


Memorandum

CS Memorandum No. 1323

To: Distribution

From: Susan MacKenzie, Document Control Manager 

Date: December 28, 2012

Reference: Project No. M544.1, Contract No. CS-149
Task No. 1-8.02, Change Control

Subject: Configuration Management Board Meeting No. 104

Attached please find minutes for Configuration Management Board Meeting No. 104 held on December 4, 2012.

Attachments: CMB Meeting No. 104 Rev. 0 Minutes with attachments

Cc: Matt Lee, SFCTA (w/attachments) matt@sfcta.org
Shahnam Farhangi, SFMTA (w/attachments)
Roger Nguyen, SFMTA (w/attachments)
Arthur Wong, SFMTA (w/attachments)
Jane Wang, SFMTA (w/attachments)
Quon Chin, CSP (w/attachments)
Carlos Campillo, CSP (w/attachments)
Chuck Morganson, HNTB/B&C (w/attachments)
Aileen Read, CSDG (w/attachments)
CS File No. M544.1.5.0890

Distribution:

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Albert Hoe, SFMTA
Joon Park, SFMTA
Richard Redmond, CSP
Ross Edwards, CSP
Mark Latch, CSP
Mark Benson, CSP
Eric Stassevitch, CSP
Beverly Ward, CSP

CMB Meeting Minutes #104 (Special Meeting)

DATE: December 05, 2012

MEETING DATE: **December 04, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 8:00 AM

ATTENDEES: J Funghi (JF), A. Hoe (AH), J. Park (JP), Richard Redmond (RR), R. Edwards (RE), M. Latch (ML), M. Benson (MB), E. Stassevitch (ES), B. Ward (BW), L. Zurinaga (LZ), B. Lebovitz (BL), D. Kuehn (DK)

COPIES TO: Attendees: S. Farhangi (SF), A. Wong (AW), R. Nguyen (RN), Q. Chin (QC), M. Lee (ML) C. Campillo (CC), J. Wang (JW), C. Morganson (CM), A. Read (AR), File No. M544.1.5.0890

REFERENCE Project No. M544.1, Contract No. 149 Task 1-8.02 Final Design

SUBJECT: Configuration Management Board Meeting # 104 (Special Meeting) – Rev. No. 0

RECORD OF MEETING *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	<p>1252 – John Funghi presented background information regarding the projects TBM Retrieval Shaft. During the environmental process from 2005 up to 2008 a number of alternatives were investigated in terms of the alignment, the extension and the north beach retrieval shaft location. Alternative 3B which includes the retrieval shaft location on Columbus Avenue was selected and approved by the Board of Supervisors, Planning Commission and the FTA through the Record of Decision. In 2012, prior to work beginning in North Beach, four community meetings were held in North Beach during the months of July and August. At the time of these meetings the Supervisorial election was approaching and at these meetings there was a lot of discussion of Central Subway’s Retrieval Shaft as part of an election issues. During these meetings Central Subway representatives explained the construction details of the North Beach retrieval shaft on Columbus Ave. The North Beach community consists of various alliances and community groups which have opposing opinions about the Central Subway project ranging from unfavorable opinions, suggesting that the project should go away, to favorable opinions supporting the project to proceed. Parts of the community expressed concerns that “North Beach receives all the disruption but no benefit”. Ways to possibly mitigate the stakeholders concerns were discussed at these meetings. With the involvement of the Supervisors and select group of businesses in North Beach four additional meetings were held. During these meeting Central Subway was asked to investigate new options for the retrieval shaft. The Program identified and then evaluated four other construction options and on November 19, 2012 presented to the North Beach Community Options 1 thru 5, Option 1 being the base option on Columbus Ave. From this meeting staff found support for recommending to proceed with Option 4</p>	12/5/12


ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>– Complete TBM Removal at 1731- 1741 Powell Street or Option 3 – Leave Tunnel Boring Machine Head under Columbus Avenue. Option 3 being the fall back position. If neither option could prove feasible by February 1, 2013, then the Project would continue with construction as previously approved. If the agency proceeds with these options than the agency would have to come up with additional funds outside of the \$1.578 billion. In addition Central Subway will need to seek Environmental Approval. In working with the Planning Department Staff there are two mechanisms for changing the Environmental documents one is done through an addendum (nonpublic staff action) and or a supplemental. The Planning Department Staff believes that Option 4 & 3 can be done through an administrative action or addenda.</p> <p>A calendar item will be presented to the SFMTA Board of Directors today, 12/04/12 recommending the Director of Transportation to pursue the feasibility of Option 4 and 3 and implement action if it is determine Option 4 or 3 would not require further Environmental review. An investigation of each option will need to be achieved by February1, 2013. If neither one of the two options are viable than the Project will continue with construction of the previously approved retrieval shaft plan on Columbus Avenue Option 1 (see attached SFMTA Board of Directors Resolution).</p> <p>This item was presented to the CMB for action to proceed with the Board item as written. AGREE – CMB 0084</p>	

ACTION ITEMS

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
1	12/04/12	12/04/12	1252 - TBM retrieval shaft options	M. Benson	12/5/12	Open

Meeting adjourned at 9:20am

These meeting minutes have been prepared by B. Ward and reviewed by E. Stassevitch, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

Signed:  [initials of preparer & reviewer] Date: 27 Dec 12 [Date review completed]

Meeting Agenda

Project No. M544.1, Contract No. CS-149
Program/Construction Management
Configuration Management Board (CMB) Meeting No. 104 (Special Meeting)
December 04, 2012
8:00am – 9:00am
 Central Subway Project Office
 821 Howard St. 2nd Floor
 Main Conference Room

Attendees:




Mark Benson	Albert Hoe	Matt Lee	Beverly Ward
Ross Edwards	Jim Kelly	Roger Nguyen	Arthur Wong
Shahnam Farhangi	David Kuehn	Joon Park	Luis Zurinaga
John Funghi	Mark Latch	Richard Redmond	
John Haley	Brad Lebovitz	Eric Stassevitch	

1. **1250** – Nothing to Report
2. **1251** – Nothing to Report
3. **1252** – Retrieval Shaft – Board item
4. **1253 (UMS)** – Nothing to Report
5. **1254 (CTS)** – Nothing to Report
6. **1255 (MOS)** – Nothing to Report
7. **1256 (STS)** – Nothing to Report
8. **Trend/Change Log** –
9. **Other Business** –

Meeting Attendance Sheet

Project No. M544.1, Contract No. 149
Program/Construction Management
Configuration Management Board Meeting No. 104 (Special Meeting)
December 04, 2012
8:00 A.m. – 9:00 A.m.
 Central Subway Project Office
 821 Howard, 2nd Floor
 Main Conference Room

Deliver Meeting Attendance Sheet with original signatures/initials to Document Control.

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Please enter initials if your name is listed below. Please enter name, affiliation, phone number and email address if your name is not listed below.				
Benson, Mark	CSP	(415) 701-4295	Mark.Benson@sfmta.com	
Edwards, Ross	CSP	(415) 701-5296	Ross.Edwards@sfmta.com	
Farhangi, Shahnam	SFMTA	(415) 554-0721	Shahnam.Farhangi@sfmta.com	
Funghi, John	SFMTA	(415) 701-4299	John.Funghi@sfmta.com	
Haley, John	SFMTA		John.Haley@sfmta.com	
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Latch, Mark	CSP	(415) 701-5294	Mark.Latch@sfmta.com	
Lebovitz, Brad	STV/PMOC	(510) 464-8052	Bradley.lebovitz@stvinc.com	
Lee, Matt	SFCTA	(415) 522-4813	matt@sfcta.org	
Nguyen, Roger	SFMTA	(415) 701-4312	Roger.Nguyen@sfmta.com	

central subway

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
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Redmond, Richard	CSP	(415) 701-4288	Richard.Redmond@sfmta.com	RR
Stassevitch, Eric	CSP	(415) 701-4426	Eric.Stassevitch@sfmta.com	<i>ES</i>
Ward, Beverly	CSP	(415) 701-5291	Beverly.Ward@sfmta.com	BW
Wong, Arthur	SFMTA	(415) 701-4305	Arthur.Wong@sfmta.com	
Zurinaga, Luis	SFCTA	(415) 716-6956	Luis.zurinaga@sfcta.org	<i>LZ</i>

CMB Change No.: CMB - 0084

Initial Implementing Change Control Procedure No.: 1252 - Retrieval Shaft Options

GENERAL

Proposed Change Sponsor: M. Benson Received by CMB: 12/05/2012
(Date)

Affected Disciplines: Demolition, Utilities
Tunnel Excavation

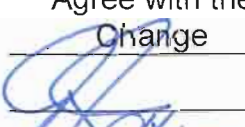


Impacts of Change 1. Various depending on option. See attached documentation for option description and respective impacts

Contract(s) Directly Affected by this Proposed Change:

1250	1251	1252	1253	1254	1255	1256
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
(CP01)	(CP02)	(CP03)	(CP04)	(CP05)	(CP06)	(CP07)

CONFIGURATION MANAGEMENT BOARD APPROVALS

Signatures

	Agree with the Change	Disagree with the Change	Date
Senior Program Manager:			<u>12-4-12</u>
Deputy Program Manager:			<u>12/4/12</u>
PM Project Services:			
PM Project Development/Delivery:			<u>12/4/12</u>
SFMTA O & M Manager:			
SFMTA Safety and Security			
SFCTA PMO			

Comments



Municipal Transportation Agency

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SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS AND
PARKING AUTHORITY COMMISSION

NOTICE OF MEETING AND CALENDAR

Tuesday, December 4, 2012

Room 400, City Hall
1 Dr. Carlton B. Goodlett Place

REGULAR MEETING AND CLOSED SESSION
1 P.M.

SFMTA BOARD OF DIRECTORS

Tom Nolan, Chairman
Cheryl Brinkman, Vice Chairman
Leona Bridges
Malcolm Heinicke
Jerry Lee
Joél Ramos
Cristina Rubke

Edward D. Reiskin
DIRECTOR OF TRANSPORTATION

Roberta Boomer
SECRETARY

[Accessible meeting policy - 1 Dr. Carlton B. Goodlett Place](#)

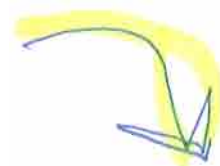
Calendar items, all accessible PDF:

[Item 10.2 traffic modifications](#)

[Item 10.3 Metropolitan Transportation Commission grant for free Muni for youth](#)

[Item 10.4 Memorandum of Understanding with Mayor's Office of Housing](#)

[Item 10.5 Fifth and Mission garage termination agreement](#)



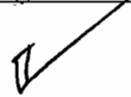
Item 10.6 Sutter-Stockton and Japantown garage leases

Item 10.7 Ellis-O'Farrell garage amendment

Item 10.8 free Muni on Dec. 28

Item 10.9 traffic calming for Clayton and Jordan Park neighborhoods

Item 11 Central Subway tunnel boring machine options



PDF help

ORDER OF BUSINESS

1. Call to Order
2. Roll Call
3. Announcement of prohibition of sound producing devices during the meeting.
4. Approval of Minutes
 - November 20, 2012 Regular Meeting
5. Communications
6. Introduction of New or Unfinished Business by Board Members
7. Director's Report (For discussion only)
 - Special Recognition Awards
 - Ongoing Activities
8. Citizens' Advisory Council Report
9. Public Comment

Members of the public may address the SFMTA Board of Directors on matters that are within the Board's jurisdiction and are not on today's calendar.

THE FOLLOWING MATTERS BEFORE THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY BOARD OF DIRECTORS ARE RECOMMENDED FOR ACTION AS STATED BY THE SFMTA DIRECTOR OF TRANSPORTATION OR CITY ATTORNEY WHERE APPLICABLE. EXPLANATORY DOCUMENTS FOR ALL CALENDAR ITEMS ARE AVAILABLE FOR REVIEW AT 1 SOUTH VAN NESS AVE. 7th FLOOR.

THIS PRINT COVERS CALENDAR ITEM NO.: 11

**SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

DIVISION: Central Subway Project

BRIEF DESCRIPTION:

Authorizing the Director to determine the feasibility of Option 4 for the removal of tunnel boring machines (removal from 1731-1741 Powell Street) and Option 3 (leaving tunnel boring machine head under Columbus Avenue) and to seek guidance from the City's environmental review officer and the Federal Transit Administration as to whether either Option requires additional environmental review, and if either Option 4 in the first instance or Option 3 in the second is feasible and does not require further environmental review, authorizing the Director to take all actions necessary to implement either option.


SUMMARY:

- The SFMTA Board of Directors on August 19, 2008 adopted Central Subway Project Alternative 3B, Fourth /Stockton Alignment with semi-exclusive surface rail operations on Fourth Street and a construction variant to extend the tunnel 2,000 feet to a North Beach Retrieval Shaft on Columbus Avenue.
- The SFMTA Board of Directors on June 28, 2011, awarded Contract No. 1252 to Barnard Impregilo Healy to construct tunnels, cross passages and the tunnel boring machine (TBM) retrieval shaft in the median of Columbus Avenue in North Beach.
- Prior to the start of construction of the North Beach Retrieval Shaft in August 2012, SFMTA staff held community meetings to provide information and address concerns related to construction activities. At these meetings, members of the community expressed concern about construction-related traffic and business disruption. To address these concerns, the community members requested that the SFMTA evaluate options to the approved TBM retrieval plan. The Central Subway Program has evaluated five retrieval shaft construction options and recommends, as its first preference, to further evaluate moving the Central Subway Tunnel Boring Machine Retrieval Shaft to 1731-1741 Powell Street, with a back-up plan of leaving the TBMs in the ground under Columbus Ave. between Powell and Union Streets. If neither alternative can be accomplished by February 1, the Project will continue with construction of the previously approved retrieval shaft on Columbus Avenue.

ENCLOSURES:

1. SFMTA Board of Directors Resolution
2. Project Budget & Financial Plan
2. North Beach Retrieval Option Review

APPROVALS:

		DATE
DIRECTOR		<u>11/29/12</u>
SECRETARY		<u>11/29/12</u>

ASSIGNED SFMTAB CALENDAR DATE: December 4, 2012

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PURPOSE

Requesting authorization to further evaluate the feasibility of removing Tunnel Boring Machine (TBM) Retrieval Shaft to 1731-1741 Powell Street or leaving the TBMs in the ground under Columbus Avenue, between Powell and Union Streets by February 1, 2013 with the expectation that the Project will proceed to construct the retrieval shaft on Columbus Avenue as previously approved if the necessary reviews and approvals cannot be obtained by that time.

GOAL

This staff report addresses Strategic Plan Goal 3 – Improve the environment and quality of life in San Francisco

Objective 3.3 Allocate capital resources effectively

DESCRIPTION

General Background:

The Central Subway Project (Project) is the second phase of the SFMTA's Third Street Light Rail Project, and will add 1.67 miles of light rail track north from the northern end of the new Third Street Light Rail at Fourth and King Streets to a terminal in Chinatown. The Project will serve regional destinations, including Chinatown (the most densely populated area of the country that is not currently served by modern rail transportation), Union Square, Moscone Convention Center, Yerba Buena, South of Market and AT&T Park. The Project will also connect to BART and Caltrain (the Bay Area's two largest regional commuter rail services), serve a low automobile ownership population of transit customers, increase transit use and reduce travel time, reduce air and noise pollution, and provide congestion relief.

The Project will have four stations and connecting subsurface tunnels to provide direct rail service to the South of Market and Chinatown neighborhoods. The Project has been planned and located in a manner that will be most compatible with the greatest public good and the least disruption to residents and businesses in the Project area.

The Project will issue construction contracts with a total estimated construction cost of approximately \$1,090 million. Construction started in 2010 and will continue for eight years. The start of revenue operations is scheduled for 2019.

Environmental Review Background:

The Third Street Light Rail Project Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) was certified by the San Francisco Planning Commission in 1998. On January 19, 1999, the Public Transportation Commission approved Resolution No. 99-009, which adopted the environmental findings pursuant to the California Environmental Quality Act (CEQA) for the Project, including mitigation measures as set forth in the 1998 FEIS/FEIR and Mitigation Monitoring Report. The Federal Transit Administration (FTA) issued a Record of

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Decision (ROD) for the Initial Operating Segment (IOS) of the Project (the Third Street LRT Phase I) on March 16, 1999, under NEPA and authorized the SFMTA to enter into final design for the IOS in early 2000. Revenue operation of Phase I of the Third Street Light Rail, extending from Bayshore Boulevard to Fourth and King Streets, began in April 2007.

On November 19, 2002, the SFMTA Board of Directors adopted Resolution No. 02-144, authorizing the Director of Transportation to execute Contract No. CS-138 with Parsons Brinckerhoff Quade & Douglas and PGH Wong for professional engineering and other support services for the Central Subway segment of the Project ("PB/Wong Agreement"), in an amount not to exceed \$29,800,000. On January 27, 2003, the Board of Supervisors authorized the Director of Transportation to execute the PB/Wong Agreement. The PB/Wong Agreement included services to prepare a Supplemental EIS/EIR for the Project.

On June 7, 2005, the SFMTA Board of Directors selected the Fourth/Stockton Streets option as the Locally Preferred Alternative (LPA) to be carried forward in the SEIS/SEIR. The intent of the SEIS/SEIR was to update environmental conditions in the Central Subway study area and to evaluate alternatives to the Project, including an enhancement to the alignment discussed in the EIS/EIR (Alternative 2) and the Fourth/Stockton Alignment, LPA (Alternative 3A). The SEIR/SEIS also evaluated a construction variant to the tunnel construction, in which the Tunnel Boring Machines would be removed through a retrieval shaft constructed on Columbus Avenue, between Powell and Union Streets ("the North Beach Construction Variant"). A Notice of Preparation was issued in June 2005 and a public scoping meeting was held.

In response to comments received during the public scoping process and preliminary cost estimates prepared for the Project, SFMTA made refinements to the Fourth/Stockton Alignment and identified a Fourth/Stockton, Modified LPA (Alternative 3B) for evaluation in the SEIS/SEIR.

The Draft SEIS/SEIR was issued on October 17, 2007, for a 55-day public review period. During the public comment period, a series of three publicized community meetings were held in the Chinatown, Union Square and South of Market areas to provide information to the public about the Draft SEIS/SEIR. These meetings were well attended and the public was able to view renderings and talk with Project staff about the Project and the environmental process. The San Francisco Planning Department conducted a public hearing on the Supplemental EIS/EIR on November 15, 2007.

The public comment period was closed on December 10, 2007. The SFMTA received 39 comment letters, and 23 people, representing 20 organizations, provided comments at the Planning Commission public hearing held on November 15, 2007. At the public hearing, 19 speakers expressed support for the Project and one expressed opposition to the Project. Of those responding during the public comment period, five (including the Recreation and Parks Department) expressed support specifically for Alternative 3B.

On February 19, 2008, the SFMTA Board of Directors adopted Resolution No. 08-029, selecting the Central Subway Project Alternative 3B, Fourth/Stockton Alignment with semi-exclusive surface rail operations on Fourth Street, and the North Beach Construction Variant, as the Locally Preferred Alternative, authorizing the Executive Director/CEO to carry forward this selection in the Final SEIS/SEIR.

The San Francisco Planning Commission adopted Motion No. M-17668 on August 7, 2008, certifying completion of the Central Subway Final SEIR. The Planning Commission certified the SEIR as accurate, adequate and objective, reflecting the independent judgment of the Planning Commission. On August 19, 2008, the SFMTA Board of Directors adopted Central Subway

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Project Alternative 3B, Fourth/Stockton Alignment with semi-exclusive surface rail operations on Fourth Street and the North Beach Construction Variant findings required by CEQA including a Statement of Overriding Considerations and a Mitigation Monitoring and Reporting Plan. As relevant here, no significant environmental impacts were identified due to the North Beach Construction Variant, although a variety of improvement measures were identified and adopted to minimize insignificant impacts from construction.

Environmental appeals were filed and heard by the Board of Supervisors on September 16, 2008. The Board of Supervisors voted unanimously to uphold the Planning Department's certification of the Supplemental EIR.

The Notice of Determination was filed on September 18, 2008, and the 30-day legal challenge period expired without any legal challenges. The notice for the Final SEIS appeared in the Federal Register on October 3, 2008, and the 30-day waiting period elapsed. The FTA issued the Record of Decision announcing the completion of the Central Subway environmental process on November 16, 2008. On January 7, 2010, the FTA issued its approval for the Project to enter into Final Design.

Project Status:

The Central Subway design consists of a short portion of in-street surface light rail from the Caltrain Station to Bryant Street, before transitioning into subway operation for most of the alignment. The subway will consist of twin bore tunnels, with three subway stations serving the Yerba Buena/Moscone, Union Square/Market Street, and Chinatown areas.

The Union Square/Market Street Station will connect with the existing BART/Muni Powell Street Station. A deep tunneling approach using TBMs will reduce surface disruption during construction, create a more direct alignment, and shorten the construction period. The Central Subway tunnels will pass under the existing BART/Muni Market Street subway tunnels with the rail over 95 feet below the ground surface. Most of the alignment will be located under existing street right-of-way with limited required underground easements. The stations will have center-platforms and are designed to accommodate high-floor two-car trains. Whenever feasible, off-street properties have been identified for the primary station access with transit oriented development opportunities at the Moscone/Yerba Buena and Chinatown Stations.

The running tunnels will be constructed using TBMs, which will pass through differing geological formations, including bay mud, alluvium, Colma formation, and Franciscan bedrock. Subway station construction methods will vary. The Yerba Buena/ Moscone Station will be constructed using traditional top-down cut-and-cover construction. The Union Square/Market Street Station is located in a very constricted area and will be constructed using a top-down cut-and-cover method. Chinatown Station, also in a very constricted area, will be constructed using mined sequential excavation.

Relocation of utilities under Contracts 1250 and 1251 for the Yerba Buena/Moscone Station, the portal area and Union Square/Market Street Station has been completed. The tunneling work (Contract 1252) has started at four construction sites. Contract No. 1300, the combined construction contract for stations, surface improvement, track way and systems, has been issued for competitive bids. Project construction is expected to be completed in 2018.

North Beach TBM Retrieval Shaft:

The decision to extend the Central Subway tunnel to North Beach was made following discussions with North Beach community groups, including Renew SF, Friends of Washington Square Park, and Telegraph Hill Dwellers Association, during development of the final Supplemental EIR from 2006 through 2008. During the preliminary design and environmental review period, presentations were made to these groups and residents and owners of businesses adjacent to the alignment. Verbal and written comments received during these presentations were incorporated into the final environmental document.

Since 2006, the Project held ten community meetings in North Beach to inform residents, business owners and organizations of the proposed construction activities. (Additional meetings are planned for the near future.) During the Project's 10-year planning and development process, three alignment alternatives were considered, in addition to the TBM retrieval shaft on Columbus Avenue in North Beach. Other retrieval shaft locations along the Stockton and Union Street right-of-way were evaluated and presented to the public, including the option of removing the TBMs from the Chinatown Station site. However, Project staff concluded that constructing the retrieval shaft on Columbus Avenue would cause the least disruption to traffic and public access to local businesses.

In the months before North Beach Retrieval Shaft construction started in August 2012, four community meetings were held to inform the public of the upcoming construction activities. These meetings took place on May 11 (North Beach Business Association), May 22 (Telegraph Hill Dwellers), July 17 and July 25, 2012 (North Beach Neighbors). The presentations described the initial utility relocation work necessary to construct the TBM retrieval shaft on Columbus Avenue. Some members of the North Beach community raised concerns at these meetings about traffic disruption and business impacts caused by the upcoming retrieval shaft construction. Most of the utility relocation construction was completed between August and November on a half-block section of Columbus Avenue between Union and Filbert Streets where no commercial frontages are located. Only one lane of traffic on Columbus Avenue was closed at a time, and it was only closed during approved work hours (Monday to Friday, 7 a.m. to 3:30 p.m.). Based on the current TBM Retrieval Shaft construction plans, construction of the retrieval shaft will begin in January 2013 and will be completed in approximately ten months. To minimize the effects of construction, a variety of measures will be employed, including traffic controls, daily street sweeping and a limiting the contractor's daily work schedule.

Before commencing utility relocation work, the Project sent a 30-day construction notice to owners of property near the construction site, as required by local ordinance. The Project's outreach team also visited more than 75 North Beach businesses to provide information about the utility relocation work and to ensure that business owners and managers knew how to contact the team should they have questions or concerns.

Some residents and business owners in North Beach expressed concern that the North Beach Retrieval Shaft work, if carried out as planned, would negatively impact traffic on Columbus Avenue and disrupt businesses, without providing the benefits to the neighborhood of enhanced public transportation. They requested that the Project team evaluate options to the current

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planned retrieval shaft work, including the feasibility of leaving the TBMs underground.

The Agency decided to move forward with approved utility relocation work to meet contractual and grant funding obligations. Utility relocation work has temporarily shut down due to the holiday construction moratorium and is currently planned to re-start after January 2013. In the meantime, the SFMTA completed a preliminary feasibility assessment of TBM removal options.

Project staff evaluated several options for the TBMs. The TBMs could be left in the ground at various locations. That would require removing some of the TBMs internal components and encapsulating the machine in concrete or within a structure to guard against surface settlement as the machines deteriorate. Leaving the TBMs in the ground could significantly impede the future extension of the subway into North Beach, however, because the encapsulated TBMs would likely have to be removed to extend the tunnels or construct an underground station. Removing the encapsulated TBMs at a later date would be more difficult, disruptive and expensive than removing them at the conclusion of Central Subway tunneling. The concrete and protective structures of the encapsulated TBMs would make them significantly larger, heavier, and far more difficult to remove, particularly if they are removed south of the Columbus Avenue site on Stockton Street, given the narrow confines of Stockton Street. Also, the TBM retrieval shaft site under Columbus Avenue was selected because there is sufficient space at that location to construct the shaft and retrieve the TBMs while maintaining traffic flow around the site. Retrieving the TBMs at other locations on the alignment would require additional traffic flow disruption.

As requested by concerned North Beach community residents and business owners, Project staff evaluated four additional options to the approved TBM retrieval shaft. The options to approved retrieval shaft plans were evaluated using three criteria: 1) potential impact to the Project's cost and schedule timeline; 2) potential impacts to the adjacent neighborhood, including traffic, proximity of construction work to residences, and impacts to residential and commercial property access; and, 3) impediments to a potential (but not yet planned) future extension of the T-Third Line to North Beach and Fisherman's Wharf. These criteria are discussed below.

Cost and Schedule:

Each option was evaluated based on its potential to impact the Project's cost and schedule. The SFMTA has entered into a \$233 million contract to construct the tunnels; the Agency issued Notice to Proceed for the tunneling work on January 27, 2012. The tunnel contract is currently on schedule and within budget. Delays to the Project that prevent the tunnel contractor from completing its work within contract time limits would expose the Project to significant financial risk of contractor claims. Funding commitments secured for the Project also require that budget and schedule milestones be maintained.

Neighborhood Impacts:

TBM options were each evaluated based on the proximity to residences and businesses of the work required to remove or abandon the TBMs, required street closure, and constraints to site access and area/space available to construct each option, and resulting traffic impacts.

Potential Implications for Extension of Rail Service:

TBM resolution options were each evaluated based on their potential to impede consideration or construction of a future extension of light rail service into the North Beach/Fisherman's Wharf area. At this time, there is no identified funding to plan, design, review or construct such an extension. However, a possible extension of the T-Third was identified in the SFMTA's 20-Year Capital Plan. The SFMTA therefore evaluated the options for removing or abandoning the TBMs based on the potential to impact a future extension of the line.

Five TBM removal options were considered and evaluated as follows:

- ***Option 1 – Base Case “Approved Project” Complete TBM removal on Columbus Avenue between Powell and Union Streets***

The currently designed retrieval shaft location is approximately 200 feet from the closest residents and approximately 70 feet from the closest businesses. All work would be done within the public right-of-way. Columbus Avenue would be reduced to a single lane in each direction for ten months in 2013. The retrieval shaft on Columbus Avenue would not negatively impact the future consideration of an extension of the Third Street T Line to North Beach and/or Fisherman's Wharf, and as approved, the retrieval shaft could also be used for construction purposes should an extension be approved. The 2000 feet of additional tunnel beyond the Chinatown Station can be used as underground train storage for the LRV fleet and as emergency exit and safe harbor areas for train operators and other staff during an emergency.

- ***Option 2 – Leave Tunnel Boring Machine Head North of the Chinatown Station***

Based on preliminary conversations with the Planning Department's Major Environmental Analysis division, this option likely would require minimal additional environmental study. However, a final determination cannot be made until new construction drawings and specifications are prepared by the Project's engineering consultants and analyzed by the Planning Department for possible impacts. Leaving the TBM Head underground in Chinatown will increase cost and could create site access issues for the tunnel and station contractors that would jeopardize the Project's schedule. Leaving the TBM head underground could complicate or preclude reasonable near-term prospects for a future extension of the T Third Line. This option would reduce Project construction costs by \$21 to \$23 million and would reduce the Tunnel Contract schedule by approximately three months by eliminating tunnel construction north of the Chinatown Station. However, overall project savings are unknown, as the SFMTA will be required to compensate the tunneling contractor for the lost resale value of the two buried TBMs. Leaving the TBMs underground may also delay the station contractor's work, which is currently scheduled to begin on the underground stations as soon as the TBMs pass beyond the Chinatown Station site.

- ***Option 3 – Leave Tunnel Boring Machine Head under Columbus Avenue***

Based on preliminary conversations with the Planning Department's Major Environmental Analysis division, this option likely would require minimal additional environmental study.

However, a final determination cannot be made until such time as new preliminary construction drawings and specifications are considered for possible impacts. Leaving the TBM Head under Columbus Avenue will leave an encapsulated large obstacle that would be difficult and disruptive to remove at a later date, as the concrete and protective structures would make the abandoned TBMs significantly larger and heavier. This option will also complicate a possible future extension of the line and/or station. Abandoning the TBMs underground on Columbus Avenue would require the SFMTA to compensate the tunnel contractor for the loss of resale value of two buried TBMs and the costs of removing the TBM trailing gear in pieces, and may also cause schedule delays to the Tunnel and Station work. Adopting this option would likely increase the Project costs by \$3-\$5 million and increase the Project schedule by approximately two months.

- ***Option 4 – Complete TBM Removal at 1731-1741 Powell Street***

Based on preliminary conversations with the Planning Department's Major Environmental Analysis division, this option likely would require minimal additional environmental study. However, a final determination cannot be made until such time as new preliminary construction drawings are considered for possible impacts. The property, a former cinema commonly known as the Pagoda Palace, is currently empty and decrepit. However, the owner has obtained approvals, including environmental approvals, from the Planning Department to redevelop the property as a mixed use retail/residential development. To use the site for TBM retrieval may require demolishing the old building. This option imposes minimal traffic impacts on Columbus Avenue. This option would not preclude future extension of LRV service. This option will increase the Project budget by approximately \$3 million and require the appropriation of additional local (non-federal) funds to purchase or otherwise secure access rights for the property from the current owner. This Option would not impact the Project schedule, provided that the SFMTA can reach agreement with the property owner, obtain any necessary further review and approvals, including approval to demolish the building by February 1, 2013. The property owner's approval may require that the City grant a zoning variance to allow development of the site to the existing building height, which exceeds current height restrictions for new construction.

- ***Option 5 – Leave TBM Head North of Taylor Street under Columbus Avenue***

Based on preliminary conversations with the Planning Department's Major Environmental Analysis division, this option likely would require minimal additional environmental study. For the reasons articulated above, abandoning the TBMs underground will require the SFMTA to compensate the tunneling contractor for the loss of the two buried TBMs resale value and the costs of removing the TBM trailing gear in pieces, and may delay construction of the tunnels and stations. If the tunnels are extended north of Taylor Street, then any future extension of the line would not conflict with the existing Powell Street Cable Car lines. This option would increase Project costs by \$24 - 26 million due to the increased tunnel length and would increase the Project schedule by approximately three months.

The above alternatives were presented to the North Beach community at a public meeting on November 19, 2012. The meeting was attended by approximately ninety people, representing a

cross section of those who support extending transit to North Beach and a group of constituents who want no construction-related disruption. SFMTA staff expressed the Agency's commitment to working with merchants, local businesses and neighbors to minimize disruption and impacts associated with Central Subway construction.

Based on the above review, only Option 4, complete TBM Removal at 1731-1741 Powell Street, will address the construction concerns of the North Beach community without significantly impeding the possible future extension of rail service to North Beach/Fisherman's Wharf. The challenges associated with this option include the very tight timeline in which to acquire or secure access rights for the private property (including issuance of any required zoning variance), the appropriation of local funds needed to purchase or secure these access rights, and the need for any additional engineering review and approvals necessary to retrieve the TBMs from the site. If Option 4 proves infeasible, Option 3, Leave Tunnel Boring Machine Head under Columbus Avenue, would respond to disruption concerns raised by some members of the North Beach community, and, while this option creates additional challenges for a future extension of the T Third Line to North Beach and Fisherman's Wharf, this Option would increase Project costs less than Option 5. The challenges associated with Option 3 for the currently approved Project include the tight timeline in which to obtain additional Project funding, complete the additional engineering work, execute the necessary construction contract modifications, and complete any additional environmental study required.

Staff recommends, as its first preference, to further evaluate Option 4 (remove tunnel boring machine from 1731-1741 Powell Street) with a back-up plan to further evaluate Option 3 (leave tunnel boring machine head under Columbus Avenue) until February 1, 2013. If the necessary reviews and approvals cannot be obtained by that time, staff recommends that the Project focus on constructing the approved retrieval shaft on Columbus Avenue so that the Project's schedule and budget are not put at risk.

Consideration of extending rail service into North Beach/Fisherman's Wharf will be a separate effort, given that funding has yet to be identified for planning, design or construction. SPUR is currently planning a design charette to be held this winter to begin community discussions regarding such extension, and are eager to work with affected communities and neighborhoods to move that discussion forward.

The City Attorney's Office has reviewed this calendar item.

ALTERNATIVES CONSIDERED

The principal alternatives considered include leaving the Tunnel Boring Machine Head under Stockton Street or at either of two locations under Columbus Avenue. The alternatives that will be pursued will be to consider moving the TBM retrieval shaft to a site on private property and leaving the TBM head under Columbus Avenue to minimize disruptions to traffic on Columbus Avenue.

FUNDING IMPACT

The funding for Central Subway is from federal, state and local sources. Costs for advancing the Base Case: Construction on Columbus/Complete TBM removal is covered by the existing Central Subway Project budget and thus does not increase the Project budget. The Central Subway Project Budget & Financial Plan is set forth in Enclosure 2.

RECOMMENDATION

Staff recommends that the SFMTA Board of Directors authorize staff to first pursue the feasibility of moving the TBM retrieval shaft to property at 1731-1741 Powell, with a back-up plan to leave the TBM head under Columbus Avenue between Union and Powell Streets. If the required necessary Project review and possible approvals cannot be obtained by February 1, 2013, then the SFMTA Board directs staff to proceed with the approved retrieval shaft construction on Columbus Avenue so that the Project's schedule and budget are not put at risk.

SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS

RESOLUTION No. _____

WHEREAS, The Final Environmental Impact Statement/Environment Impact Report (Final EIS/EIR) for the two-phase Third Street Light Rail Project (the "Project") was completed in November 1998; and,

WHEREAS, The former Public Transportation Commission approved Resolution No. 99-009 on January 19, 1999, which adopted the environmental findings pursuant to the California Environmental Quality Act (CEQA) for the Project, including mitigation measures as set forth in the Project's Final Environmental Impact Report and Mitigation Monitoring Report; and,

WHEREAS, Design and construction of the 1.7-mile Central Subway is Phase 2 of the Third Street Light Rail Transit Project; and,

WHEREAS, The SFMTA Board of Directors adopted Resolution No. 05-087 on June 7, 2005, which selected the Fourth/Stockton option as the Locally Preferred Alternative (LPA) to be carried forward in the SEIS/SEIR; and,

WHEREAS, In response to comments received during the public scoping process and preliminary cost estimates prepared for the Project, SFMTA made refinements to the Fourth/Stockton Alignment and identified a Fourth/Stockton, Modified LPA (Alternative 3B) for evaluation in the SEIS/SEIR; and,

WHEREAS, The San Francisco Municipal Transportation Agency Board of Directors on February 19, 2008 adopted Resolution No. 08-029, selecting the Central Subway Project Alternative 3B, Fourth/Stockton Alignment with semi-exclusive surface rail operations on Fourth Street and the North Beach Construction Variant, as the Locally Preferred Alternative; and,

WHEREAS, The San Francisco Planning Commission adopted Motion No. M-17668 on August 7, 2008 certifying completion of the Central Subway Final SEIR; and,

WHEREAS, The SFMTA Board of Directors adopted Resolution No. 08-150 on August 19, 2008 adopting Central Subway Project Alternative 3B, Fourth / Stockton Alignment with semi-exclusive surface rail operations on Fourth Street and the North Beach Construction Variant; and,

WHEREAS, Certain members of the North Beach community are concerned that the North Beach Retrieval Shaft work as approved will impede traffic on Columbus Avenue and disrupt businesses, without receiving the benefit of enhanced public transportation; and,

WHEREAS, Certain members of the North Beach community has requested that the Central Subway team evaluate options to the current approved retrieval shaft construction work; and,

WHEREAS, The SFMTA has reviewed several options to the North Beach Construction Variant; and,

WHEREAS, According to the North Beach Retrieval Option Review, only Option 4, Complete TBM Removal at 1731-1741 Powell Street, will address the construction impacts of the North Beach community without impeding the possible future extension of the T-Third to North Beach/Fisherman's Wharf should funding be identified to plan, design and construct such an extension, and only Option 3, Leave Tunnel Boring Machine Head under Columbus Avenue will provide a reasonable option that the North Beach community may accept without precluding reasonable near-term prospects for a future extension of the T Third Line to North Beach and Fisherman's Wharf, if Option 4 proves infeasible; and,

WHEREAS, In order to not impact the construction schedule, Options 3 and 4 require that additional local funds be appropriated, and review (including environmental review) and approvals be obtained by February 1, 2013; and,

WHEREAS, If the necessary review, approvals or funds cannot be obtained by that time, the Project must proceed with constructing the approved retrieval shaft construction on Columbus Avenue so as not to put the Project's schedule and cost obligations at risk; therefore be it

RESOLVED, That the San Francisco Municipal Transportation Agency Board of Directors authorizes the Director of Transportation or his designee to evaluate the feasibility of Option 4 (remove tunnel boring machine from 1731-1741 Powell Street) as an alternative to the previously approved plan to remove the tunnel boring machines for the Central Subway Program using Columbus Avenue between Powell and Union Streets, and, if the Director determines Option 4 to be feasible and if the City's Environmental Review Officer and the Federal Transportation Administration conclude that no additional environmental review is necessary, authorizes the Director of Transportation to take all actions necessary to implement Option 4; and,

RESOLVED, That if the Director of Transportation determines that Option 4 is not feasible, the San Francisco Municipal Transportation Agency Board of Directors authorizes the Director of Transportation or his designee to evaluate the feasibility of Option 3 (leave tunnel boring machine head under Columbus Avenue) as an alternative to the previously approved plan to remove the tunnel boring machines for the Central Subway Program using Columbus Avenue between Powell and Union Streets, and, if the Director determines Option 3 to be feasible and if the City's Environmental Review Officer and the Federal Transportation Administration conclude that no additional environmental review is necessary, authorizes the Director of Transportation to take all actions necessary to implement Option 3; and be it

FURTHER RESOLVED, That if the Director of Transportation determines by February 1, 2013 that either Option 3 or Option 4 is not feasible, or if the City's Environmental Review Officer or the Federal Transit Administration concludes that the preferred Option requires additional environmental review, the SFMTA Board of Directors directs the Central Subway Program to continue to construct the retrieval shaft for the tunnel boring machines on Columbus Avenue, as previously approved.

I certify that the foregoing resolution was adopted by the San Francisco Municipal Transportation Agency Board of Directors at its meeting of December 4, 2012.

Secretary to the Board of Directors
San Francisco Municipal Transportation Agency

ENCLOSURE 2

THIRD STREET LIGHT RAIL PROJECT
CENTRAL SUBWAY

Project Budget & Financial Plan

Cost	(\$Million)
Conceptual and Preliminary Engineering	46.32
Program Management & Construction Management	206.52
Final Design	86.05
Construction Contracts	1,089.61
Vehicles	26.38
Contingency	63.34
Right-of-Way	37.40
Other Professional Services	22.68
Total Central Subway Cost	\$ 1,578.30

Funding	(\$Millions)
Federal 5309 New Starts	942.20
Federal CMAQ	41.03
State RTIP Grant	88.00
State TCRP Grant	14.00
State Proposition 1A - High Speed Rail	61.31
State Proposition 1B - PTMISEA	307.78
Proposition K Sales Tax Funds	123.98
Total Central Subway Funding	\$ 1,578.30

North Beach Retrieval Option Review

1. Base Case: Construction on Columbus Avenue/Complete TBM removal
 2. Leave TBMs head north of Chinatown Station
 3. Leave TBMs head under Columbus Avenue
 4. Complete TBM removal at 1731-1741 Powell Street
 5. Leave TBMs head north of Taylor Street under Columbus Avenue
- *Additional environmental work is required to investigate further

Criteria	Good	Fair	Poor
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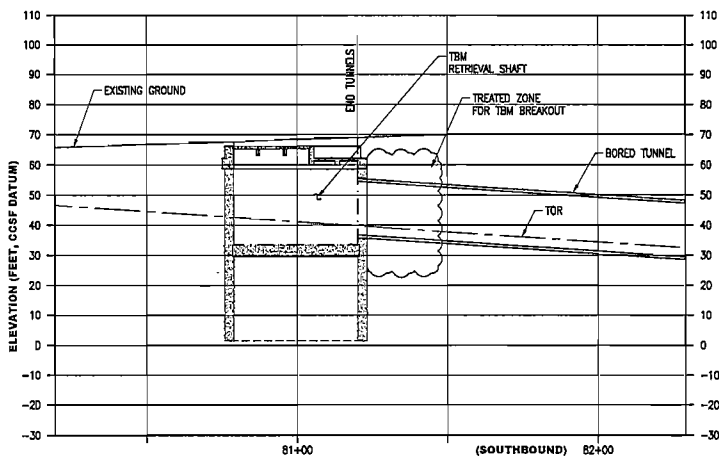
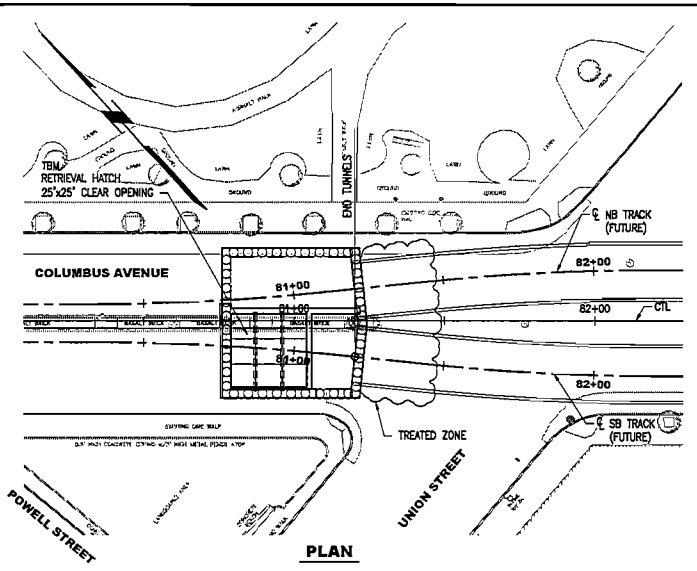
Neighborhood Impacts	Option 1	Option 2	Option 3	*Option 4	*Option 5
Residential Considerations (NB)	Good	Fair	Good	Fair	Good
Business Considerations	Fair	Fair	Good	Fair	Good
Construction Access/Area	Fair	Poor	Fair	Fair	Fair
Traffic Impacts	Poor	Poor	Fair	Good	Fair
Neighborhood Impacts Summary	Fair	Poor	Fair	Poor	Fair

Environmental Impacts/Planning Processes	Option 1	Option 2	Option 3	*Option 4	*Option 5
Within FEIS/FEIR Limits	Good	Good	Good	Fair	Fair

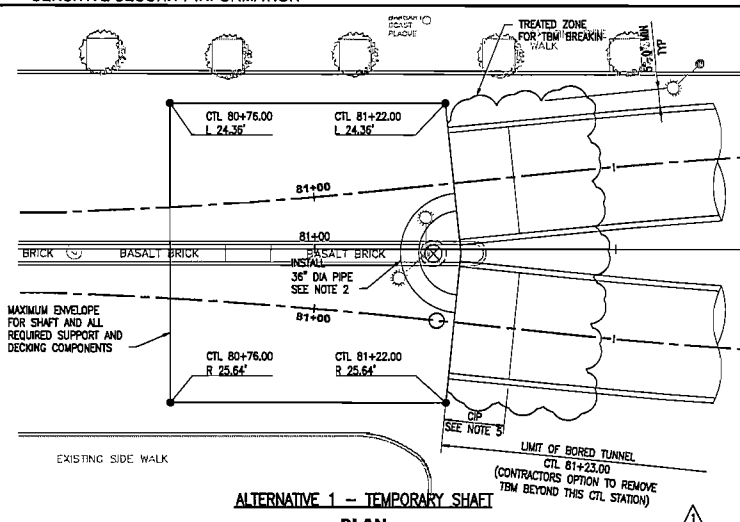
Cost and Schedule	Option 1	Option 2	Option 3	*Option 4	*Option 5
Cost (does not include cost of schedule delay)	Good	Good	Fair	Fair	Poor
Schedule	Good	Fair	Fair	Good	Fair

Future Phase III Considerations	Option 1	Option 2	Option 3	*Option 4	*Option 5
Central Subway Phase III Extension Considerations	Good	Poor	Poor	Good	Poor
Future North Beach Transit Station Considerations	Good	Poor	Poor	Good	Good

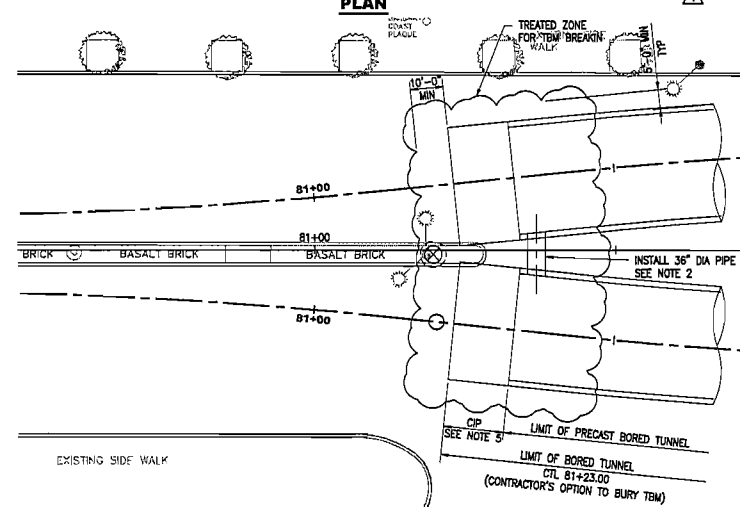
\\S:\p003\muni.sfgov.org\m544\1\FinalDesign\Drawing-B2\3-Structural\Excavation and Ground Support\Sheet Files CP03\M544235161_R1C.dwg ecom1 Tue Aug 23, 2011 - 7:21 am ES-161_R1C



BASE BID - PERMANENT SHAFT



ALTERNATIVE 1 - TEMPORARY SHAFT



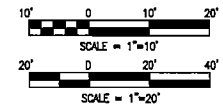
ALTERNATIVE 2 - NO SHAFT/BURIED SHIELD

NOTES:

- DRAWINGS:
 - FOR TRAFFIC ROUTING WORK SEE TR-019 & TR-020
 - FOR UTILITY DEMOLITION WORK SEE UD-701
 - FOR JOINT TRENCH WORK SEE JT-701
 - FOR SEWER WORK SEE SW-3 & SW-5
 - FOR WATER DISTRIBUTION WORK SEE WD-701
 - FOR AUXILIARY WATER SUPPLY SYSTEM WORK SEE AW-501.1, AW-501.6, AW-501.7 & AW-501.8
 - FOR ROAD DEMOLITION WORK SEE PD-100 TO PD-102
 - FOR PAVEMENT RENOVATION WORK SEE RP-101 TO RP-103
 - FOR LANDSCAPING WORK SEE LA-011 & LA-012
 - FOR STRUCTURAL WORK SEE ST162 TO ST-163
 - FOR BUILDING PROTECTION INSTRUMENTATION SEE BP-002 TO BP-113
 - FOR OTHER GROUND TREATMENT WORK SEE ES-101, ES-102 & ES-162
 - FOR TRAFFIC SIGNALS WORK SEE ET-101
 - FOR OVERHEAD CATERWAY WORK SEE OV-101 TO OV-104
 - FOR TRACTION POWER WORK SEE TP-101
 - FOR STREET LIGHTING WORK SEE SL-101

NOTES FOR ALTERNATIVES IF SELECTED BY CONTRACTOR:

- CONTRACTOR TO SUBMIT METHOD STATEMENT FOR SELECTED ALTERNATIVE
 - CONTRACTOR TO DESIGN AND CONSTRUCT PRECAST CONCRETE PIPE BETWEEN TUNNELS.
 - CONTRACTOR TO SUBMIT FULL DESIGN FOR TEMPORARY SHAFT BASED ON FULL SOIL AND WATER PRESSURES WITH APPLICABLE OVERBURDEN LOADS AND CONSTRUCT AND BACKFILL SHAFT ON COMPLETION.
 - CONTRACTOR TO SUBMIT TEMPORARY SEWER OVERSIZES AND OBTAIN AGREEMENT TO ALL OVERSIZES.
- ALTERNATIVE 1 IF SELECTED:**
- CONTRACTOR'S PROFESSIONAL ENGINEER TO DESIGN AND CONTRACTOR TO CONSTRUCT PERMANENT HEADWALL IN EACH TUNNEL TO SUPPORT FULL SOIL, GROUNDWATER AND OVERBURDEN LOADS. CONTRACTOR DESIGN FOR ALTERNATIVE 2 SHALL INCLUDE CAST-IN-PLACE CONCRETE LINING INSIDE TBM SHIELD TO INDICATED LIMIT OF BORED TUNNEL. SUBMIT DESIGN FOR ENGINEER'S APPROVAL.



CONFORMED

DATE	DESCRIPTION	BY	CHKD	APP'D
04/23/2011	ISSUED FOR ADDENDUM 4	T	MH	MEP
07/27/2011	ISSUED FOR BID	D		

PB TELAMON
PB AMERICAS, INC.

DESIGNED BY: M. HEDSON
 CHECKED BY: T. SANDOFF
 REVISIONS BY: M. HEDSON
 APPROVED BY: M. FOWLER
 DATE: JUN 21, 2011

REV. 0 SEALED BY M. FOWLER

CITY AND COUNTY OF SAN FRANCISCO
 MUNICIPAL TRANSPORTATION AGENCY

APPROVED BY: OMER K. NEMM
 EXECUTIVE DIRECTOR/CD

THIRD STREET LIGHT RAIL PROGRAM
 PHASE 2 - CENTRAL SUBWAY TUNNELS

EXCAVATION AND GROUND SUPPORT
 TBM RETRIEVAL SHAFT
 BASE AND OPTION

CONTRACT NO.	1252
DRAWING NO.	CL-18166
DRAWING NO.	ES-161
SHEET NO.	1

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 152. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 152, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTIES OR CRIMINAL ACTION.

- c) Hauling and disposing of materials that can be legally disposed of at an unregulated dump site.
- 3) The amount paid under this item shall exclude markups of any kind.

C. Structural Items—ST

1. **Bid Item ST-1—Construction of Fourth Street Portal Structure**

- a. The lump sum price for this bid item shall include full payment for the cost of work and materials necessary for the construction of the Fourth Street Portal Structure .
- b. The cost of the TBM Launch Box is paid for under other bid items.
- c. Estimates for progress payment purposes will be made based on the Contractor's approved schedule of values.

2. **Bid Item ST-2—Construction of Tunnels**

- a. The lump sum price for this bid item shall include full payment for the cost of work and materials necessary for construction of tunnels.
- b. The cost of ground treatment and building protection measures is paid for under other bid items.
- c. Estimates for progress payment purposes will be made based on the Contractor's approved schedule of values.

3. **Bid Item ST-3—Construction of Cross Passages**

- a. The lump sum price for this bid item shall include full payment for the cost of work and materials necessary to construct cross passages.
- b. The cost of ground treatment and building protection measures is paid for under other bid items.
- c. Estimates for progress payment purposes will be made based on the Contractor's approved schedule of values.

4. **Bid Item ST-4—Construction of Base Bid Permanent Retrieval Shaft**

- a. The lump sum price for this bid item shall include full payment for the cost of work and materials necessary to construct the Base Bid Permanent Retrieval Shaft on Columbus Street.
- b. The cost of designing, furnishing, installing, and maintaining sheeting, shoring, and bracing of trenches and open excavations five feet or deeper is paid for under other bid items. The cost of ground treatment and building protection measures is paid for under other bid items.
- c. Estimates for progress payment purposes will be made based on the Contractor's approved schedule of values.

5. **Bid Item ST-OP 1—Construction of Retrieval Shaft Option**

- a. The lump sum deduct price for this bid item shall include difference in full payment for the cost of work and materials necessary to construct either Alternative 1 – Temporary Shaft or Alternative 2 – No Shaft/Bury Shield compared to construction of the Base Bid Permanent Retrieval Shaft. Refer to SP-1 for the selection process.
- b. Attention is called to the Schedule of Bid Prices for additional instructions related to this bid item.
- c. The cost of designing, furnishing, installing, and maintaining sheeting, shoring, and bracing of trenches and open excavations five feet or deeper related to the Retrieval Shaft Option is paid for under this bid item.
- d. The cost of ground treatment and building protection measures in excess of that required for construction of the Base Bid Permanent Retrieval Shaft shall be included in this bid item.
- e. The cost of ground treatment and building protection measures up to or equal to that required for construction of the Base Bid Permanent Retrieval Shaft is paid for under other bid items.
- f. Estimates for progress payment purposes will be made based on the Contractor's approved schedule of values.
- g. For Alternative 1, the applicable work for the construction of permanent retrieval shaft on the following contract drawings will be deleted: SW-3, SW-3.1, ST-163, ST-164, ST-165, ST-166, ST-167, ST-168, ST-169, ST-170, ST-171, ST-172, ST-173, ST-174, ST-175, ST-176, ST-177, ST-178, ST-179, ST-180, ST-181, ST-182, ST-183. The work shown on SW-3 and SW-3.1 shall be temporary (or other approved method). Existing sewer alignment and capacity shall be reconstructed. A total of 23 contract drawings.
- h. For Alternative 2, the applicable work for the construction of permanent retrieval shaft on the following contract drawings will be deleted in addition to the deletion of work in Alternative 1: UT-701, UT-721, SW-3, SW-3.1, PD-100, PD-101, PD-102, RP-101, RP-102, RP-145, RP-146, RP-147, RP-148, RP-149, RP-160, RP-171, LA-011, LA-012, LA-021, LA-022, LA-031, ST-162, OV-101, OV-102, OV-103. A total of 46 drawings.

D. Building Protection Items—BP

1. **Bid Item BP-1—Protection and Monitoring**

- a. The lump sum price for this bid item shall include full payment for the cost of work and materials necessary for the following items:
 - 1) Automated building settlement monitoring points.
 - 2) Manual building settlement monitoring points.
 - 3) Tunnel and surface settlement monitoring points.

To see all the details that are visible on the screen, use the "Print" link next to the map.





Current Construction Timeline

Construction in North Beach is planned to occur along the following timeline. Access to local businesses, residences and driveways will be maintained throughout construction.

2012

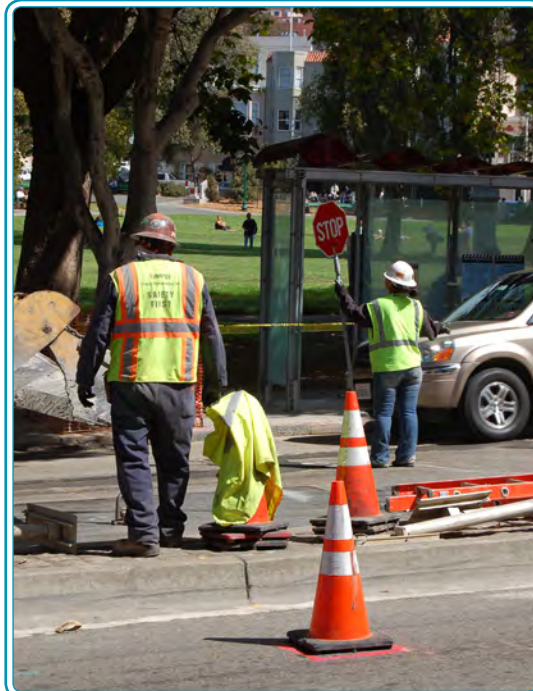
- Preconstruction surveys
- Utility relocation

2013

- Continued utility relocation
- Retrieval shaft construction
- Ground stabilization work, known as grouting

2014

- Tunnel boring machine retrieval
- Street and sidewalk restoration, planting of new trees



Central Subway Construction in North Beach



The Central Subway will extend Muni's T Third Line through central San Francisco, reducing travel times, improving San Francisco's transportation network and enhancing connections between the city's vibrant, diverse communities.

The Central Subway tunnel is planned to extend past Chinatown to North Beach. When tunneling is complete, the tunnel boring machines will be removed from the ground on Columbus Avenue, with construction activity limited to a half-block area. Afterward the project will install new sidewalks, curbs, gutters and asphalt in the impacted area, and new trees will be planted in Washington Square Park.

Utility relocation in North Beach to prepare for this essential transit improvement is underway. As construction advances, we encourage you to contact us with any questions or concerns and to connect with us online for the most current project information.

Questions or Concerns? Contact Us!

The Central Subway team commits to responding to all complaints and inquiries, and quarterly project briefings are available upon request. If you have questions or concerns, we encourage you to contact us:

**Project Infoline
and E-mail Address**
415-701-4371
Central.Subway@SFMTA.com

Sarah Wilson
Tunnel Contract Resident Engineer
Central Subway Project
415-249-8213

For More Information

For weekly construction updates and pertinent project information, connect with us online.

- www.centuralsubwaysf.com
- www.twitter.com/central_subway
- www.facebook.com/centuralsubway
- www.centuralsubwayblog.com



311 Free language assistance / 免費語言協助 / Ayuda gratuita con el idioma / Бесплатная помощь переводчиков / Trợ giúp Thông dịch Miễn phí / assistenza linguistica gratuita / Assistance linguistique gratuite / 無料の言語支援 / 311 免費語言協助 / 311 免費語言協助 / 311 免費語言協助



SFMTA



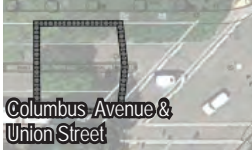
Utility Relocation: What to Expect in First Quarter 2013

- **Areas of impact:** Columbus Avenue between Filbert and Union streets, and Powell Street between Union Street and Columbus Avenue (see map).
- **Transit Impacts:** The bus stops on Columbus Avenue at Union Street will be temporarily closed one at a time.
- **Work hours:** Monday through Friday, 7 a.m. to 3:30 p.m.
- **Traffic:** No more than one lane of traffic will be closed at a time, and all lanes will be opened at the end of each work day.
- **Street sweeping** will occur daily on work days.
- **Parking restrictions** will be in effect.
- **A traffic control officer and flagger** will facilitate the flow of traffic during work hours.
- **Dust** will be monitored and controlled, and noise will be kept within required decibel levels.



North Beach Retrieval Option Review

1 Base Case: Construction on Columbus Avenue/
complete TBM removal



2 Leave TBMs head north of Chinatown Station



3 Leave TBMs head under Columbus Avenue



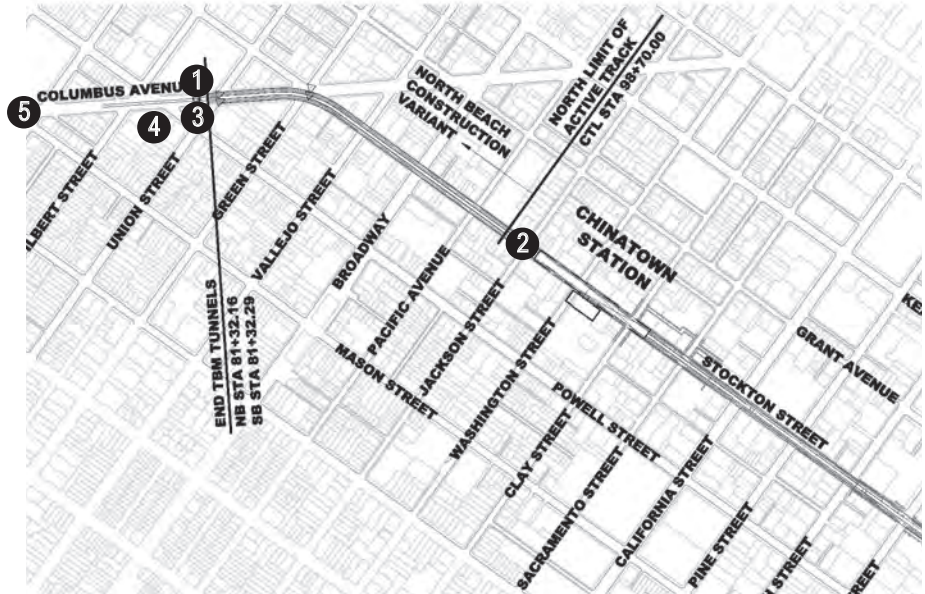
4 Complete TBM removal
at 1741 Powell Street



5 Leave TBMs head north of Taylor
Street under Columbus Avenue



Additional environmental
work is required to investigate
further



Criteria ● Good ◐ Fair ○ Poor

Neighborhood Impacts

	1	2	3	4	5
Residential Considerations (NB)	●	◐	●	◐	●
Business Considerations	◐	◐	●	◐	●
Construction Access/Area	◐	○	◐	◐	◐
Traffic Impacts	○	○	◐	●	◐

Neighborhood Impacts Summary

	◐	○	◐	◐	◐
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Environmental Impacts/Planning Processes

Within FEIS/FEIR Limits	●	●	●	◐ Administrative Addendum	◐ Administrative Addendum
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Cost and Schedule

Cost*	● (No Additional Cost)	● (- \$21-23 Million)	◐ (+ \$3-5 Million)	◐ (+ \$6-8 Million)	○ (+ \$24-26 Million)
Schedule	● (No Additional Time)	◐ (- Three Months)	◐ (+ Two Months)	● (No Additional Time)	◐ (+ Three Months)

Future Phase III Considerations

Central Subway Phase III Extension Considerations	●	○	○	●	○
Future North Beach Transit Station Considerations	●	○	○	●	●

* Does not include cost of schedule delay