacturers & dealers, Lee You, 921 Stockton
1896–1897	City Directory – groceries-retail, John A. Schroeder, 923 Stockton
1898–1899	City Directory – no listing for 919, 921, 923, or 925 Stockton
1899	Sanborn Map – Lot same dimensions. Same front building with staircase between two sections. Labeled “3rd Partly Furred. Lodgings”
1900	U.S. Census – <u>919 Stockton</u> . Family 1. Head: Wong Fung Chung, 35, married 2 years, immigrated 1877, dealer shoes, literate, can speak English, rents house; Wife: Ho She, 19, married 2 years, no children, immigrated 1896, illiterate, cannot speak English; both Chinese, China Lodgers: Wong Ping, 34, married 12 years, immigrated 1879, shoemaker, unemployed 2 months, literate, cannot speak English; Wong Lock, 51, married 35 years, immigrated 1875, shoemaker, unemployed 2 months, literate, can speak English; Wong Sum, 30, married 12 years, immigrated 1879, cook, literate, cannot speak English; all Chinese, male, China Family 2. Head: Young Lung, Chinese, male, 49, married 30 years, China, immigrated 1875, wood dealer, literate, cannot speak English, rents house; Partners: Young Duck, 50, married 33 years, immigrated 1881, laborer cannery, unemployed 6 months, literate, cannot speak English; Young Ler, 28, single, immigrated 1879, laborer cannery, unemployed 1 month, literate, can speak English; both Chinese, male, China

Documentary Research Table, 919 [919-921; 923; 925; 935-949] Stockton (continued)

1900	<p>Lodgers: Wong Ting, female, 54, widowed, 1 of 1 child living, immigrated 1860, illiterate, cannot speak English; Suey Won, female, 27, widowed, no children, immigrated 1885, seamstress, unemployed 6 months, illiterate, cannot speak English; Look Yuk, 43, married 15 years, immigrated 1882, cook, illiterate, cannot speak English; all Chinese, China (ED 219, Sheet 4A)</p>
1900	<p>U.S. Census – 921 Stockton. Family 1. Head: Won Duck Yuk?, Chinese, male, 39, married 22 years, China, immigrated 1882, sewing machine operator, literate, cannot speak English, rents house; Partners: Won More, 35, married 12 years, immigrated 1871, sewing machine operator, literate, cannot speak English; Chen Yue, 49, single, immigrated 1865, cigar maker, unemployed 7 months, illiterate, cannot speak English; Cheng Morie, 44, single, immigrated 1874, cook, unemployed 5 months, literate, can speak English; all Chinese, male, China (ED 279, Sheets 3A-3B)</p> <p>Family 2. Head: Lee Yew, 37, married 6 years, immigrated 1890, laborer canning, unemployed 7 months, literate, cannot speak English, rents house; Wife: Chun Ho, 22, no children, immigrated 1891, illiterate, cannot speak English; both Chinese, China</p> <p>Family 3. Head: Yem Kow, 48, married 26 years, immigrated 1869, provision dealer, literate, can speak English, rents house; Wife: Ho She, 39, no children, immigrated 1880, illiterate, cannot speak English; both Chinese, China</p> <p>Family 4. Head: Tong Che, 39, married 10 years, immigrated 1886, sewing machine operator, unemployed 6 months, literate, cannot speak English, rents house; Wife: Chen Shea, 35, no children, immigrated 1885, seamstress, unemployed 6 months, illiterate, cannot speak English; both Chinese, China</p> <p>Lodgers: Lau Foon, 34, married 15 years, immigrated 1898, restaurant keeper, literate, cannot speak English; Won Ling, 44, married 23 years, immigrated 1881, car maker, unemployed 6 months, literate, cannot speak English; So Duck, 52, single, immigrated 1881, sewing machine operator, unemployed 6 months, literate, cannot speak English; Lee Fuey Hung, 37, single, 1881, laborer, unemployed 2 months, literate, cannot speak English; Lee Chong, 44, married 20 years, immigrated 1872, laborer, unemployed 12 months, illiterate, cannot speak English; Wo Ging, 46, married 15 years, immigrated 1876, cigar maker, unemployed 6 months, illiterate, cannot speak English; Lee Neu, 45, married 18 years, immigrated 1876, cigar maker, unemployed 4 months, literate, cannot speak English; Woo Yow, 48, single, immigrated 1858, cigar maker, unemployed 4 months, literate, cannot speak English; N'G Duck, 41, single, immigrated 1879, cigar maker, unemployed 4 months, illiterate, cannot speak English; all Chinese, male, China; Lee Yow Juong, Chinese, male, 28, married 10 years, CA, parents China, cook, unemployed 6 months, literate, can speak English</p> <p>Family 5. Head: Juen Sin, 46, married 25 years, immigrated 1881, cigar maker, unemployed 1 month, literate, cannot speak English, rents house; Partners: Yee Sing, 48, married 30 years, immigrated 1874, cigar maker, unemployed 4 months, literate, cannot speak English; Lee Chy, 45, single, immigrated 1876, laborer, unemployed unknown months, Lee Yee, 44, single, immigrated 1872, cook, unemployed 2 months, literate, can speak English; Chew N'Gook, 35, single, immigrated 1890, cook, literate, cannot speak English; all Chinese, male, China (ED 279, Sheets 3A-3B)</p> <p>Family 6. Head: He? Wing, Chinese, male, 30, married 5 years, China, immigrated 1872, laundry man, unemployed two months, literate, cannot speak English, rents house; Partners: Lee Young, 33, single, immigrated 1882, laundry man, unemployed 2 months, illiterate, cannot speak English; Lee Bing, 33, single, immigrated 1881, cook, literate, can speak English</p>

Documentary Research Table, 919 [919-921; 923; 925; 935-949] Stockton (continued)

1900	Family 7. Head: Leen Yow, Chinese, female, 36, married 21 years, 3 of 8 children living, China, immigrated 1870, seamstress, unemployed 6 months, illiterate, rents house; Sons: Lan So, 11, illiterate, cannot speak English; Lan Fook, 2; both Chinese, CA, parents China; Daughter: Leen, Seen, Chinese, 6, CA, parents China; Lodger: Ler Chick Sai, 47, married 38 years, China, immigrated 1868, cigar maker, literate, cannot speak English (ED 279, Sheet 3B)
1900	U.S. Census – 925 Stockton. Family 1. Head: Fong Shek, Chinese, male, 45, married 15 years, China, immigrated 1868, restaurant proprietor, literate, cannot speak English, rents house; Partners: Fong Wai, 19, single, immigrated 1896, waiter, literate, cannot speak English; Fong Wing, 29, single, immigrated 1894, cook, illiterate, cannot speak English; Fong Horn, 27, married 8 years, immigrated 1894, dishwasher, literate, can speak English; Mah Shen, 47, married 25 years, immigrated 1877, delivery clerk, literate, cannot speak English; Chew Juong, 31, single, immigrated 1889, cashier restaurant, literate, can speak English; Fong Won Yew, 55, married 28 years, immigrated 1873, cook, illiterate, cannot speak English; all Chinese, male, China (EDT 79, Sheet 3A)
1905	San Francisco Telephone Directory – Quong On, pants maker, 921 Stockton
1905	Sanborn Map – Lot same dimensions. Same front building with staircase between two sections. Labeled “3rd Partly Furred. Lodgings”. The section on the corner of Stockton and Washington is labeled “Rest”. The section to the south is a store labeled “Clo. Fac.” The last section is a store labeled “Shoe Fac.”
1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2-925 Stockton and 905-911 Washington]
1910	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Excelsior Cigar, 943 Stockton; Jung Hong & Co., dyeing & cleaning, 947 Stockton; Union Pacific Restaurant, 949 Stockton; [addresses 911-1/2-919 change to 935-949 sometime during 1910]
1913	Sanborn Map – [935-949 Stockton Street] – 140 × 60 ft. two-story building subdivided into eight approximately 18-ft. sections. From south to north, sections are labeled “Shoe Factory, Chine Laundry, Junk, S[tore], S[tore], Junk, S[tore], and S[tore].” Section labeled laundry has one-story addition at rear. Second store from north has small subdivided section in front designated as dwelling
1920	San Francisco Telephone Directory – Jone Sai Co., merchant, 935 Stockton; Lee Chong Lung, merchant, 937 Stockton; Man Fung Lung & Co., merchant, 949 Stockton;
1930	San Francisco Telephone Directory – Lee Chong Lung, merchant, 937 Stockton; Chau & Jue, employment, 943 Stockton; Sing Lung & Co., laundry, 945 Stockton
1948	Sanborn Map – [935-949 Stockton Street] – Same building as above. All “S[tore],” except 943/945 labeled “Chine Laundry”

907 [903-905] WASHINGTON STREET**ABSTRACT**

Building:

1852/53	No building shown
1857/59	Large rectangular building
1887	30 × 80 lot. Two buildings. Front building two stories with partitioned office space. Porch facing street on second floor. Rear building one story. Labeled "Wood and Coal." Brick wall separating lot from adjacent 919–925 Stockton Street
1899	Lot same dimension. Same front building as above labeled "Old Coal and Wood." Brick construction. Rear building divided. Front two stories labeled "Hay Loft 2nd."; rear one and a half stories designated as stable
1905	Address changed to 905. Lot same dimension. Same front building as above labeled "Old Coal and Wood." Wood framed structure. Rear building divided. Front two stories labeled "Hay Loft 2nd."; rear one and a half stories designated as stable. East wall of back building labeled "iron clad"
1913	[903 & 905 Washington] – Two eastern sections of a larger one-story building. 903 Washington (16 × 50 ft.) labeled "Clo Factory," shows three skylights. Walkway space between building and adjacent Stockton Street building. 905 Washington (12 × 50 ft.) labeled "Chine Laundry," with a rear L-shaped one-story addition
1948	[903 Washington] – One-story (15 × 50 ft.) store with three skylights

Residents/Occupation/Use:

1879–1904	907 Washington. Wood and Coal Yard; residence of various Italians who work at the business
1905	Address changed to 905
1910	903 Washington. Sing Hop [address changed to 903 and 905]
1913	Factory; Chinese Laundry
1930–1932	905 Washington. Charles Chun family – Chinese American from Hawaii, 2 sons and 2 daughters; Charles Chun, father, insurance; Lou Choy, mother, Linn[g] Hink[g] candy store keeper located at 905 Washington
1948	Store

Ownership:

1894	Jas Freeborn
1906	Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1909	Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]

DOCUMENTARY TIME LINE

1852/53	U.S. Coast Survey – No building shown
1857/59	U.S. Coast Survey – Large rectangular building

Documentary Research Table, 907 [903-905] Washington (continued)

1862–1864	City Directory – James Smith, Eureka Wood and Coal Yard S s[ide] Washington between Stockton and Powell
1865	City Directory – Thomas Horabin, wood and coal, S s[ide] Washington near Stockton
1867	City Directory – Thomas Horabin, wood and coal, 903 Washington
1867	Voter Register – Address not listed
1868–1874	City Directory – Thomas Horabin, wood and coal, 907 Washington
1875–1876	City Directory – Alessio Coli (Alessio Coli & Co.) dwl. 907 Washington; Alessio Coli & Co. (A. Coli & A. Quilice) wood and coal 907 Washington; Alfonso Quilice (Alessio Coli & Co.) dwl. 907 Washington
1877	City Directory – Alesio Coli: same as previous year but different spelling; A. Coli & Co.—same as previous; Alfonso Quilici: same as previous but different spelling; Annanin Quilici, saloon, 306 Montgomery, r. 907 Washington
1878	City Directory – no listing in Wood and Coal for 907 Washington; no listing for A. Coli or A. Quilici; Casciani & Co. wood & coal 970 Washington (most likely 907 Washington—no 970 address exists on 1887 Sanborn)
1879	City Directory – Salvatore Casciani (Casciani & Co.) r. 907 Washington; Casciani & Co. (Salvatore Casciani & A. Quilici) Wood & Coal 907 Washington
1880	U.S. Census – 907 Washington. Casciani Family: Head: Salvatore, 23, single, coal dealer; Lodger: Alessio Coli, 40, single, coal dealer, Italy; Servant: Augustus Valentina, 16, laborer, Italy (ED 51, Page 3)
1880	City Directory – Salvator Casciani, wood & coal, 907 Washington
1881	City Directory – Salvdor Casciani (Casciani & Co.) r. 907 Washington; Casciani & Co. (Salvador Casciani & Alessio Coli), wood & coal, 907 Washington; Alessio Coli (Casciani & Co.) r. 907 Washington
1882–1883	City Directory – Salvatore Casciani, coal dealer, r.907 Washington; Alessio Coli (A. Coli & Co.) r. 907 Washington; A. Coli & Co. (Alesio Coli & Bartolomeo Coli) wood & coal, 907 Washington; Bartolomeo Col (A. Coli & Co.) r. 907 Washington
1884	City Directory – Alessio Coli (A. Coli & Co.) r. 907 Washington; A. Coli & Co. (Alessio Coli & Joseph Roccatagliata) wood & coal, 907 Washington; Joseph Roccatagliata (A. Coli & Co.) r. 907 Washington
1885	City Directory – Alessio Coli—same as previous; A. Coli & Co.—same as previous; Giuseppe Roccatagliata—same as previous but Giuseppe instead of Joseph
1886	City Directory – Alessio Coli—same as previous; A. Coli & Co.—same as previous; Giuseppe Roccatagliata—same as previous; G.B. Roccatagliata (M.J. Lynch & Co.) r. 907 Washington
1887	City Directory – same as previous with the addition of Frank Roccatagliata (F. Roccatagliata & Co.) r. 907 Washington and G.B. (Giovanni B.) Roccatagliata no longer a resident of 907 Washington
1887	Sanborn Map – 30 × 80 ft. Two buildings. Front building two stories with partitioned office space. Porch facing street on second floor. Rear building one story. Labeled "Wood and Coal." Brick wall separating lot from adjacent 919–925 Stockton Street
1888	City Directory – same as previous but Frank Roccatagliata no longer listed as a resident

Documentary Research Table, 907 [903-905] Washington (continued)

1888/89	Southern Pacific Coast Business Directory – wood & coal: A. Coli & Co., 907 Washington
1889–1890	City Directory – Giuseppe Roccatagliata, wood and coal 907 Washington
1890	Voter Register – Cogniacci, Lorenzo, 23, Italy, laborer, 907 Washington, naturalized 22 May 1888, San Mateo CA, Sup., registered 15 October 1890; Roccatagliato, Joseph, 31, Italy, wood & coal, 907 Washington, naturalized 7 August 1884, S.F. CA, 12th Sup., 29 August 1890 (District 32 – Precinct 12)
1891	City Directory – A. Moni & Co. (Andrew Moni & Libero Pocai) wood & coal, 907 Washington; Andrew Moni (A. Moni & Co.) r. 806 Vallejo; Libero Pocai (A. Moni & Co.) r. 806 Vallejo
1892–1894	City Directory – A. Moni & Co. (Andrew Moni & Peter Simi) wood & coal, 907 Washington; Andrew Moni (A. Moni & Co.) r. 907 Washington; Peter Simi (A. Moni & Co.) r. 907 Washington [Peter changed to Pietro in 1894]
1894	Block Book – Jas Freeborn [large parcel including 911-1/2–925 Stockton and 907–911 Washington]
1895	City Directory – Peter Simi, wood & coal 907 Washington
1896	City Directory – P. Simi & Co. (Peter Simi) wood & coal, 907 Washington; Peter Simi (P. Simi & Co.) r. 907 Washington
1897	City Directory – A. Moni & Co. (Andrew Moni & Libero Pocai) wood & coal 907 Washington; Andrew Moni (A. Moni & Co.) r. 806 Vallejo; Libero Pocai (A. Moni & Co.) r. 806 Vallejo
1898	City Directory – A. Moni & Co. (Andrew Moni & Libero Pocai) wood & coal, 907 Washington; Andrew Moni (A. Moni & Co.) r. 12 Auburn; Libero Pocai (A. Moni & Co.) r. 12 Auburn
1899	City Directory – A. Moni & Co. (Andrew Moni) wood & coal, 907 Washington; Andrew Moni (A. Moni & Co.) r. 907 Washington
1899	Sanborn Map – Lot same dimension. Same front building as above labeled “Old Coal and Wood.” Brick construction. Rear building divided. Front two stories labeled “Hay Loft 2nd.”; rear one and a half stories designated as stable
1900	U.S. Census – 907 Washington. Casanero? Family: Head: Cicu?, 44, married 26 years, Italy, immigrated 1875, alien, driver coal wagon, literate, can speak English, rents house; Partners: Arego Pocai, 18, single, machinist; Jacob Pocai, 20, single, horse shoer; both Italy, immigrated 1896, literate, can speak English (ED 279, Sheet 9A)
1900	City Directory – Andrew Moni, wood & coal, 907 Washington; Jacob Pocai, horseshoer A. Gatto, r. 907 Washington
1901	City Directory – Andrea Moni, wood & coal, 907 Washington, r. 2 Hopeton Terrace
1902	City Directory – A. Moni & Co. (Andrea Moni & Henry Pocai) wood & coal, 907 Washington and 3107 Fillmore; Andrea Moni (A. Moni & Co.) r. 2 Hopeton Terrace; Henry Pocai (A. Moni & Co.) r. 907 Washington
1903	City Directory – A. Moni & Co. (A. Moni & E. & A. Pocai) wood & coal, 907 Washington & 3107 Fillmore; Andrea Moni (A. Moni & Co.) r. 2 Hopeton Terrace; Amadeo Pocai (A. Moni & Co.) r. 907 Washington; Enrico Pocai (A. Moni & Co.) r. 907 Washington

Documentary Research Table, 907 [903-905] Washington (continued)

1904	City Directory – A. Moni & Co. (A. Moni & A. Mecchi) wood & coal, 3107 Fillmore & 907 Washington; Andrea Moni (A. Moni & Co.) r. 2 Hopeton Terrace; Andrew Mecchi (A. Moni & Co.) r. 2208 Filbert
1905	Sanborn Map – Address changed to 905. Lot same dimension. Same front building as above labeled "Old Coal and Wood." Wood framed structure. Rear building divided. Front two stories labeled "Hay Loft 2nd"; rear one and a half stories designated as stable. East wall of back building labeled "iron clad".
1905–1906	City Directory – no listing for 905 Washington
1906	Block Book – Eleanor Freeborn [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1907–1908	City Directory – no listing for 905 Washington
1909	Block Book – Freeborn Estate Co. [large parcel including 911-1/2–925 Stockton and 905–911 Washington]
1910	U.S. Census – 907? [probably next door to 903/905] Washington. Head: Sang Joe, 53, married, Chinese, salesman Chinese general merchandise; King Sen Joe, 45, single, Chinese, restaurant cook; Hong Choy, 41, married, Chinese, agent in office; Lung Sing Joe, 49, single, Chinese, agent in office; Yew Joe, 25, single, b. California, outside laborer; Chew Kong Joe, 35, married, b. California, family cook; Tsu Chong Ng, 42, married, Chinese, family cook; Fook Look Joe, 48, single, Chinese, family cook; Tau Ng, 37, married, Chinese, salesman, fancy goods store; Perk Quon Joe, 33, married, b. California, family cook; Lung Yuen Quon, 41, married, b. California, salesman, fancy goods store.
1910	San Francisco Telephone Directory – Sing Hop, 903 Washington
1913	Sanborn Map – [903 & 905 Washington] – Two eastern sections of a larger one-story building. 903 Washington (16 × 50 ft.) labeled "Clo Factory," shows three skylights. Walkway space between building and adjacent Stockton Street building. 905 Washington (12 × 50 ft.) labeled "Chine Laundry," with a rear L-shaped one-story addition
1930	U.S. Census – [905 Washington] Chun Family. Head: Charles Chun, renter, 40 yrs. old, married at age 25, born in Hawaii, insurance agent; Wife: Lou Choy, 40 yrs. old, married at age 25, born in Hawaii, candy store keeper; Daughter: Alice, 15 yrs. old; Daughter: Francis, 9.5 yrs. old; Son: Joseph L., 7.25 yrs. old; Son: Paul F., 4 yrs. old
1930	City Directory – Linn Hink Co., confectioners-retail, 905 Washington
1931	City Directory – Linn Hink Co., gro, 905 Washington; confectioners – Ling Hing Co., 905 Washington; grocers – Ling Hing Co., 905 Washington
1932	City Directory – Charles K. Chun (Lou), ins agent, r. 905 Washington
1948	Sanborn Map – [903 Washington] – One-story (15 × 50 ft.) store with three skylights

APPENDIX D – MOSCONE STATION DOCUMENTARY RESEARCH TABLE

APPENDIX D

MOSCONE STATION DOCUMENTARY RESEARCH TABLE

307 CLEMENTINA STREET

ABSTRACT

Building:

1852/53	No buildings shown
1857/59	Small square building at rear of lot
1887	25 × 80 ft. lot. Two-story dwelling (20 × 35 ft.) set back 10 ft. from street. One-story addition (10 × 22 ft.) in rear of building. 5-ft. wide alleyway between buildings at adjacent 244–250 Fourth Street
1899	Same as above; [addresses illegible]
1913	Earlier building replaced by 242–250 Fourth Street: 80 × 80 ft. three-story building subdivided into four sections. Corner section (242) designated "Sal[oon]." 244–250 Fourth Street have stores on ground floor. Building labeled "Lodgings Abv." Four street side bay windows. Two long rectangular light shafts
1948	[266–282 Fourth Street] – Same building as above. Corner section (266) designated "Sheet Metal Wks." 270 Fourth labeled "Hotel Off." 274/276 and 280/282 stores on ground floor. Labeled "Lodgings Abv."

Residents/Occupation/Use:

1862–1870	Samuel Abrams
1879–1883	Lazare Levy and family
1889	Nicholas E. Tracey, speculator; John Wilsliw, driver
1890	James Hand; Dennis McCarthy, grocer
1890–1896	James Hand, billiard room worker
1897–1903	Michael Dalton, day laborer, his family, and lodgers
1908–1948	Carlenton Hotel (246/274 4th St.)
1911–22	Richard Donovan, liquors (242/266 4th St.)
1943–48	Theo Filirides, sheet metal worker, 266 4th St.
1913–48	Mixed commercial and residential use

Ownership:

1894	S. Abram
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DOCUMENTARY TIME LINE

1852/53	U.S. Coast Survey – No buildings shown
1857/59	U.S. Coast Survey – Small square building at rear of lot
1859	City Directory – L. Levy, clothing, 20 Sacramento
1860	City Directory – Lazare Levy, clothing 151 Kearny

Documentary Research Table, 307 Clementina (continued)

1860	U.S. Census – Lazare Levy, merchant, 40 yrs. old, France; Amelia Levy, 36 yrs. old, France; Adele Levy, 13 yrs. old, France, attended school within the year; M. Bartholomy, 9 yrs. old, female, France, attended school within the year
1861	City Directory – L. Levy, clothing 615 Kearny
1862	City Directory – Samuel Abrams, office Sacramento, dwl S s[ide] Clementina bet Fourth and Fifth; Lazare Levy, clothing 615 Kearny
1863	City Directory – Samuel Abrams, commission merchant, office 423 Sacramento, dwl S s[ide] Clementina nr Fourth; Lazard Levy, clothing 615 Kearny
1864	City Directory – Samuel Abrams, r. 305 Clementina; Lazard Levy, merchant, dwl 313 Clementina
1865	City Directory – Lazard Levy, merchant, dwl 313 Clementina
1866	City Directory – Abrams (Samuel) & Greenberg (Henry) real estate agents, off 321 Montgomery, dwl 307 Clementina; Lazard Levy, merchant, dwl 313 Clementina
1867	Voter Register – Address not listed
1867	City Directory – Abrams (Samuel) & Greenberg (Henry) real estate agents, office 509 California, dwl 307 Clementina; Lazard Levy, merchant, dwl 313 Clementina
1868	City Directory – Abrams (Samuel) & Greenberg (Henry) real estate agents, office 509 California, dwl 307 Clementina; Lazard Levy, merchant, dwl 313 Clementina; August Straus, rigger, dry dock, Hunter's Point; A. Straus, dwl 429 Bush
1869–1870	City Directory – Abrams (Samuel) & Greenberg (Henry) real estate agents, office 310 Mont, dwl 307 Clementina; Lazard Levy, merchant, dwl 313 Clementina; August Straus, dwl 313 Clementina
1870	U.S. Census –Lozer [Lazar] Levy, 52, huckster, France; Emily Levy, 50, keeping house, France; Maline Bartholomy, 18, at home, California; Adell[e] Srtrafs [Straus]
1871	City Directory – Lazard Levy, merchant, dwl 307 Clementina; Mrs. Adele Straus, dwl 307 Clementina
1873	City Directory – Lazard Levy, merchant, dwl 307 Clementina
1874	City Directory – Lazard Levy, merchant, dwl 307 Clementina
1875	City Directory – Lazard Levy, merchant, dwl 307 Clementina; August Straus, jeweler, dwl 307 Clementina
1876	City Directory – Lazard Levy, merchant, dwl 307 Clementina; August Straus, jeweler, 427 Kearny, dwl 307 Clementina
1877	City Directory – Lazar Levy, r. 307 Clementina; A. Straus, watchmkr, 427 Kearny, r. 307 Clementina
1878	City Directory – Lazard Levy, dwl 307 Clementina; August Straus, watchmaker and jeweler, 427 Kearny, dwl 307 Clementina, bet Fourth and Fifth; Joseph A. Armitage, carpenter, dwl 307 Clementina
1879	City Directory – Lazare Levy r. 307 Clementina; August Straus, watchmaker and jeweler, 427 Kearny, r. 307 Clementina

Documentary Research Table, 307 Clementina (continued)

1880	U.S. Census – 307 Clementina. Levy Family. Head: Lazare, 60, married, at home, cataract, France; Wife: Emily, 60, married, keeping house, France; Son-in-Law: August Strauss, 46, married, jewelry store, Belgium, mother France; Daughter: Adele Strauss, 33, married, keeping house, France; Granddaughter: Emily, 9; at school, CA; Grandson: August, 7, at school, CA; Servant: Maxine Carrerre, 27, single, domestic, France; Sister-in-law: Josephine Strauss, 32, single, teacher, Belgium (ED 126, Page 21)
1880	City Directory – Lazard Levy, r. 307 Clementina; August Straus, watchmaker 427 Kearny, r. 307 Clem.
1881	City Directory – Lazard Levy, r. 307 Clementina; August Straus, watchmaker and jeweler 427 Kearny, r. 307 Clementina
1882	City Directory – Lazard Levy, r. 307 Clementina; August Straus, watchmaker and jeweler, 207 Montgomery, r. 307 Clementina
1883	City Directory – Lazard Levy, r. 307 Clementina; August Straus, watchmaker and jeweler, 207 Montgomery, r. 307 Clementina
1884	City Directory – Lazard Levy, merchant, r. 591 Ellis; August Straus, practical watchmaker, and dealer watches, clocks, diamonds, jewelry and silverware, 207 Montgomery, r. 591 Ellis
1884	City Directory – Lazard Levy has relocated: (merchant, r. 591 Ellis)
1887	Sanborn Map – 25 × 80 ft. lot. Two-story dwelling (20 × 35 ft.) set back 10 ft. from street. One-story addition (10 × 22 ft.) in rear of building. 5-ft.-wide alleyway between buildings at adjacent 244–250 Fourth Street
1889	City Directory – Nicholas E. Tracey, speculator; John Wilsliw, driver City SR.; both r. 307 Clementina
1890	City Directory – James Hand r. 307 Clementina
1890	Voter Register – Hand, James William, 33, MO, occtl. [sic?] bar rm., 307 Clementina, registered 14 October 1890; McCarthy, Dennis, 22, Ireland, grocer, 307 Clementina, naturalized 23 July 1890, S.F. CA, Dept. 7, registered 15 September 1890 (District 36 – Precinct 11)
1892	City Directory – J.W. Hand, r. 307 Clementina; Dennis McCarthy, clerk, r. 307
1894	City Directory – James W. Hand, billiard rooms, The California Hotel, r. 307 Clementina
1894	Block Book – S. Abram [part of parcel including 244–250-1/2 Fourth Street and 307 Clementina]
1895	City Directory – (James W. Hand, manager billiard room Occidental Hotel, r. 350 Clementina)
1896	City Directory – (James W. Hand, billiard marker Occidental Hotel, r. 314 3/4 Clementina)
1897	City Directory – Michael Dalton, longshoreman, r. 307 Clementina
1898	City Directory – Michael Dalton, porter, r. 307 Clementina
1899	City Directory – Michael Dalton, laborer, r. 307 Clementina
1899	Sanborn Map – Same as above; [addresses illegible]

Documentary Research Table, 307 Clementina (continued)

1900	U.S. Census – 307 Clementina Dalton Family: Head: Michael, 65, married 21 years, Ireland, immigrated 1892, naturalized, day laborer, rents house; Wife: Margaret, 60, 3 of 3 children living, England, parents Ireland, immigrated 1891 Lodgers: Michael Sullivan, 35, single, Ireland, immigrated 1894, first papers for naturalization, horseshoer (blacksmith); Joseph Smith, 36; single, MN, parents England, blacksmith; William Hesseran, 61, widowed, Ireland, immigrated 1870, naturalized, saloonkeeper; [Wife]: Katie Hesseran, 24, single, NV, parents Ireland (ED 23, Sheet 8A)
1901–1903	City Directory – Michael Dalton, lab., r. 307 Clementina
1908–1909	City Directory – Julien Guizard, propr Hotel Carlenton, 246 4th; Carlenton Hotel (House), lodgings, 246 4th
1910	City Directory – Julian Guizard, propr Hotel Carlenton, 246 4th; Henry Hug, sausagemkr, r. 246 4th; Herman Koppelow, with Palace Hotel, r. 246 4th; Eben Larson, cook, r. 246 4th; Frank J. Paytavay, candymkr, r. 246 4th; Harold Simpson, porter, r. 246 4th
1911–1912	City Directory – Richard Donovan, liquors, 242 4th; Carlenton Hotel, Julian Guizard, propr, 246 4th
1913	Sanborn Map – Earlier building replaced by 242–250 Fourth Street: 80 × 80 ft. three-story building subdivided into four sections. Corner section (242) designated "Sal[oon]." 244–250 Fourth Street stores on ground floor. Building labeled "Lodgings Abv." Four street-side bay windows. Two long rectangular light shafts
1913–1914	City Directory – Richard Donovan, liquors, 242 4th; Carlenton Hotel, 246 4th
1915–1919	City Directory – Richard Donovan, liquors, 266 4th, r. 274 4th; Hotel Carle[n]ton, 274 4th
1920–1922	City Directory – Richard Donovan, refreshments, 266 4th, r. 274 4th; Carle[n]ton Hotel, 274 4th ; Carlenton Hotel, 274 4th
1923	City Directory – Carle[n]ton Hotel, 274 4th; Guizard Julien (Carle[n]ton Hotel) r 274 4th; Charles Anderson, janitor, r. 274 4th; Julian Guizard (Martha) (Universal Hotel) r. 274 4th; Jacob Holcenberg (Bertha), men's furn, 156 Embarcadero, r. 274 4th Av; Charles H Whitworth, teller, Humboldt Savings Bank, r. 274 4th
1924	City Directory – Carle[n]ton Hotel, 274 4th;
1927–1929	City Directory – Carlenton Hotel, 274 4th (Amedee Jonis 1927)
1933–1938	City Directory – Carlenton Hotel, 274 4th
1940–1942	City Directory – Hotel Carle[n]ton/Carlenton Hotel, 274 4th
1943–1946	City Directory – Theo Filiridis, "Sheet Metal Workers", 266 4th
1948	City Directory – Hotel Carlenton 274 4th; Theo Filiridis, "Sheet Metal Workers", 266 4th
1948	Sanborn Map – [266–282 Fourth Street] – Same building as above. Corner section (266) designated "Sheet Metal Wks." 270 Fourth labeled "Hotel Off." 274/276 and 280/282 stores on ground floor. Labeled "Lodgings Abv."