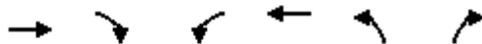


HCM Signalized Intersection Capacity Analysis
7: Beach St. & Polk St.

Shared Lane Option
8/31/2010

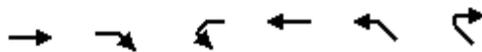


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Volume (vph)	48	37	306	46	41	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frbp, ped/bikes	0.95			1.00	0.90	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.88	
Flt Protected	1.00			0.96	0.99	
Satd. Flow (prot)	1668			1785	1478	
Flt Permitted	1.00			0.96	0.99	
Satd. Flow (perm)	1668			1785	1478	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	40	333	50	45	274
RTOR Reduction (vph)	34	0	0	0	234	0
Lane Group Flow (vph)	58	0	0	383	85	0
Confl. Peds. (#/hr)		80	80		20	50
Turn Type			Split			
Protected Phases	4		8	8	2	
Permitted Phases						
Actuated Green, G (s)	11.0			27.0	11.0	
Effective Green, g (s)	11.0			27.0	11.0	
Actuated g/C Ratio	0.15			0.36	0.15	
Clearance Time (s)	4.0			4.0	4.0	
Lane Grp Cap (vph)	245			643	217	
v/s Ratio Prot	c0.03			c0.21	c0.06	
v/s Ratio Perm						
v/c Ratio	0.24			0.60	0.39	
Uniform Delay, d1	28.3			19.6	29.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.3			4.0	5.3	
Delay (s)	30.5			23.6	34.2	
Level of Service	C			C	C	
Approach Delay (s)	30.5			23.6	34.2	
Approach LOS	C			C	C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 8: Beach St. & Columbus

Semi-Exclusive Option
 8/31/2010



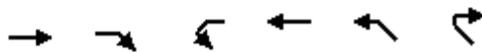
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑	↗		↖	↖	↗
Sign Control	Stop			Stop	Stop	
Volume (vph)	472	219	46	213	66	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	513	238	50	232	72	83

Direction, Lane #	EB 1	EB 2	WB 1	NW 1
Volume Total (vph)	513	238	282	154
Volume Left (vph)	0	0	50	72
Volume Right (vph)	0	238	0	83
Hadj (s)	0.03	-0.67	0.07	-0.19
Departure Headway (s)	5.3	4.6	5.3	5.8
Degree Utilization, x	0.76	0.30	0.42	0.25
Capacity (veh/h)	663	767	654	571
Control Delay (s)	21.7	8.4	12.0	10.7
Approach Delay (s)	17.5		12.0	10.7
Approach LOS	C		B	B

Intersection Summary	
Delay	15.3
HCM Level of Service	C
Intersection Capacity Utilization	56.9%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
8: Beach St. & Columbus

Shared Lane Option
8/31/2010



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑	↗		↖	↘	
Sign Control	Stop			Stop	Stop	
Volume (vph)	472	283	46	213	66	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	513	308	50	232	72	83
Direction, Lane #	EB 1	EB 2	WB 1	NW 1		
Volume Total (vph)	513	308	282	154		
Volume Left (vph)	0	0	50	72		
Volume Right (vph)	0	308	0	83		
Hadj (s)	0.03	-0.67	0.07	-0.19		
Departure Headway (s)	5.3	4.6	5.3	5.9		
Degree Utilization, x	0.76	0.39	0.42	0.25		
Capacity (veh/h)	662	768	652	571		
Control Delay (s)	21.8	9.4	12.1	10.8		
Approach Delay (s)	17.1		12.1	10.8		
Approach LOS	C		B	B		
Intersection Summary						
Delay			15.2			
HCM Level of Service			C			
Intersection Capacity Utilization			56.9%	ICU Level of Service	B	
Analysis Period (min)			15			

APPENDIX C

Cultural Resources

Appendix C includes correspondence to date for Section 106 consultation requirements.



Preserving America's Heritage

November 2, 2007

Brian O'Neill, General Superintendent, Golden Gate National Recreation Area
Kate Richardson, Superintendent, San Francisco Maritime National Historical Park
National Park Service
Golden Gate National Recreation Area
Fort Mason, San Francisco, CA 94123

*RE: Proposed Extension of the San Francisco Municipal Railway Historic Streetcar Line
San Francisco, California*

Dear Mr. O'Neill and Ms. Richardson:

On October 16, 2007, the Advisory Council on Historic Preservation (ACHP) received your notification for the proposed area of potential effect (APE) and scope of identification efforts for historic properties that may be affected by the referenced undertaking pursuant to our regulations, "Protection of Historic Properties" (36 CFR Part 800).

Thank you for providing us with this information regarding the National Park Service's progress in its Section 106 consultation. We encourage the NPS to continue consultation with the California State Historic Preservation Office, Indian tribes, and other consulting parties to identify and evaluate historic properties and to assess any potential adverse effects on those historic properties. If you determine, through consultation with the consulting parties, that the undertaking will adversely affect historic properties, or that the development of a Programmatic Agreement is necessary, the NPS must notify the ACHP and provide the documentation detailed at 36 CFR § 800.11(e).

Should you have any questions as to how your agency should comply with the requirements of Section 106, please contact me by telephone at (202) 606-8583 or by e-mail at kfanizzo@achp.gov.

Sincerely,

Kelly Yasaitis Fanizzo
Historic Preservation Specialist
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8617 • achp@achp.gov • www.achp.gov

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
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(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



3 December 2007

Reply To: NPS071019A

Kate Richardson, Superintendent
National Park Service
San Francisco Maritime National Historical Park
Building E, Lower Fort Mason, Room 265
San Francisco, CA 94123

Brian O'Neill, General Superintendent
National Park Service
Golden Gate National Recreation Area
Fort Mason
San Francisco, CA 94123

Re: Section 106 Review for the San Francisco Municipal Railway (Muni) Extension, San Francisco, San Francisco County, CA

Dear Ms. Richardson and Mr. Neill:

Thank you for your letter of 4 October 2007, requesting my comment pursuant to the National Historic Preservation Act and the implementing regulations codified at 36 CFR 800 with regards to the above undertaking. You are requesting that I concur with your determination of the APE for the undertaking and comment on the general project approach.

As I presently understand it, the undertaking consists of extension of the San Francisco Municipal Railway (Muni) historic streetcar line.

The APE for the project is shown in Figure 1 attached to your letter. This APE includes the areas that could be impacted by all of the proposed alignments and turnaround options. The proposed APE consists of the properties fronting on streets or areas where new track would be constructed, as well as the full extent of eight previously designated historic resources surrounding or abutting the project area. I find this satisfactory pursuant to 36 CFR 800.16(d).

At the time of your letter, eight properties were listed in the National Register of Historic Places (NRHP) of which three are National Historic Landmarks. There are approximately eighteen more properties which will be evaluated for inclusion in the NRHP.

At this time I feel the NPS project scope is adequate and I look forward to continuing this consultation as the NPS moves forward with the project.

Thank you for considering historic properties as part of your project planning. If you have any questions, please contact Amanda Blosser of my staff at (916) 653-9010 or e-mail at ablosser@parks.ca.gov

Sincerely,

A handwritten signature in cursive script that reads "Susan K Stratton for".

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:ab



Figure (C) 1. Area of Potential Effect

- APE Boundaries
- Parcels Requiring Survey
- Identified Historic Properties

547



United States Department of the Interior
NATIONAL PARK SERVICE

Golden Gate National Recreation Area
Fort Mason # 201
San Francisco, California 94123

IN REPLY REFER TO:

H4217 (GOGA-CRMM)

September 29, 2009

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Attn: Mark Beason
Department of Parks and Recreation
Office of Historic Preservation
1416 9th Street
Sacramento, CA 95814

Dear Mr. Donaldson:

We wish to thank Steve Mikesell, Susan Stratton, and Mark Beason of your staff for making a site visit to San Francisco on January 28, 2009, for the purpose of holding a National Historic Preservation Act Section 106 consultation meeting concerning an undertaking to extend the San Francisco Municipal Railway historic streetcar line from Fishermen's Wharf, through the historic Ft. Mason tunnel, to the Marina district within the city of San Francisco. Section 106 consultation was initiated for this undertaking via letter from Golden Gate National Recreation Area and San Francisco Maritime National Historical Park dated May 2, 2006 (NPS071019A). Though we have not yet reached the point in planning where we are prepared to assess effects of the undertaking on historic properties, please be informed that in conformance with 36 CFR 800.8 of the Section 106 regulations, "Coordination with the National Environmental Policy Act," findings of effect for this undertaking will be documented in a draft Environmental Impact Statement that will be shared with your office for comment at a later date.

As a means of furthering the Section 106 consultation at this time, the National Park Service, through the agencies of URS Corporation and Page & Turnbull, has prepared the enclosed historic structures and archeological reports in order to identify historic properties that may be affected by the proposed extension of the historic streetcar line within the Area of Potential Effect (APE) previously established for the undertaking in consultation with your office. URS and Page & Turnbull briefed SHPO staff on these reports at the January 2009 meeting.

To identify historic properties, Page & Turnbull completed State of California Department of Parks and Recreation (DPR) 523A (Primary Record) and 523B (Building, Structure, Object Record) forms for all properties older than forty-five years old located within the previously identified APE. Within the APE boundaries, eight properties were already listed in the National Register of Historic Places (National

Register), and thirty-seven properties were evaluated for historic significance utilizing the criteria set forth by the National Register. None of the thirty-seven properties were found eligible for the National Register, although four were found to be eligible for the California Register of Historical Resources (California Register).

Archaeological properties within the APE were identified by review of existing records, supplemental contextual research, and pedestrian survey (URS 2009). The North West Information Center of the California Historical Resources Information System provided information on 18 archaeological sites within .25 miles of the project area. Two of the sites were within the APE, CA-SFR-23 and CA-SFR-29, and may be affected by project actions if they still exist. Neither the pedestrian survey nor the supplemental historical research located any unrecorded archaeological properties or suggestion of buried properties in the APE.

This effort to identify historic properties was completed according to the provisions of Section 106 at 36 CFR 800.4, "Identification of historic properties." As a means of documenting our conformance with this provision of Section 106, we request that you review the enclosed reports and inform us of their adequacy. Any comments or questions on this matter may be directed to Paul Scolari, Historian, Golden Gate NRA, at (415) 561-4963 and Robbyn Jackson, Chief of Cultural Resources, San Francisco Maritime NHP, at (415) 561-7019.

Sincerely,



Frank Dean
Acting Superintendent
Golden Gate NRA



Kate Richardson
Superintendent
San Francisco Maritime NHP

Enclosures

cc:

Advisory Council on Historic Preservation, w/o enc.
Elaine Jackson-Retondo, NPS NHL Coordinator, Pacific West Region, w/o enc.



United States Department of the Interior

NATIONAL PARK SERVICE
GOLDEN GATE NATIONAL RECREATION AREA www.nps.gov/goga
FORT MASON BLDG. 201 SAN FRANCISCO, CA 94123-0022



N1621

JUN 15 2010

Dear Ohlone/Costanoan Representative:

The purpose of this letter is to invite you to participate in consultation in accordance with the National Historic Preservation Act of 1966, as amended (NHPA), regarding the proposed "Extension of Historic Streetcar Service from Fisherman's Wharf to the San Francisco Maritime National Historical Park and Golden Gate National Recreation Area's Fort Mason Center." The National Park Service (NPS) will prepare an Environmental Impact Statement (EIS) to examine the environmental impacts of extending the streetcar service west to Fort Mason.

The proposed project is needed to improve local and regional accessibility to these two units of the NPS by means of a zero-local-emission transit connection compatible with the historic nature of the parks. Conditions prompting the need for this project include: inadequate regional transit access, inefficient access for low-income populations, limited connectivity to the northeastern waterfront cultural corridor, and insufficient transportation infrastructure to accommodate existing and projected visitor demands at the parks.

The Historic Streetcar Extension project involves extending the existing Muni historic streetcar line from the intersection of Jefferson and Jones streets to the west side of Fort Mason, to serve several NPS properties and improve local transit connectivity. The project will be situated on, and will affect properties of the City of San Francisco and of the U.S. government. The project as defined includes several alternative configurations of new tracks on Jefferson and Beach streets, beginning at Jones Street and extending west to Van Ness Avenue. All alternatives include construction of new track through a portion of Aquatic Park, a National Historical Landmark (NHL), and use of an existing tunnel under Fort Mason to extend the line from Van Ness Avenue to a western terminus at Laguna Street.

Alternative Fort Mason Terminal Configurations

NPS is considering two general alternatives for the western terminus of the street car line at Fort Mason. The first type directly serves Fort Mason Center within the existing parking area of the San Francisco Port of Embarkation NHL. The second type terminates the line within the Great Meadow of Fort Mason, on NPS property but outside the NHL. Un-scaled concept drawings of these general alternatives are enclosed.

Area of Potential Effect (APE)

The APE for the Historic Streetcar Extension project is shown in Figure 1 (Enclosed). This APE includes the areas that could be affected by all of the proposed alignments and turnaround options. The proposed APE consists of the properties fronting on streets or areas where new track would be constructed, as well as the full extent of several previously designated historic resources surrounding or abutting the project area. Previously designated historic resources within the APE include:

Property Name	Address/Location	Status
CA-SFr-29	Fort Mason	National Register Eligible
CA-SFr-23	Hyde and Beach Street	Not Determined

San Francisco Cable Cars	Hyde and Beach Street	National Historic Landmark
Haslett Warehouse	680 Beach Street	National Register Listed
Aquatic Park Historic District	Beach Street (vicinity)	National Historic Landmark
SF Water Dept. Auxiliary Water Supply System; Pumping Station # 2	Foot of Van Ness Ave.	National Register Listed
San Francisco Port of Embarkation, U.S. Army	Fort Mason	National Historic Landmark
Fort Mason Historic District	Fort Mason	National Register Listed
Pioneer Woolen Mills D. Ghirardelli Company	900 North Point Street	National Register Listed
Unknown-storage	2907 Jones Street	California Register of Historical Resources Eligible
Unknown-storage	2911 Jones Street	California Register of Historical Resources Eligible
The Cannery	2801 Leavenworth Street	California Register of Historical Resources Eligible
Marina Safeway	11-15 Marina Boulevard	California Register of Historical Resources Eligible

Need to Determine Location and Extent of Historic Properties

Two known indigenous archeological sites, one in the city of San Francisco and one in Ft. Mason, are within the planning area and in the vicinity of where the rail line may run (See enclosed Figure 1). This information was previously provided to you in Golden Gate National Recreation Area's "Native Update" (June 2009 and March 2010). An archeological investigation aimed at identifying the boundaries of these sites in order to inform future planning and design is warranted, and will be carried out in the near future. A Scope-of-Work for limited archeological testing has been prepared (Enclosed). The NPS will arrange for a native monitor to be present during all subsurface testing activities described in the Scope-of-Work. CA-SFr-29, a pre-contact habitation site, was originally located in 1978 during systematic subsurface augering, conducted by Suzanne Baker. In June of 1979, test excavations were conducted at CA-SFr-29. It was determined that the site contained significant undisturbed deposits of cultural material including bone, stone, shell artifacts and faunal residues. The site was considered eligible for listing on the National Register of Historic Places, and recommendations were made to protect the site during re-landscaping of Fort Mason by placing fill over existing concrete and asphalt that capped the site at that time. Because much of the site has been covered by historical and modern construction, its exact boundaries are unknown. Limited archaeological testing is proposed to determine the extant site boundaries in relationship to the current south loop terminus option.

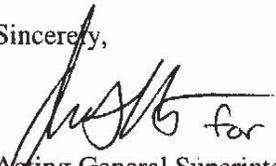
CA-SFr-23, a pre-contact shell midden site is purportedly located near the intersection of Hyde and Beach Streets and was last recorded in 1954. According to the site survey record, the site information is taken from an 1861 publication titled "The Indianology of California" (Davis, 1954). The site was described as a "circular fire-burnt spot on the bare place at the summit of a sandy cliff, 40' high, with quantities of decayed fish-bone and crushed shells mixed with sand." In addition, the 1954 site record also states that the site was destroyed in 1861. It is unclear whether the recorder was able to, or attempted to, relocate the site in 1954. Although no evidence of the site is currently visible, it is possible that subsurface cultural material is present. The enclosed Archeological Testing Scope-of-Work proposes that an archeological consultant provide an overview of all previous archeological site descriptions and reported location of the site and develop recommendations on possible testing to relocate the site and or/monitoring as appropriate.

We would greatly appreciate your comments on the proposed project, including the enclosed Scope-of-Work. Comments will be compiled and considered for integration into the EIS as appropriate. A copy of

the EIS will be provided when drafted for additional review and comments. We currently expect to have a draft of the EIS available for your review early in 2011.

Should you have questions or comments concerning the proposed undertaking, or on the enclosed Scope-of-Work, please contact Paul Scolari, Historian and American Indian Liaison, at (415) 561-4963 or paul_scolari@nps.gov, by July 15, 2010. We will share the results of the archeological investigation with you once field work has been completed and reported on. We look forward to working with you on this important transportation project.

Sincerely,


Acting General Superintendent
Golden Gate National Recreation Area


Superintendent
San Francisco Maritime National Historical Park

Enclosures

cc:

California State Historic Preservation Office, w/o Enc.

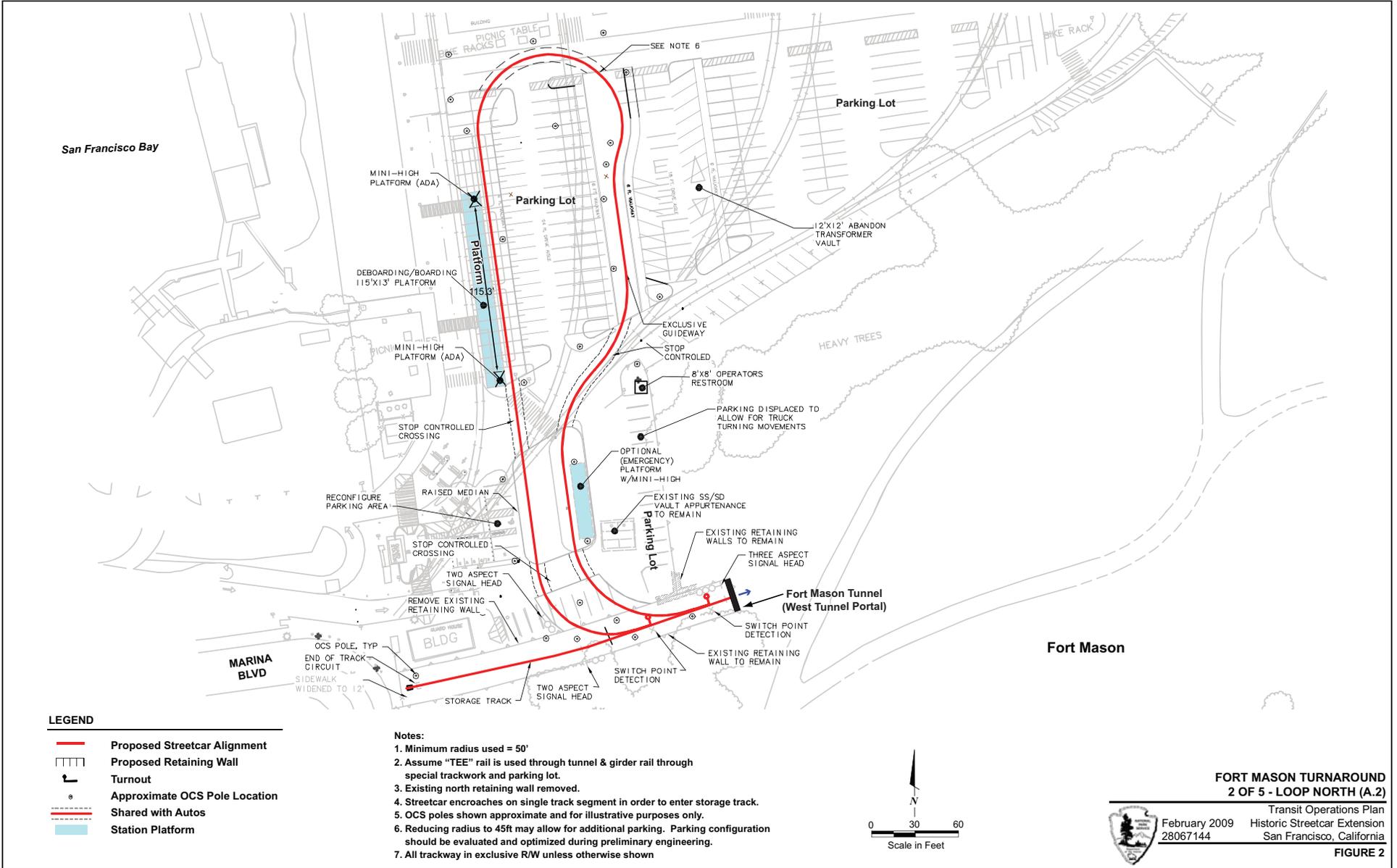
Advisory Council on Historic Preservation, w/o Enc.

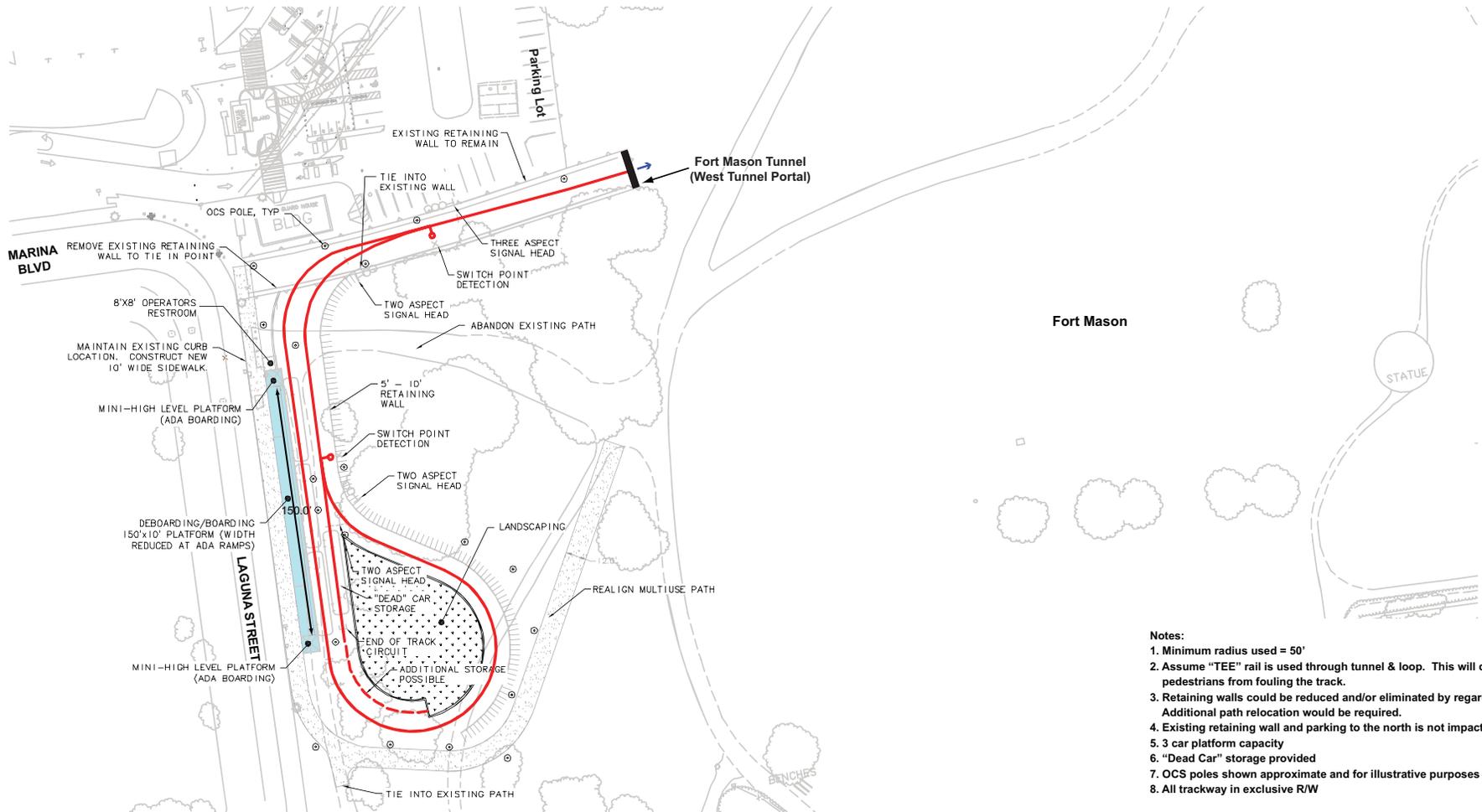
National Historic Landmarks Coordinator, NPS-Pacific West Region, w/o Enc.



Figure 1. Area of Potential Effect

- APE Boundaries
- Parcels Requiring Survey
- Identified Historic Properties

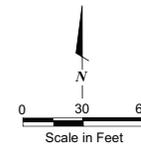




- Notes:**
1. Minimum radius used = 50'
 2. Assume "TEE" rail is used through tunnel & loop. This will deter pedestrians from fouling the track.
 3. Retaining walls could be reduced and/or eliminated by regarding. Additional path relocation would be required.
 4. Existing retaining wall and parking to the north is not impacted.
 5. 3 car platform capacity
 6. "Dead Car" storage provided
 7. OCS poles shown approximate and for illustrative purposes only.
 8. All trackway in exclusive R/W

LEGEND

- Proposed Streetcar Alignment
- Proposed Retaining Wall
- Turnout
- Sidewalk/Path
- Approximate OCS Pole Location
- Shared with Autos
- Station Platform



**FORT MASON TURNAROUND
4 OF 5 - SOUTH LOOP (A.4)**



Transit Operations Plan
February 2009
28067144

Historic Streetcar Extension
San Francisco, California

FIGURE 4

Government Scope and Estimate

Project: F-Line Historic Streetcar

Task: Assessment of South Loop Alternative Effects on CA-SFR-29 and Review of CA-SFr-23 Treatment

The National Park Service is seeking a subsurface archaeological survey of the boundaries of prehistoric site CA-SFR-29 at Fort Mason, San Francisco to determine potential effects on the property that would result from implementation of the “South Loop” alternative for the F-Line Historic Streetcar Project (see attached project and site maps). A review of archaeological data and San Francisco Planning Department records will also be conducted on CA-SFr-23, reported near the intersection of Hyde and Beach Street. A detailed report of CA-SFr-29 investigations with GPS coordinate data and mapping of site and associated features (capping fills or concrete foundations) will be prepared. Previous efforts to consider CA-SFr-23 in planning will be reviewed, and practical alternatives will be proposed for a subsurface survey of the CA-SFr-23 locale, or for monitoring with discovery protocols during construction.

Subsurface archaeological explorations were conducted by hand and power augers in 1978 in preparation for landscaping resulting in what is today referred to as the Great Meadow on the western side of the historic post (Baker 1978a,b). Work located and tested prehistoric site CA-SFR- 29, much of which resided beneath the foundation of Building S-130 and an adjacent community garden. Recommendations were made to preserve the site intact by leaving much of the foundation intact above it and placing fill over the community garden areas (Baker 1978b:139).

CA-SFr-23, a prehistoric shell midden site is purportedly located near the intersection of Hyde and Beach Streets and was last recorded in 1954. According to the site survey record, site information is taken from an 1861 publication titled “The Indianology of California”. The site was described as a “circular fire-burnt spot on the bare place at the summit of a sandy cliff 40’ high, with quantities of decayed fish-bone and crushed shells mixed with sand.” In addition, the 1954 site record also states that the site was destroyed in 1861. It is unclear whether the recorder was able to, or attempted to, relocate the site in 1954. Although no evidence of the site is currently visible it is possible that subsurface cultural material is present. We are proposing that an archeological consultant provide an overview of previous archeological site description and composite of location of the site and provide recommendations on possible testing/monitoring as appropriate.

Contractor will be prepared to provide hand and/or power auger, backhoe, jackhammer, or any other method suitable to locate and define the bounds of CA-SFR-29.

Work shall include:

- Work shall focus on subsurface clarification of the southern and northern boundaries of CA-SFR-29 with as minimal intrusion to the midden deposit as possible. The archaeological records and San Francisco Planning Department reviews for the area.
- Based on existing sources and fieldwork, compare and analyze the proposed layout of the South-Loop Alternative of the F-Line Historic Streetcar against the location of CA-SFR-29. Provide a discussion of any expected adverse effects from the South Loop design on this historic property in accordance with 36 CFR 800 and Section 106 of the National Historic Preservation Act.
- Consult with NPS Archaeologist (Leo Barker, 415-561-2836).

- Consult with Randall Dean, Archaeologist, San Francisco Planning Department (415-575-9029) and research City files on CA-SFr-23 and those environmental review projects that have considered this site in planning.
- Contractor will acquire and conduct fieldwork with an Ohlone/Costanoan monitor based on consultation with NPS Tribal Liaison (Paul Scolari, Park Historian, 415-561-4963).
- Consult with NPS regarding known infrastructure in project area (Sondi Matovich, Maintenance Supervisor, 415-289-3101).
- Conduct USA Call (800-227-2600; <http://www.usanorth.org/>).
- Avoid irrigation system damage, and stockpile turf and topsoil according to protocols established through NPS (Bill Vogele, Maintenance Supervisor, 415-561-4199).
- Consult with NPS regarding upcoming accessible trail work on Great Meadow in CA-SFR-29 vicinity (Rich Meldostad).
- Keep the work zone safely barricaded to keep the public at safe distance.
- GPS the location of all subsurface explorations and produce a map of the site and areas investigated.
- For each excavation, document location and details of soil, stratigraphy, and features uncovered.
- Overall project and particularly heavy equipment use have no adverse impact to discernible archaeological deposits beyond that needed to identify the site.
- Effort to include controlled hand augering of exposed midden deposits to clarify site size and content information.
- Diagnostics materials and artifacts will be collected and used in reporting, including a brief inventory. Materials will be bagged by provenience and submitted to park archaeologist at conclusion of reporting.
- Replace all topsoil and turf per NPS protocols, leaving area as originally found.
- Prepare a revised site form for the California Historical Resources Information System (CHRIS) and the NPS Archaeological Sites Management Information System (ASMIS).
- Provide a detailed report of investigations following at least the outline established in Archaeological Resource Management Reports (ARMR): Recommended Contents and Format, 1990, California Office of Historic Preservation.

Deliverables and Review:

- Provide a digital pdf and Word version of the draft report to the Park Archaeologist and Contract Officer within 30 days of completion of field work;
- Allow NPS 15 days to review and provide comments on the draft report;
- Within 15 days of receipt of draft report comments, prepare final digital pdf and Word version of final report along with ten (10) hardcopies, and provide them to the Park Archaeologist.

References

Baker, Suzanne

1978a Fort Mason Landscaping Project: Preliminary Archaeological Testing, Phase I. Prepared by Archaeological Consultants, Oakland, California. Submitted to Western Region, National Park Service, San Francisco, California. On file at Archaeology Lab, Golden Gate National Recreation Area, San Francisco.

1978b Report on the Fort Mason Archaeological Test Excavations. Prepared by Archaeological Consultants, Oakland, California. Submitted to Western Region, National Park Service, San Francisco, California. On file at Archaeology Lab, Golden Gate National Recreation Area, San Francisco.

Houke, Amy, and Eliot Foulds

2004 Cultural Landscape Report for Fort Baker, Golden Gate National Recreation Area: Volume One: Site History, Existing Conditions, and Analysis. Pacific Northwest Region Office, National Park Service, Seattle. Olmsted Center for Landscape Preservation, Brookline, Massachusetts.

(Budget Estimate is attached as a separate Excel file “F Line Archeo_South Loop Assessment Scope and Budget_LRB_051810.xls) “

Leo R. Barker

Park Archaeologist, Golden Gate National Recreation Area, National Park Service

May 13, 2010

Return Receipt Registered.

Rosemary Cambra, Chairperson ✕
Muwekma Ohlone Indian Tribe
2151 Oakland Road
San Jose, CA 95131

Tony Cerda, Chairman ✕
Costanoan-Rumsen Carmel Tribe
240 East First Street
Pomona, CA 91766

Andrew Galvan ✕
The Ohlone Indian Tribe
P.O. Box 3152
Mission San Jose, CA 94539

Louise Miranda Ramirez, Chairperson ✕
Ohlone/Costanoan-Esselen Nation
P.O. Box 1301
Monterey, CA 93942

Jakki Kehl ✕
720 North 2nd Street
Patterson, CA 95363

Valentin Lopez, Chairman ✕
Amah Mutsun Tribal Band
3015 Eastern Ave. #40
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Anthony Miranda ✕
1312 S. Magnolia Ave.
Monrovia, CA 91016

Rico Miranda ✕
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Office of Historic Preservation California Department of Parks and Recreation
State Historic Preservation Officer Milford Wayne Donaldson,
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United States Department of the Interior

NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Fort Mason, San Francisco, California 94123

IN REPLY REFER TO:

H4217 (GOGA-CRMM)

DEC 17 2010

Mr. Milford Wayne Donaldson
State Historic Preservation Officer
California Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Dear Mr. Donaldson:

We are continuing consultation with you on the proposed Extension of Historic Streetcar Service from Fisherman's Wharf to the Aquatic Park in San Francisco Maritime National Historical Park and the Golden Gate National Recreation Area's Fort Mason Center (undertaking) in San Francisco City and County, California (SHPO project number NPS071019A). In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and implementing guidelines 36 CFR 800.10 (Special Requirements for Protection of National Historic Landmarks) and 36 CFR 800.4 through 36 CFR 800.6, as well as the Secretary of the Interior Standards, we have determined that the proposed undertaking will have adverse effects to historic properties. We are providing documentation for your review and we are requesting your concurrence with our findings.

Project Area of Potential Effects and Previous Consultation

We have previously consulted with your office regarding the Area of Potential Effects (APE) for the proposed undertaking. The boundaries of the APE generally encompass an area from Taylor Street to the east, Laguna Street to the west, the San Francisco Bay to the north, and Bay Street to the south. The APE includes the areas that could be affected by all components of the undertaking. The proposed APE consists of the properties fronting on streets or areas where new track would be constructed, as well as the full extent of several previously designated historic resources surrounding or abutting the project area.

An APE description and delineation map was submitted to your office on August 2, 2007, with the request for concurrence regarding the extent of the APE. We received a concurrence letter from your office on December 3, 2007 pursuant to 36 CFR Part

800.4(a)(1). A copy of the response letter and the APE delineation map are enclosed for your information. As part of the consultation process, we have also provided your office with the results of our efforts to identify historic properties within the APE, sent on September 29, 2009. More information about the historic properties identified is provided below.

Project Location and Description

The proposed undertaking is located along the northern waterfront of the City and County of San Francisco, generally between Fisherman's Wharf to the east and the Fort Mason Center to the west. A project location map is enclosed for your information. The undertaking would allow the San Francisco Municipal Transportation Agency (SFMTA or Muni) to extend streetcar service from its existing terminus at Jones Street in Fisherman's Wharf to the San Francisco Maritime National Historical Park (NHP) and to Golden Gate National Recreation Area (Fort Mason Center), both of which are under the jurisdiction of the National Park Service (NPS).

The undertaking is the culmination of several studies by the NPS, the State of California, the City and County of San Francisco, Muni, and the Presidio Trust. Since the 1970s, a mass-transit connection to the existing local and regional transportation network has been identified as a NPS objective. The congressionally mandated 1977 Golden Gate Travel Study recommended restoring the historic State Belt Railway link from Hyde Street Pier (now part of the San Francisco Maritime NHP) through the State Belt Railway tunnel at Fort Mason to improve access to NPS properties. The historic alignment of the State Belt Railway, in use from 1889–1976, is located within both parks and extends outside of the APE.

The current undertaking is needed to improve local and regional accessibility to these two units of the NPS by means of a zero-local-emission transit connection compatible with the historic nature of the parks. Conditions prompting the need for this project include: inadequate regional transit access, inefficient access for low-income populations, limited connectivity to the northeastern waterfront cultural corridor from the west, and insufficient transportation infrastructure to accommodate existing and projected visitor demands at the parks.

The alignment for the proposed undertaking includes four primary segments. From east to west they are an in-street segment, a transition segment within Aquatic Park, a tunnel improvement segment, and a turnaround segment at the Fort Mason Center. The undertaking also includes an Overhead Contact System (OCS), signal equipment, and signage throughout the length of the alignment. Each of these components is described below in more detail.

The in-street segment would extend two-way streetcar service from the existing F-line Muni terminus at Jefferson and Jones Streets to Leavenworth Street, and then west along Beach Street, either on semi-exclusive tracks or mixed traffic/shared auto arrangements.

The alignment would traverse Aquatic Park between approximately Beach and Polk Streets and approach the Fort Mason tunnel's eastern portal at Van Ness Avenue, in an area known as the transition segment. The transition segment would take the alignment from the street-running segment to the east, shifting the alignment to NPS property to the west of Polk Street. A station would be located on the transition segment near Van Ness Avenue and within NPS property at the far western end of Aquatic Park. In this location, the track would shift from double track to single track between the station platforms and the tunnel portal. The station would have two ADA-compliant platforms, one located on the east side of the transition segment, and one located on the west side (located just south of an existing east/west pedestrian path and the historic speaker tower in Aquatic Park). The station would be constructed in the general location of an existing bocce ball court and historic stone retaining wall.

The Fort Mason Tunnel segment includes improvements to the existing concrete-lined tunnel that runs east-west about 60 feet beneath the upper Fort Mason complex. The tunnel is about 1,500 feet long, 16 feet wide, and 22 feet high at its highest point. Given these limitations, the proposed streetcar extension would run on a single track through the tunnel. The tunnel improvements would include installation of new track and overhead lines and reconstruction of the tunnel interior, including construction of a new tunnel lining. Associated signals, lighting, and utilities would be installed, including traction power feeders.

The turnaround segment would consist of tracks that loop north out of the Fort Mason Tunnel and enter the Fort Mason Center parking lot. A 155-foot-long by 13-foot-wide, ADA-compliant station platform would be located alongside approximately 155 feet of the southernmost end of Building A at Fort Mason Center. A second optional platform could potentially be placed on the loop's eastern side. A segment of the Fort Mason Tunnel's northern retaining wall, up to 50 feet in length, would be removed to provide access from the Fort Mason Tunnel to the parking lot at Fort Mason Center. A storage track would be provided extending west from the loop, adjacent to the Fort Mason gate house. A detection circuit with a "clear to proceed" signal would be installed at the south end of the platform or adjacent to the Fort Mason Tunnel.

The streetcars would be powered by a traction power system which would feed power to the overhead contact system (OCS). The traction power system would connect to an existing substation via underground feeders in duct banks and would provide power to the OCS. The OCS would consist of a single-wire system similar to the existing Muni OCS on the F-Line tracks in the Fisherman's Wharf area. The OCS would be configured for trolley pole operation by historic streetcars. The poles would be spaced every 100 feet on tangent track, and closer together (up to 50 feet apart) where the track curves. Other project components would include standard Muni signal equipment, signage, and lighting.

Native American Consultation

A letter dated June 15, 2010 from the NPS was sent to Ohlone/Costanoan representatives inviting them to participate in consultation regarding the proposed undertaking in accordance with Section 106 of the NHPA. The letter also provided information about and invited consultation on the efforts to identify indigenous archeological sites CA-SFr-23 and CA-SFr-29; additional information about this investigative work is provided below. A copy of the consultation request letter is enclosed for your information. One written response was received on July 15, 2010. Additional comments on the project were received during follow-up phone calls to letter recipients. These collective comments included concerns for protection of Ohlone sites and cultural materials, requests for additional information as it becomes available, offers to monitor future stages of project work if monitoring is required, and suggestions for the development of a treatment plan to address potential encounters with Ohlone cultural resources.

Identification and Evaluation of Historic Properties

The identification and evaluation of cultural resources in the APE was conducted between 2007 and 2010 by Page & Turnbull, URS Corporation, and Holman & Associates. Identification of resources included archival research and intensive-level field surveys. The findings of these efforts are described below.

Identification of historic architectural resources included archival research and field surveys completed by Page & Turnbull from 2007 to 2009. As a result of the archival research, seven properties already listed in the National Register of Historic Places (NRHP, National Register) were identified within the APE (see **Table 1**). These properties are also identified on the attached APE map.

TABLE 1. HISTORIC PROPERTIES LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES

	Name	Location	Listing
1	Aquatic Park National Historic Landmark (NHL) District	Bounded by Van Ness Avenue on the west, Beach Street on the south, and Hyde Street on the east.	National Historic Landmark, National Register-listed
2	San Francisco Port of Embarkation, US Army NHL District	Fort Mason	National Historic Landmark, National Register-listed
3	Fort Mason National Register Historic District	Fort Mason	National Register-listed
4	California Fruit Cannery Association (Haslett) Warehouse	680 Beach Street; currently the Argonaut Hotel	National Register-listed

	Name	Location	Listing
5	Pioneer Woolen Mills & D. Ghirardelli Company	900 North Point Street	National Register-listed
6	San Francisco Cable Cars	Hyde and Beach Street	National Historic Landmark, National Register-listed
7	Pumping Station #2, San Francisco Fire Department Auxiliary Water Supply System	Foot of Van Ness Ave.	National Register-listed

The intensive-level survey of the APE completed by Page & Turnbull between 2007 and 2009 also identified a total of 37 buildings and structures outside the park boundaries that were forty-five years old or older. All 37 properties were evaluated for their potential historic significance using the criteria set forth by the National Register. Of these 37 potential resources, none were found eligible for inclusion in the National Register, and four were found to be eligible for the California Register of Historic Resources (the Cannery at 2801 Leavenworth Street, the Marina Safeway at 11-15 Marina Boulevard, and two storage buildings at 2907-2911 Jones Street).

Identification of indigenous archeological resources included archival research and surveys by URS Corporation in 2009 and Holman & Associates (Holman & Associates, 2010). As a result of the archival research, two previously recorded indigenous archeological resources were identified within the areas potentially affected by construction, and are identified below in Table 2, and described below.

TABLE 2. INDIGENOUS ARCHEOLOGICAL PROPERTIES CONSIDERED POTENTIALLY ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES

	Site Number	Location	Listing
1	CA-SFr-29	Fort Mason Great Meadow	Considered National Register Eligible
2	CA-SFr-23	Intersection of Hyde and Beach Street	Considered National Register Eligible if Present

An intensive-level pedestrian survey of the APE was completed by URS Corporation in June, 2009. The field survey yielded no new cultural resource discoveries. In addition, no evidence of CA-SFr-23 or CA-SFr-29 was encountered during that survey.

Site CA-SFr-29, a pre-contact habitation site, was originally located in 1978 during systematic subsurface augering, conducted by Suzanne Baker. In June of 1979, test

excavations were conducted at CA-SFr-29. It was determined that the site contained significant undisturbed deposits of cultural material including bone, stone, shell artifacts and faunal residues. The site was considered eligible for listing on the National Register, and recommendations were made to protect the site during re-landscaping of Fort Mason by placing fill over existing concrete and asphalt that capped the site at that time. Because much of the site has been covered by historical and modern construction, documentation of the exact boundaries of the site in relation to the project APE required clarification.

In July, 2010, Holman & Associates undertook an archeological investigation to identify the location of CA-SFr-29 and determine if the site extended into areas proposed for historic streetcar related improvements. This investigation was conducted under contract to NPS, and in consultation with local Ohlone representatives. Nine auger borings were cored adjacent to Laguna Street and the west entrance to the Fort Mason Tunnel. Mr. Andrew Galvan, an Ohlone representative, monitored the auger borings. No archeological deposits were identified in areas that could be affected by project alternatives.

Site CA-SFr-23, an indigenous shell midden site is purportedly located near the intersection of Hyde and Beach Streets and was last recorded in 1954. According to the site survey record, site information is taken from an 1861 publication titled "The Indianology of California". The site was described as a "circular fire-burnt spot on the bare place at the summit of a sandy cliff 40' high, with quantities of decayed fish-bone and crushed shells mixed with sand." In addition, the 1954 site record also states that the site was destroyed in 1861. It is unclear whether the recorder was able to, or attempted to, relocate the site in 1954. Although no evidence of the site is currently visible it is possible that subsurface cultural material is present.

A letter requesting your concurrence regarding the identification and evaluation of historic properties was sent on September 29, 2009. A copy of the letter is enclosed for your information. As no response has been received to date, it is assumed that your office concurs with the identification and evaluation efforts.

Assessment of Effects

Under Section 106 of the NHPA, an agency shall assess the effects of its activities on historic properties in accordance with 36 CFR 800.5 *Assessment of adverse effects*. The NHPA defines an effect as an alteration to the characteristics of a historic property that qualify it for inclusion in or eligibility for the NRHP. Special requirements are given in 36 CFR 800.10 for protection of National Historic Landmarks (NHLs). In addition to the minimization of harm to the maximum extent possible through project planning and actions by the federal agency, these provisions include participation by the Advisory Council on Historic Preservation (ACHP) in resolution of adverse effects, notification of the Secretary of the Interior of projects that may involve adverse effects to NHLs, and reporting by the ACHP of the outcome of the Section 106 process for any undertakings involving adverse effects to NHLs.

The criteria of adverse effect have been applied to all historic properties within the APE, with consideration given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register.

As you are aware, the criteria of adverse effect are used as a threshold for determining whether the undertaking will have an "adverse effect" or "no adverse effect" on historic properties.

According to 36 CFR 800.5, an adverse effect on a historic property includes, but is not limited to:

- I. Physical destruction of or damage to all or part of the property
- II. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines
- III. Removal of the property from its historic location
- IV. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- V. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

The proposed undertaking will have an adverse effect on two NHL Districts; 1) the Aquatic Park NHL District, and 2) the San Francisco Port of Embarkation, U.S. Army NHL District. Specific effects to each of these NHLs are described below. Effects to the Fort Mason National Register Historic District are included under the same heading as the San Francisco Port of Embarkation, U.S. Army NHL District, because effects would be essentially the same to both the National Register Historic District and the smaller subset of contributing elements that are included in the NHL District. The Fort Mason tunnel is the one exception to this in that it is located outside the NHL District, but inside the National Register Historic District.

Effects to the Aquatic Park NHL District

- Demolition of historic fabric and a contributing resource to the NHL District: removal of a stone retaining wall for tracks and passenger loading platform, and removal of the historic belt line tracks as they cross Van Ness Avenue and approach the tunnel (and beyond) (Criteria of Adverse Effect I: Physical destruction of or damage to all or part of the property). The aspects of integrity that would be adversely affected by this particular action would be integrity of

setting, design, workmanship, and materials. Aspects of integrity that would be unaffected are location, association, and feeling.

- Introduction of features and structures that would be incompatible with the historic uses of the District, such as new tracks, a platform/station, overhead contact system, and signals that were not present in the District during its period of significance. Introduction of new uses to the NHL District that will affect the historic viewshed, such as the alteration of existing views from within the western portion of the District with new views that include: tracks, platform/station, overhead contact system, and signals that do not currently exist (Criteria of Adverse Effect IV: Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance). The aspects of integrity that would be adversely affected by this particular action would be integrity of setting, association, and feeling. Aspects of integrity that would be unaffected are location, design, workmanship, and materials.
- Introduction of new sources of noise, vibration, and light to the NHL District from streetcar operation (Criteria of Adverse Effect V. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features). For example, the Maritime Museum and West Speaker Tower, as well as recreational visitors within the western portion of the District, may experience greater levels of noise, vibration, and light due to streetcar operation than exist currently in this location. These two structures may also experience a temporary increase in noise and vibration due to construction. The aspects of integrity that would be adversely affected by this particular action would be integrity of setting, association, and feeling. Aspects of integrity that would be unaffected are location, design, workmanship, and materials.

In summary, the demolition of historic fabric and a contributing resource to the NHL District, the introduction of incompatible features and structures, the alteration of the historic viewshed, and the introduction of new sources of noise, vibration and light will combine to form an adverse effect to the Aquatic Park NHL District.

Effects to the San Francisco Port of Embarkation, U.S. Army NHL District/Fort Mason National Register Historic District

- Demolition of historic fabric and contributing resources to the NHL District: removal of up to 50 feet of the northern Fort Mason Tunnel Retaining Wall, removal of historic tracks within the Fort Mason Tunnel, as well as removal of segments of historic tracks within the parking lot of Fort Mason Center. Seismic improvements to the tunnel structure itself, which is a contributing element of the Fort Mason National Register Historic District, would also remove some of the historic fabric of the interior lining of the tunnel. (Criteria of Adverse Effect I: Physical destruction of or damage to all or part of the property). The aspects of integrity that would be adversely affected by this particular action would be integrity of setting, design, workmanship, and materials, of both a portion of the