

## CMB Meeting Minutes #157

DATE: February 11, 2014

MEETING DATE: February 5, 2014

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:00 PM

ATTENDEES: J Funghi (JF), A. Hoe (AH), R. Redmond, (RR), K. Shah (KS), T. DePooter (TDP), E. Stassevitch (ES), M. Latch (ML), M. Leong (MLe), M. Benson (MB), M. Hembd, (MH), B. Volberding (VB), M. Vilcheck,(MV), M. Acosta (MA), J. Wang (JW), B. Ward (BW), L. Zurinaga (LZ), B. Lebovitz (BL)

COPIES TO: Attendees: S. Farhangi (SF), M. Henry (MH), R. Nguyen (RN), S. Wilson (SW), J. Xia (JX), B. Kelleher (BK), J. Park (JP), V. Chow (VC), S. Jefferis (SJ), S. Tisell (ST), S. Espinal (SE), R. Hansen (RH), D. Kuehn (DK)  
File No. M544.1.5.0890

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

SUBJECT: Configuration Management Board Meeting # 157– Rev. No. 0

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

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	M. Benson and M. Leong presented for consideration Contract 1277 force account item COR 01 - Demolish and remove unforeseen concrete structures under slab on grade. The CMB took exception to the information presented requesting the CM team demonstrate how the inspector delineated contract work from extra work and to investigate the force account tickets against the inspector's daily reports. No action was taken by the CMB on this item.	
2-	M. Leong presented Contract 1277 COR 02 - Demolition of the parapet wall. Contract work required the removal of the existing brick wall on the Southwest side of Pagoda Theater, would leave the adjacent parapet wall unsupported requiring removal as well. The <b>CMB agreed with merit</b> and costs associated with the different site condition for a Not to Exceed amount of \$8,054.88 <b>AGREE – CMB 0147.</b>	
3-	M. Leong presented Contract 1277 COR 03 - Hauling and disposal of Styrofoam debris. Styrofoam was discovered inside the concrete of the interior stairway and embedded in the concrete floor of the Pagoda Theatre. It was necessary to dispose the material at Ox Mountain rather than the usual Brisbane dumpsite incurring an additional cost for transportation between the two sites. The CMB took exception to the write - up of the merit evaluation requesting it include a better explanation of the "facts" to be brought back to the next meeting. The CMB approved the costs associated with the different site condition for a Not to Exceed amount of \$4,307.78 <b>AGREE – CMB 0148.</b>	MB/MLe 02/12/14

ITEM #	DISCUSSION	ACTION BY DUE DATE
4-	M. Leong Contract 1277 COR 04 - Sorting of materials at Bayland Soils Processing No action was taken by the CMB on this item. The CMB requested the CM team revisit the defined scope of the COR. Citing the Contractor cost for sorting of the material is contract work and the disposal of the hazmat work is part of the DSC. In addition the Contractor created a larger issue by not sorting the material on site.	
5-	M. Leong presented - FACO #10 - Slip line the existing 3'x5" sewer with a 16" HDPE pipe on Columbus Ave. No action was taken by the CMB on this item. Requesting confirmation of what needs to be done and verification of the physical function of the pipe to determine the most cost effective way to address the PUC's request.	
6-	J. Wang presented a proposed PCC 008 to modify contract 1300 plans - Impacts from Tunnel Lowering affecting the profile of track and overhead contact system between UMS and YBM, and the sump pump at cross passage 5. CMB agreed that the PCC should be forwarded to the Contractor for pricing and should include the quantity take-offs as part of the backup information.	
7-	R. Redmond and M. Vilcheck presented as an informational item the Contractor's proposed revised Traffic Control Plans which modifies the current Temporary Traffic Routing Plan A Phase 1 to accommodate the equipment for the installation of the slurry wall on the west side. The Contractor will be notified the traffic plan is conditionally approved, which can be rescinded if there is evidence of traffic being impacted.	
8-	R. Redmond presented for information CSDG Task 16 cost tracking report expended for the authorized six-month period of design support under contract 1300. The CMB directed the construction manager to continue to closely monitor the Task 16 budget and to authorize another 6 months of budget similar to the original authorization.	
9-	R. Redmond presented for discussion SFMTA CN 1300 Letter No. 0077 in response to the Contractor letter of CTS Utility Delay. SFMTA's letter stated the Contractor should follow the contract provisions, of demonstrating a time impact for review by SFMTA. (see attached).	
10-	R. Redmond notified the CMB of a potential DSC concerning four separate locations of street base collapse during potholing work a STS. The Contractor has determined the cause is due to the catch basin lateral leaking at the main connection in the middle of the street. The CM team was directed to notify the PUC of the issue letting them know we can make the fix or they need to dispatch an official to address the issue immediately.	


**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
8	07/24/13	07/24/13	1252 – Breakdown of Bid Item GE-3	MB	02/12/14	Open
2	08/14/13	08/14/13	1252 – CMod #8 (PSI strength) – Statement of occurrence post meeting record of approval which overrode CMB direction	SW	02/12/14	Open
1	08/28/13	08/28/13	1252 – Outstanding COR's – status update	SW/MB	02/12/14	Open
2 & 3	08/28/13	08/28/13	1252 – COR 97 & 98 – gravel encountered action plan from Engineering of Record (DP1)	SW/MB	02/12/14	Open

5	08/28/13	08/28/13	1252 – Action plan of execution for the Slip Lining Work (Stockton/Columbus)	SW	02/12/14	Open
4	09/25/13	10/02/13	1252 – COR #104 - Additional Sewer Slip Lining – SFPUC Response	SW	02/12/14	Open
5	09/25/13	10/02/13	1300 – PCC CTS 0001 - Contractor Cost Proposal	TDP	02/12/14	Open
2	10/09/13	10/09/13	1252 – Design Clause - confirmation of existing contract language in CN 1252 and CN 1300 regarding existing conditions related to utilities	JW/AH	02/12/14	Open
1	10/16/13	10/16/13	1252 – COR 102 - Determine if the Contractor received 1251 as built information before they began operations	SW	02/12/14	Open
1	10/16/13	10/16/13	1252 – COR 102 - Graphic showing the location of the headwalls control line	SW	02/12/14	Open
3	10/23/13	10/23/13	1252 – PCC 014 - Contractor Cost Proposal	JW/SW	02/12/14	Open
4	10/23/13	10/23/13	1300 – COR 05 - Revisit IRL process with	RR	02/12/14	Open
2	11/06/13	11/06/13	1252 - COR 017 – Notify utility of cost as Form B bill update under CN1250 or CN1251	SW	02/12/14	Open
3	11/06/13	11/06/13	1252 – Slurry Wall Panels – TIA to be sent to BIH – SFMTA’s time savings and premium cost saving	SW/AA	02/12/14	Open
2	11/13/13	11/13/13	1300 – Setup a meeting with DT to confirm the use to control traffic	BK	02/12/14	Open
NA	11/13/13	11/13/13	1252 – Confirm who is being billed for the use of PCO’s at 5 <sup>th</sup> St.	MB	02/12/14	Open
2	11/20/13	11/20/13	1300 – PCC 00X - PGE Traffic Control - Utility verification letter	TDP	02/12/14	Open
7	12/11/13	12/11/13	1252- BART Load Cell - Conference Call	JW	02/12/14	Open
9	12/11/13	12/11/13	1252 - Trend Log Segment Measuring Frequency line item credit (1.3M)	MB	02/12/14	Open
10	12/11/13	12/11/13	1252 - Precast Tunnel Liner Test - Contractor’s Rpt.	ML	02/12/14	Open
2	01/08/14	01/08/14	1300 - PCC - Contractor Cost Proposal - Geoprobes	RR/ST	02/12/14	Open
4	01/08/14	01/08/14	1300 - PCC - Contractor Cost Proposal - Joint Trench Conduits	TDP	02/12/14	Open
4	01/15/14	01/15/14	1300 - CTS confirmation from PG&E of cost for concrete encasement of lines	TDP	02/12/14	Open
1	01/22/15	01/22/14	1300 - (RFS) supplemental information from Contractor	RR/MV	02/12/14	CLOSED
XX	02/05/14	02/05/14	1277 - Revise COR 003 Evaluation of Merit sheet	MB/MLe	02/12/14	Open

Meeting adjourned at 6:30pm

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: 11 FEB 14 [Date review completed]

## Meeting Agenda

**Project No. M544.1, Contract No. CS-149**  
**Program/Construction Management**  
**Configuration Management Board (CMB) Meeting No. 157**  
**February 05, 2014**  
**3:00pm – 5:00pm**  
 Central Subway Project Office  
 821 Howard St. 2<sup>nd</sup> Floor  
 Main Conference Room

**Attendees:**

Mark Benson	Brian Kelleher	Richard Redmond
John Funghi	Mark Latch	Eric Stassevitch
Albert Hoe	Brad Lebovitz	Beverly Ward
Scott Jefferis	Roger Nguyen	Luis Zurinaga

1. **1252** - FACO No. 10 - Slip Lining 16" HDPE Pipe 80+41 to 81+50 on Columbus Ave. - *Cost NTE*
2. **1277** - COR 01 - Demolish and remove unforeseen concrete structures found under slab on grade - *Merit, Cost NTE*
  - COR 02 - Parapet wall demolition at the Filbert Garage - *Merit, Cost NTE*
  - COR 03 - Hauling and disposal of Styrofoam debris - *Merit, Cost NTE*
  - COR 04 - Sorting of materials at Baylands Soils Processing - *Merit, Cost NTE*
3. **1300** - PCC 08 (Impacts from Tunnel Lowering) - *Approval*
  - CTS) Response TPC Ltr 51 Utility Delays to Layne Christensen - *Information*
  - YBM - Traffic Control Modification for Installation of West Side Slurry Wall - *Review*
  - CSDG Task 16 - Cost Tracking - *Review*
4. **Trend Log**
5. **Other Business –**

## Meeting Attendance Sheet

Project No. M544.1, Contract No. 149  
 Program/Construction Management  
 Configuration Management Board Meeting No. 157  
 February 05, 2014  
 3:30 p.m. – 5:00 p.m.  
 Central Subway Project Office  
 821 Howard, 2<sup>nd</sup> 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) 238-0996	Mark.Benson@sfmta.com	MCB
Chow, Vivian	SFMTA	(415) 701-5264	Vivian.chow@sfmta.com	
DePooter, Ted	CSP	(415) 701-5295	Ted.DePooter@sfmta.com	TJD
Farhangi, Shahn timer	SFMTA	(415) 554-0721	Shahn timer.Farhangi@sfmta.com	
Funghi, John	SFMTA	(415) 701-4299	John.Funghi@sfmta.com	CF
Haley, John	SFMTA		John.Haley@sfmta.com	
Henry, Melvyn	SFMTA	(415) 701-5719	Melvyn.Henry@sfmta.com	
Hoe, Albert	SFMTA	(415) 701-4289	Albert.Hoe@sfmta.com	AH
Jefferis, Scott	SFMTA	(415) 238-4679	Richard.Jefferis@sfmta.com	
Kelleher, Brian	SFMTA	(415) 701-5289	Brian.Kelleher@sfmta.com	
Kelly, Jim	SFMTA		Jim.Kelly@sfmta.com	
Kuehn, David	STV/PMOC	(510) 464-8053	David.kuehn@stvinc.com	
Latch, Mark	CSP	(415) 701-5294	Mark.Latch@sfmta.com	MDL
Lebovitz, Brad	STV/PMOC	(510) 464-8052	Bradley.lebovitz@stvinc.com	BL
Nguyen, Roger	SFMTA	(415) 701-4312	Roger.Nguyen@sfmta.com	





**CMB Change No.: CMB – 0147**

**Initial Implementing Change Control Procedure No.: 1277 – COR # 02**

**GENERAL**

Proposed Change Sponsor: M. Benson Received by CMB: 02/05/2014  
(Date)

Affected Disciplines: Demolition

Impacts of Change Demolition of parapet wall

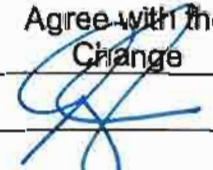


Change Order Request (COR 02) Amount Not To Exceed \$8,054.88

**Contract(s) Directly Affected by this Proposed Change:**

1250	1251	1252	1253	1254	1255	1256	1277
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input checked="" type="checkbox"/>
(CP01)	(CP02)	(CP03)	(CP04)	(CP05)	(CP06)	(CP07)	

**CONFIGURATION MANAGEMENT BOARD APPROVALS**

*Signatures*

	Agree with the Change	Disagree with the Change	Date
Program Director:			
Deputy Program Manager:			
PM Project Services:			
PM Project Construction:			2/5/14
SFMTA O & M Manager:			
SFMTA Safety and Security			
SFCTA PMO			5 Feb 14

**Comments**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## COR No. 002 Estimate/Negotiated Cost Summary

**General Scope:**

- Setup of roof protection for garage building
- Demolition of parapet wall
- Installation of roof flashing cap on parapet wall and repair for garage roof

**Date of work performed:**

- Setup Roof Protection: 9/5/13
- Demo Wall 9/7/13 through 9/13/13
- Install Roof Cap: 9/27/13

**Total estimated cost:**

Labor	\$	1,405.68
Material	\$	878.57
Equipment	\$	591.60
2nd Tier Sub	\$	3,310.00
Markup on 2nd Tier Sub - 5%	\$	165.50
Prime - Markup - 15%	\$	431.38
Pollution Insurance - 2.11%	\$	143.12
Bond - 1.08%	\$	73.25
<b>Total Estimated Amount</b>	<b>\$</b>	<b>6,999.10</b>

**Total Negotiated Cost:**

Labor	\$	2,342.80
Material	\$	878.57
Equipment	\$	591.60
2nd Tier Sub	\$	3,310.00
Markup on 2nd Tier Sub - 5%	\$	165.50
Prime - Markup - 15%	\$	571.95
Pollution Insurance - 1.394%	\$	109.57
Bond - 1.08%	\$	84.89
<b>Total Negotiated Amount</b> (RE Recommended NTE Amount)	<b>\$</b>	<b>8,054.88</b>

**List of attached documents:**

- Contractor Cost Proposal/SFMTA Estimated Cost Comparison
- Detailed Estimate
- Detailed Negotiated Cost Breakdown
- S'Top Roofing Invoice

  
 Prepared By: Ben Volberding

02/04/2014  
 Date:

  
 Checked By: Matt Hembd  
 Date: 02/04/2014



1277 COR No. 002

	No.	Activity Name	Hours (C)	Hours (EE)	Contractor (C) [REV.1]	SFMTA Engineer's Estimate (EE)	Delta (C-EE)	Summary of Delta	Negotiation Position	Negotiation Results	Amount
Labor	1	Labor (L)	96	24	\$ 5,623.00	\$ 1,405.68	\$ 4,217.32	-C including costs for 96 man-hours. EE includes 24 man-hours.	-Use 24 mhrs. SFMTA Field Inspector could only verify 24 mhrs. of labor.	-C stated that additional time was required to install additional protection on roofing. SFMTA inspector had not included this time in his analysis. Agreed on 40 total manhours.	\$ 2,342.80
Equipment	1	Equipment (E)	40	12	\$ 1,972.00	\$ 591.60	\$ 1,380.40	-C including costs for 40 hours of man lift equipment costs. EE includes 12 hours.	-Use 12 hrs. SFMTA Field Inspector could only verify 12 hrs. for equipment.	-C agreed to use SFMTA's estimated cost	\$ 591.60
Materials	1	Materials (M)			\$ 878.00	\$ 878.57	\$ (0.57)	-EE Tax includes: (9.75% - Sales: 8.75% + CA Lumber: 1.00%); C excludes 1% tax for CA lumber.	-Use 9.75% Tax rate	-C agreed to use SFMTA's revised tax rate	\$ 878.57
Services	1	Services (S)			\$ 3,310.00	\$ 3,310.00	\$ -		-Pay S'Top roofing work for cost shown on invoice provided by MH	-Agreed to use invoiced cost	\$ 3,310.00
			OH&P Markup (S - 5%)		\$ 165.50	\$ 165.50	\$ -			OH&P Markup (S - 5%)	\$ 165.50
			OH&P Markup (LM&E - 15%)		\$ 1,270.95	\$ 431.38	\$ 839.57			OH&P Markup (LM&E - 15%)	\$ 571.95
			Insurance Pollution (2.11%)		\$ 253.33	\$ 143.12	\$ 110.22	MH to provide SFMTA with supporting documentation to verify this insura		Insurance Pollution (1.394%) <sup>1</sup>	\$ 109.57
			Bond (1.08%)		\$ 169.68	\$ 73.25	\$ 96.42			Bond (1.08%)	\$ 84.89
			<b>Total</b>		<b>\$ 13,642</b>	<b>\$ 6,999.10</b>	<b>\$ 6,643.36</b>			<b>Negotiated Total</b>	<b>\$ 8,054.88</b>

<sup>1</sup>C provided SFMTA with documentation supporting actual insurance pollution markup of 1.394%

Hourly rates:

Activity Description	Laborer G3		Labor totals	JLG 80' Manlift	Equipment Totals
	12	12		12	
	<b>ST RATES</b>				
Demo Parapet Wall	12	12	\$ 1,405.68	12	\$ 591.60
			<b>\$ 1,405.68</b>		<b>\$ 591.60</b>

Invoice No.	SFMTA Index	Material	Qty.	Unit	Unit Price	Extension
M00064170-002	D	4' x 8 Plywood	14	Ea	\$ 51.25	\$ 717.50
M00064170-002	C	2"x 4" Douglas Fir	160	Ea	\$ 0.43	\$ 68.80
M00064170-002	A	5# Bright Common 8D Nails	1	Ea	\$ 7.11	\$ 7.11
M00064170-002	B	5# Brian Common 10D Nails	1	Ea	\$ 7.11	\$ 7.11
		Tax (9.75% - Sales: 8.75% + CA Lumber: 1.00%)	1	LS	9.75%	\$ 78.05
<b>TOTAL</b>						<b>\$ 878.57</b>

Invoice Date:	SFMTA Index	Services	Qty.	Unit	Unit Price	Extension
9/27/2013	E	S'top Roof Repair	1	LS	\$ 3,310.00	\$ 3,310.00
<b>TOTAL</b>						<b>\$ 3,310.00</b>

Hourly rates:

Activity Description	Laborer G3		Labor totals	JLG 80' Manlift	Equipment Totals
	20	20		12	
	ST RATES				
Demo Parapet Wall / Setup Roof Protection	20	20	\$ 2,342.80	12	\$ 591.60
			\$ 2,342.80		\$ 591.60

Invoice No.	SFMTA Index	Material	Qty.	Unit	Unit Price	Extension
M00064170-002	D	4' x 8 Plywood	14	Ea	\$ 51.25	\$ 717.50
M00064170-002	C	2"x 4" Douglas Fir	160	Ea	\$ 0.43	\$ 68.80
M00064170-002	A	5# Bright Common 8D Nails	1	Ea	\$ 7.11	\$ 7.11
M00064170-002	B	5# Brian Common 10D Nails	1	Ea	\$ 7.11	\$ 7.11
		Tax (9.75% - Sales: 8.75% + CA Lumber: 1.00%)	1	LS	9.75%	\$ 78.05
<b>TOTAL</b>						<b>\$ 878.57</b>

Invoice Date:	SFMTA Index	Services	Qty.	Unit	Unit Price	Extension
9/27/2013	E	S'top Roof Repair	1	LS	\$ 3,310.00	\$ 3,310.00
<b>TOTAL</b>						<b>\$ 3,310.00</b>





25 Marin Street  
San Francisco, CA 94124-1095 USA  
Phone: (415)-824-4300

Remit To: Beronio  
P.O. Box 7777  
San Francisco, CA 94144-4142  
Phone: (415)-824-4300

**INVOICE**

**M00064170-002**

Invoice Date: 09/06/13  
Account: 5568 0001  
Branch: 01MARIN  
Phone: (415)-558-9778  
Fax: (415)-558-9612  
Delivery: M00064170-002

**BILL TO:**  
M.H. Construction  
1630 17TH Street  
San Francisco CA 94107

*Pagoda*

**SHIP TO:**  
M.H. Construction  
1630 17TH Street  
San Francisco CA 94107

PO: 1731 powell REF: 1989176 JOB:  
ORDER DATE: 09/05/13 SALES House 15 ORDER TYPE: WILLCALL SHIP VIA: wc FRT TERM:  
SHIP DATE: 09/06/13 AGENTS J Martinez ORDERED BY: ENTERED BY: Kauyeung AUTH CHG:

QTY ORDERED	QTY SHIPPED	UOM	ITEM/DESCRIPTION	CONVERTED QTY	PRICE/UOM	AMOUNT
			LP #: 7v95285			
1	1	PC	97BC08 5# Bright Common 8d 2-1/2"	1.0000/PC	7.11/PC	7.11
1	1	PC	97BC10 5# Bright Common 10d 3"	1.0000/PC	7.11/PC	7.11
106.6667	106.6667	BF (PC)	0022040204 2"x4" DFG24 S/Grn DF Std & Btr S4S* 20/08'	160.0000/LF	0.4260/LF	68.16
14	14	PC	203400X108 1-1/8"x 4' x 8' CD118 CD SE Ply (1.091in)	14.0000/PC	51.25/PC	717.50
			***** SUB-TOTAL *****			799.88
			State of California Lumber Tax - 1.00%			7.86
			CA,SAN FRANCISCO,DISTRICT TAX (BART/SFTA/SF		8.75%	69.99
			Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. www.wy.com/inform. (Returned goods subject to a 10% restocking fee.)			

**POSTED**  
9/12/13

**PAYMENT TERMS:**  
10 Days Net 30 Due Date: 10/06/13  
You may deduct 8.70 if paid by 09/16/13

Balance \$877.73

**S'TOP HOME SERVICE ROOFING CO., INC.**

One Hallidie Plaza, Suite 702

San Francisco, CA 94102

Tel. (415) 931-4480 / (510) 523-9949 / FAX (415) 292-4006

STATE LICENSE # 688301

**INVOICE DATE:** September 27, 2013

**COMPLETED DATE:** September 27, 2013

**Bill To:**

Mr. Matthew Huey  
1630 17<sup>th</sup> St.  
San Francisco, CA 94107

**Job Address:**

1731 Powell St.  
Filbert Street Garage  
San Francisco, CA 94133

**Description of Work:**

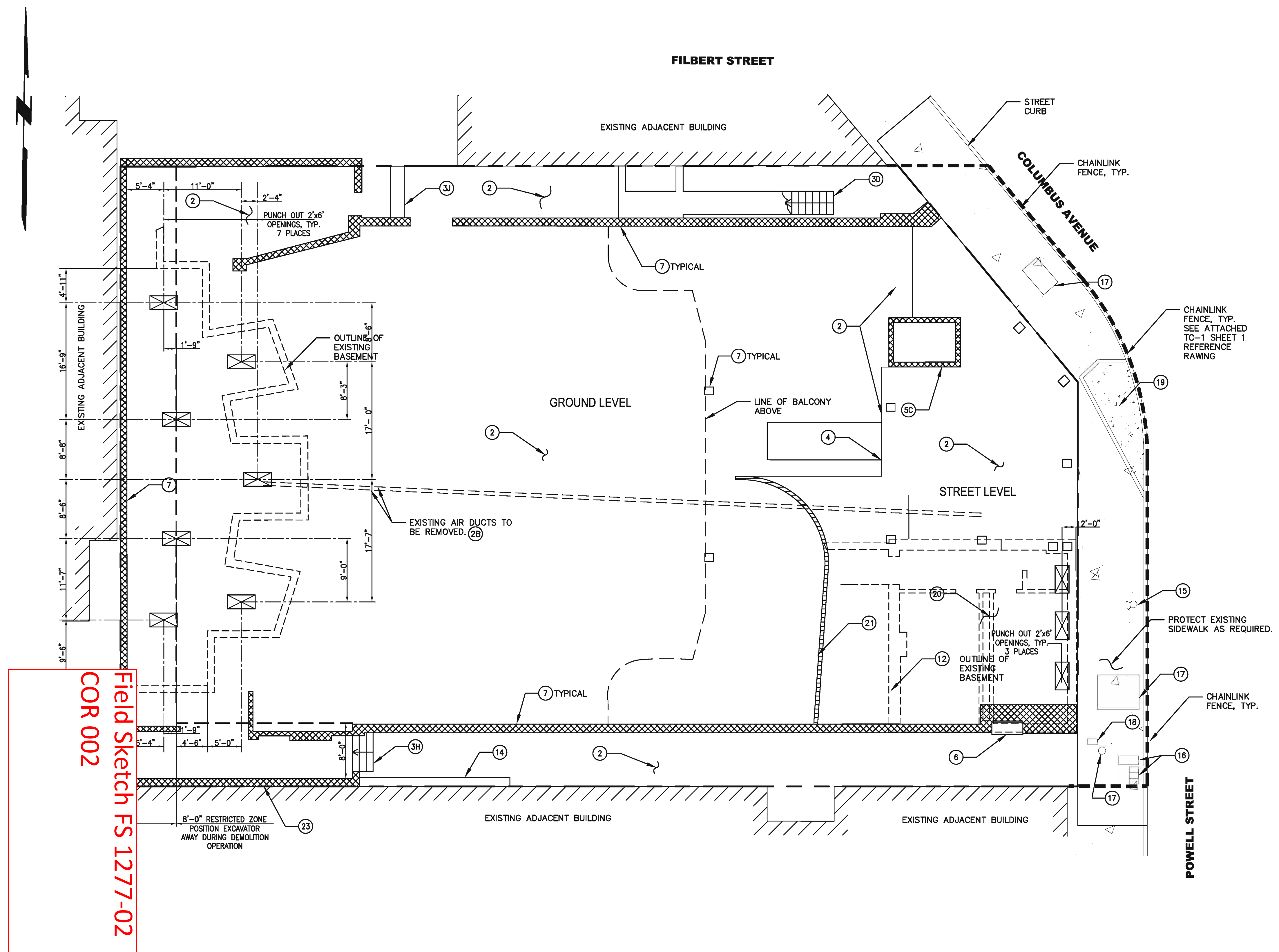
- **Repair work has been completed accordingly to our proposal and job specifications :**
  1. Repair shingle roof
  2. Install new galvanize sheet metal 70 ft. parapet cap.
- All debris has been cleaned and hauled from jobsite.
- Contractor does not grant any guarantees on repair work.

Contract Amount:	\$ 3,310.00
Deposit	\$ .00
<u>Extra Charges:</u>	<u>\$ .00</u>
<b>Balance Due:</b>	<b>\$ 3,310.00</b>

**Please pay the balance above upon receipt of this invoice.**

Thank you for your business. We look forward to satisfying your roofing needs again in the future.

PROPOSAL/ESTIMATE DATE: 09/25/2013



Field Sketch FS 1277-02  
COR 002

**NOTES**

1. PROTECT WALLS BY SHORING AS REQUIRED AGAINST ADJACENT STRUCTURES AND FOUNDATIONS, DURING DEMOLITION WORK.

**LEGEND**

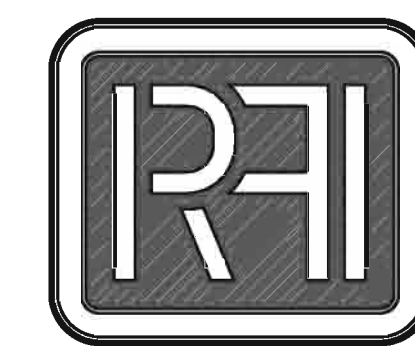
- ② EXISTING CONCRETE SLAB AND MULTIPLE TOP LEVEL DECK TO BE REMOVED.
- ③ EXISTING STAIRS, LANDING RAMP TO BE REMOVED.
- ④ EXISTING TIMBER RAMP TO BE REMOVED.
- ⑤ EXISTING ELEVATOR SHAFT TO BE REMOVED.
- ⑥ EXISTING WATER, GAS LINES TO BE REMOVED; THEY SHALL BE CUT AND CAPPED AT THE PROPERTY LINE.
- ⑦ EXISTING CONCRETE ENCLOSED STEEL COLUMNS LOCATED WITHIN BUILDING WALL, BRICK MASONRY WALL OR FREE STANDING STEEL COLUMNS TO BE REMOVED TO GROUND LEVEL.
- ⑫ [Hatched Box] EXISTING BRICK WALL, CONCRETE WALL, STUD WALL, ROOF, WINDOWS AND MULTIPLE TOP LEVEL STUD TO BE REMOVED.
- ⑭ EXISTING RETAINING WALL AGAINST NEIGHBOR BUILDING TO REMAIN, PROTECT IN PLACE.
- ⑮ EXISTING FIRE HYDRANT TO REMAIN.
- ⑯ EXISTING SFPUC WATER METER TO REMAIN.
- ⑰ EXISTING PG&E UTILITY TO REMAIN.
- ⑱ EXISTING TELEPHONE UTILITY TO REMAIN.
- ⑲ EXISTING CURB RAMP TO REMAIN.
- ⑳ EXISTING CONCRETE LOW WALL TO BE REMOVED.

--- EXISTING PROPERTY LINE.

**DEMOLITION SEQUENCE:**

1. INSTALL RAKERS TO SUPPORT EXISTING BASEMENT WALL. LEGEND ⑰
2. REMOVE EXISTING CONCRETE LOW WALL. LEGEND ⑬
5. DEMOLISH FLOOR SLAB ABOVE BASEMENT. LEGEND ②A AND ②B
23. REMOVE FLASHING. LEGEND ⑤A
24. REMOVE LOWER LEVEL WALLS BETWEEN STEEL COLUMNS ALL AROUND TO GROUND LEVEL. LEGEND ⑦
25. REMOVE ALL INTERIOR COLUMNS TO GROUND LEVEL. LEGEND ①
28. REMOVE AIR DUCTS

DESIGNER



**RP ASSOCIATES, INC.**  
CONSULTING ENGINEERS

205-13th STREET, SUITE 3130  
SAN FRANCISCO, CA 94013  
TEL (415) 863-9647  
FAX (415) 864-7547  
EMAIL - Raman@rpce.com

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OWNER

**PAGODA THEATER**  
1731-1741 POWELL STREET,  
SAN FRANCISCO, CALIFORNIA

PROJECT TITLE

**DEMOLITION**  
1731-1741 POWELL STREET,  
SAN FRANCISCO, CALIFORNIA

SEAL



SHEET CONTENT

**DEMOLITION PLAN  
GROUND LEVEL**

DATE	ISSUED FOR	BY
07-25-13	APPROVAL	RP

SCALE AS NOTED

DRAWN BY CMDC

CHECKED BY RAMAN PATEL

PROJECT NO. 13-20	SHEET NO. D-5
----------------------	------------------

SFMTA Contract No. 1277

Contractor: MH Construction Management Co.

## EVALUATION OF MERIT

### COR 002:

**Recommendation:** Accept justification of Merit for COR 002, for the following additional work:

- Setup of roof protection for garage building
- Demolition of parapet wall
- Installation of roof flashing cap on parapet wall and repair for garage roof

There is no time extension requested or recommended for this work.

**Facts:** While performing contract work for the demolition of the Pagoda Theater the contractor, MH Construction, encountered a parapet wall not shown in the contract documents. See Field Sketch FS 1277-02 for approximate location of parapet wall.

The existing brick wall on the Southwest side of Pagoda Theater, when removed as required by contract, would leave the adjacent parapet wall unsupported. Therefore, the parapet wall needed to be removed. With the concurrence of MH Construction's (MHC) engineer and the garage owner, the SFMTA directed MHC to remove a portion of the parapet wall.

To remove the parapet wall, additional roof protection was required on the adjacent garage building. On September 13<sup>th</sup>, 2013, the parapet wall was removed to the level of the starter wall on the adjacent garage. After the parapet wall was removed, the section of wall that was exposed needed to be protected. On September 30<sup>th</sup>, the contractor's roofing subcontractor completed installation of a flashing cap on the parapet wall and repaired the garage roof where the adjoining parapet wall was removed.

**Justification:** The contract drawings do not indicate the presence of the parapet wall described above and therefore the wall is as a differing site condition. City personnel have verified that a portion of the parapet wall had to be removed to safely remove the theater brick wall. Setup of roof protection was necessary to protect the roof on the adjacent garage. Installation of the flashing cap and repair of the garage roof was necessary after the parapet wall was demolished to ensure proper moisture protection of the garage building.

RE has evaluated the conditions outlined in Article 3.04 and found that: conditions differ materially and conditions caused the scope of work to increase.

**Change Type:** (2) Unforeseen Condition

SFMTA Contract No. 1277

Contractor:

MH Construction Management Co.

By: *Mark Benson FOR* *2/5/14*  
Mark Benson Date  
Resident Engineer  
  
*[Signature]* *2-5-14*  
Configuration Management Board Date  
Approval



**GENERAL**

Proposed Change Sponsor: M. Benson Received by CMB: 02/05/2014  
(Date)

Affected Disciplines: Demolition

Impacts of Change

Hauling and disposal of Styrofoam debris

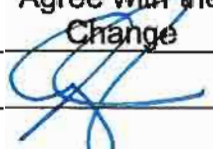
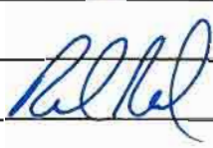

Change Order Request (COR 03) Amount Not To Exceed \$4,037.78

Contract(s) Directly Affected by this Proposed Change:

1250	1251	1252	1253	1254	1255	1256	1277
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input checked="" type="checkbox"/>
(CP01)	(CP02)	(CP03)	(CP04)	(CP05)	(CP06)	(CP07)	

**CONFIGURATION MANAGEMENT BOARD APPROVALS**

*Signatures*

	Agree with the Change	Disagree with the Change	Date
Program Director:			
Deputy Program Manager:			
PM Project Services:			
PM Project Construction:			2/5/14
SFMTA O & M Manager:			
SFMTA Safety and Security			
SFCTA PMO			5 Feb 14

**Comments**

Blank lines for comments.

Connecting people. Connecting communities.

**COR No. 003 Cost Estimate Summary**

General Scope:

-Hauling and disposal of Styrofoam debris discovered during demolition of the Pagoda Theater

Total estimated cost:

Labor	\$	-
Material	\$	1,200.00
Equipment	\$	-
2nd Tier Sub	\$	380.00
Markup on 2nd Tier Sub - 5%	\$	19.00
Prime - Markup - 15%	\$	180.00
Pollution Insurance - 2.11%	\$	37.54
Bond - 1.08%	\$	19.21
<b>Total Amount</b>	<b>\$</b>	<b>1,835.75</b>

Total Negotiated Cost:

Labor	\$	-
Material	\$	1,643.90
Equipment	\$	-
2nd Tier Sub	\$	2,175.36
Markup on 2nd Tier Sub - 5%	\$	108.77
Prime - Markup - 15%	\$	246.59
Pollution Insurance - 1.394%	\$	88.08
Bond - 1.08%	\$	45.09
<b>Total Negotiated Amount</b> (RE Recommended NTE Amount)	<b>\$</b>	<b>4,307.78</b>

List of attached documents:

Contractor Cost Proposal/SFMTA Estimated Cost Comparison  
 Estimated Material and Subcontractor Cost Breakdown  
 Supporting Documentation (Quotations, Drawings etc.)

  
 Prepared By: Ben Volberding

02/04/14  
 Date:

  
 Checked By: Matt Hembd

02/04/14  
 Date:

1277 COR No. 003

	No.	Activity Name	Hours (C)	Hours (EE)	Contractor (C) [REV 1]	SFMTA Engineer's Estimate (EE)	Delta (C-EE)	Summary of Delta	Negotiation Position	Negotiation Results	Amount		
Labor	1	Labor (L)	-	-	\$ 1,520.00	\$ -	\$ 1,520.00	-MH including trucking costs in Labor category	-Trucking costs to be included in Services category	N/A	\$ -		
Equipment	1	Equipment (E)	-	-	\$ -	\$ -	\$ -	N/A	N/A	N/A	\$ -		
Materials	1	Materials (M)			\$ 6,031.00	\$ 1,200.00	\$ 4,831.00	-MH including disposal costs with insufficient supporting documentation (such as trucking tags, receipts, etc.).	-SFMTA to use estimated quantities and unit costs to determine fair and reasonable disposal costs. Estimated cost based on quote obtained by SFMTA Estimated (quote provided by Republic Services).	-SFMTA agreed to pay disposal premium (actual Ox Mountain credit card charges less Brisbane's disposal fee of \$360/load, for all 10ea loads) due to presence of Styrofoam in debris. SFMTA agreed to pay premium since waste would otherwise have been Contract (if no Styrofoam). -Negotiated disposal fees are based on actual quantities supported by invoices/credit card receipts. Negotiated quantities are supported by Field Inspector's notes in Daily Inspection Reports.	\$ 1,643.90		
Services	1	Services (S)			\$ 3,625.60	\$ 380.00	\$ 3,245.60	-MH including disposal trucking with insufficient supporting documentation (such as trucking tags, receipts, etc.).	-SFMTA to use estimated quantities and unit costs to determine fair and reasonable trucking costs (90 CY of Styrofoam equates to 10 loads with 4 total trucking hours). -Assume 4 hour round trip to ox mountain	-MH stated that disposal at Ox Mountain resulted in decreased off hauling production b/c/o longer route. Production decreased from 5 loads/day at Brisbane to 2 loads/day at Ox Mountain. -SFMTA agreed to pay for 60% of Economy Trucking invoice due to production loss. -Negotiated trucking costs are based on actual quantities supported by invoices. Negotiated quantities are supported by Field Inspector's notes in Daily Inspection Reports.	\$ 2,175.36		
					OH&P Markup (S - 5%)	\$ 181.28	\$ 19.00	\$ 162.28			OH&P Markup (S - 5%)	\$ 108.77	
					OH&P Markup (LM&E - 15%)	\$ 1,132.65	\$ 180.00	\$ 952.65			OH&P Markup (LM&E - 15%)	\$ 246.59	
					Insurance Pollution (2.11%)	\$ 240.30	\$ 37.54	\$ 202.76	MH to provide SFMTA with supporting documentation to verify this insurance rate			Insurance Pollution (1.394%) <sup>1</sup>	\$ 88.08
					Bond (1.08%)	\$ 160.94	\$ 19.21	\$ 141.73			Bond (1.08%)	\$ 45.09	
					OH&P Markup on Bond and Insurance (15%)		\$ -	\$ -	C incorrectly applying markups for OH&P and bonds and insurance. Bonds and insurance should be applied to direct costs and markups for OH&P.			OH&P Markup on Bond and Insurance (15%) <sup>2</sup>	\$ -
					<b>Total</b>	<b>\$ 12,891.77</b>	<b>\$ 1,835.75</b>	<b>\$ 11,056.02</b>			<b>Negotiated Total</b>	<b>\$ 4,307.78</b>	

<sup>1</sup>C provided SFMTA with documentation supporting actual insurance pollution markup of 1.394%

FAR Date	FAR	SFMTA Index	Material	Qty.	Unit	Unit Price	Extension
N/A	N/A	40	<b>SFMTA Estimate: Haul and Dump Styrofoam</b> (90 CY = 2.4 Tons = 10 Loads)				
		A	Styrofoam Disposal Fees (Quote by Republic Services)	1	Loads	\$ 1,200.00	\$ 1,200.00
			<b>TOTAL</b>				<b>\$ 1,200.00</b>

FAR Date	FAR	SFMTA Index	Services	Qty.	Unit	Unit Price	Extension
N/A	N/A	40	<b>SFMTA Estimate: Haul and Dump Styrofoam</b> (90CY = 10 Loads)				
		C	Styrofoam Hauling (semi end dump)	4	Hours	\$ 95.00	\$ 380.00
			<b>TOTAL</b>				<b>\$ 380.00</b>

Date	FAR	SFMTA Index	Material	Qty.	Unit	Unit Price	Extension
N/A	N/A	1	<b>Ox Mountain Sanitary Disposal Charges</b>				
			Credit Charge 01	1	Ea	\$ 1,234.68	\$ 1,234.68
			Credit Charge 02	1	Ea	\$ 410.52	\$ 410.52
			Credit Charge 03	1	Ea	\$ 441.09	\$ 441.09
			Credit Charge 04	1	Ea	\$ 471.68	\$ 471.68
			Credit Charge 05	1	Ea	\$ 511.00	\$ 511.00
			Credit Charge 06	1	Ea	\$ 441.10	\$ 441.10
			Credit Charge 07	1	Ea	\$ 441.10	\$ 441.10
			Credit Charge 08	1	Ea	\$ 471.68	\$ 471.68
			Credit Charge 09	1	Ea	\$ 379.95	\$ 379.95
			Credit Charge 10	1	Ea	\$ 441.10	\$ 441.10
<b>SUBTOTAL</b>							<b>\$ 5,243.90</b>
<b>Negotiated SFMTA Cost (Total Ox Mountain cost less 10 loads at Brisbane's \$360/load Disposal Fee):</b>							<b>\$ 1,643.90</b>

Date	FAR	SFMTA Index	Services	Qty.	Unit	Unit Price	Extension
9/12/2013	N/A	2	<b>Economy Trucking Invoice</b>				
			Truck 51	9	Hours	\$ 88.00	\$ 792.00
			Truck 56	8.6	Hours	\$ 88.00	\$ 756.80
			Truck 52	7.3	Hours	\$ 88.00	\$ 642.40
			Truck 55	7.3	Hours	\$ 88.00	\$ 642.40
			Truck 53	9	Hours	\$ 88.00	\$ 792.00
<b>SUBTOTAL</b>							<b>\$ 3,625.60</b>
<b>Negotiated SFMTA Cost (60% of trucking to account for longer haul route to Ox Mountain):</b>							<b>\$ 2,175.36</b>





August 23 - September 21, 2013  
Page 3 of 6

**Auctions continued**

Saction ie	Posting Date	Description	Reference Number	Account Number	Amount	Total
<b>Purchases and Adjustments</b>						
<del>08/02</del>	<del>08/08</del>	<del>ORIGINAL US RESTAURANT SAN FRANCISCO CA</del>	<del>0293</del>	<del>9934</del>	<del>82.55</del>	
<del>08/02</del>	<del>08/04</del>	<del>30M SUPPLY CO INC SAN FRANCISCO CA</del>	<del>1000</del>	<del>9934</del>	<del>282.00</del>	<i>82.625</i>
<del>08/03</del>	<del>08/04</del>	<del>APL APPLE ITUNES STORE 8667127753 CA</del>	<del>1450</del>	<del>9934</del>	<del>9.98</del>	
		<b>E17736702</b>				
<del>08/05</del>	<del>08/08</del>	<del>30M SUPPLY CO INC SAN FRANCISCO CA</del>	<del>1205</del>	<del>9934</del>	<del>152.05</del>	<i>152.05</i>
<del>08/05</del>	<del>08/08</del>	<del>APL APPLE ITUNES STORE 8667127753 CA</del>	<del>2018</del>	<del>9934</del>	<del>9.98</del>	
09/11	09/12	2046YDEI MH3WQBWBQS-0 APL APPLE ITUNES STORE 8667127753 CA	3440	9934	9.98	
09/11	09/12	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000091	8835	9934	1,234.68	<i>(1)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000015	7505	9934	410.52	<i>(2)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000027	7638	9934	441.09	<i>(3)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000017	7539	9934	471.68	<i>(4)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000021	7562	9934	511.00	<i>(5)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000026	7620	9934	0.01	<i>(6)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000050	7844	9934	441.10	<i>(7)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000054	7885	9934	441.10	<i>(8)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000052	7869	9934	471.68	<i>(9)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000065	8008	9934	379.95	<i>(10)</i>
09/12	09/13	OX MOUNTAIN SANITARY L 650-726-1819 CA 0000000066	8016	9934	441.10	<i>(11)</i>
		<b>F169LD1B60J</b>				
<del>08/17</del>	<del>08/16</del>	<del>Y24ZNLFPZGP6</del>	<del>2005</del>	<del>9934</del>	<del>121.61</del>	

Date	Description	Amount	Total
09/21	Interest Charged		
09/21	Interest Charged on Purchases	0.00	
09/21	Interest Charged on Balance Transfers	0.00	
09/21	Interest Charged on Dir Dep&Chk CashAdv	0.00	
09/21	Interest Charged on Bank Cash Advances	0.00	
	<b>TOTAL INTEREST FOR THIS PERIOD</b>		<b>\$0.00</b>

2013 Totals Year to Date	
Total fees charged in 2013	\$0.00
Total interest charged in 2013	\$196.26



# QUOTATION SHEET

**Date:** 10/11/2013

**Expires:** 11/1/2013

**Page** 1 of 1

**Attn:** Gary Chen

**Tel:** (415) 558-9778

**Fax:**

**Company Name:** MH Construction Management Company

**Project Name:** All Projects

**Project Site:** All Locations

**F.O.B Plant Site:**

MATERIALS DESCRIPTION	TRUCK TYPE	ESTIMATED QUANTITY	PRICE PER UNIT
DUMP Mixed: Concrete & Asphalt	Semi-end dump		\$360.00 per load (clean)
DUMP Mixed: Concrete & Asphalt	Ten wheeler		\$200.00 per load (clean)
w/ rebar, debris, or over 2 ft.	Semi-end dump		\$60. extra for each per load
	Ten wheeler		\$30. extra for each per load
w/ wire or brick	Semi-end dump		To Be Determined
	Ten wheeler		To Be Determined

CTB, ASPHALT/CONCRETE: LOADS MUST BE FREE OF WASTE, DEBRIS, REBAR, BRUSH, WEEDS, PLASTERBOARD, TRASH OR RUBBISH.

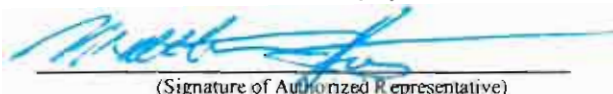
**\*\*POSITIVELY NO HAZARDOUS WASTE ACCEPTED\*\***

All prices are net per ton, not including tax. Payment due 30 days from the date of invoice. Please note that the items bid may be subject to price change after the quote expiration date. Brisbane Recycling Co., Inc. requires confirmation of low materials supplier from apparent low bidder no later than one (1) day after bid opening. Job material schedule outline is required two weeks before the start of the project and updating is required throughout. This is the responsibility of the contractor to keep Brisbane Recycling Co., Inc. fully updated on material needs on a daily basis if necessary. It is also the responsibility of the contractor and driver to correctly identify material and job description. Quote honored only if these conditions are signed by the contractor prior to the start of work.

MH CONSTRUCTION MANAGEMENT CO.

(Purchaser's Company Name)

BRISBANE RECYCLING CO., INC.

  
(Signature of Authorized Representative)

\_\_\_\_\_  
(Signature of Authorized Representative)

DATE SIGNED: 10/10/13

DATE SIGNED: \_\_\_\_\_

\*All concrete & asphalt in each load must be under 2'x2'x1' with no rebar, wire, brick or any other debris.

Economy Trucking  
P. O. Box 1603  
Union City, Ca 94587  
510-733-9100

Date: 09/16/13  
Invoice No: 0028257  
Account No: 01604  
Job: 1604/16  
1790 POWELL ST. SAN FRANCI  
From: 1790 POWELL ST. SF  
To: AS DIRECTED

MBC INC.  
2436 DOUGLAS ST.  
SAN PABLO, CA 94806  
510-778-4588

Commodity:  
Terms: 30 DAYS

Date	Frt Bill No	Weight Tag	Truck	Bill Of Lad	Net Weight	Quantity	Units	Rate	Amount
09/12/13	142132		51			9.000	Hours	88.0000	792.00
09/12/13	143053		56			8.600	Hours	88.0000	756.80
09/12/13	144752		52			7.300	Hours	88.0000	642.40
09/12/13	144807		55			7.300	Hours	88.0000	642.40
09/12/13	148265		53			9.000	Hours	88.0000	792.00
				FREIGHT		41.200	Hours		3,625.60
				Sub Total			Loads		3,625.60
Please Pay This Amount									3,625.60

# Economy Trucking Services, Inc.

P.O. Box 525  
 Union City, CA 94587  
 Phone (510) 733-9100  
 Fax (510) 733-9600  
 CA #0293659

142132

OFFICE COPY

S M T W T F S

DATE 9-12-13



Got Dirt?

DBE, MBE, WBE, UDBE

TRUCK # 51 TRAILER # 517 ACCOUNT NUMBER \_\_\_\_\_

PRIME CARRIER Ami Jet Trucking SUB HAULER \_\_\_\_\_

CONTRACTOR M.B.C INC JOB NO. \_\_\_\_\_ MATERIAL Boxing Coils

POINT OF ORIGIN 1719 Powell St DESTINATION Ox Mountain MATERIAL CHARGE TO M.H. Const

CITY San Francisco CA CITY Huffman Ga

NO.	SCALE TAG NO.	YARDS OR WEIGHT	LOADING			UNLOADING			NET STAND BY	NO. AXLES	TYPE OF EQUIPMENT	DISTANCE BETWEEN AXLES	CUBIC YARD CAPACITY
			TIME ARRIVE	TIME LEAVE	NET STAND BY	TIME ARRIVE	TIME LEAVE	NET STAND BY					
1	960349	Boxing Coils	7-0	7-15		8:35	9-05		5	<input type="checkbox"/> Semi Bottom <input type="checkbox"/> Semi End <input type="checkbox"/> Double Bottom	<input type="checkbox"/> 10 Wheeler <input type="checkbox"/> Super Dump <input type="checkbox"/> Flat Bed	<input type="checkbox"/> Highrise <input type="checkbox"/> Trailers	
2	960523	11 y	10-40	10-50		10-25	12-40						
3	55928	concrete	2-0	2-15		3-0	3-15						
4			4-0										
5													
6													
7													
8													
9													
10												9	
11													
12													
13													
14													
15													
16													
17													
18													
19													
START TIME: <u>7:00</u> STOP TIME: <u>4:00</u> DEDUCT TIME: <u>5</u> NET TIME: <u>9:00</u>											TOTAL CHARGES \$		

RECEIVED BY X [Signature]

ALL BILLS ARE DUE AND PAYABLE BY THE 10TH OF THE MONTH. A 3% PER MONTH CHARGE ON PAST DUE ACCOUNTS. THIS IS AN ANNUAL PERCENTAGE RATE OF 24%. CUSTOMER WILL BE RESPONSIBLE FOR ALL COURT AND ATTORNEY COSTS FOR COLLECTION.

THESE CHARGES INCLUDE (1) FEES TO PAY FOR REGULATION OF TRANSPORTATION COMPANIES BY THE CALIFORNIA PUBLIC UTILITIES COMMISSION AND (2) TAXES PAID TO CALIFORNIA CITIES INSTEAD OF EXCISE OR BUSINESS LICENSE TAXES THEY COULD OTHERWISE IMPOSE.

NOTICE: OUR DRIVERS WILL MAKE EVERY EFFORT TO PLACE MATERIAL WHERE CUSTOMER DESIGNATES, BUT THE COMPANY ASSUMES NO RESPONSIBILITY FOR DAMAGES INSIDE CURB OR PROPERTY LINE. NO CLAIMS ALLOWED UNLESS MADE WHEN MATERIAL IS DELIVERED AND RECEIVED FOR. ECONOMY TRUCKING IS NOT RESPONSIBLE FOR OVER WEIGHT LOADS OR TICKETS.

# Economy Trucking Services, Inc.

P.O. Box 525  
 Union City, CA 94587  
 Phone (510) 733-9100  
 Fax (510) 733-9600  
 CA #0293659

143053

OFFICE COPY

S M T W T F S



Got Dirt?

DBE, MBE, WBE, UDBE

DATE 9-12-13

TRUCK # 56 TRAILER # 522 ACCOUNT NUMBER 151

PRIME CARRIER Economy T. SUB HAULER HMI JOT T.

CONTRACTOR M.H. CONST. JOB NO.  MATERIAL BRICKS

POINT OF ORIGIN 1719 Powell St DESTINATION EX-MTN MATERIAL CHARGE TO PAGOLA PUMPE

CITY SAN FRANCISCO, CA CITY HALF MOON BAY, CA

NO	SCALE TAG NO.	YARDS OR WEIGHT	LOADING			UNLOADING			NO AXLES	TYPE OF EQUIPMENT	DISTANCE BETWEEN AXLES	CUBIC YARD CAPACITY
			TIME ARRIVE	TIME LEAVE	NET STAND BY	TIME ARRIVE	TIME LEAVE	NET STAND BY				
1	9603705	> EX-MTN	7:30	7:48		9:00	9:25		<input type="checkbox"/> Semi Bottom	<input type="checkbox"/> 10 Wheeler	<input type="checkbox"/> Highside	
2	960531		10:45	11:00		17:15	12:45		<input checked="" type="checkbox"/> Semi End	<input type="checkbox"/> Super Dump	<input type="checkbox"/> Transfers	
3	55132	Recology	2:15	2:45		3:21	3:25		<input type="checkbox"/> Double Bottom	<input type="checkbox"/> Flat Bed		
4			4:15									
5												
6	2 loads, dumped on HALF MOON BAY										3:35 pm	
7	BRICKS										30 MINUTES	
8	1 load, dumped on SF -											
9	RECYCLED CONCRETE PIER. 94 - Recology											
10	TO: ALL # M.D.C. INC.											
11	TOLL # 55432											
12	3 loads											
13												
14												
15												
16												
17												
18												
19												
START TIME <u>7:30 AM</u> STOP TIME <u>4:05 PM</u> DEDUCT TIME <u></u> NET TIME <u>8:35 hrs</u>										TOTAL CHARGES \$		

RECEIVED BY X [Signature]

ALL BILLS ARE DUE AND PAYABLE BY THE 10TH OF THE MONTH. A 2% PER MONTH CHARGED ON PAST DUE ACCOUNTS. THIS IS AN ANNUAL PERCENTAGE RATE OF 24%. CUSTOMER WILL BE RESPONSIBLE FOR ALL COURT AND ATTORNEY COSTS FOR COLLECTION.

THESE CHARGES INCLUDE (1) FEES TO PAY FOR REGULATION OF TRANSPORTATION COMPANIES BY THE CALIFORNIA PUBLIC UTILITIES COMMISSION AND (2) TAXES PAID TO CALIFORNIA CITIES INSTEAD OF EXCISE OR BUSINESS LICENSE TAXES THEY COULD OTHERWISE IMPOSE.

NOTICE OUR DRIVERS WILL MAKE EVERY EFFORT TO PLACE MATERIAL WHERE CUSTOMER DESIGNATES, BUT THE COMPANY ASSUMES NO RESPONSIBILITY FOR DAMAGES INSIDE CURB OR PROPERTY LINE. NO CLAIMS ALLOWED UNLESS MADE WHEN MATERIAL IS DELIVERED AND RECEIPTED FOR. ECONOMY TRUCKING IS NOT RESPONSIBLE FOR OVER WEIGHT LOADS OR TICKET.

CHP USE ONLY START TIME \_\_\_\_\_ FINISH TIME \_\_\_\_\_ TOTAL TIME \_\_\_\_\_

# Economy Trucking Services, Inc.

P.O. Box 525  
 Union City, CA 94587  
 Phone (510) 733-9100  
 Fax (510) 733-9600  
 CA #0293659

144752

DELIVERY RECEIPT

S M T W T F S



Got Dirt?

DBE, MBE, WBE, UDBE

DATE 1/12/13

TRUCK # 52 TRAILER # A ACCOUNT NUMBER \_\_\_\_\_

PRIME CARRIER <u>ABC</u>	SUB HAULER _____	
CONTRACTOR <u>ABC Inc.</u>	JOB NO. <u>0401120</u>	MATERIAL <u>Concrete Pave</u>
POINT OF ORIGIN <u>1719 Powell St.</u>	DESTINATION <u>1500 Westgate Lane</u>	MATERIAL CHARGE TO <u>ABC Inc.</u>
CITY <u>SEA, CA</u>	CITY <u>Hayward, CA</u>	

NO	SCALE TAG NO.	YARDS OR WEIGHT	LOADING			UNLOADING			NO. AXLES	TYPE OF EQUIPMENT	DISTANCE BETWEEN AXLES	CUBIC YARD CAPACITY
			TIME ARRIVE	TIME LEAVE	NET STAND BY	TIME ARRIVE	TIME LEAVE	NET STAND BY				
1	7960376	Maxwell	7:58	8:20		7:38	10:06		<input type="checkbox"/> Semi Dump <input type="checkbox"/> Semi End <input type="checkbox"/> Double Bottom	<input type="checkbox"/> 10 Wheel <input type="checkbox"/> Super Dump <input type="checkbox"/> Flat Bed	<input type="checkbox"/> Highside <input type="checkbox"/> Transfers	
2	7960591		11:39	12:05		1:30	1:50		TIME STARTED LAST LOAD			
3			12:15						TIME ARRIVED TO DUMP LAST LOAD			
4									NET RUNNING TIME LAST LOAD			
5									TIME FINISHED DUMP LAST LOAD			
6									TIME ALLOWED TO RETURN SAME GROSS RUNNING TIME LAST LOAD			
7									<b>OFFICE USE ONLY</b>			
8									BILL TO			
9												
10									TOTAL HOURS, LOADS OR TONS	7.3		
11									RATE PER HOUR, LOAD OR TON	\$		
12									<b>SUBTOTAL</b>	\$		
13									STAND BY TIME			
14									DUMPS			
15									MATERIAL			
16									SURCHARGE			
17												
18									BRIDGE FARE	\$		
19									<b>TOTAL CHARGES</b>	\$		
START TIME <u>8:00</u>			STOP TIME <u>7:15</u>			DEDUCT TIME <u>1:00</u>			NET TIME <u>4:15</u>			

RECEIVED BY X

ALL BILLS ARE DUE AND PAYABLE BY THE 10TH OF THE MONTH. A 2% PER MONTH CHARGE ON PAST DUE ACCOUNTS. THIS IS AN ANNUAL PERCENTAGE RATE OF 24%. CUSTOMER WILL BE RESPONSIBLE FOR ALL COURT AND ATTORNEY COSTS FOR COLLECTION.

THESE CHARGES INCLUDE (1) FEES TO PAY FOR REGULATION OF TRANSPORTATION COMPANIES BY THE CALIFORNIA PUBLIC UTILITIES COMMISSION AND (2) TAXES PAID TO CALIFORNIA CITIES INSTEAD OF EXCISE OR BUSSE LICENSE TAXES THEY COULD OTHERWISE IMPOSE.

NOTICE OUR DRIVERS WILL MAKE EVERY EFFORT TO PLACE MATERIAL WHERE CUSTOMER DESIGNATES, BUT THE COMPANY ASSUMES NO RESPONSIBILITY FOR DAMAGES (INSIDE CURB) OR PROPERTY DAMAGE. NO CLAIMS ALLOWED UNLESS MADE WHEN MATERIAL IS DELIVERED AND RECEIVED FOR. ECONOMY TRUCKING IS NOT RESPONSIBLE FOR OVER WEIGHT LOADS OR TICKET.

CHP USE ONLY START TIME \_\_\_\_\_ FINISH TIME \_\_\_\_\_ TOTAL TIME \_\_\_\_\_



# Economy Trucking Services, Inc.

P.O. Box 525  
 Union City, CA 94587  
 Phone (510) 733-9100  
 Fax (510) 733-9600  
 CA #0293659

144807

DELIVERY RECEIPT

S M T W T F S



Got Dirt?

DBE, MBE, WBE, UDBE

DATE 7-12-13

TRUCK # <u>50</u>	TRAILER # <u>32</u>	ACCOUNT NUMBER
PRIME CARRIER <u>Economy</u>	SUB HAULER <u>Economy</u>	
CONTRACTOR <u>MBC</u>	JOB NO.	MATERIAL <u>Concrete</u>
POINT OF ORIGIN <u>1719 Powell St</u>	DESTINATION <u>1719 Powell St</u>	MATERIAL CHARGE TO <u>MBC</u>
CITY <u>SFO</u>	CITY <u>San Francisco</u>	

MATERIALS			LOADING			UNLOADING			NO. AXLES	TYPE OF EQUIPMENT	DISTANCE BETWEEN AXLES	CUBIC YARD CAPACITY
NO	SCALE TAG NO.	YARDS OR WEIGHT	TIME ARRIVE	TIME LEAVE	NET STAND BY	TIME ARRIVE	TIME LEAVE	NET STAND BY				
1	<u>960593</u>	<u>6125</u>	<u>7:45</u>	<u>5:10</u>		<u>9:15</u>	<u>10:30</u>		<input type="checkbox"/> Semi Bottom	<input type="checkbox"/> 18 Wheeler	<input type="checkbox"/> Highside	
2	<u>X</u>	<u>"</u>	<u>11:45</u>	<u>12:00</u>		<u>1:30</u>	<u>1:45</u>		<input type="checkbox"/> Semi End	<input type="checkbox"/> Super Dump	<input type="checkbox"/> Tandem	
3			<u>3:00</u>						<input type="checkbox"/> Double Bottom	<input type="checkbox"/> Flat Bed		
4									TIME STARTED LAST LOAD			
5									TIME ARRIVED TO DUMP LAST LOAD			
6									NET RUNNING TIME LAST LOAD			
7									TIME FINISHED DUMP LAST LOAD			
8									TIME ALLOWED TO RETURN SAME GROSS RUNNING TIME LAST LOAD			
9									<b>OFFICE USE ONLY</b>			
10									BILL TO			
11									TOTAL HOURS, LOADS OR TONS		<u>73</u>	
12									RATE PER HOUR, LOAD OR TON		\$	
13									SUBTOTAL		\$	
14									STAND BY TIME			
15									DUMPS			
16									MATERIAL			
17									SURCHARGE			
18									BRIDGE FARE		\$	
19									TOTAL CHARGES		\$	
START TIME <u>7:45</u>			STOP TIME <u>3:00</u>			DEDUCT TIME <u>3:00</u>			NET TIME <u>7:00</u>			

RECEIVED BY X

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CHP USE ONLY START TIME \_\_\_\_\_ FINISH TIME \_\_\_\_\_ TOTAL TIME \_\_\_\_\_

# Economy Trucking Services, Inc.

P.O. Box 525  
 Union City, CA 94587  
 Phone (510) 733-9100  
 Fax (510) 733-9600  
 CA #0293659

148265

OFFICE COPY

S M T W T F S

DATE 9-12-13



Got Dirt?

DBE, MBE, WBE, UDBE

TRUCK # 53 TRAILER # \_\_\_\_\_ ACCOUNT NUMBER \_\_\_\_\_

PRIME CARRIER <u>ECONOMY TRUCKING'S</u>	SUB HAULER	
CONTRACTOR <u>MBC INC</u>	JOB NO.	MATERIAL <u>BRICKS</u>
POINT OF ORIGIN <u>1719 POWELL ST</u>	DESTINATION <u>OX MOUNTAIN LAUREL GA</u>	MATERIAL CHARGE TO
CITY <u>SAN FRANCISCO CA</u>	CITY <u>HALF MOON BAY CA</u>	

NO.	SCALE TAG NO.	YARDS OR WEIGHT	LOADING			UNLOADING			NO. AXLES TYPE OF EQUIPMENT	DISTANCE BETWEEN AXLES	CUBIC YARD CAPACITY
			TIME ARRIVE	TIME LEAVE	NET STAND BY	TIME ARRIVE	TIME LEAVE	NET STAND BY			
1	960361		7:15	7:32		8:45	9:20				
2	960527		10:43	11:03		12:28	12:55				
3	55931	CONCRETE	2:10	2:25		3:15	3:30				
4			4:15								
5											
6											
7											
8											
9											
10										9	
11											
12	2-25	LOADED OUT									
13											
14											
15											
16											
17											
18											
19											
START TIME <u>7:15</u> STOP TIME <u>4:15</u> DEDUCT TIME _____ NET TIME <u>9:00</u>									TOTAL CHARGES \$ _____		

RECEIVED BY X [Signature]

ALL BILLS ARE DUE AND PAYABLE BY THE 10TH OF THE MONTH. A 2% PER MONTH CHARGED ON PAST DUE ACCOUNTS. THIS IS AN ANNUAL PERCENTAGE RATE OF 24%. CUSTOMER WILL BE RESPONSIBLE FOR ALL COURT AND ATTORNEY COSTS FOR COLLECTION.

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CHP USE ONLY START TIME \_\_\_\_\_ FINISH TIME \_\_\_\_\_ TOTAL TIME \_\_\_\_\_



08/22/2013 12:14





08/22/2013 12:16

**PROPOSED CONTRACT CHANGE**

**FINDING OF FACTS**

Contract No. 1300 Stations, Surface, Track and Systems Date 2/5/14  
 PCC No. 1300-008  
 PCC Title Tunnel Lowering  
 PCC Initiator Jane Wang

**Description of PCC:**

Modify Contract 1300 plans affected by the lowering of tunnels. This change affects the profile of track and overhead contact system between UMS and YBM, and the sump pump at cross passage 5. See list below.

**Reason/Need for PCC:**

Due to a potential conflict of the issued for bid tunnel alignment with the micropiles constructed under Contract 1251, the tunnel profile was lowered to clear the micropiles.

**Location/Station:**

Northbound: Station 134+25.00 to Station 151+69.83  
 Southbound: Station 134+25.00 to Station 151+67.00

**Configuration Control Analysis:**

The analysis, Rationale Supporting Revised Alignment of the Central Subway Tunnels by PB/T, dated June 26, 2013, concluded that the combination of vertical and horizontal curves in the trackway south of the UMS Station without increasing the length of vertical curve did not compromise rider comfort, maintenance, safety issues, or the design speed of 25 mph. UMS and YBM station designs are not affected by the new profile of the tunnels.

**Recommended Action:** Recommend incorporation of affected work as the tunnel has been constructed with the new profile.

**Estimate:** Estimate will be prepared by SFMTA; request estimate from contractor.

**Spec. Ref.:** None

**Drawing Nos.:**

1253 Package: Drawings TC-108 R1, TC-134 R1  
 1255 Package: Drawings TC-111 R1, TC-136 R1  
 1256 Package: Drawings TC-108 R1, TC-109 R1, TC-110 R1, TC-111 R1, TC-134 R1, TC-135 R1, TC-136 R1, MP-801 R1, OV-108 R1, OV-109 R1, OV-110 R1, 144 R1, OV-145 R1, OV-146 R1, EP-021 R1, EP-041 R1, EP-116 R1

**Attachments:** Same as above Drawings

Recommended by: \_\_\_\_\_ Date \_\_\_\_\_  
 Richard Redmond, Program Manager/Construction (SFMTA Representative)

Concur in Principle: \_\_\_\_\_ Date \_\_\_\_\_  
 Jane Wang, Program Manager/Project Development (SFMTA Representative)

<b>Reviewed By Impacted Contract/Design Package Project Manager: DP1, Matt Fowler</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Recommended:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

<b>Reviewed By Impacted Contract/Design Package Project Manager: DP2, Aileen Read</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Recommended:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

<b>Reviewed By Impacted Contract/Design Package Project Manager: DP3, Chuck Morganson</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Recommended:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

<b>Reviewed By SFMTA Design Manager: Sanford Pong</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Recommended (If yes, forward to Project Manager):</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

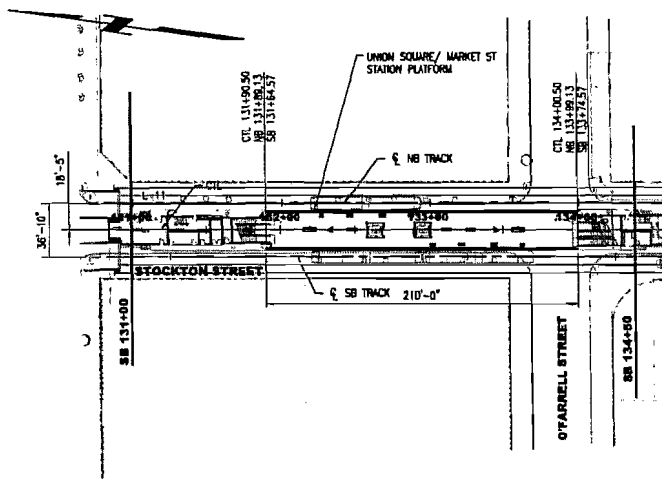
<b>Reviewed By Project Controls Manager (Cost and Schedule): Eric Stassevitch</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Recommended:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

<b>Reviewed By Program Manager Project Development: Jane Wang</b>	<b>Date:</b>	<b>Signature:</b>
<b>Comments:</b>		
<b>Change Approved:</b> Yes <input type="checkbox"/> No <input type="checkbox"/> <b>Change to be forwarded to CMB:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>		

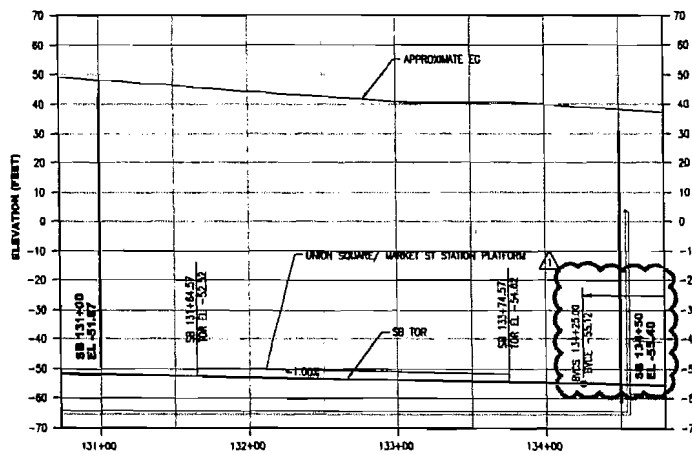


**NOTES:**

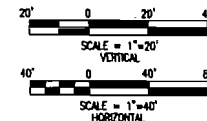
1. PLATFORM LIMITS SHOWN CORRESPOND TO ENDS OF TACTILE STRIPS.



**PLAN**



**SOUTHBOUND PROFILE**



FOR ORIGINAL SIGNATURES, SEE CL-18462, REV. 0.

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 Opening Fri Jan 31 2014 - 4:23 pm TC-108

02/03/2014	ISSUED FOR PCC NO. 8	1			
02/15/2012	ISSUED FOR BID	0			
DATE	DESCRIPTION	REV.	BY	CHECKED	APPROVED

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

REV. 0  
SEALED BY  
J. SELIN

CITY AND COUNTY OF SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY

APPROVED  
EDWARD D. REISMAN  
DIRECTOR OF TRANSPORTATION

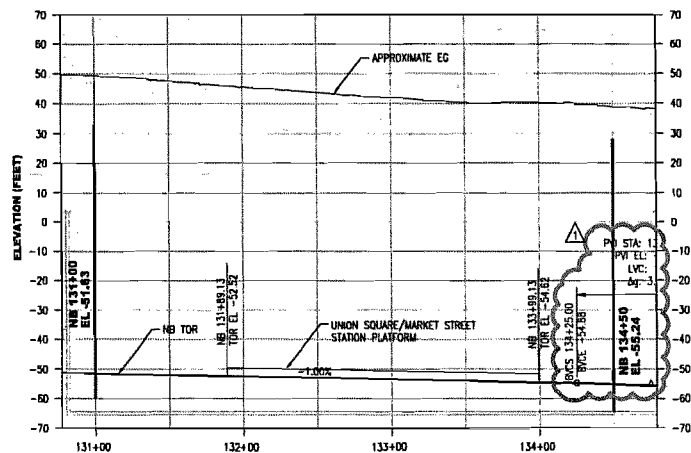


THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
UNION SQUARE/MARKET STREET STATION

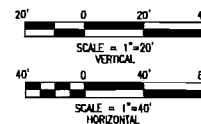
TRACK  
PLAN AND PROFILE  
SB 131+00 TO 134+50

PROJECT NO.	1253
FILE NUMBER OR	CL-18462
DRAWING NO.	TC-108
SHEET NO.	214
REVISED	1

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**NORTHBOUND PROFILE**



FOR ORIGINAL SIGNATURES, SEE CL-18463, REV. 0.

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 gyoung Fri Jun 31 2014 4:23 pm TC-134

DATE	DESCRIPTION	BY	CHECKED	APPROVED
02/03/2014	ISSUED FOR PCC NO. 8	J		
02/15/2012	ISSUED FOR BID	J		

**HNTB-B&C**  
JOINT VENTURE  
**HNTB**

DESIGNED  
L. M. GUN  
CHECKED  
J. A. SCHROEDER  
REVIEWED  
J. J. SELIM  
RECOMMENDED  
J. A. READ  
APPROVED  
J. J. EDWARDS  
DATE  
02/15/2012

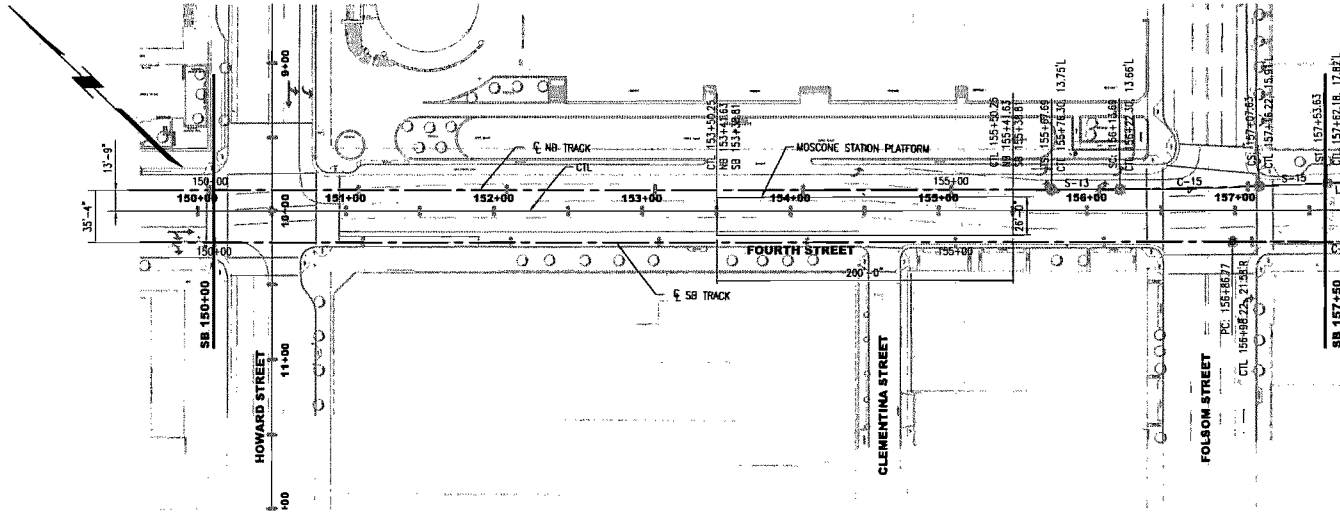
REV. 0  
SEALED BY  
J. SELIM



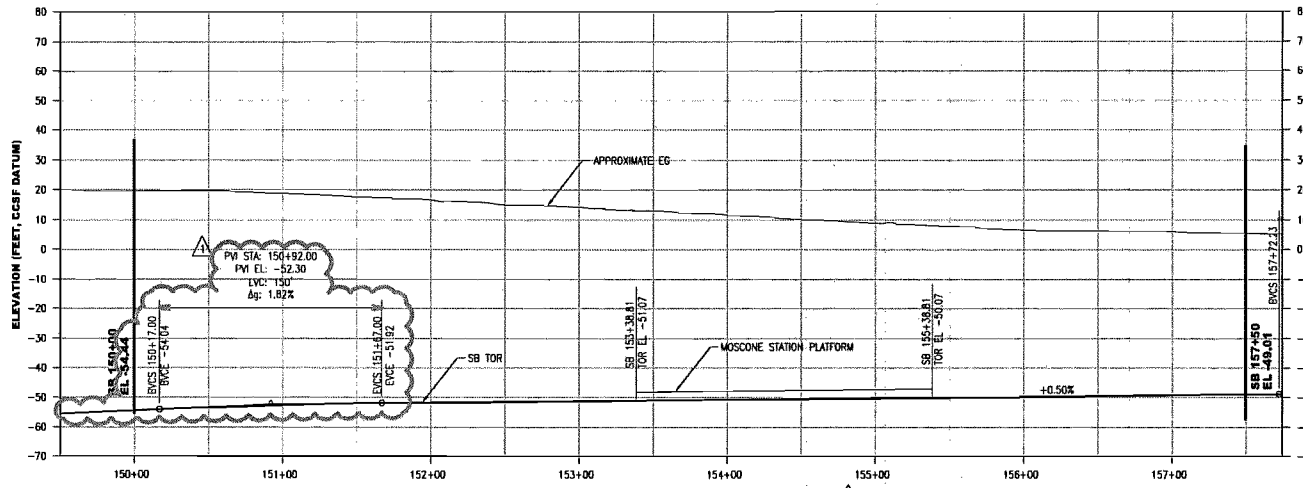
CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
APPROVED  
EDWARD O. REISKIN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
UNION SQUARE/MARKET STREET STATION  
TRACK  
NORTHBOUND PROFILE  
NB 131+00 TO 134+50

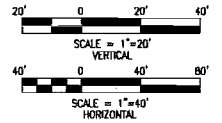
CONTRACT NO. 1253	REVISION
DISTRICT CONTROL NO. CL-18463	
DRAWING NO. TC-134	1
SHEET NO. 215	



PLAN



SOUTHBOUND PROFILE



FOR ORIGINAL SIGNATURES, SEE CL-21652, REV. 0

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 gyoung Fri Jun 30 12:04 - 5:52 pm TC-111

DATE	DESCRIPTION	BY	CHECKED	APPROVED
02/03/2014	ISSUED FOR PCC NO. 8			
02/15/2012	ISSUED FOR BD			

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

DESIGNED BY: M. SCHROEDER  
CHECKED BY: J. SELIN  
REVIEWED BY: A. READ  
PROJECT MANAGER: R. EDWARDS  
DATE: 02/15/2012

REV. 0  
SCALED BY  
J. SELIN



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

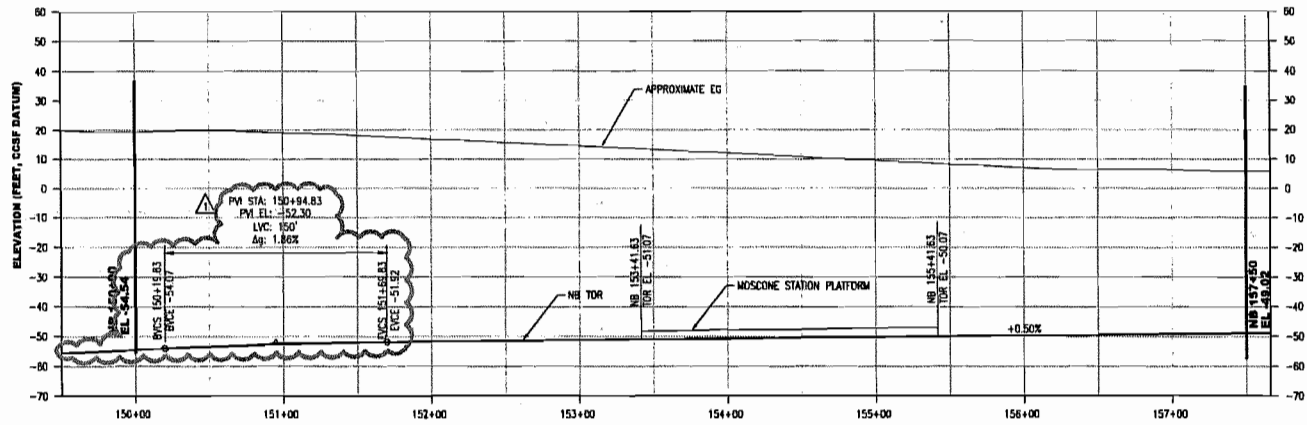
APPROVED  
EDWARD D. REISKIN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
MOSCONE STATION

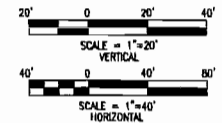
**TRACK  
PLAN AND PROFILE  
SB 150+00 TO 157+50**

CONTRACT NO. 1255	REVISION 1
SPECIAL CONTROL NO. CL-21652	
DRAWING NO. TC-111	
SHEET NO. 130	

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**NORTHBOUND PROFILE**



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 gyoung Fri Jan 31 2014 - 5:03 pm TC-136

DATE	DESCRIPTION	REV.	BY	CHECKED	APPROVED
07/03/2014	ISSUED FOR POC NO. 8	1			
02/11/2012	ISSUED FOR BID	0			

**HNTB-B&C**  
JOINT VENTURE  
**HNTB**

PREPARED BY: M. OHN  
 CHECKED BY: A. SCHROEDER  
 DRAWN BY: J. SELIN  
 REVISED BY: J. SELIN  
 INTERFERENCES BY: A. SEAR  
 APPROVED BY: M. LOMBERG  
 DATE: 01/15/2012

REV. 0  
SCALED BY  
J. SELIN



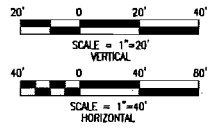
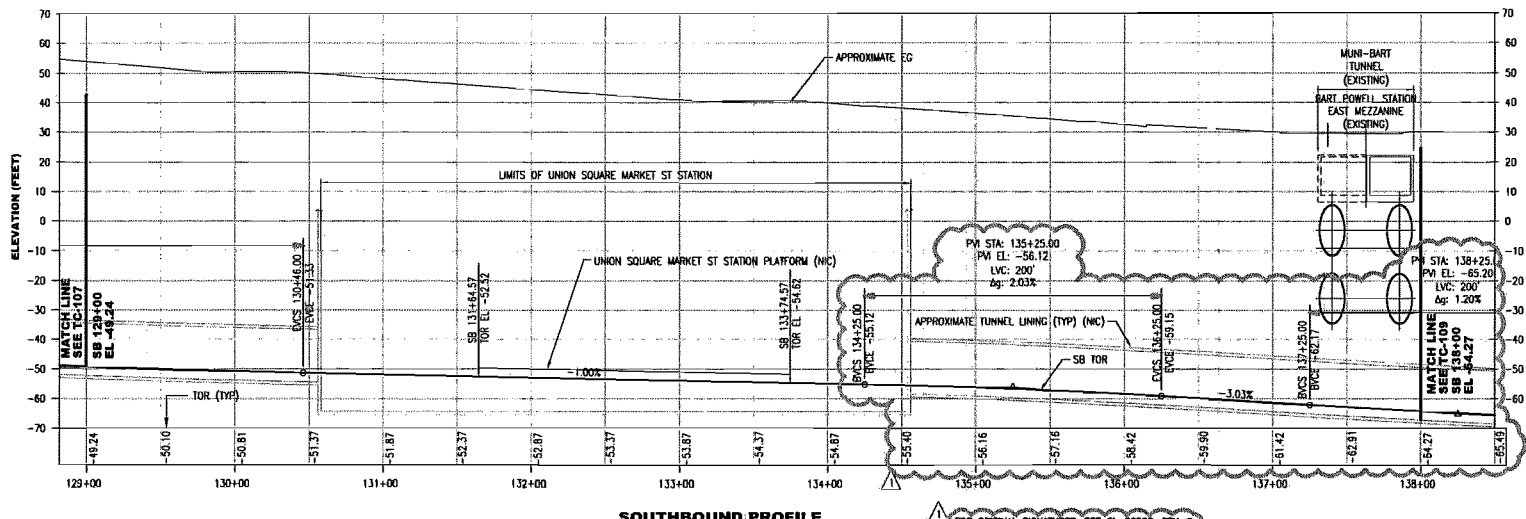
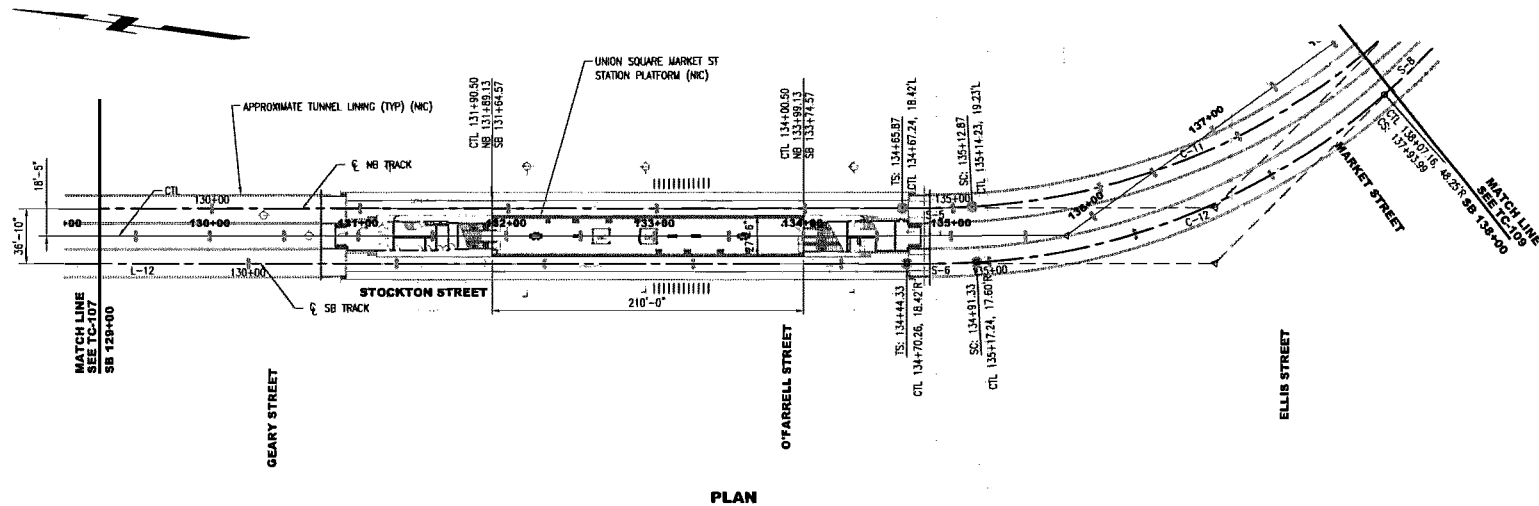
CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
 APPROVED  
 EDWARD D. REISKIN  
 DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
 PHASE 2 - CENTRAL SUENWAY  
 MOSCONE STATION

TRACK  
 NORTHBOUND PROFILE  
 NB 150+00 TO 157+50

CONTRACT NO.	1255
SPECIAL CONTRACT NO.	CL-21653
DRAWING NO.	TC-136
SHEET NO.	131
REVISION	1

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 Opening Fri, Jun 3, 2014 - 4:09 pm TC-108

DATE	DESCRIPTION	REV.	BY	CHECKED	APPROVED
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05/25/2012	ISSUED FOR BID	0			

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

DESIGNED BY: M. CHIN  
 CHECKED BY: A. SCHROEDER  
 DRAWN BY: J. SELIN  
 IN CHARGE: L. TOLENTINO  
 PROJECT MANAGER: C. MORFANSON  
 SUPERVISOR: B. EDWARDS  
 DATE: 05/23/2012

REV. 0  
SEALED BY  
J. SELIN



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

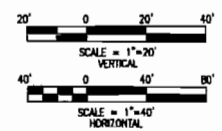
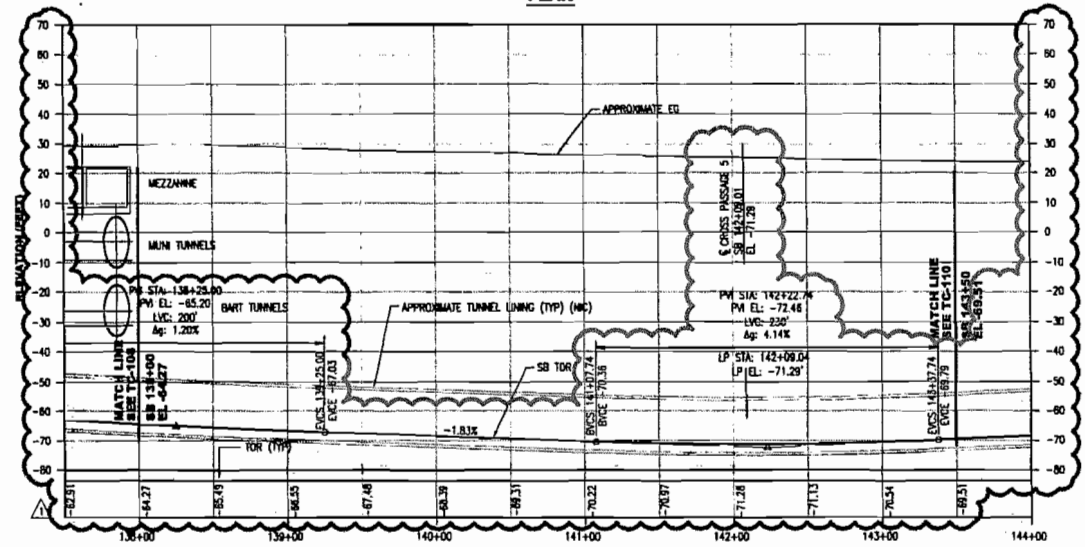
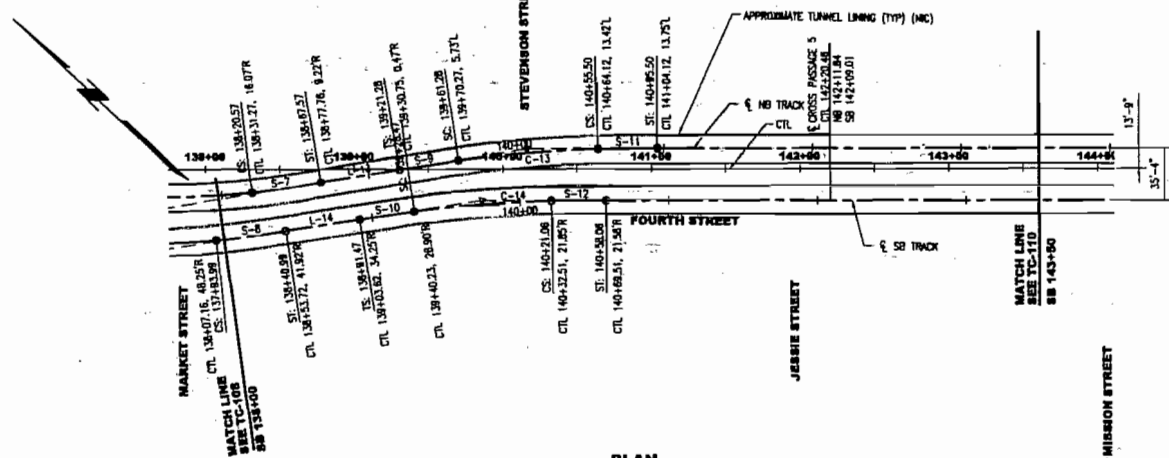
APPROVED  
EDWARD O. REISKIN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

TRACK  
PLAN AND PROFILE  
SB 129+00 TO 138+00

CONTRACT NO.	1256
OFFICE CONTROL NO.	CL-22528
DRAWING NO.	TC-108
SHEET NO.	33
REVISION	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 PENALTY OR OTHER ACTION.



\\evnc003\m544.1\maddesign\DRAWINGS\CS155-3\1256\sheet\res\02\_CIVIL\13\_TRACK\12560213TC109\_R1.dwg  
 Drawing: Fri, Jan 31, 2014 - 4:09 pm TC-109

02/03/2014	ISSUED FOR P.C. NO. 8	1
09/25/2012	ISSUED FOR BID	1
DATE	DESCRIPTION	BY

**HNTB-B&C**  
 JOINT VENTURE  
**HNTB**

REV. 0  
 SEALED BY  
 J. SELIN



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
 APPROVED  
 EDWARD D. REISKIN  
 DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
 PHASE 2 - CENTRAL SUBWAY  
 SURFACE, TRACK AND SYSTEMS

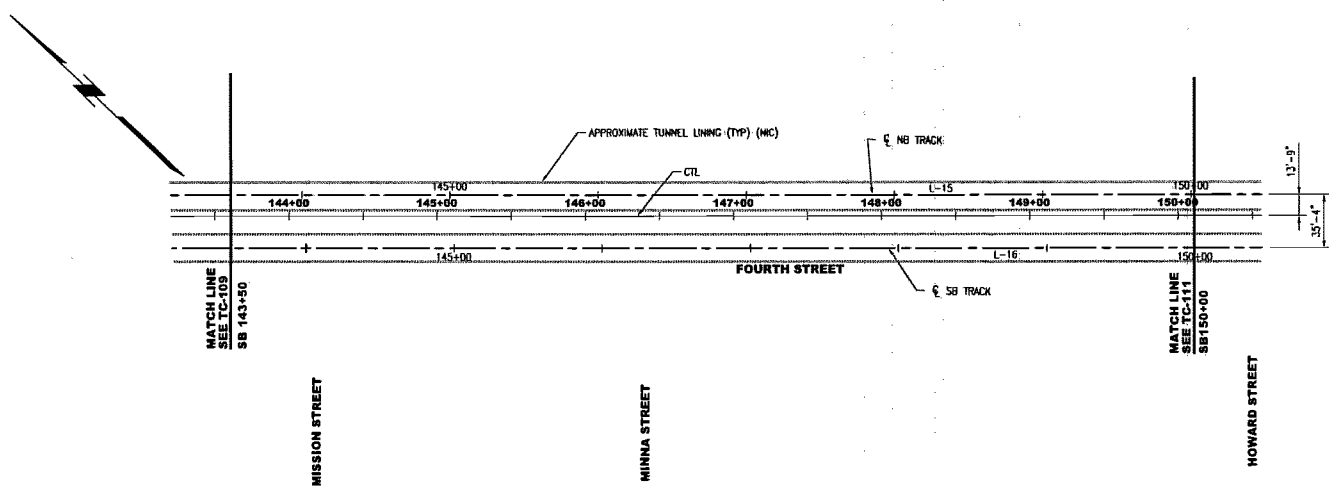
PROJECT NO. 1256  
 SHEET NO. CL-22529  
 TRACK  
 PLAN AND PROFILE  
 SB 138+00 TO 143+50

TC-109  
 34

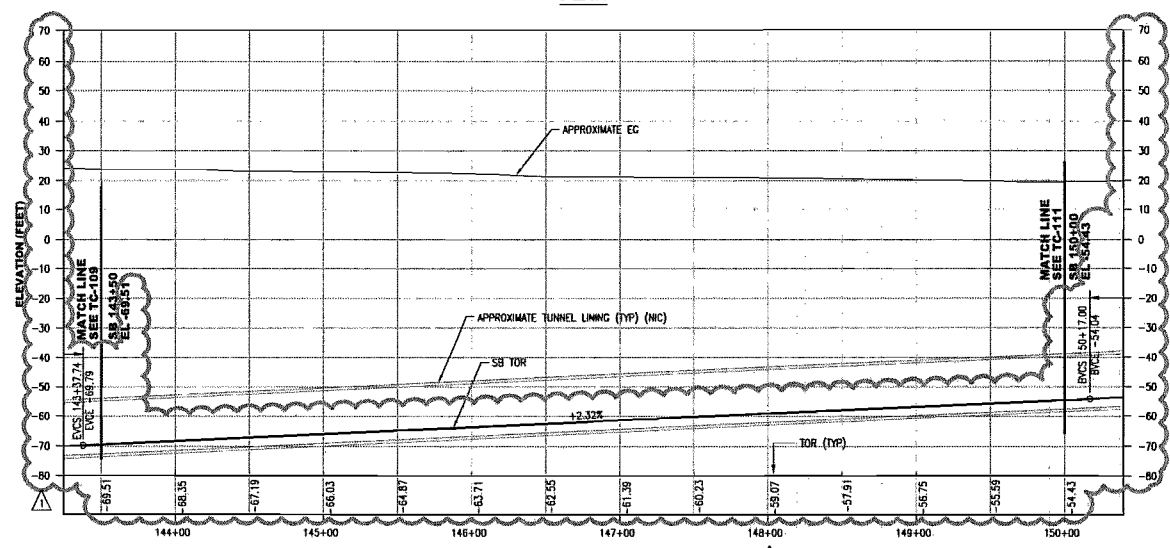
WARNING: THIS DRAWING CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 18 AND 1862. NO PART OF THIS DRAWING MAY BE DISCLOSED TO PERSONS WITHOUT A NEED TO KNOW. AS DISCLOSED IN 48 CFR PARTS 18 AND 1862, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN FINE, PENALTY OR OTHER ACTION.



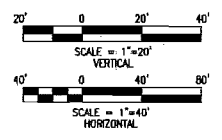
SENSITIVE SECURITY INFORMATION



PLAN



SOUTHBOUND PROFILE



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 Drawing Fri Jun 31 2014 - 4:12 Pm TC-110

DATE	DESCRIPTION	BY	CHECKED	APPROVED
02/03/2014	ISSUED FOR PCC NO. 8			
05/23/2012	ISSUED FOR BD			

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

DESIGNED BY: M. GUN  
 CHECKED BY: A. SCHROEDER  
 DRAWN BY: J. SELIN  
 IN CHARGE: I. TOLENTINO  
 ENGINEER: C. MORGANSON  
 DATE: 05/23/2012

REV. 0  
SEALED BY  
J. SELIN



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

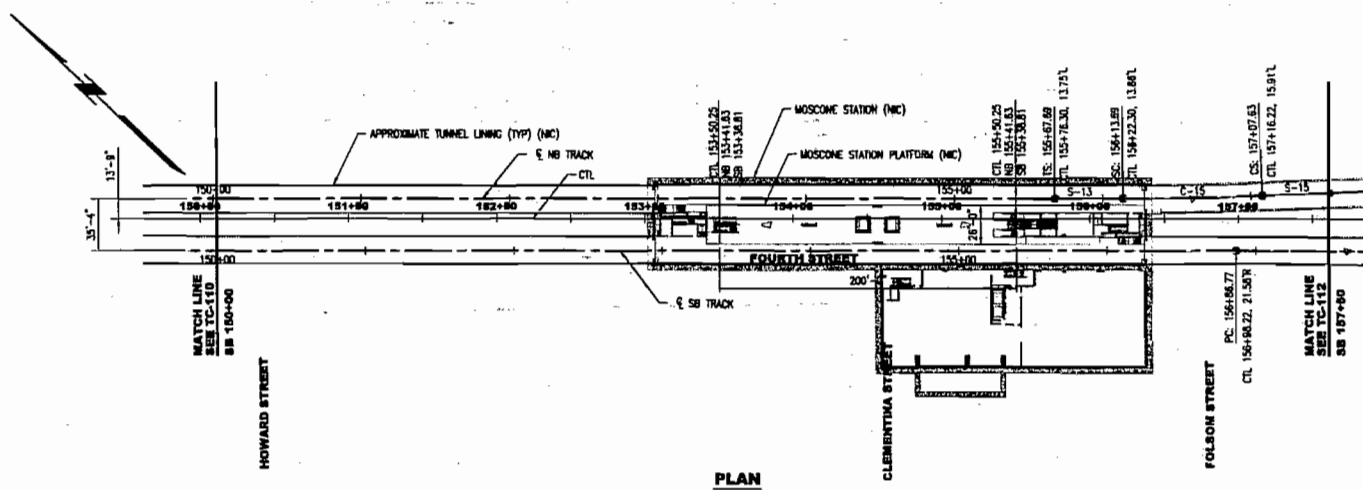
APPROVED  
 EDWARD D. REISKIN  
 DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
 PHASE 2 - CENTRAL SUBWAY  
 SURFACE, TRACK AND SYSTEMS

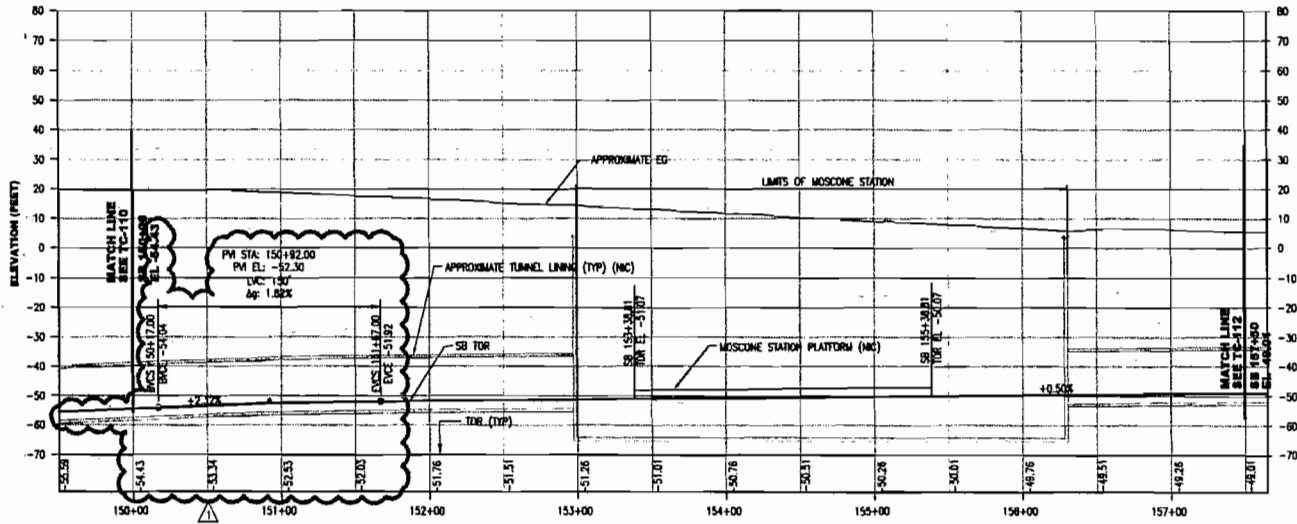
TRACK  
 PLAN AND PROFILE  
 SB 143+50 TO 150+00

CONTRACT NO.	1256
CIVIL CONTROL NO.	CL-22530
DRAWING NO.	TC-110
SHEET NO.	35
REVISION	1

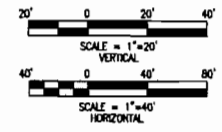
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 11 AND 120. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW" AS DEFINED BY 49 CFR PARTS 11 AND 120, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.



PLAN



SOUTHBOUND PROFILE



FOR ORIGINAL SIGNATURES, SEE CL-22531, REV. 0.

\\edms003\p45441\workspace\DRAWINGS\CS155-3\1256\sheet Res\02\_CIVIL\13\_TRACK\12560213TC111\_R1.dwg  
 Opening Fri Jun 30 2014 - 4:13 pm TC-111

DATE	DESCRIPTION	BY	CHECKED	APPROVED
07/01/2011	ISSUED FOR PLOT NO. 8			
08/25/2012	ISSUED FOR BB			

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

DATE	DESCRIPTION
08/23/2012	REVISED

REV. 0  
SEALED BY  
J. SELIN

CITY AND COUNTY OF SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY

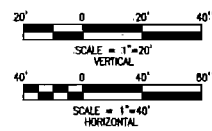
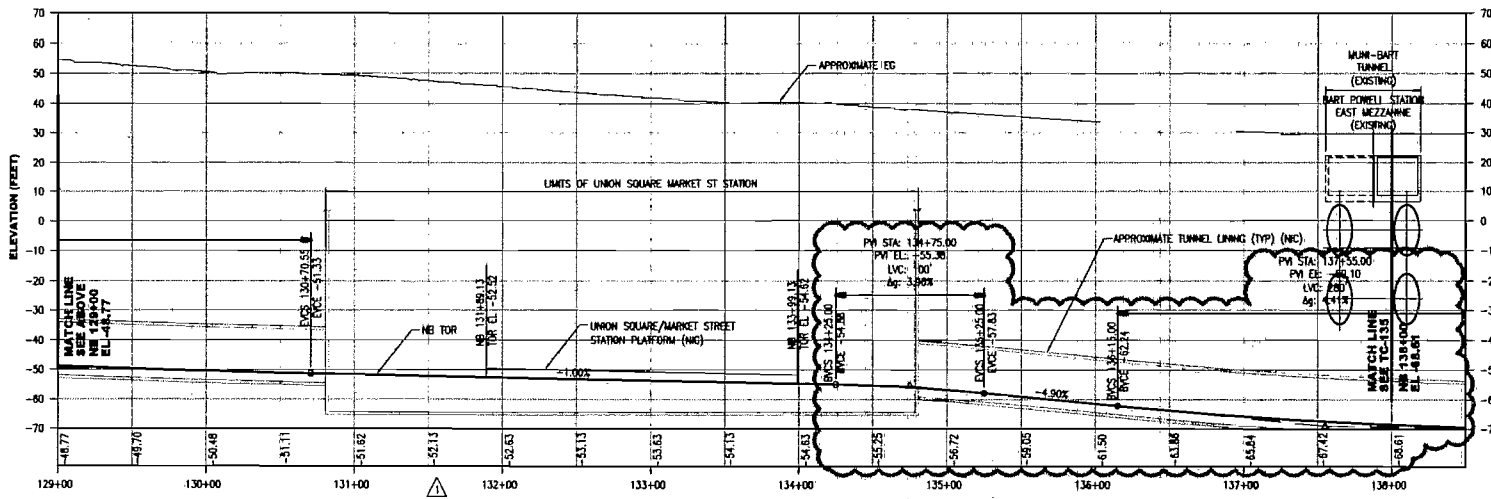
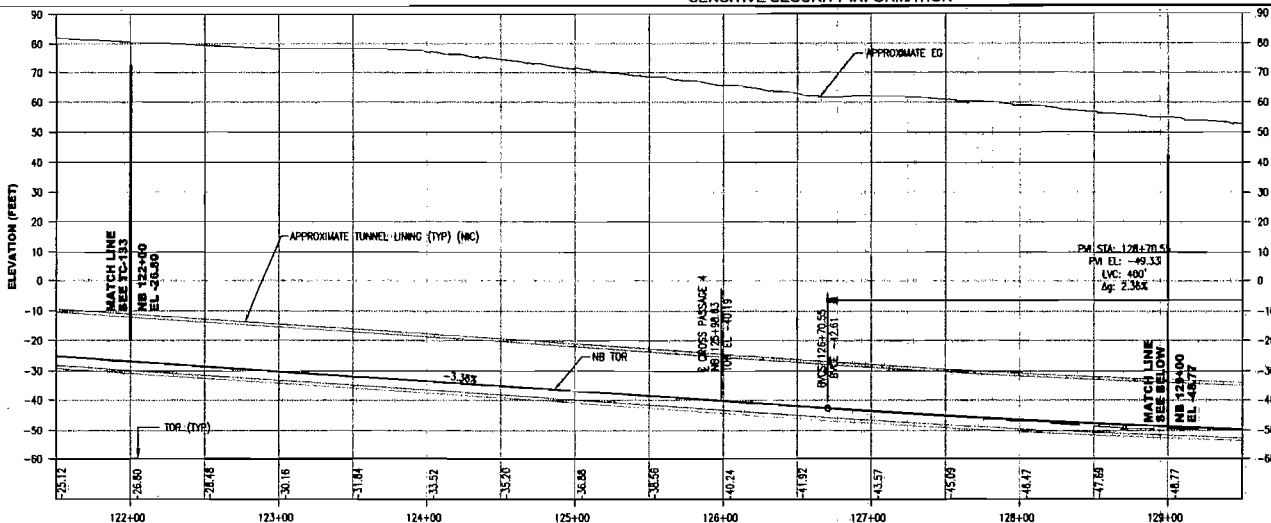
APPROVED  
EDWARD O. REISMAN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

TRACK  
PLAN AND PROFILE  
SB 150+00 TO 157+00

PROJECT NO.	1256
SPRINT CONTROL NO.	CL-22531
DRAWING NO.	TC-111
SHEET NO.	36
REVISION	1

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**NORTHBOUND PROFILE**

FOR ORIGINAL SCHEDULES SEE CL-225A, REV. 0

DATE	DESCRIPTION	BY	CHECKED	APPROVED
02/01/2014	ISSUED FOR PCC NO. 2			
05/23/2012	ISSUED FOR BO			

**HNTB-B&C**  
JOINT VENTURE  
**HNTB**

DESIGNED BY: J. SCHROEDER  
CHECKED BY: J. SELIM  
IN CHARGE: J. SELIM  
PROJECT MANAGER: C. WOODWARD  
DATE: 05/23/2012

REV. 0  
SCALED BY  
J. SELIM



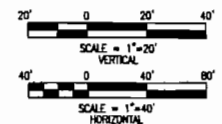
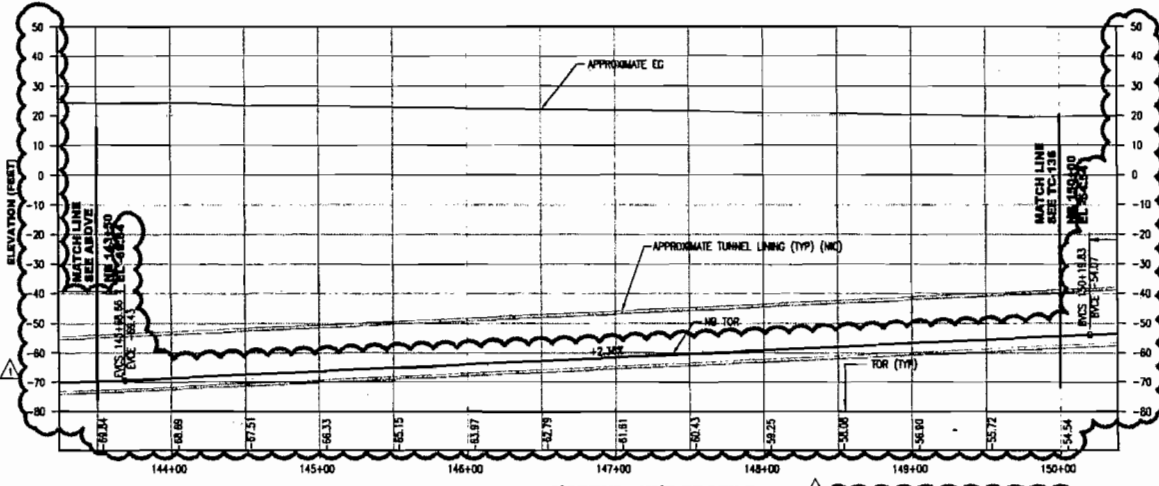
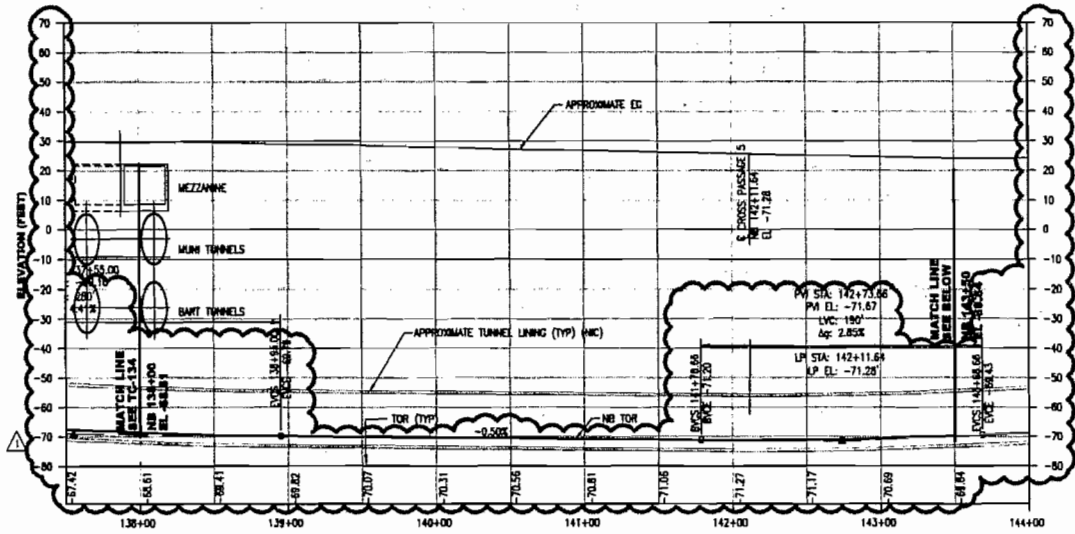
CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
APPROVED  
EDWARD D. REISMAN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS  
**TRACK  
NORTHBOUND TRACK PROFILE  
NB 122+00 TO 138+00**

PROJECT NO.	1256
CL-22543	
PROJECT NO.	TC-134
SHEET NO.	48
TOTAL SHEETS	1

\\vfor003\ms444\p\design\DRAWINGS\CSI55-3\1256\sheet files\CIVIL\13\_TRACK\12560213TC134\_R1.dwg  
 Drawing File Jpn 3/1/2014 - 4:14 pm TC-134

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 158. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW" AS DEFINED IN 49 CFR PARTS 15 AND 158, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.



**NORTHBOUND PROFILE** FOR ORIGINAL SCHEDULES, SEE CL-22544, REV. D

\\redacted003\rs544\1\redacted\BRAWNINGS\SI155-1\1250\sheet files\02\_CIVIL\13\_TRACK\125002\3TC135\_R1.dwg  
 gyoung Fri Jun 30 2014 4:15 pm TC-135

02/03/2014	ISSUED FOR PCC NO. B	1
08/25/2012	ISSUED FOR BO	0
05/02/2012		0

**HNTB-B&C**  
JOINT VENTURE

**HNTB**

H. CHEN  
 A. SCHROEDER  
 J. SELIN  
 M. WOODS  
 T. S. SCHOENING  
 C. BERGANTON  
 R. EDWARDS  
 05/02/2012

REV. D  
SEALED BY  
J. SELIN

CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

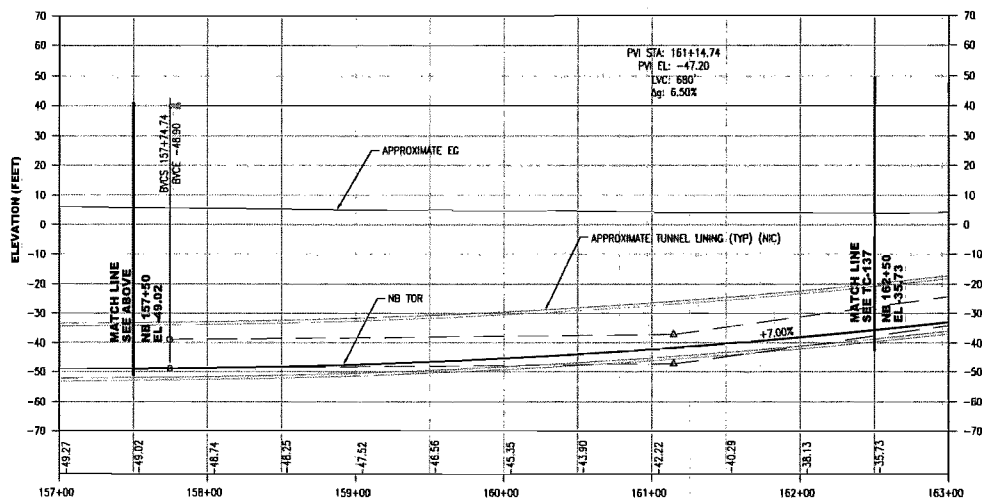
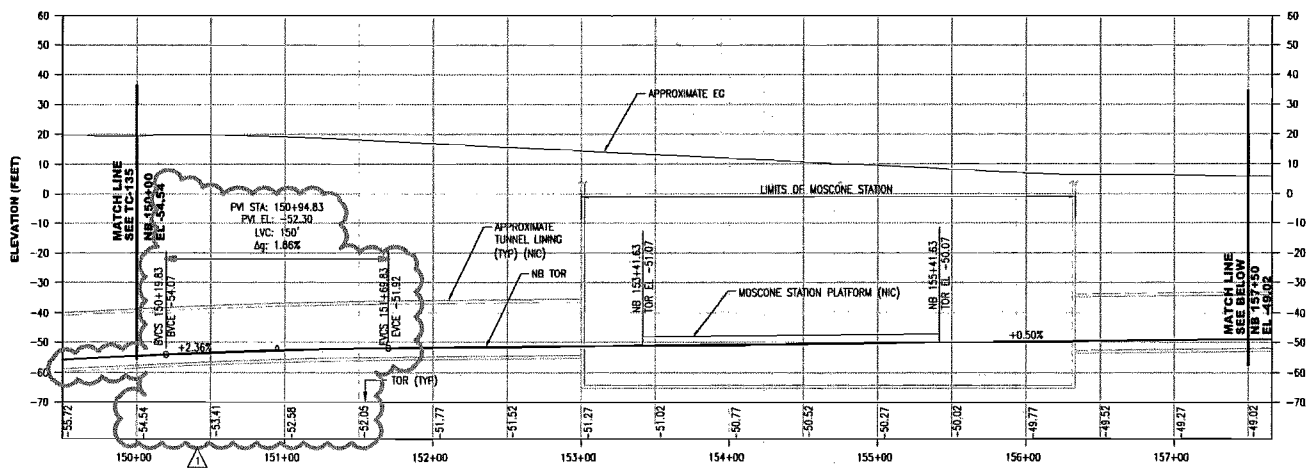
APPROVED  
EDWARD D. RESIGN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

**TRACK**  
**NORTHBOUND TRACK PROFILE**  
NB 138+00 TO 150+00

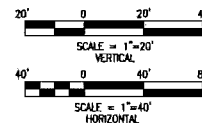
1256
CL-22544
TC-135
49

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 15 AND 18B. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW", AS DEFINED IN 48 CFR PARTS 15 AND 18B, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATION OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION UNLESS OTHERWISE PERMITTED BY CIVIL, FEDERAL OR OTHER ACTION.



**NORTHBOUND PROFILE**

FOR ORIGINAL SCHEDULES, SEE CL-22545, REV. 0.



\\sfr-prod3\ms544\inc\design\DRAWINGS\CS155-3\1256\sheet files\02\_CIVIL\13\_TRACK\12560213TC136\_R1.dwg  
 9/29/14 Fri Jun 31 2014 4:15 pm TC-136

09/03/2014	ISSUED FOR PLO NO. 8	1		
05/25/2012	ISSUED FOR BLD	0		
DATE	DESCRIPTION	BY	CHECKED	APPROVED

**HNTB-B&C**  
JOINT VENTURE  
**HNTB**

DESIGNED BY  
M. CHEN  
CHECKED BY  
S.A. SCHROEDER  
DESIGNED BY  
J. SELIN  
REVIEWED BY  
T. BLOOMFIELD  
RECORDED BY  
C. MORGANSON  
APPROVED BY  
R. EDWARDS  
DATE  
05/25/2012

REV. 0  
SEALED BY  
J. SELIN



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
APPROVED  
EDWARD D. REISMAN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS  
**TRACK**  
**NORTHBOUND TRACK PROFILE**  
NB 150+00 TO 162+50

CONTRACT NO.  
**1256**  
SHEET CONTROL NO.  
**CL-22545**  
DRAWING NO.  
**TC-136**  
SHEET NO.  
**50**

REVISION  
**1**

PUMP SCHEDULE											
EQUIPMENT TAG	BASIS OF DESIGN MFR. AND MODEL NO.	LOCATION	PUMP TYPE	FLOW (GPM)	TOT. HEAD (FT)	HP	VOLTS	PHASE	HERTZ	AMP	REMARKS
SP-1	FLYGT/MP3171.275 SH	CROSS PASSAGE 5	SUBMERSIBLE NON-CLOG	500	110	35	480	3	60	40	1
SP-2	FLYGT/MP3171.275 SH	CROSS PASSAGE 5	SUBMERSIBLE NON-CLOG	500	110	35	480	3	60	40	1
SP-3	FLYGT/MP3171.275 SH	CROSS PASSAGE 5	SUBMERSIBLE NON-CLOG	500	110	35	480	3	60	40	2, 3

REMARKS: 1. DUPLEX - REDUNDANT SYSTEM  
2. SPARE PUMP FOR EMERGENCY USE. PUMP SHALL BE PLACED AT THE FLOOR OF THE CROSS PASSAGE AWAY FROM THE DOOR AND SLUMP.  
3. DO NOT CONNECT PUMP TO THE DRAINAGE PIPING.

SUMP PUMP	
SETTING	DEPTH IN SUMP
HIGH WATER ALARM	9'-4"
LAG PUMP START	7'-4"
LEAD PUMP START	6'-10"
BOTH PUMPS OFF	1'-6"

EQUIPMENT SCHEDULE			
EQUIPMENT TAG	BASIS OF DESIGN MFR. AND MODEL NO.	LOCATION	DESCRIPTION
H-1	LAURDEN/522 ACCOLUF/1380080	CROSS PASSAGE 5	MANUAL AND HOIST SYSTEM FOR SUMP PUMP EXTRACTION 2-TON CAPACITY
REMARKS:			

FOR DESIGN SUBMIT SEE C-2113 REV D

\\vncad03\4544\1\Drawings\DRAWINGS\EST-55-3\1256\SHEET FILES\05\_MECHANICAL\01\_PLUMBING\12560501UP801\_LR1.dwg  
 Puser Fri Jan 24, 2014 - 2:56 pm MP-801

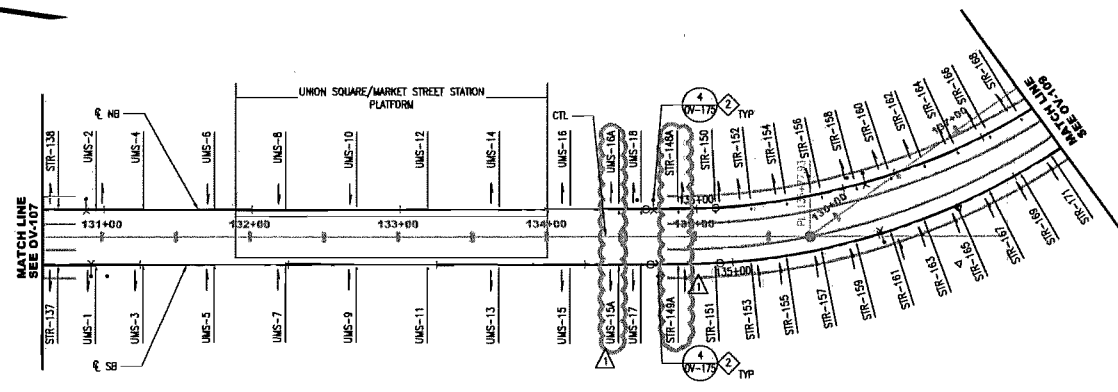
ISSUED FOR POC NO. 8 02/03/2014 ISSUED FOR BID 05/13/2012		<b>SFMTA</b>		DESIGNED BY T. LEE CHECKED BY J. BUCKLE DRAWN BY T. HALEY IN CHARGE T. TOFFINO SUPERVISOR C. MORGANSON APPROVED BY R. EDWARDS DATE 05/25/2012	REV. 0 SEALED BY T. LEE	 CITY AND COUNTY OF SAN FRANCISCO <b>MUNICIPAL TRANSPORTATION AGENCY</b> APPROVED EDWARD D. REISMAN DIRECTOR OF TRANSPORTATION	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS	PROJECT NO. 1256 SFMTA DESIGN NO. CL-23163 DRAWING NO. MP-801 SHEET NO. 716	APPROVED 1
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WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 101 AND 1010. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW" (AS DEFINED IN 48 CFR PARTS 101 AND 1010), EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED DISCLOSURE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.

NORTHBOUND TRACK																						
STRUCTURE NUMBER	STR-138	UMS-2	UMS-4	UMS-6	UMS-8	UMS-10	UMS-12	UMS-14	UMS-16	UMS-16A	UMS-18	STR-148A	STR-150	STR-152	STR-154	STR-156	STR-158	STR-160	STR-162	STR-164	STR-166	STR-168
STATIONING - NB TRACK	130+89.18	130+94.62	131+26.61	131+74.63	132+22.63	132+70.62	133+18.63	133+66.63	134+14.62	134+62.63	134+62.63	134+87.63	135+12.65	135+36.66	135+60.67	135+84.68	136+08.68	136+32.69	136+56.70	136+80.71	137+04.71	137+28.72
Ø OF WIRE TO Ø OF TRACK	3"	2"	0"	3"	6"	3"	0"	3"	6"	4"	3"	6"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
CONTACT WIRE HEIGHT (FT-IN)	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
DETAIL	27/OV-181	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	27/OV-181	27/OV-181	19/OV-179	19/OV-179	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181

**NOTES:**

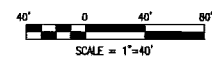
- FINAL SUPPORT STATIONING AND OFFSET TO BE FIELD VERIFIED.
- FOR LOCATIONS OF FEEDER TAPS, SEE TP-SERIES DRAWINGS.
- FOR PROFILE, SEE OV-144.



**LAYOUT PLAN AND SCHEDULE**

SOUTHBOUND TRACK																							
STRUCTURE NUMBER	STR-137	UMS-1	UMS-3	UMS-5	UMS-7	UMS-9	UMS-11	UMS-13	UMS-15	UMS-15A	UMS-17	STR-148A	STR-151	STR-153	STR-155	STR-157	STR-159	STR-161	STR-163	STR-165	STR-167	STR-169	STR-171
STATIONING - SB TRACK	130+44.62	130+70.07	131+02.08	131+50.07	131+98.16	132+46.08	133+94.09	133+42.07	133+90.08	134+22.07	134+38.07	134+63.07	134+88.07	135+12.08	135+36.09	135+60.09	135+84.11	136+08.12	136+32.13	136+56.15	136+80.16	137+04.17	137+28.18
Ø OF WIRE TO Ø OF TRACK	5"	6"	3"	2"	6"	3"	0"	3"	6"	4"	3"	2"	0"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
CONTACT WIRE HEIGHT (FT-IN)	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
DETAIL	27/OV-181	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	26/OV-180	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	19/OV-179	19/OV-179	19/OV-179	27/OV-181

FOR ORIGINAL SIGNATURES, SEE CL-22835, REV 0



\\sfrnas003\W4644.1\FinalDesign\DRAWINGS\OS155-3\1256 SHEET FILES\OS\_SYSTEMS\12\_OVERHEAD\12560612OV108\_R1.dwg  
 created Mon Feb 03, 2014 - 1:50 pm OV-108

				THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS		CONTRACT NO. 1256 SFMTA CONTROL NO. CL-22835	
REV. D SCALED BY S. LEUNG		APPROVED EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION		OVERHEAD CONTACT SYSTEM SUBWAY LAYOUT PLAN AND SCHEDULE CTL STA 130+60 TO 137+50		DRAWING NO. OV-108 SHEET NO. 368	

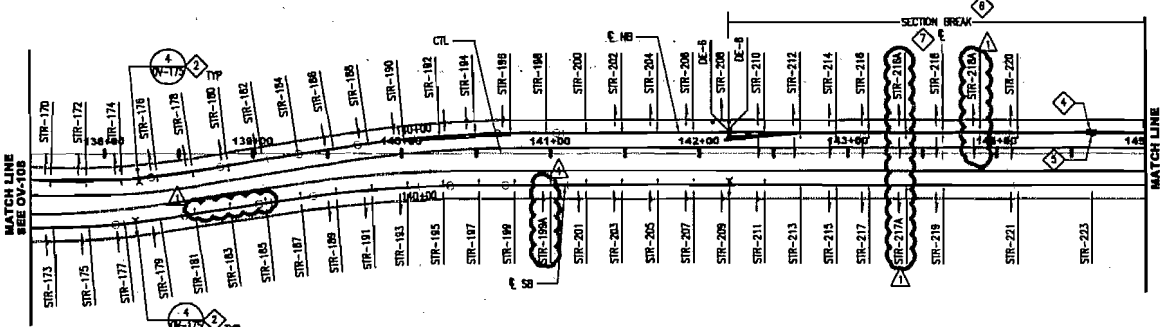
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 18 AND 101. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW," AS DEFINED IN 48 CFR PARTS 18 AND 101, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.



SENSITIVE SECURITY INFORMATION

		NORTHBOUND TRACK																											
STRUCTURE NUMBER		STR-170	STR-172	STR-174	STR-176	STR-178	STR-180	STR-182	STR-184	STR-186	STR-188	STR-190	STR-192	STR-194	STR-196	STR-198	STR-200	STR-202	STR-204	STR-206	DE-6	STR-208	DE-8	STR-210	STR-212	STR-214	STR-216	STR-218A	STR-218
STATIONING - NB TRACK		137+52.71	137+78.71	138+00.71	138+24.71	138+48.70	138+72.78	138+96.72	139+20.57	139+44.64	139+68.63	139+92.61	140+16.80	140+40.58	140+64.57	140+88.55	141+15.28	141+39.28	141+63.28	141+87.28	142+10.82	142+11.28	142+12.71	142+35.28	142+58.28	142+83.28	143+05.28	143+30.00	143+54.90
Ø OF WIRE TO Ø OF TRACK		2"	2"	2"	4"	4"	0"	0"	0"	3"	4"	1"	1"	1"	1"	0"	0"	2"	3"	4"	-	8"	-	4"	3"	3"	3"	3"	3"
MESSANGER WIRE HEIGHT (FT-IN)		14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
CONTACT WIRE HEIGHT (FT-IN)		12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
DETAIL		27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	18/OV-178	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181
Ø OF WIRE TO Ø OF TRACK		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MESSANGER WIRE HEIGHT (FT-IN)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONTACT WIRE HEIGHT (FT-IN)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DETAIL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

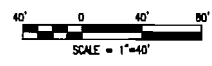
NORTHBOUND TRACK	
STRUCTURE NUMBER	STR-218A STR-220
STATIONING - NB TRACK	143+80.00 144+05.28
Ø OF WIRE TO Ø OF TRACK	3" 4"
MESSANGER WIRE HEIGHT (FT-IN)	14'-1" 14'-1"
CONTACT WIRE HEIGHT (FT-IN)	- -
DETAIL	Ø Ø
Ø OF WIRE TO Ø OF TRACK	3" 3"
MESSANGER WIRE HEIGHT (FT-IN)	14'-1" 14'-1"
CONTACT WIRE HEIGHT (FT-IN)	12'-7" 12'-7"
DETAIL	21/OV-178 21/OV-179



- NOTES:**
- FINAL SUPPORT STATIONING AND OFFSET TO BE FIELD VERIFIED.
  - FOR LOCATIONS OF FEEDER TAPS, SEE TP-SERIES DRAWINGS.
  - FOR PROFILE, SEE OV-145.
  - SECTION INSULATOR IS NON-RIDING.
  - SECTION INSULATOR IS RIDING.
  - FOR TYPICAL SECTION BREAK ARRANGEMENT, SEE OV-174.
  - CENTERLINE OF SECTION BREAK.
  - FOR NON-RIDING CONTACT WIRE, REMOVE ONE EACH OF ITEMS 405, 417, AND 426.
  - FOR RIDING CONTACT WIRE, REPLACE ONE EACH OF ITEMS 417 AND 428 WITH ONE OF ITEM 418 AND TWO OF ITEM 409.
  - REPLACE TWO EACH OF ITEMS 417 AND 428 WITH TWO OF ITEM 418 AND FOUR OF ITEM 409.

LAYOUT PLAN AND SCHEDULE

		SOUTHBOUND TRACK																												
STRUCTURE NUMBER		STR-173	STR-175	STR-177	STR-178	STR-181	STR-183	STR-185	STR-187	STR-188	STR-191	STR-193	STR-195	STR-197	STR-199	STR-199A	STR-201	STR-203	STR-205	STR-207	STR-209	STR-211	STR-213	STR-215	STR-217	STR-217A	STR-219	STR-221	STR-223	
STATIONING - SB TRACK		137+52.18	137+76.20	138+00.21	138+24.21	138+48.21	138+72.21	138+96.21	139+20.20	139+44.21	139+68.21	139+92.20	140+16.20	140+40.20	140+64.20	140+88.33	141+12.46	141+36.46	141+60.46	141+84.46	142+08.46	142+32.46	142+56.45	142+80.46	143+04.45	143+27.45	143+52.45	144+02.45	144+52.46	
Ø OF WIRE TO Ø OF TRACK		3"	2"	2"	1"	0"	0"	0"	0"	1"	1"	1"	0"	0"	0"	2"	3"	4"	6"	8"	4"	3"	0"	0"	2"	3"	4"	6"	3"	0"
MESSANGER WIRE HEIGHT (FT-IN)		14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	
CONTACT WIRE HEIGHT (FT-IN)		12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	
DETAIL		27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	



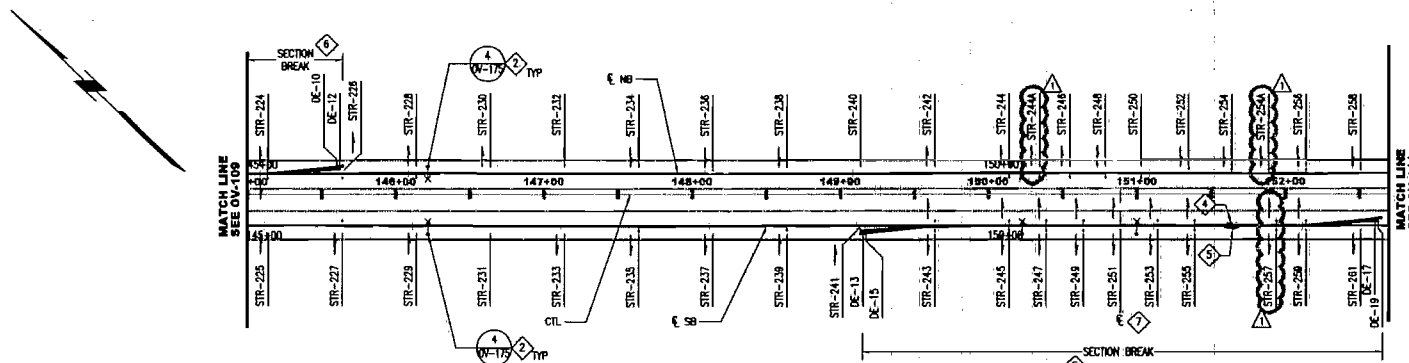
FOR ORIGINAL SIGNATURES, SEE CL-22836, REV 0

		REV. 0 SCALED BY S. LEUNG	CITY AND COUNTY OF SAN FRANCISCO <b>MUNICIPAL TRANSPORTATION AGENCY</b>  APPROVED: EDWARD D. REISKON DIRECTOR OF TRANSPORTATION	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS  <b>OVERHEAD CONTACT SYSTEM                  SUBWAY LAYOUT PLAN AND SCHEDULE                  CTL STA 137+50 TO 145+00</b>	PROJECT NO. <b>1256</b>  SFPA DRAWING NO. <b>CL-22836</b>  SHEET NO. <b>OV-109</b>  TOTAL SHEETS <b>369</b>
		ISSUED FOR POC NO.8 09/23/2014	ISSUED FOR MD	DATE	DRAWN BY

\\sfrmap03\4544\1\Final\design\DRAWINGS\1256-SHEET FILES\06\_SYSTEMS\12\_OVERHEAD\125600120V109\_R1.dwg  
 cdoyle Mar 03 2014 - 1:59 pm OV-109

FOR MORE RECORDS 12/20/2011  
 WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED BY LAW AND IS NOT TO BE RELEASED TO THE PUBLIC WITHOUT A "NEED TO KNOW". AS DESCRIBED BY 48 CFR PARTS 101 AND 101A, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.

		NORTHBOUND TRACK																					
STRUCTURE NUMBER		STR-224	DE-10	DE-12	STR-228	STR-228	STR-230	STR-232	STR-234	STR-236	STR-236	STR-240	STR-242	STR-244	STR-244A	STR-246	STR-248	STR-250	STR-252	STR-254	STR-254A	STR-256	STR-258
STATIONING - NB TRACK		145+04.92	145+51.51	145+53.80	145+55.28	146+05.28	146+55.28	147+05.28	147+55.28	148+05.28	148+55.28	149+05.28	149+55.28	150+05.28	150+25.75	150+48.21	150+70.21	150+94.21	151+26.21	151+55.28	151+80.25	152+05.28	152+42.18
OUT-RUNNING	€ OF WIRE TO € OF TRACK	6"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CONTACT WIRE HEIGHT (FT-IN)	13'-1"	-	13'-1"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DETAIL	22/OV-179	10/OV-178	12/OV-176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IN-RUNNING	€ OF WIRE TO € OF TRACK	3"	-	-	3"	6"	3"	0"	3"	6"	3"	0"	3"	6"	5"	3"	2"	0"	1"	3"	6"	6"	3"
	MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	-	-	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
	CONTACT WIRE HEIGHT (FT-IN)	12'-7"	-	-	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
	DETAIL	-	-	-	19/OV-179	18/OV-179	17/OV-178	17/OV-178	17/OV-178	19/OV-179	17/OV-178	17/OV-178	17/OV-178	17/OV-178	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	27/OV-181	19/OV-179

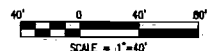


LAYOUT PLAN AND SCHEDULE

- NOTES:**
- FINAL SUPPORT STATIONING AND OFFSET TO BE FIELD VERIFIED.
  - FOR LOCATIONS OF FEEDER TAPS, SEE TP-SERIES DRAWINGS.
  - FOR PROFILE, SEE OV-146.
  - SECTION INSULATOR IS NON-RIDING.
  - SECTION INSULATOR IS RIDING.
  - FOR TYPICAL SECTION BREAK ARRANGEMENT, SEE OV-174.
  - CENTERLINE OF SECTION BREAK.
  - FOR NON-RIDING CONTACT WIRE REMOVE ONE EACH OF ITEMS 405, 417, AND 426.
  - FOR RIDING CONTACT WIRE, REPLACE ONE EACH OF ITEMS 417 AND 425 WITH ONE OF ITEM 416 AND TWO OF ITEM 409.
  - REPLACE TWO EACH OF ITEMS 417 AND 426 WITH TWO OF ITEM 416 AND FOUR OF ITEM 409.

		SOUTHBOUND TRACK																						
STRUCTURE NUMBER		STR-225	STR-227	STR-229	STR-231	STR-233	STR-235	STR-237	STR-239	STR-241	DE-13	DE-15	STR-243	STR-245	STR-247	STR-249	STR-251	STR-253	STR-255	STR-257	STR-259	STR-261	DE-17	DE-19
STATIONING - SB TRACK		145+02.46	145+52.45	146+02.45	146+52.46	147+02.46	147+52.46	148+02.45	148+52.46	149+02.38	149+03.76	149+05.86	149+52.45	150+02.46	150+27.45	150+52.45	150+77.45	151+02.45	151+27.45	151+82.42	152+02.46	152+39.34	152+49.07	152+51.16
OUT-RUNNING	€ OF WIRE TO € OF TRACK	3"	6"	3"	0"	3"	6"	2"	3"	3"	-	-	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	-	-	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
	CONTACT WIRE HEIGHT (FT-IN)	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	-	-	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
	DETAIL	17/OV-178	19/OV-178	17/OV-178	17/OV-178	17/OV-178	18/OV-179	17/OV-178	19/OV-179	19/OV-179	-	-	22/OV-179	21/OV-179	21/OV-179	21/OV-179	21/OV-179	21/OV-179	21/OV-179	21/OV-179	21/OV-179	22/OV-179	-	10/OV-178
IN-RUNNING	€ OF WIRE TO € OF TRACK	-	-	-	-	-	-	-	-	-	-	-	6"	5"	4"	3"	3"	3"	3"	3"	3"	1"	-	-
	MESSENGER WIRE HEIGHT (FT-IN)	-	-	-	-	-	-	-	-	-	-	-	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"	14'-1"
	CONTACT WIRE HEIGHT (FT-IN)	-	-	-	-	-	-	-	-	-	-	-	13'-1"	13'-1"	-	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"
	DETAIL	-	-	-	-	-	-	-	-	-	12/OV-178	10/OV-178	-	21/OV-179	21/OV-179	-	-	21/OV-179	21/OV-179	21/OV-179	-	19/OV-179	-	-

FOR ORIGINAL SIGNATURES, SEE CL-22837, REV 0



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David Mon Feb 03/2014 - 2:00 pm OV-110

02/03/2014	ISSUED FOR PCC NO.8	1			
05/25/2012	ISSUED FOR BID	0			
DATE	DESCRIPTION	BY	CHECKED	APPROVED	

**SFMTA**

DESIGNED BY  
C. SPED  
CHECKED BY  
S. LEUNG  
IN CHARGE  
S. LEUNG  
SUPERVISOR  
R. BROWN  
DATE  
1/13/2012

REV. 0  
SEALED BY  
S. LEUNG



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

APPROVED  
EDWARD D. REISMAN  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

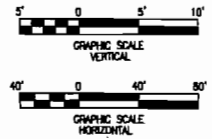
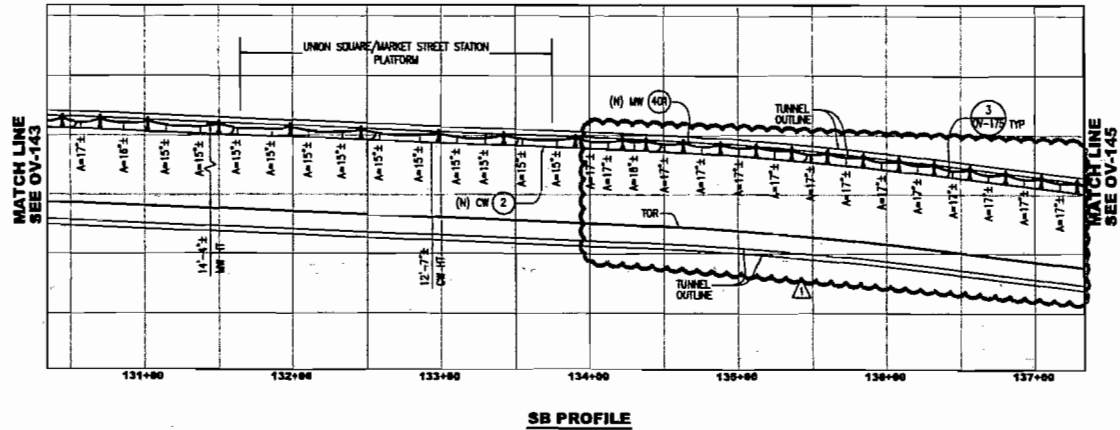
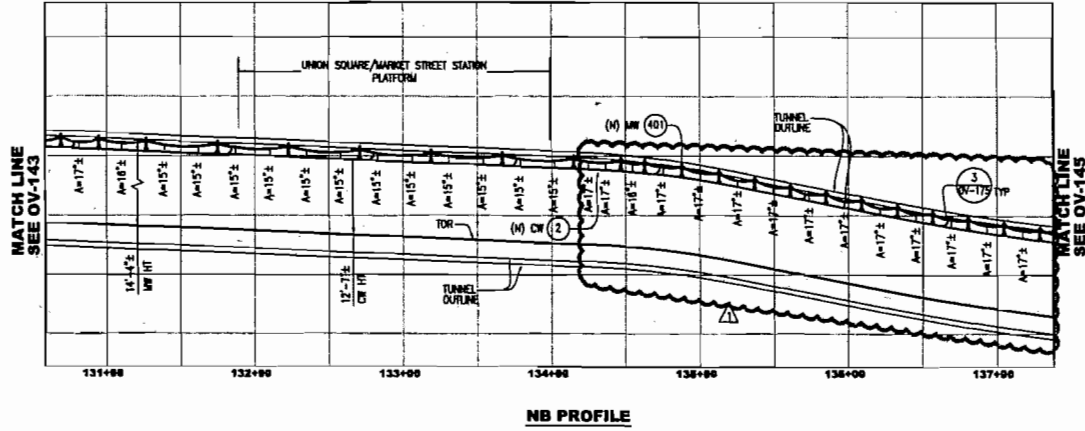
OVERHEAD CONTACT SYSTEM  
SUBWAY LAYOUT PLAN AND SCHEDULE  
CTL STA 145+00 TO 152+70

PROJECT NO.	1256
SHEET NO.	OL-22837
DATE	OV-110
SCALE	370

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER AN EPI PART IN AND ISL. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW", AS DEFINED IN AN EPI PART IN AND ISL, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.

**NOTE:**

- 1. FOR LAYOUT PLAN, SEE OV-108.



FOR ORIGINAL SIGNATURES, SEE CL-22857, REV. 0

S:\P\ndesign\DRAWINGS\CS155-3\1256\1256\SHEET FILES\06\_SYSTEMS\12\_OVERHEAD\125608120V144\_R1.dwg  
created: Mon Feb 03, 2014 - 1:32 pm by: OV-144\_R1

DATE	DESCRIPTION	BY	CHECKED	APPROVED
02/03/2014	ISSUED FOR PCC NO.3	1		
05/25/2012	ISSUED FOR 80			

<b>SFMTA</b>	DESIGNER C. SPIND CHECKER S. LEUNG ENGINEER T. BELMONT SUPERVISOR C. BERKANDSON DIRECTOR E. FERRARIO DATE 2/3/2012
--------------	---

REV. 0  
SEALED BY  
S. LEUNG



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
APPROVED  
EDWARD D. RESZON  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

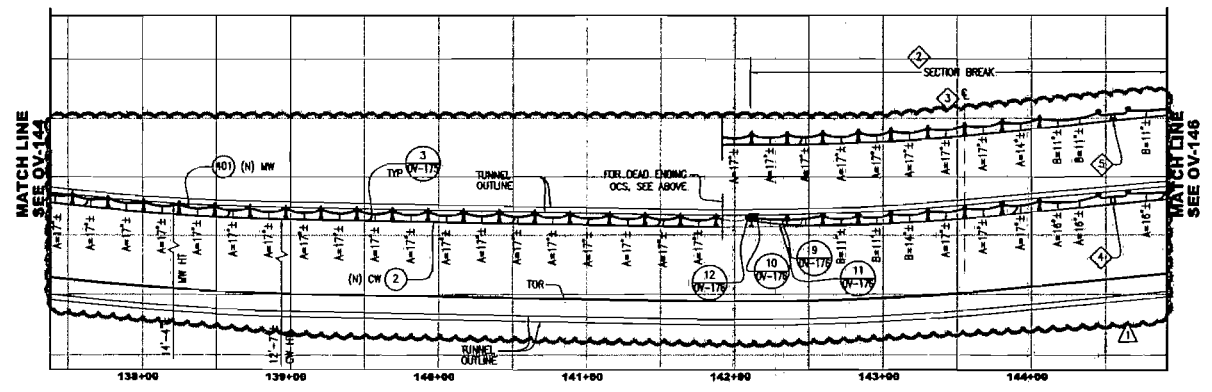
**OVERHEAD CONTACT SYSTEM  
SUBWAY PROFILE**  
CTL STA 130+60 TO 137+50

PROJECT NO.	1256
SHEET NUMBER	CL-22857
PROJECT NO.	OV-144
SHEET NO.	390
SCALE	1

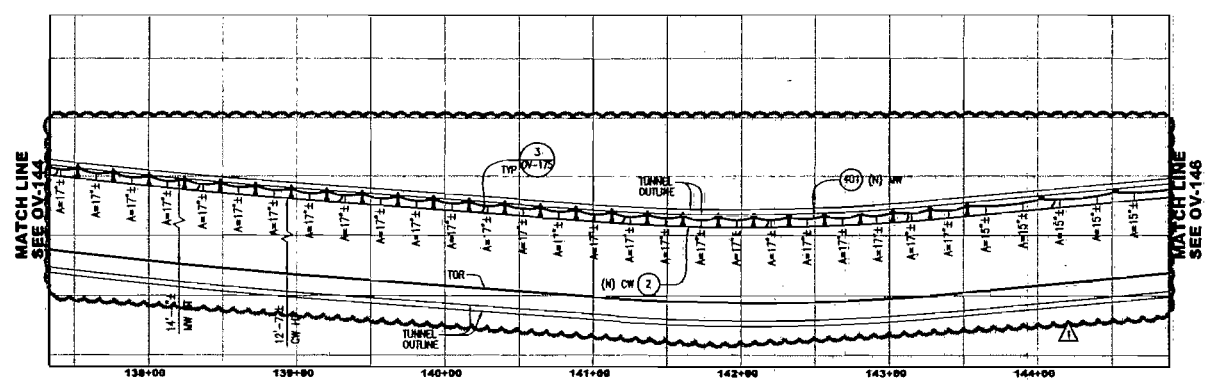
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1586 AND PART OF THIS RECORD MAY BE DECLASSIFIED TO PUBLIC WITHOUT A "HOLD TO HONOR," AS REQUIRED BY 49 CFR PARTS 15 AND 1586, OCCUR WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.

**NOTES:**

1. FOR LAYOUT PLAN, SEE OV-100.
2. FOR TYPICAL SECTION BREAK ARRANGEMENT, SEE OV-174.
3. CENTER LINE OF SECTION BREAK.
4. SECTION INSULATOR IS RIDING.
5. SECTION INSULATOR IS NON-RIDING.

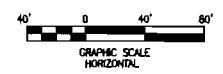
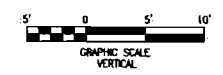


**NB PROFILE**



**SB PROFILE**

FOR ORIGINAL SIGNATURES, SEE CL-22858, REV 0



\\w6nc003\MS44.1\FinalDesign\DRAWINGS\CS185-3\1256\SHEET FILES\06\_SYSTEMS\12\_OVERHEAD\125606120V145\_R1.dwg  
 claud Mon Feb 03, 2014 - 1:34 pm OV-145

02/03/2014	ISSUED FOR PCC NO.8	1		
05/23/2012	ISSUED FOR BID	0		
DATE	DESCRIPTION	BY	CHECKED	APPROVED

**SFMTA**

REV. 0  
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S. LEUNG



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

APPROVED:  
EDWARD D. REZSON  
DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
SURFACE, TRACK AND SYSTEMS

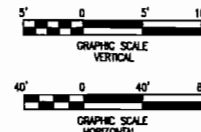
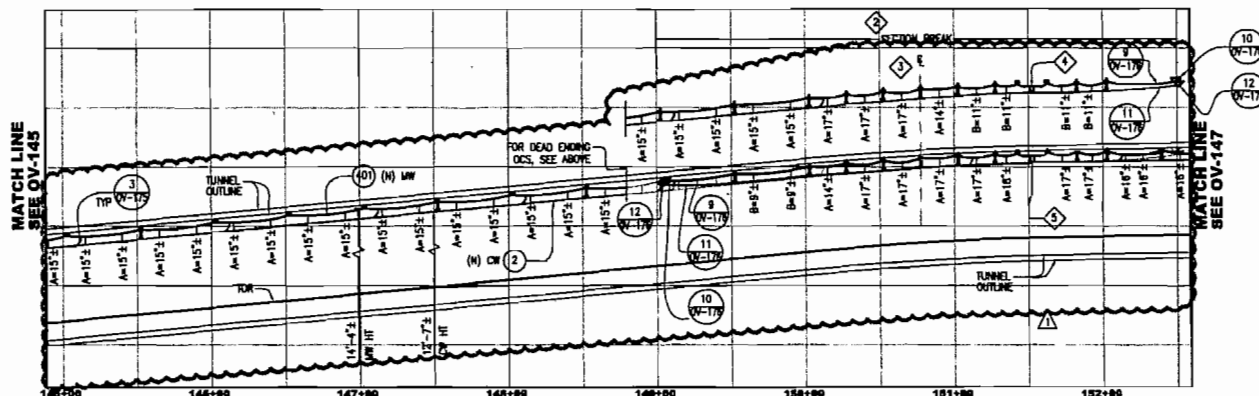
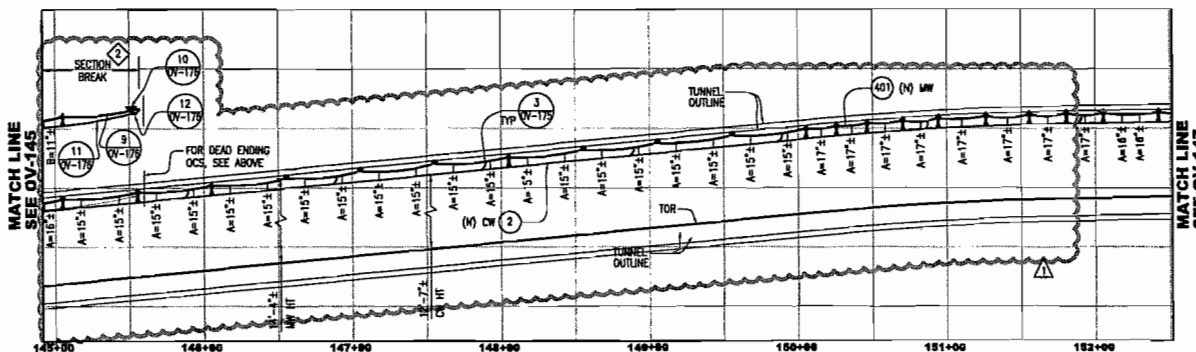
OVERHEAD CONTACT SYSTEM  
SUBWAY PROFILE  
CTL STA 137+50 TO 145+00

CONTRACT NO.	1256
SHEET CONTROL NO.	CL-22858
DRAWING NO.	OV-145
SHEET NO.	391
REVISION	1

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 168. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSON WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 168, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATION OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION.

**NOTES:**

1. FOR LAYOUT PLAN, SEE OV-110.
2. FOR TYPICAL SECTION BREAK ARRANGEMENT, SEE OV-174.
3. CENTER LINE OF SECTION BREAK.
4. SECTION INSULATOR IS RIDING.
5. SECTION INSULATOR IS NON-RIDING.



FOR ORIGINAL SIGNATURES, SEE CL-22859, REV 0

\\pfs003\031\0544\1\Final\Design\DRAWINGS\CS155-3\1256\SHEET FILES\08\_SYSTEMS\12\_OVERHEAD\12560520V146\_R1.dwg  
 Date: Mon Feb 03 2014 1:55 pm  
 User: 01-146

DATE	REVISION	BY	DESCRIPTION
02/03/2014	01		ISSUED FOR PCC M&B
06/25/2012	00		ISSUED FOR MD

<b>SFMTA</b>	
DATE	REVISION
02/03/2014	01
06/25/2012	00

REV. 0  
SEALED BY  
S. LEUNG



CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**  
 APPROVED  
 EDWARD D. REISKIN  
 CHIEF OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM  
 PHASE 2 - CENTRAL SUBWAY  
 SURFACE, TRACK AND SYSTEMS

OVERHEAD CONTACT SYSTEM  
 SUBWAY PROFILE  
 CTL STA 145+00 TO 152+70

PROJECT NO.	1256
GRAPHIC SCALE NO.	CL-22859
PROJECT NO.	OV-146
SHEET NO.	392

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## **Rationale Supporting Revised Alignment of the Central Subway Tunnels**

Date: June 26, 2013  
Prepared by: George Harris and Eric Scotson, Parsons Brinckerhoff San Francisco  
Prepared for: San Francisco Metropolitan Transportation Agency  
Requested by: Matt Fowler, PB Telamon Joint Venture Project Manager

### **Background**

The reference design alignment of the northbound (NB) Central Subway Tunnel between Market Street and the Union Square Market Street Station (UMS) includes a constant -1.00% grade through a horizontal curve of 450' radius with 47' long spirals at each end. The UMS South Headwall and "soft eye" for the tunnel bore have been installed in this area approximately 80' south of the end of the UMS passenger station platform.

Subsequent to the development of the original alignment of the Central Subway NB Tunnel it was discovered that there could be a possible conflict of the proposed tunnel alignment with a group of micro piles installed to support retaining walls placed to create a joint utility trench under the eastside sidewalk along Stockton Street.

Due to the severe right-of-way constraints imposed by having to maintain the tunnel alignment under Stockton Street, Market Street and Fourth Street, and staying within negotiated easements on both sides of Market Street, a change to the horizontal alignment of the NB tunnel was deemed not feasible. In order to provide clearance to the micro piles the NB tunnel grade south of the South Headwall soft eye was increased from -1.00% to -4.90% with two new vertical curves added.

The purpose of this document is to provide a rationale and supporting technical information to document the combination of vertical and horizontal curvature in the trackway south of the UMS Station. Muni's Design Criteria for these conditions, as defined in Section 7.2.2.6 of the criteria, allows such combined vertical and horizontal curves with increases to the length of the vertical curves.

### **Drawings and Data Reviewed and attached:**

1. Lowered NB and SB Tunnel Profile Drawing prepared by PB Telamon 3/27/2013 for SFMTA
2. CN1252 Contract Drawings TC-013 and TC-014 Track Alignment Summary NB 114+50 to 161+50, prepared by HNTB + B&C for SFMTA.
3. MUNI Third Street Light Rail Phase 2 Central Subway Design Criteria, Trackway Alignment Section 7.2.2 – 7.2.2.6 Combined Horizontal and Vertical Curvature



## Analysis

In order to conform to the requirements of the Muni Design Criteria (Section 7.2.2.3 and 7.2.2.6) at the applicable 25 MPH design speed the rate of change in grade would be limited to 1.06% per 100 ft and the length of the vertical curve (designated NB1 in Figure 1 excerpted from Attachment 1) would need to be 369'. The length of vertical curve that is physically possible due to the location of the UMS platform and other constraints to the alignment is 100'. This is a large difference, however, for the horizontal and vertical curve combination south of UMS Station. The primary reason to increase vertical curve length in a horizontal curve is to reduce the vertical acceleration that occurs when passing through a vertical curve. This vertical acceleration is typically of significance only in a crest vertical curve at higher speeds. The effect is usually not large at low speed, and in this case a large increase in the vertical curve length that would be required by the Muni Design Criteria formula for "Combined Horizontal and Vertical Curvature", appears to be unwarranted.

A crest vertical curve imparts a downward acceleration to the vehicle, slightly reducing the effect of gravity. Since the lateral force due to the horizontal curve remains the same, the angle of the resultant force increases slightly, effectively increasing the balancing superelevation. Therefore, an alternate solution to increasing the length of the vertical curve is to increase the actual superelevation, if the resultant unbalanced superelevation is excessive.

A sag vertical curve imparts an upward acceleration to the vehicle, slightly increasing the effect of gravity. The result is the reverse of that of the crest vertical curve; it slightly reduces the angle of the resultant force, effectively decreasing the balancing superelevation. This results in a decrease in the unbalanced superelevation, a condition that normally requires no change in the actual superelevation.

For the specific case at hand, horizontal curve C-11 extends through two vertical curves (NB2 and NB1), beginning within the first vertical curve NB2 and ending within the second vertical curve NB1. The specific curve radius is 450 feet, which at 25 mph has a lateral acceleration of  $2.988 \text{ ft/sec}^2$ , or 9.29% of gravity ( $32.174 \text{ ft/sec}^2$ ). The total length of the horizontal curve is 401.70 feet, consisting of two 47.00 feet long spirals and a 307.70 feet long central curve.

Vertical Curve NB1, a 100 feet long crest curve, has an effective radius of 2564 feet resulting in a downward acceleration of  $0.524 \text{ ft/sec}^2$ , reducing the effect of gravity by 1.63%. Vertical Curve NB2, a 280 feet long sag vertical curve, has an effective radius of 6358 feet resulting in an upward acceleration of  $0.211 \text{ ft/sec}^2$ , increasing the effect of gravity by 0.66% (See Table 1 below).

**Table 1 Calculation of Changes to Unbalanced Superelevation**

	Point	Stationing	Segment Length fm previous (feet)	Local gravity (ft/sec <sup>2</sup> )	Lateral acceleration (% of local gravity)	Equivalent E + U (inches)	Set E (inches)	Calc U (inches)	Change in U (inches)
	End Plat	133+96.63		32.174					
Within VC NB1	PVC	134+25.00	28.37	32.174	0.00%	0	0	0	0
	TS	134+65.87	40.87	31.650 (-1.60%)	0.00%	0	0	0	0
	SC	135+12.87	47.00		9.44%	5.652	2.50	3.152	+0.092
	PVT	135+25.00	12.13		9.44%	5.652	2.50	3.152	+0.092
	Straight between VC's			32.174	9.29%	5.560	2.50	3.060	0
Within VC NB2	PVC	136+15.00	90.00	32.385 (+0.66%)	9.23%	5.524	2.50	3.024	-0.036
	CS	138+20.57	205.57		9.23%	5.524	2.50	3.024	-0.036
	ST	138+67.57	47.00		0.00%	0	0	0	0
	PVT	138+95.00	27.43	32.174	0.00%	0	0	0	0

The crest vertical curve (NB1) causes the effective unbalanced superelevation to increase by 0.09 inches in the portion of the body of horizontal curve C-11 that is within the vertical curve. The length of this segment is only 12.1 feet. The majority of the horizontal curve within this vertical curve, 47.00 feet, is the spiral transition S5. For this portion of the horizontal curve the unbalanced superelevation transitions from 0.00 inches to 3.15 inches. The next 90 feet is in the vertical tangent between the vertical curves. For this portion of the horizontal curve the unbalanced superelevation is 3.06 inches. The following 205.57 feet of curve C-11 falls within the sag vertical curve (NB2) which has the effect of decreasing the unbalanced superelevation by 0.036 inches to 3.02 inches. The remaining 47.00 ft portion of the horizontal curve is in the ending spiral of the curve. Within this portion of the vertical curve, the unbalanced superelevation decreases from 3.02 inches to zero.

This analysis shows that the large increase in vertical curve length that would be required by the Muni Design Criteria formula for "Combined Horizontal and Vertical Curvature" is unwarranted. It appears that no change is needed for either the horizontal curve or the vertical curves in this area for the current assumed design speed of 25 MPH. If any change were to be considered, the only one that would have any benefit would be to increase the applied superelevation for curve C-11 by  $\frac{1}{8}$  to  $\frac{1}{4}$  inch. Per the Muni Design Criteria 7.2.1.3 the Recommended Maximum design unbalance is 3.0 inches; absolute maximum is 4.5 inches. The calculated values of unbalance with the proposed revised alignment are slightly over 3.0 inches, but well under the 4.5 inch absolute maximum.

### Conclusion and Recommendations

Considering the constraints to both the horizontal and vertical alignment of the NB Central Subway tunnel immediately south of the Union Square Market Street passenger station, the high performance of the Muni Light Rail Vehicles, and the full maneuverability of the Tunnel Boring Machine, it is recommended that the proposed revised tunnel profile be accepted. In this instance not complying with

all of Muni's design criteria for track alignment through horizontal and vertical curves is not anticipated to cause any ride, maintenance or safety issues, and will provide an acceptable plan and profile alignment for the negotiation of a very space restricted segment of the Central Subway Extension.

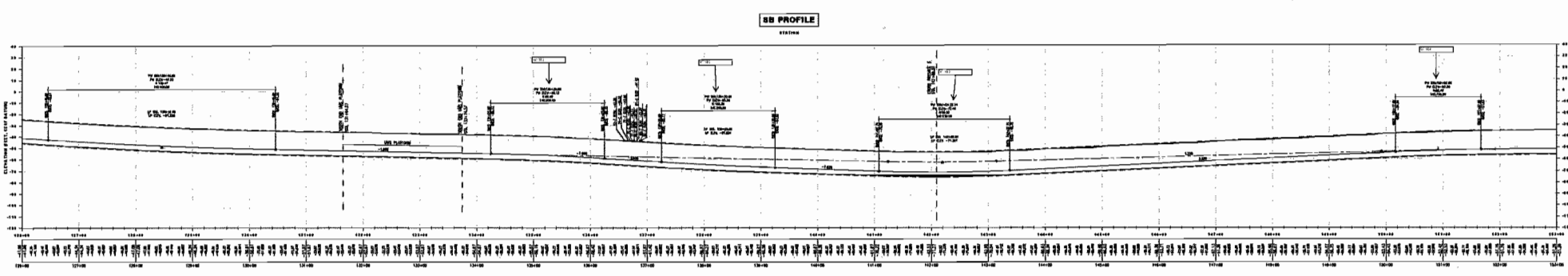
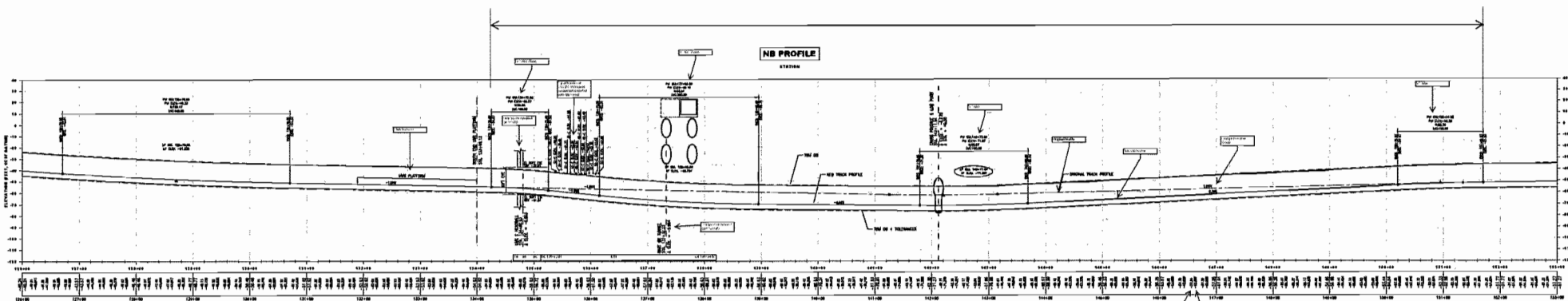
The slight increase in superelevation mentioned in the analysis is not considered to be essential, however, it could be considered by the track designers during their revisions of the reference track design needed to reflect the profile changes described in this analysis.

**Attachments**

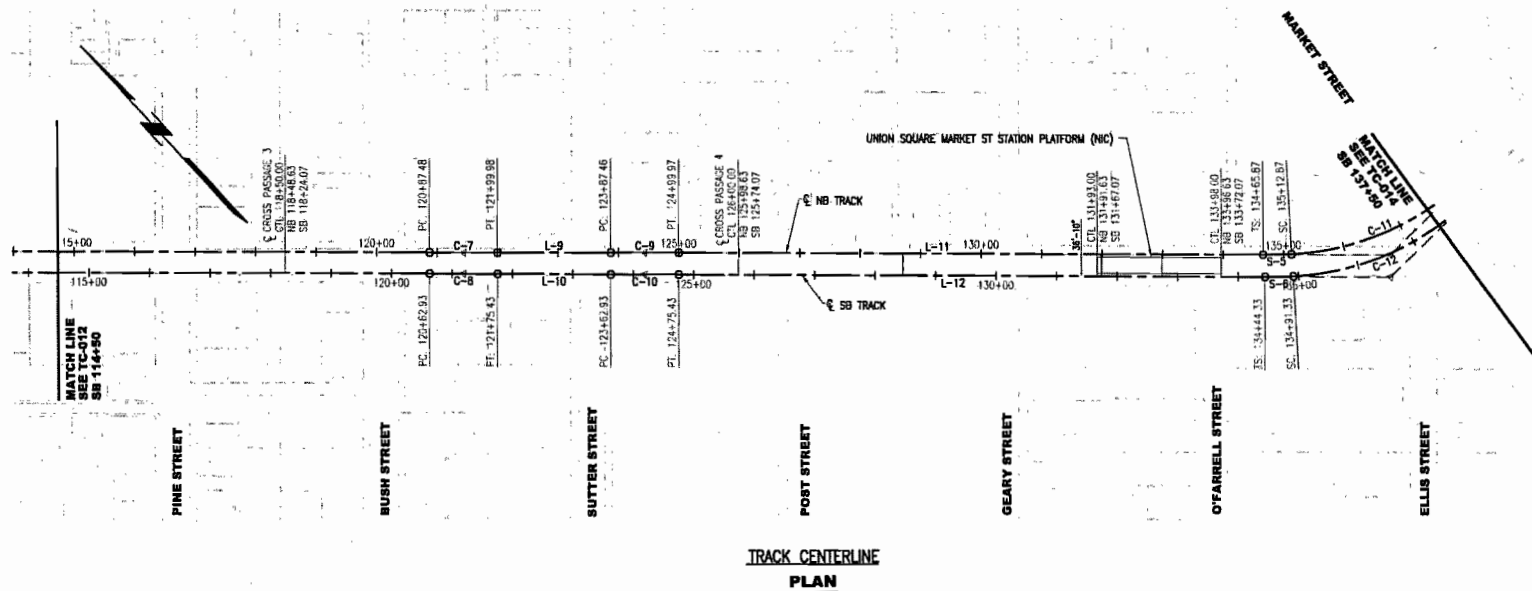
1. Lowered NB and SB Tunnel Profile Drawing prepared by PB Telamon 3/27/2013 for SFMTA (Attachment to 5/21/2013 email from M.Fowler to A.Hoe, *Tunnel Profile Changes for Muni Ops Review.*)
2. CN1252 Contract Drawings TC-013 and TC-014 Track Alignment Summary NB 114+50 to 161+50, prepared by HNTB + B&C for SFMTA.
3. MUNI Third Street Light Rail Phase 2 Central Subway Design Criteria, Trackway Alignment Section 7.2.2 – 7.2.2.6 Combined Horizontal and Vertical Curvature

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1. ALL DIMENSIONS ARE IN FEET AND INCHES.  
 2. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.  
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.  
 4. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.  
 5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.



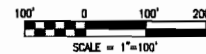
TRACK CENTERLINE PLAN

ALIGNMENT DATA - NB TRACK

LINE/CURVE NO.	POINT	STATION	COORDINATE (NORTHING, EASTING)	DATA	SPEED (MPH)	Ea (ft)	U (ft)	REMARKS
C-7	PC	120+87.48 NB	2115794.218, 6010837.389	PI: 2115738.500, 6010645.111 A: 0'08'35.69" T: 58.253 R: 45000.001	50	0	0.22	
L-9	PT	121+99.98 NB	2115682.802, 6010852.993	BEARING: 58° 03' 15.86"E L: 187.480				
C-9	PC	123+87.46 NB	2115497.172, 6010679.281	PI: 2115441.474, 6010687.143 A: 0'08'35.69" T: 58.253 R: 45000.000	50	0	0.22	
L-11	PT	124+99.97 NB	2115385.757, 6010884.885	BEARING: 57° 54' 40.00"E L: 965.901				
S-5	TS	134+65.87 NB	2114429.046, 6010827.829	L: 47.000 O: 2'58'31.81" X: 46.987 P: 0.205 K: 23.488 Y: 0.818				
C-11	SC	135+12.87 NB	2114382.621, 6010835.106	PI: 2114220.327, 6010858.833 A: 39°10'42.21" T: 160.142 R: 450.000	25	2.5	3.08	

ALIGNMENT DATA - SB TRACK

LINE/CURVE NO.	POINT	STATION	COORDINATE (NORTHING, EASTING)	DATA	SPEED (MPH)	Ea (ft)	U (ft)	REMARKS
C-8	PC	120+82.93 SB	2115789.351, 6010802.372	PI: 2115733.638, 6010610.114 A: 0'08'35.66" T: 58.250 R: 45000.000	50	0	0.22	
L-10	PT	121+75.43 SB	2115677.902, 6010617.717	BEARING: 57° 46' 04.34"E L: 187.501				
C-10	PC	123+82.93 SB	2115492.122, 6010643.060	PI: 2115436.388, 6010650.662 A: 0'08'35.66" T: 58.250 R: 45000.000	50	0	0.22	
L-12	PT	124+75.43 SB	2115380.673, 6010858.404	BEARING: 57° 54' 40.00"E L: 968.903				
S-8	TS	134+44.33 SB	2114420.892, 6010791.761	L: 47.000 O: 2'58'31.81" X: 46.987 P: 0.205 K: 23.488 Y: 0.818				
C-12	SC	134+91.33 SB	2114374.565, 6010799.038	PI: 2114215.198, 6010820.358 A: 38'32'07.55" T: 157.303 R: 450.000	25	2.50	3.08	

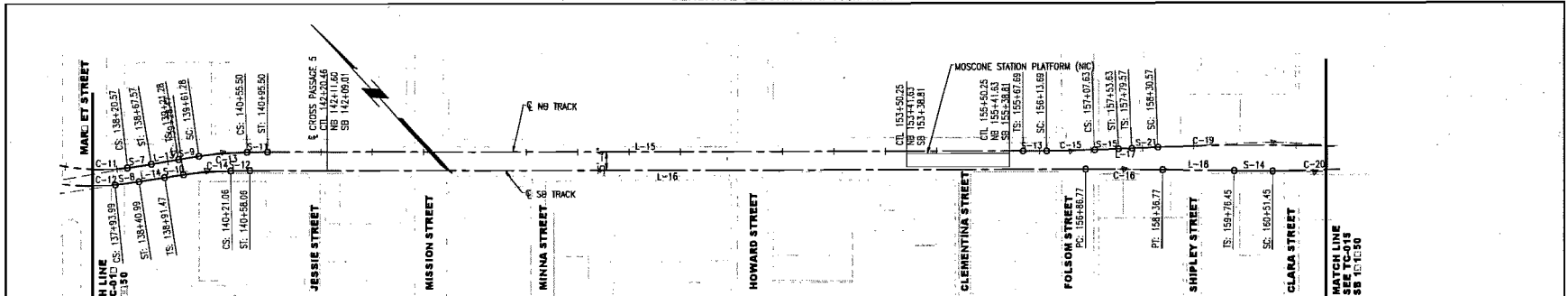


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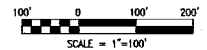




TRACK CENTERLINE  
PLAN

ALIGNMENT DATA - NB TRAC									
LINE/ CURVE NO.	POINT	STATION	COORDINATE (NORTHING, EASTING)	DATA	SPEED (MPH)	E.I. (IN.)	U (IN.)	REMARKS	
S-7	CS	138+20.57 NB	2114122.607, 6010988.220	L: 47.000 P: 0.205 : 2°50'31.81" K: 23.498 X: 46.987 Y: 0.818					
L-13	ST	138+67.57 NB	2114093.724, 6011025.290	BEARING: 55° 04' 25.42"E L: 53.707					
S-9	TS	139+21.28 NB	2114061.458, 6011068.224	L: 40.000 P: 0.081 : 1°23'50.85" K: 20.000 X: 39.998 Y: 0.325					
C-13	SC	139+61.28 NB	2114037.168, 6011100.003	PI: 2114099.030, 6011137.985 Δ: 6°34'59.82" T: 47.181 R: 820.000 L: 94.218 K: 20.000 X: 94.218 Y: 820.000	30	1.75	2.64		
S-11	CS	140+55.50 NB	2113974.630, 6011170.403	L: 40.000 P: 0.081 : 1°23'50.85" K: 20.000 X: 39.998 Y: 0.325					
L-15	ST	140+95.50 NB	2113945.935, 6011198.270	BEARING: 54° 3' 41" 43.90"E L: 1472.188					
S-13	TS	155+67.69 NB	2112881.512, 6012215.295	L: 46.000 P: 0.028 : 0°24'42.53" K: 23.000 X: 46.000 Y: 0.110					
C-15	SC	156+13.69 NB	2112846.330, 6012247.153	PI: 2112814.283, 6012279.531 Δ: 1°40'55.38" T: 46.975 R: 3200.000 L: 93.943 K: 23.000 X: 93.943 Y: 3200.000	50	1.50	1.63		
S-15	CS	157+07.63 NB	2112781.844, 6012313.519	L: 46.000 P: 0.028 : 0°24'42.53" K: 23.000 X: 46.000 Y: 0.110					
L-17	ST	157+53.63 NB	2112749.927, 6012346.644	BEARING: 54° 6' 12" 04.34"E L: 25.936					
S-21	TS	157+79.57 NB	2112731.976, 6012365.364	L: 51.000 P: 0.021 : 0°17'21.54" K: 25.500 X: 51.000 Y: 0.086					
C-19	SC	158+30.57 NB	2112696.615, 6012402.115	PI: 2112541.096, 6012564.420 Δ: 5°05'45.85" T: 224.730 R: 5050.000 L: 449.163 K: 25.500 X: 449.163 Y: 5050.000	50	1.00	0.98		

ALIGNMENT DATA - SB TRAC									
LINE/ CURVE NO.	POINT	STATION	COORDINATE (NORTHING, EASTING)	DATA	SPEED (MPH)	E.I. (IN.)	U (IN.)	REMARKS	
S-8	CS	137+93.89 SB	2114117.813, 6010948.297	L: 47.000 P: 0.205 : 2°59'31.81" K: 23.498 X: 46.987 Y: 0.818					
L-14	ST	138+40.99 SB	2114088.516, 6010985.041	BEARING: 55° 25' 50.77"E L: 50.487					
S-10	TS	138+91.47 SB	2114057.733, 6011025.058	L: 37.000 P: 0.067 : 1°14'49.29" K: 18.500 X: 36.998 Y: 0.268					
C-14	SC	139+28.47 SB	2114034.961, 6011054.220	PI: 2114008.866, 6011091.183 Δ: 6°14'28.28" T: 46.341 R: 850.000 L: 92.590 K: 18.500 X: 92.590 Y: 850.000	30	1.50	2.74	Δ	
S-12	CS	140+21.06 SB	2113973.113, 6011123.062	L: 37.000 P: 0.067 : 1°14'49.29" K: 18.500 X: 36.998 Y: 0.268					
L-16	ST	140+58.06 SB	2113946.548, 6011148.815	BEARING: 54° 3' 41" 43.90"E L: 1628.708					
C-18	PC	158+67.77 SB	2112768.958, 6012273.969	PI: 2112714.730, 6012325.782 Δ: 0°51'13.41" T: 75.901 R: 10066.908 L: 150.000 K: 23.000 X: 150.000 Y: 10066.908	50	0	0.99		
L-18	PT	158+36.77 SB	2112659.737, 6012376.781	BEARING: 54° 50' 30.49"E L: 139.678					
S-14	TS	159+76.45 SB	2112557.320, 6012471.759	L: 75.000 P: 0.094 : 0°51'33.97" K: 37.500 X: 74.998 Y: 0.375					
C-20	SC	160+51.45 SB	2112502.584, 6012523.031	PI: 2112442.298, 6012578.426 Δ: 3°44'53.73" T: 81.804 R: 2500.000 L: 163.549 K: 37.500 X: 163.549 Y: 2500.000	50	2.00	2.00		



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central **T** subway

**Design Criteria**

**Contract CS-155-3**

**Task 12.01**

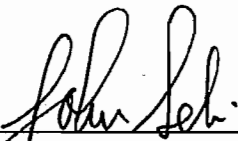
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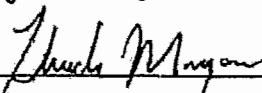
**Trackway Alignment**

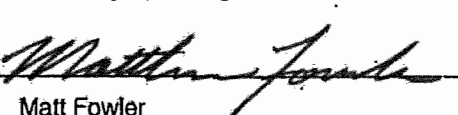
**Revision 3**

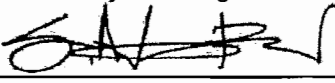
**January 24, 2012**


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**TABLE OF CONTENTS**

<b>7.</b>	<b>TRACKWAY ALIGNMENT .....</b>	<b>7-1</b>
7.1	General.....	7-1
7.2	Trackway Alignment.....	7-1
	7.2.1 Horizontal Alignment.....	7-1
	7.2.2 Vertical Alignment.....	7-3
	7.2.3 Civil Speeds.....	7-4
7.3	Clearances.....	7-4
	7.3.1 Surface Clearance.....	7-4
	7.3.2 Subway Clearance.....	7-5

## 7. TRACKWAY ALIGNMENT

### 7.1 GENERAL

The track alignment and clearance will be determined by the parameters contained in this section to achieve the following objective:

- Patron Comfort & Safety
- System Safety
- Operational Efficiency
- Compatibility with the Characteristics of the Vehicle to be Used
- Minimize Wear on Rails and LRVs
- CPUC General Order No. 143B, "Safety Rules and Regulations Governing Light-Rail Transit"

### 7.2 TRACKWAY ALIGNMENT

#### 7.2.1 Horizontal Alignment

The horizontal alignment shall be designed to maximize the running speed of LRVs. Superelevation shall be used to minimize wear on the rails where it does not interfere with street grades on shared right-of-ways. The design speed shall be based on the probable speed of the LRV taking into account speed restrictions, stop locations, pedestrian activities and other related parameters.

##### 7.2.1.1 Horizontal Control

Horizontal control for track alignment shall be referenced to survey control points established for this project. The coordinates for control points are based on the California Coordinate System Zone III, using ground distances.

##### 7.2.1.2 Tangent Section

The recommended minimum length of tangent track between reverse curves without spirals shall be 3 times the design speed with an absolute minimum of 25 feet. The horizontal and vertical alignment should be tangent at station platforms throughout the entire length. A tangent should extend a minimum of 25 ft beyond either end of the platform, unless it can be demonstrated that the swept-path of the LRV will not endanger people or interfere with platform and meet ADA requirements.

##### 7.2.1.3 Nomenclature and Definition:

$E_a(\text{in})$ :	Actual superelevation – The height by which the high rail is raised above the low rail.
$E_{eq}(\text{in})$ :	Equilibrium superelevation – The value of superelevation that eliminates lateral forces at a given vehicle speed.
$E_r(\text{in})$ :	Equivalent car body roll for a vehicle with a stabilized suspension (Breda LRV) is 1.5 inches and with an unstabilized suspension (Historic) is 3 inches.
$L_c(\text{ft})$ :	Arc length of circular curve, measured at track centerline.
$L_s(\text{ft})$ :	Total length of spiral, measured at track centerline.
$L_{s \text{ min}}(\text{ft})$ :	Minimum length of spiral, measured at track centerline.
$L_t(\text{ft})$ :	Length of tangent.
$R_c(\text{ft})$ :	Radius of circular curve, measured at track centerline.
$R_{\text{min}}(\text{ft})$ :	Minimum desirable radius of track centerline.

$R_{a_{min}}$ (ft):	Absolute minimum radius of track centerline.
$\Delta_c$ :	Central angle of circular curve, degrees
$\Theta$ :	Central angle of spiral length $L_s$ , degrees.
U (in):	Design Unbalance. The difference between $E_{eq}$ and $E_a$
$U_{max}$ (in):	Recommended Maximum Design Unbalance is three (3) inches.
$U_{abs}$ (in):	Absolute Maximum Design Unbalance is four and half (4.5) inches.
V (mph):	Design speed considering civil speed restrictions.
$V_{max}$ (mph):	The maximum speed of an LRV on the alignment unconstrained by traffic regulations and signals, scheduled stops and comfort requirements.
	$= \sqrt{((E_a + U - E_r)(R/4)}$

#### 7.2.1.4 Circular Curves

Circular curves shall have spiral transitions wherever feasible. Circular curves shall be specified by the centerline radius (R), the central angle ( $\Delta$ ) and the arc length ( $L_c$ ). The radius should be as large as possible within the physical restrictions. The minimum desirable radius is 67.5 feet and shall not be less than 45 feet in any case. The recommended length of curve is 3 times design speed.

#### 7.2.1.5 Superelevation

Superelevation is the designed difference in the elevations of the rails of the same track. Superelevation shall be designed to minimize the wear of the rails. For shared right-of-way, the maximum track superelevation shall be two inches unless additional superelevation is needed to conform to adjacent pavements. For exclusive right-of-way, the maximum track superelevation shall be six inches. Superelevation shall transition uniformly throughout spirals. Superelevation in tunnels shall be accomplished by maintaining the elevation of the inside rail at the profile grade and raising the elevation of the outside rail. However, superelevation in paved areas may be accomplished by lowering the inside rail and/or raising the outside rail to achieve the full amount of the superelevation, whichever will provide better drainage or better conform to adjacent paved areas. Maximum rate of superelevation runoff shall not exceed two inches in 25 feet. The equilibrium superelevation shall be determined to the nearest 1/4 inch by the following formula:

$$E_{eq} = E_a + U = 4 \cdot V^2 / R_c$$

#### 7.2.1.6 Spirals

When the geometry allows, spirals shall be used to provide a smooth transition between tangents and curves and between curves of different radii, thereby increasing rider comfort and minimizing rail wear. Spirals shall be 25 feet minimum in length and satisfy the following requirements:

- Spirals shall be Clothoid spirals.
- The recommended length of spiral curve shall be the greatest of the following:

$$L_s = 1.10EV$$

$$L_s = 0.82UV$$

- The minimum length of a spiral curve shall be the greatest of the following:

$$L_{s \min} = 0.29 V(U + E_r)$$

$$L_{s \min} = 0.29 V E_a$$

$$L_{s \min} = 12.5 E_a$$

If  $L_s/R_c \leq 0.01$  or  $L_s < 25\text{ft}$ , then no spiral is required.

## 7.2.2 Vertical Alignment

Track shall conform to street surface profile grades unless otherwise revised for new street grades, or as needed to clear underground facilities. The profile grade is defined as the average of the elevations of both tops of rails of the same track.

### 7.2.2.1 Nomenclature and Definition

G (%): Vertical grade

$\Delta G$  (%): Change in grade over the length of the vertical curve

$\Delta g$  (%): The rate of change of vertical grade, i.e., the change of vertical grade in a 100-foot station

$\Delta g_{\max}$  (%): See 7.2.2.6.

LVC (ft): The length of the vertical curve

### 7.2.2.2 Maximum/Minimum Gradients

The desired grade is less than five percent. The maximum grade allowed shall be seven percent. This may be increased up to 9 percent for very short distances.

A minimum grade of 0.3 percent is required for drainage.

### 7.2.2.3 Vertical Curves

Vertical curves shall be parabolic curves having a constant rate of change of grade. The minimum radius of vertical crest curve and a sag curve shall be within the requirements of the selected vehicle. The absolute minimum curve length is 40 ft. Vertical curves shall end at 25 feet away from a station platform unless it can be demonstrated that the vehicle doors will meet ADA requirements.

- The minimum length of vertical curve shall be the greater of:

$$LVC_{\min} = \Delta G / \Delta g_{\max} * 100$$

$$LVC_{\min} = 15 * \Delta G$$

- Where possible, the maximum rate of change of vertical grade shall be as follows:

- For vertical curve crest on tangent  $\Delta g_{\max} = 3000/V^2$

- For vertical curve sag on tangent  $\Delta g_{\max} = 4500/V^2$

### 7.2.2.4 Reverse Vertical Curves

Reverse vertical curves may be used if: (1) the sum of the rates of change of grade per 100 ft station of the two curves does not exceed the values defined by Section 7.2.2.2, and (2) the minimum length of each curve is not less than that defined in Section 7.2.2.1.

### 7.2.2.5 Compound Vertical Curves

Compound unsymmetrical vertical curves may be used if  $\Delta g$  conforms to Section 7.2.2.2 and the LVC conforms to Section 7.2.2.1.

**7.2.2.6 Combined Horizontal and Vertical Curvature**

Where horizontal and vertical curves are combined, the desirable rate of change of vertical grade shall be computed as follows:

$$\Delta g_{\max} = N/(V^2)(1-0.25U)(1-0.025 E_a)$$

where:

$E_a$  and  $U$  are in inches

$V$  = Designed speed, in mph

$N$  = 3000 for a crest

$N$  = 4500 for a sag

**7.2.3 Civil Speeds**

The alignment design shall provide safe, comfortable and efficient LRV service conforming to the following speed criteria:

**7.2.3.1 Through intersections**

LRVs shall travel at the legal speed limit for normal traffic operations of 25 mph through intersections.

**7.2.3.2 Semi-exclusive right-of-way separated by 6-inch curb**

LRVs shall travel at the legal speed limit of parallel traffic but not to exceed 35 mph for right of way separated from traffic by a 6-inch curb.

**7.2.3.3 Exclusive right-of-way fully separated within the subway**

LRVs shall travel up to the maximum design speed of 52 mph in fully separated right-of-way in subway areas.

**7.3 CLEARANCES****7.3.1 Surface Clearance**

Clearance guidelines are set forth in PUC General Order No. 143B. Clearances between vehicles and stationary objects shall be as follows:

- All clearances shall be measured from the dynamic envelope of the outermost surface of the largest vehicle on tangent track. The spacing of tracks and structures shall be increased proportionally for curved track to provide the minimum clearances, shall be such that no contact can take place due to any condition of design wear, loading, air spring deflation, and normal lateral vehicle motion.
- Side clearances to obstructions greater than eight inches above top-of-rail and the clearances between LRV's and streetcars located on parallel tracks used exclusively for light rail transit operations shall be governed by the following requirements:
  - On station platforms, in yards and along shop aisles, and other locations, including emergency walkways, where passengers, employees, or other persons are permitted or required to be while trains are in motion, the minimum clearances shall be 30 inches wide by 80 inches high.
  - At locations and in areas where passengers, employees, and other persons are normally prohibited while trains are in motion, the minimum clearance shall be 18 inches. Fixed wayside structures less than five feet in length shall be excluded from these requirements.



# RFI Transmittal

**Request for Information #: YBM-0038**  
SFMTA 3rd St Light Rail Prog

**Response Required By: 2/10/2014**

**Initiated Date: 2/3/2014**

**Project # 01011.101760**

530 Bush Street  
Suite 302  
San Francisco, CA 94108  
Tel: 415-638-6052 Fax:

Printed on: 2/3/2014

## Drawing Interpretation / Clarification

**Discipline:** Traffic

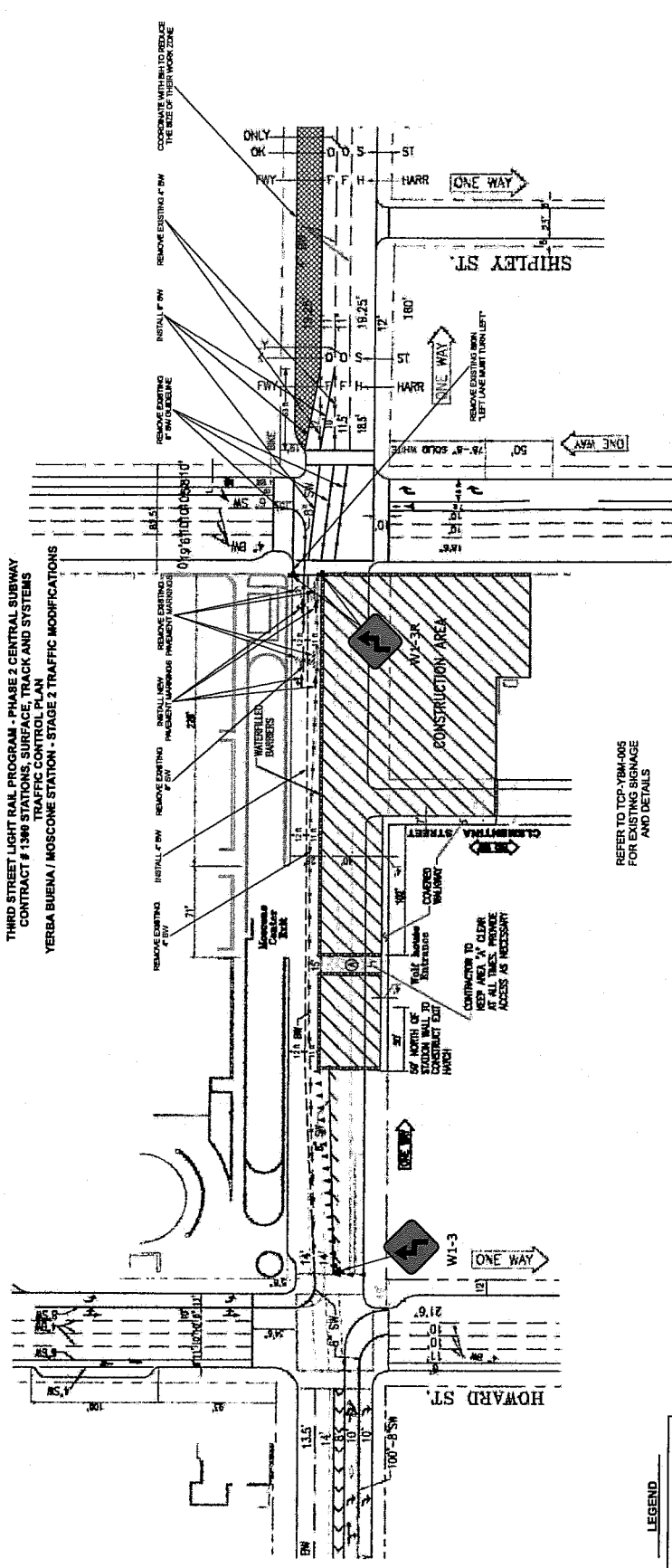
<b>Submitted To:</b> SF Municipal Transportation Agency Richard Redmond 821 Howard Street 2nd Floor San Francisco, CA 94103	<b>Submitted By:</b> Tutor Perini Corporation Gabriel Bautista 530 Bush Street San Francisco, CA 94108
<b>Subject</b> YBM Traffic Control Modification for Installation of West Side Slurry Wall	
<b>Copies To:</b>	
<b>Drawing Reference</b>	
YBM-TR- 001    PLAN A-PHASE 1 (WEST SIDE WORK AREA) FOURTH ST - MISSION ST TO FOLSOM ST	YBM-TR- 002    PLAN A-PHASE 1 (WEST SIDE WORK AREA) FOURTH ST - MISSION ST TO FOLSOM ST
<b>Information Requested</b> During the coordination meeting for the installation of west side Slurry wall held on January 23, 2014, SFMTA requested to revise the proposed traffic control plan to show stages of traffic configuration and its duration of implementation. These revised stages of Traffic Control Plans (Sheet Nos. YBM-018 Rev. 0 and YBM-019 Rev.0) are attached herewith for your review and approval. These revised Traffic Control Plans shall modify the current Temporary Traffic Routing Plan A Phase 1 to accommodate the Hydromill rig for the installation of the slurry wall at the west side.	
<b>Suggestion</b>	
<b>Response</b>	

Answered By: \_\_\_\_\_

Date Answered: \_\_\_\_\_



**THIRD STREET LIGHT RAIL PROGRAM - PHASE 2 CENTRAL SUBWAY  
CONTRACT # 1386 STATIONS, SURFACE, TRACK AND SYSTEMS  
TRAFFIC CONTROL PLAN  
YERBA BUENA / MOSCONE STATION - STAGE 2 TRAFFIC MODIFICATIONS**



REFER TO TOP-YBM-005  
FOR EXISTING SIGNAGE  
AND DETAILS

**LEGEND**

	Flashing Arrow Board (Plan View)
	Flashing Arrow Board (Plan View)
	Portable Flashing Beacon
	Type I Barricade
	Type II Barricade (Plan View)
	30' Traffic Cone
	Water Area
	Sign and Blank
	Direction of Travel
	Delineator with Yellow Curbside Side
	Water Flood Barrier
	Mail To Route
	Two-Way/No Stop Sign
	Public Office
	Flagpole
	Work Truck
	Sign to be Installed



**CNC Construction**  
 CMC Traffic Control Specialists  
 11000 S. Bascom Avenue, Suite 100  
 San Jose, CA 95128  
 Phone: (415) 253-7777  
 Fax: (415) 253-7771  
 CMC License No. 22000 (Class A & C-10)  
 Traffic Control License No. 22011 (P & R-Subcontractor)

Scale: 1/8" = 1'-0" (As Shown) Project: 1386 Central Subway Station  
 Client: Santa Clara County (SCLC) TCF: 1258-016  
 CMC Job #: 237 NBY: 0

1) LOCAL ACCESS IS TO BE PROVIDED BY CONTRACTOR AT ALL TIMES.  
 2) THE CONTRACTOR SHALL NOT PREVENT OR DELAY THE OPERATION OF SAID TRANSIT VEHICLE AT ANY TIME.  
 3) CONTRACTOR SHALL MAINTAIN ADEQUATE TRAFFIC CONTROL SET UP.  
 4) DURATION: 3/22/14 TO 4/16/14

# central T subway

Connecting people. Connecting communities.

CS CN 1300 Letter No. 0077

Wednesday, February 5, 2014

**Tutor Perini Corp**  
530 Bush Street, Suite 302  
San Francisco, California 94108  
Attn: Patrick Jennings, Project Manager

**Reference:** Project No. M544.1, Contract No. 1300  
Stations, Surface, Track and Systems

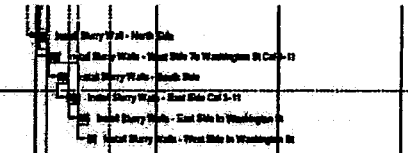
**Subject:** (CTS) Response to TPC Letter 51 – CTS Utility Delays to Layne Christensen

Gentlemen,

SFMTA is in receipt of your letter SFMTA-51, with regard to the Layne Notice of Delay for the contract work related to the Slurry Diaphragm Walls and therefore resulting also in delays to the Compensation Grouting at Chinatown Station due to existing utilities interfering and preventing the contract work to be executed in sequence.

We reference your Cycle 4 submission, relative to work at CTS for slurry walls, guide walls and utility relocation in Washington St:

CTC#	Description	Start	End	Duration	Notes
CTC#12.01.001	Install Slurry Wall - North Side	08-Jan-14	02-Feb-14	25	
CTC#12.01.002	Install Slurry Wall - West Side To Washington St Col 5-11	08-Feb-14	02-Mar-14	25	
CTC#12.01.003	Install Slurry Wall - South Side	08-Apr-14	02-May-14	25	
CTC#12.01.004	Install Slurry Wall - East Side Col 5-11	08-May-14	02-Jun-14	25	
CTC#12.01.005	Install Slurry Wall - East Side in Washington St	08-Jun-14	02-Jul-14	25	
CTC#12.01.006	Install Slurry Wall - West Side in Washington St	08-Jul-14	02-Aug-14	25	



To date, Tutor Perini has yet to complete the necessary Instrumentation, gain approval of submittals relative to beginning the slurry wall work, which in your schedule, reflect the start of North Side slurry walls on January 8. In addition, as we have depicted in prior correspondence, instrumentation installation is a predecessor activity, as your schedule shows, which lacks completion at this time.

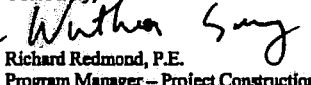
It is our understanding that AT&T completed its work on February 4, 2014 and the path is now clear for Layne to continue and proceed with guide wall work.

CTC#	Description	Start	End	Duration	Notes
CTC#12.01.001	Install Slurry Wall - North Side	08-Jan-14	02-Feb-14	25	
CTC#12.01.002	Install Slurry Wall - West Side To Washington St Col 5-11	08-Feb-14	02-Mar-14	25	
CTC#12.01.003	Install Slurry Wall - South Side	08-Apr-14	02-May-14	25	
CTC#12.01.004	Install Slurry Wall - East Side Col 5-11	08-May-14	02-Jun-14	25	
CTC#12.01.005	Install Slurry Wall - East Side in Washington St	08-Jun-14	02-Jul-14	25	
CTC#12.01.006	Install Slurry Wall - West Side in Washington St	08-Jul-14	02-Aug-14	25	

Tutor Perini should follow the contract provisions, of demonstrating a time impact for review by SFMTA, instead of alluding to an impact not defined.

Please contact me if you have any questions or concerns.

Yours truly,

*for* 

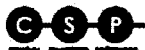
Richard Redmond, P.E.  
Program Manager – Project Construction  
SFMTA Central Subway Project

Attachments: Tutor Letter 51

**Cc:** John Funghi, SFMTA  
Eric Stassevitch, SFMTA  
Albert Hoe, SFMTA  
Jane Wang, SFMTA  
Brian Kelleher, SFMTA  
Wyman Lee, SFMTA  
Ted DePooter, SFMTA  
CS File No. M544.1.3.1300.0030



Municipal Transportation Agency



821 Howard Street  
San Francisco, Ca 94103

415.701.5262 Phone  
415.701.5222 Fax

**Tutor Perini Corporation**  
530 Bush St, Suite 302  
San Francisco, CA 94108  
Tel: 415/638-6052

**Tutor Perini**  
Over a century of excellence

SFMTA - 51

Friday, January 31, 2014

SF Municipal Transportation Agency  
821 Howard Street  
2nd Floor  
San Francisco, CA 94103  
Attn: Richard Redmond

Reference: Third Street Light Rail Program Phase 2 – Central Subway Stations, Surface, Track and Systems, Contract No. 1300, TPC 10176000


Subject: CTS Utility Delays to Layne Christensen

Dear Mr. Redmond,

Attached is our slurry wall subcontractor, Layne Christiansen's, letter providing a notice of delay to their work at the Chinatown Station.

If you have any questions, please contact the undersigned at 415-638-6052.

Respectfully,  
Tutor Perini Corporation

  
Patrick Jennings  
Project Manager

cc: File, 10-2.033, 10-2.034, 10-2.037



2315 Southwell Road • Dallas, Texas  
Telephone: (972) 247-6767 • Fax: (972) 484-5574  
Web: [www.bencorconstruction.com](http://www.bencorconstruction.com) • EMail: [bencor@bencorconstruction.com](mailto:bencor@bencorconstruction.com)



**January 30, 2014**

Pat Jennings  
Tutor Perini  
530 Bush Street  
San Francisco, CA 94108

LC-TP-001

**Reference: SFMTA – Stations, Surface, Tracks & Systems – Contract 1300  
Chinatown Station – Slurry Diaphragm Walls and Compensation Grouting  
Notice of Delay**

Dear Mr. Jennings,

Please consider this correspondence as Layne Notice of Delay for the contract work related to the Slurry Diaphragm Walls and therefore resulting also in delays to the Compensation Grouting at Chinatown Station due to existing utilities interfering and preventing the contract work to be executed in sequence.

Layne has started the construction of the guide walls out of sequence as soon as the site was made available partially to Layne to mitigate some of the delays associated with the existing utilities as shown on the attached sketch; Layne has completed all available guide walls as of January 28, 2014.

The attached sketch documents the installed guide walls to date and approximate location of existing utilities in place and removed recently.

While we are proceeding to mitigate delays it needs to be noted that Layne is entitled to additional time and related compensation due to this delay and will be presented at a later stage.

Thanks and best regards.

Ihab Allam

Attachments:

- sketch showing guide walls installed and existing utilities.

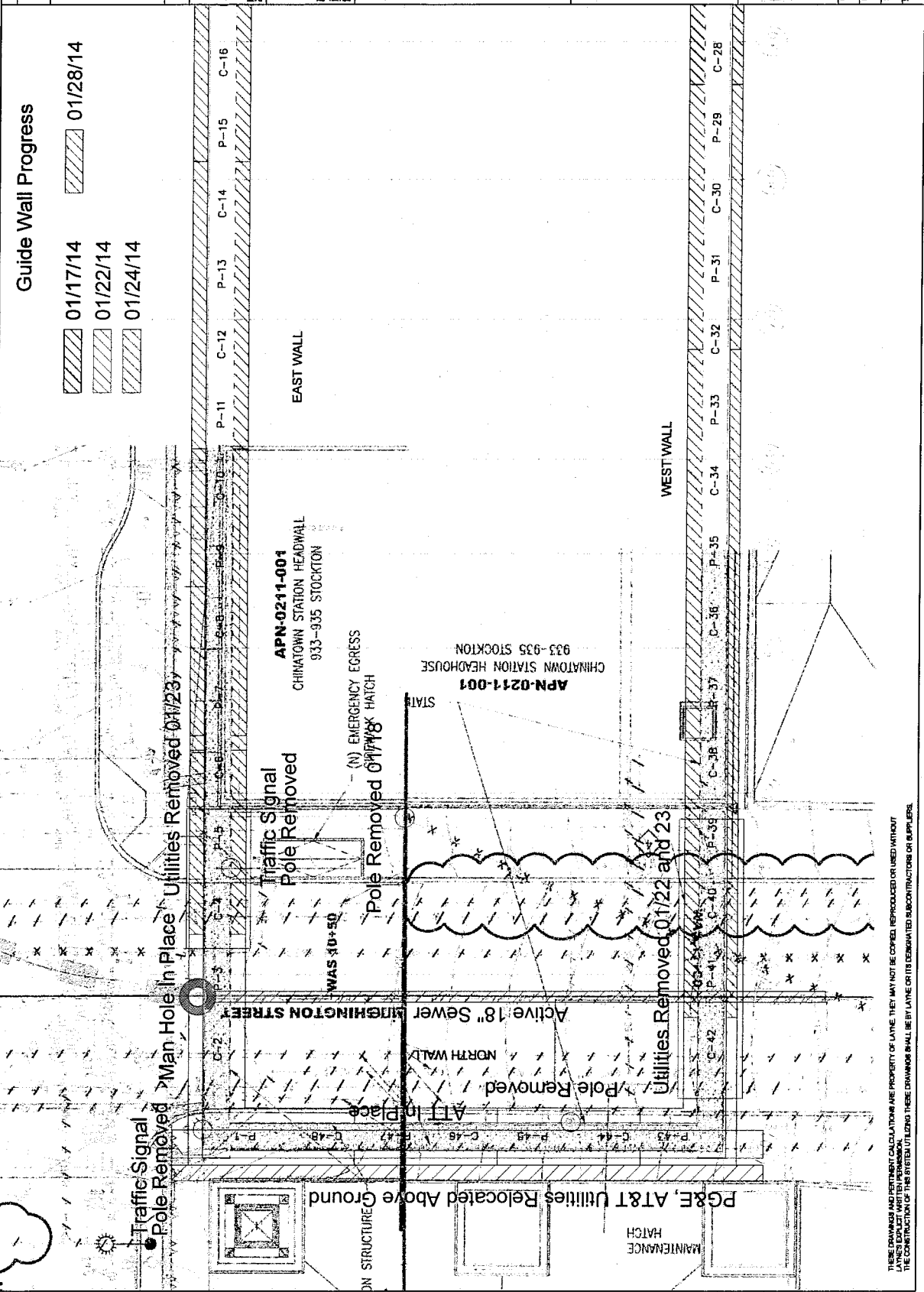


PROJECT NUMBER  
37888-1  
PROJECT FILE  
C:\Layne\37888-1.dwg  
SHEET NUMBER  
1  
DATE  
01-14-11

STRA CONTRACT NO. 1300  
THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 CENTRAL SUBWAY  
STATIONS, SURFACE TRACK AND SYSTEMS  
CHINATOWN STATION

UTILITY UNDERLAY  
PLAN

NO.	DATE	DESCRIPTION
1	01/28/14	DRAWN BY
2	01/29/14	CHECKED BY
3	01/29/14	APPROVED BY



THESE DRAWINGS AND PERTINENT CALCULATIONS ARE PROPERTY OF LAYNE. THEY MAY NOT BE COPIED, REPRODUCED OR USED WITHOUT LAYNE'S EXPLICIT WRITTEN PERMISSION. THE CONTRACTOR OF THIS PROJECT UTILIZING THESE DRAWINGS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SUBCONTRACTORS OR SUPPLIERS.



Task	Sum of Revised Budget	Sum of Authorized Amount	Sum of Cost to Date (01/17/2014)	Sum of Budget Remaining (Revised Budget - Actual)	Sum of Authorized Budget Remaining
01 - Project Management and Control	\$2,912,864	\$ 2,912,864	\$2,893,744	\$19,120	\$19,120
02 - Design and Project Integration	\$844,917	\$ 844,917	\$794,508	\$50,409	\$50,409
02.50 Coordination with Art for Transit	\$244,192	\$ 244,192	\$193,782	\$50,410	\$50,410
03 - Geotechnical Investigations	\$2,055,595	\$ 2,055,595	\$2,055,595	(\$1)	(\$1)
04 - Surveying and Right of Way	\$8,138	\$ 8,138	\$8,138	(\$0)	(\$0)
05 - Traffic Engineering	\$28,513	\$ 28,513	\$28,513	(\$0)	(\$0)
06 - Utility Design Coordination	\$230,970	\$ 230,970	\$230,970	\$0	\$0
07 - Drainage	\$16,264	\$ 16,264	\$16,264	\$0	\$0
08 - Permits	\$219,486	\$ 219,486	\$219,486	(\$0)	(\$0)
09 - Contract Specifications	\$429,143	\$ 429,143	\$429,143	(\$0)	(\$0)
10 - Cost Estimate and Scheduling	\$456,851	\$ 456,851	\$456,851	\$0	\$0
11 - Quality Control	\$265,530	\$ 265,530	\$265,530	\$0	\$0
12 - Drawings and Documents	\$18,330,322	\$ 18,330,322	\$18,330,324	(\$1)	(\$1)
13 - Construction Packaging and Schedules	\$10,811	\$ 10,811	\$10,811	\$0	\$0
14 - Outreach Support	\$220,543	\$ 220,543	\$220,543	\$0	\$0
15 - Bid Support Services	\$1,273,623	\$ 582,139	\$597,046	\$676,577	(\$14,907)
16 - DSDC (Contract 1252)	\$208,069	\$ 208,069	\$141,516	\$66,553	\$66,553
16.30 Shop Drawing Reviews and RFI (Headwalls)	\$65,704	\$ 65,704	\$67,113	(\$1,409)	(\$1,409)
16.30.DSC-JG18 Shop Drawing Reviews and RFI (Headwalls)	\$6,000	\$ 6,000	\$1,890	\$4,110	\$4,110
16.40 Field Visits/Meetings (Headwalls)	\$4,296	\$ 4,296	\$4,296	(\$0)	(\$0)
16.RSCG Retrieval Shaft Compensation Grouting Design	\$132,069	\$ 132,069	\$68,216	\$63,853	\$63,853
16.RSCG.1 RSCG Work Plan	\$68,708	\$ 68,708	\$68,216	\$492	\$492
16.RSCG.2 RSCG Design to Address Observed Settlements	\$29,364	\$ 29,364	\$0	\$29,364	\$29,364
16.RSCG.3 RSCG Field Representation	\$33,997	\$ 33,997	\$0	\$33,997	\$33,997
16 - DSDC (Contract 1300)	\$9,140,044	\$ 507,800	\$169,560	\$8,970,484	\$338,240
16.10 Construction Support Strategic Execution Plan	\$21,506	\$ -	\$0	\$21,506	\$0
16.20 Design Team Support	\$2,950,423	\$ 93,600	\$64,270	\$2,886,153	\$29,330
16.30 Shop Drawing Reviews and RFI (CN 1300)	\$3,509,172	\$ 300,000	\$52,153	\$3,457,019	\$247,847
16.30.OTH Other (CN 1300)	\$325,147	\$ 30,000	\$10,830	\$314,316	\$19,170
16.30.RFI Requests for Information (CN 1300)	\$581,500	\$ 30,000	\$8,741	\$572,759	\$21,259
16.30.SUB Submittals (CN 1300)	\$2,572,525	\$ 210,000	\$31,006	\$2,541,519	\$178,994
16.30.Substitution (CN 1300)	\$30,000	\$ 30,000	\$1,575	\$28,425	\$28,425
16.30.M Construction Phase Project Mmgt and Admin	\$1,326,000	\$ 57,200	\$48,851	\$1,277,149	\$8,349
16.40 Field Visits/Meetings (CN 1300)	\$460,637	\$ 19,500	\$4,286	\$456,351	\$15,214
16.50 Change Proposals / Value Engineering	\$214,972	\$ 37,500	\$0	\$214,972	\$37,500
16.60 Conformed Contract Documents	\$378,993	\$ -	\$0	\$378,993	\$0
16.70 O&M Manuals	\$278,341	\$ -	\$0	\$278,341	\$0
16.80 Warranty Services	\$0	\$ -	\$0	\$0	\$0

## Ward, Beverly

---

**From:** Acosta, Michael  
**Sent:** Wednesday, February 05, 2014 12:39 PM  
**To:** Stassevitch, Eric; Redmond, Richard  
**Cc:** Ward, Beverly; Pong, Sanford  
**Subject:** Streetbase Collapse During Potholing at the STS Site  
**Attachments:** IMG\_1864.JPG; IMG\_1865.JPG; IMG\_1866.JPG; IMG\_1867.JPG

**Importance:** High

Rich/Eric,

Last Monday night, Valverde performed an emergency repair of a streetbase that has sunk about 1' deep. All 4 sides of this streetbase was saw-cut earlier in the day, but didn't show signs of possible collapse. The collapse happened at night after the street had been opened for vehicular traffic. Location is on 4<sup>th</sup> between Bluxome and Townsend.

Last week, Valverde notified me of streetbase sinking about 3" soon after saw-cutting is completed. These are at 2 locations at 4<sup>th</sup>/Freelon.

Today, Valverde showed me a 4' x 5' void underneath the streetbase after Valverde lifted up the saw-cutted streetbase. The location is on 4<sup>th</sup> between Bluxome and Brannan.

All 4 locations have been made safe by backfilling and/or placing steel plates. One common occurrence on all of these 4 locations is that they are located where catchbasin laterals exist. For the one that has been exposed, the catchbasin lateral seems to be leaking at the main connection in the middle of the street (see photos).

We can continue to expect more of this type of condition as we move along with our potholing work.

Valverde and Tutor consider this to be a Differing Site Condition... a notice of DSC is forthcoming.

Meanwhile, we are tracking on force account Valverde's effort to keep the job safe. Cost will include labor, equipment and plates rental.

I think we should bring this up to CMB today... but unfortunately I will not have time to prepare the write-up besides the attached photos and this e-mail. I have a 1:30 PM meeting with AT&T at 4<sup>th</sup>/Bryant this afternoon.

Should I come in to CMB and give a briefing?

Please advise.

**Mike Acosta, P.E.**  
Resident Engineer  
SFMTA/Central Subway  
Tel.: 415-701-5282  
Mobile: 415-539-9828  
Fax: 415-701-5222  
E-mail: [Michael.acosta@sfmta.com](mailto:Michael.acosta@sfmta.com)





02/05/2014





market likely to keep  
respect shot at 6

02/05/2014





02/05/2014





02/05/2014

**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

**Trend Log**

Total Cost Estimate and Allocated Contingencies										
Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	
					Approval Action	Approval Date				Actual/Forecast
<b>Contract 1250 - Utilities Relocation #1 (Portal &amp; MOS)</b>										
1250-0001	04/15/10	081-0001	Delete Option MF-OPT1 "Fire Protection Sprinkler System"	1	N/A		(50,000)	Cleared City Attorney's Office; to Shahnam for execution. [In "Current Forecast" - Sep2010 Cost Report.] <b>COMPLETE, NO FURTHER ACTION; CMOD #1</b>	CMOD #1 Approved	
1250-0002	05/07/10	081-0002	Changes to Sewer on 4th between Howard and Folsom	2	CMB-0001	Agree	07/12/10	+107,174	Differing conditions as AWSS is directly over existing sewer; unable to install sewer manhole per plan. [In "Current Forecast" - Sep2010 Cost Report.] <b>No reimbursement from SFPUC Sewer.</b> <b>COR #2-\$34,135; COR #5-\$73,039</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #2</b>	CMOD #2 Approved
1250-0003	05/28/10	081-0003	Quantity Adjustment for JT-6 and JT-7	4	CMB-0002	Agree	08/04/10	+192,420	In April 2010 pay app, JT-6 bid qty exceeded by 344% (230 vs. 1021) and JT-7 bid qty exceeded by 112% (500 vs. 1060) [In "Current Forecast" - Sep2010 Cost Report.] <b>COMPLETE, NO FURTHER ACTION; CMOD #3</b>	CMOD #3 Approved
1250-0004	07/02/10	081-0004	Demolition of existing brick and concrete footing on 4th between Howard and Folsom	2	CMB-0003	Agree	07/12/10	+170,000	Unforeseen bricks and concrete footing discovered on east side of 4th Street between Folsom and Howard. [In "Current Forecast" - Sep2010 Cost Report.] <b>COR #3-RFI #76</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #4</b>	CMOD #4 Approved
1250-0005	04/20/10	081-0005	Modify AWSS at 4th/Bryant and 4th/Harrison	3	CMB-0004	Agree	08/04/10	+586,000	At 4th/Bryant, AWSS conflict with new 48" sewer and AT&T duct bank. At 4th/Harrison, AWSS conflict with 18" sewer. [In "Current Forecast" - Sep2010 Cost Report.] <b>No reimbursement from SFPUC AWSS.</b> <b>PCC #2: RFI #s 34, 49 &amp; 51</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #5</b>	CMOD #5 Approved
1250-0006	04/29/10	081-0006	Install four additional piles and reinforce existing foundation at 401 4th Street	2	CMB-0005	Agree	08/25/10	+130,000	Existing foundation was discovered to be part brick and part concrete, which is different from plan. Also, foundation was unstable and required additional reinforcement. <b>Refer to RFIs #85R1, 88.1, 100, 101, 102</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #6</b>	CMOD #6 Approved
1250-0007	10/06/10	081-0007	Additional work to install 48" sewer due to various utility conflicts at 4th/Bryant	2	N/A			+32,964	48" RCP sewer in conflict with existing AT&T duct bank that needs to remain in service until new joint trench is installed to enable switchover. This conflict forced contractor into a more expensive means to install sewer. Also, 48" RCP sewer in conflict with existing 30" force main and 24" steel pipes. <b>No reimbursement from SFPUC Sewer.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #9</b>	CMOD #9 Approved
1250-0008	10/06/10	081-0008	Relocate TPC vault on 4th Street between Howard and Folsom	6	N/A			+19,500	Contractor uncovered existing TPC conduits on top of AT&T duct bank on 4th near Howard, a differing site condition. An AT&T intercept vault is to be installed, however, TPC conduits can not reside inside AT&T intercept vault. Joint Trench utilities participation cost TBD. Executed on 10/14/2010. <b>Refer to RFI #62</b> <b>(\$19,500) Expected Reimbursement from TPC. RE has provided documentation of notification to TPC, July-August '10. See final 1250 Form B actual costs</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #8</b>	CMOD #8 Approved
1250-0009	10/06/10	081-0009	Install additional sewer and provide temporary connections at 4th/Stillman	3	N/A			+47,000	Location of existing sewer to be intercepted differs from where it's shown in the plan, hence additional sewer to be installed. Also, due to optional sewer MH not buildable until (E) AT&T DB is removed, additional sewer is necessary to tie into (E) main as interim. New sewer is supposed to tie into optional MH. <b>No reimbursement from SFPUC Sewer.</b> RFI #91 <b>COMPLETE, NO FURTHER ACTION; CMOD #7</b>	CMOD #7 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1250-0010	10/06/10	081-0010	Perform AT&T wye cast connection and chipping of existing duct bank at various locations	6	N/A			+48,181	AT&T was supposed to tie-in its own facility. However, AT&T's contractor, who is hired to install vaults, stated it is not in their scope of work. Refer to RFI #82.1. AT&T intercept vault at 4th/Harrison can not be installed at design location due to utility conflicts. AT&T vault to be shifted a few feet instead of vault being on top of existing duct bank. This will cause additional excavation, joint trench and modification to existing duct bank. Joint Trench utilities participation cost TBD. SFMTA and AT&T are negotiating with Contractor. (\$48,181) Expected Reimbursement from AT&T. RE has provided documentation of notification to AT&T, Sept-Oct '10. See final 1250 Form B actual costs. <b>COMPLETE, NO FURTHER ACTION; CMOD #10</b>	CMOD #10 Approved
1250-0011	10/06/10	081-0011	Remove existing piles and shoring at 801 Howard	2				-0-	This change order has been incorporated in CMOD #16 (Trend #30) <b>COMPLETE, NO FURTHER ACTION; CMOD #16</b>	CMOD #16 Approved
1250-0012	10/06/10	081-0012	Additional work related to AT&T facilities due to unforeseen conditions.	6	CMB-0047	Agree	08/03/11	-0-	This is the total of all force account work related to AT&T facility. SFMTA to seek reimbursement from AT&T through the Form B process. (\$67,798) Expected Reimbursement from AT&T. Cost captured in Trend #15 <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
1250-0013	10/06/10	081-0013	Additional work related to PG&E facilities due to unforeseen conditions.	6	CMB-0047	Agree	08/03/11	-0-	This is the total of all force account work related to PG&E facility. SFMTA to seek reimbursement from PG&E through the Form B process. (\$30,547) Expected Reimbursement from AT&T. Cost captured in Trend #15 <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
1250-0014	10/06/10	081-0014	Remove brick wall at sewer sta 152+94 (west side) on 4th between Howard and Folsom.	2				-0-	This change order has been incorporated in CMOD #16 (Trend #30) <b>COMPLETE, NO FURTHER ACTION; CMOD #16</b>	CMOD #16 Approved
1250-0015	10/06/10	081-0015	Archaeological Findings - Charges for rental of steel plates, triton barriers, shoring and labor for maintenance.	2				+784,771	Midden deposits were discovered on 4th Street between Howard and Folsom. Contractor stopped work. Contractor requesting payment for rental charges of trench plates, barricades, and shoring, and cost of maintenance. Total cost exposure is projected through end of November 2010. The \$290,703.00 is expected to be the final estimate for the rental of trench plates, barriers and shoring. \$597,000 Arch, \$179, 000 DIFF, \$8,500 Traffic <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20
1250-0016	10/06/10	081-0016	Additional AWSS modification at 4th/Harrison	1	CMB-0016	Agree	11/10/10	+156,418	New alignment is proposed by Design team. No reimbursement from SFPUC AWSS. COR #33 Supplemental <b>COMPLETE, NO FURTHER ACTION; CMOD #12</b>	CMOD #12 Approved
1250-0017	10/06/10	081-0017	Protection Work at PG&E Vault 1611	6				-0-	Expected Reimbursement from PG&E or work to be deferred \$6,400. RE has notified PG&E via email dated 10/29/10 that SFMTA expects full reimbursement for this work if implemented. Follow-up pending. <u>Work was not performed and will need to be addressed in a future contract.</u>	
1250-0018	10/06/10	081-0018	Demolition and Support Work at PG&E Vault 1611	6				-0-	Expected Reimbursement from PG&E or work to be deferred \$25,000. RE has notified PG&E via email dated 10/29/10 that SFMTA expects full reimbursement for this work if implemented. Follow-up pending. <u>Work was not performed and will need to be addressed in a future contract.</u>	
1250-0019	10/06/10	081-0019	Extended overhead delay claim due to Archaeological discoveries	2					Old Note: Potential delay claim if issue extends project duration. Amount is estimated at \$3,000.00 per day for 60 days (\$180K). New Note: By exercising all option work, additional 84 calendar days is added to the contract time. In addition, midden mitigation will start on 10/7/10. As a result, the potential for extended overhead cost is averted. <b>This trend has been superseded by Trend #37.</b> <b>COMPLETE, NO FURTHER ACTION</b>	
1250-0020	10/06/10	081-0020	Sewer modification under I-80 freeway at 2 locations	3				+39,062	Inverts of existing sewer where new sewer will tie into are found to be different than shown in plan and would create a reverse slope. Additional pipe and manhole are required to fix slope. Refer to RFI Nos. 2S01 and 147. No reimbursement from SFPUC Sewer. <b>COMPLETE, NO FURTHER ACTION; CMOD #11</b>	CMOD #11 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1250-0021	10/06/10	081-0021	Install new AWSS lateral including hydrant at NW 4th/Harrison	2				Existing AWSS lateral at SW 4th/Harrison is in conflict with new 18" sewer. Instead of modifying the lateral to avoid the sewer, a new lateral at NW corner is a preferred solution. CM awaiting design revision from Design team. <b>Trend No. 21 is combined with Trend No. 22.</b>		
1250-0022	10/06/10	081-0022	Install additional 30 feet of DIP and new AWSS at 4th/Harrison	2	CMB-0026	Agree	01/12/11	+160,908	AWSS Point of connection on 4th Street was found to be cast iron instead of ductile iron as shown in DPWS as-built. Due to this differing condition, additional length of pipe needs to be replaced and lead joint to be installed in order to install a ductile iron tee. Also, existing AWSS hydrant lateral is in conflict with new 18" sewer. The preferred solution was to install a new ductile iron lateral at a different location rather than installing vertical offsets on an existing cast iron lateral. <b>No reimbursement from SFPUC AWSS.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #15</b>	<b>CMOD #15</b> <b>Approved</b>
1250-0023	10/06/10	081-0023	Steel plates and shoring standby for 2 months due to PG&E delay at Clementina	3				+24,981	Sewer at Clementina was delayed by 2 months due to PG&E vault conflict. PG&E will not pay cost of steel plates and shoring standby because PG&E drawings were sent to MTA during design phase and PG&E was not made aware of the conflict then. <b>COMPLETE, NO FURTHER ACTION; CMOD #13</b>	<b>CMOD #13</b> <b>Approved</b>
1250-0024	10/06/10	081-0024	Utility support and work around for AT&T facilities	6	CMB-0048	Agree	08/24/11	+95,311	Contract specs specified AT&T to compensate contractor directly for workaroud & support. AT&T refused to pay Synergy. Synergy considers AT&T's refusal as a changed condition to CN 1250 contract. <b>(\$95,311) Reimbursement from AT&amp;T. See Final 1250 Form B actual costs.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #19</b>	<b>CMOD #19</b> <b>Approved</b>
1250-0025	10/06/10	081-0025	Utility support and work around for PG&E facilities	6					Contract specs specified PG&E to compensate contractor directly for workaroud & support. PG&E negotiated \$100,000 directly with Synergy and will pay synergy directly as well.	
1250-0026	10/06/10	081-0026	Utility support and work around for SFWD facilities	3	CMB-0028	Agree	02/09/11	+66,510	Total cost known to date (10/5/10) of all SFWD support and workaroud. See COR #12, 20, 32 and 35. Agreed amount is total of COR #12, 20 and 32. Total exposure is equal to agreed amount plus COR #35. <b>No reimbursement from SFWD.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #14</b>	<b>CMOD #20</b> <b>Approved</b>
1250-0027	10/06/10	081-0027	Trucking and labor support for Archaeological mitigation	2				-0-	Synergy is asked to provide trucking for delivery of midden soil to Sonoma State University lab. Other support work includes traffic control, plating, loading and unloading of midden soil. The amount shown are charges up to end of November 2010 only. <b>Additional charges are expected which will be tracked as Trend No. 28.</b> <b>COMPLETE, NO FURTHER ACTION</b>	<b>CMOD #20</b> <b>Approved</b>
1250-0028	12/08/10	081-0028	Trucking and labor support for Archaeological mitigation, Part II	2				-0-	Synergy is asked to provide trucking for delivery of midden soil to Sonoma State University lab. Other support work includes traffic control, plating, loading and unloading of midden soil. The amount shown are expected charges beyond November 2010. <b>COMPLETE, NO FURTHER ACTION</b>	<b>CMOD #14</b> <b>Approved</b>
1250-0029	12/08/10	081-0029	Cost overrun for bid item UD-10 "Additional excavation and backfill"	4	CMB-0036	Agree	05/04/11	+112,500	Bid item UD-10 is to pay for excavation of connection hole and kill hole for SFWD line. Contract only included 200 cubic yard for this work. The size of excavations is dictated by field conditions and per the direction of SFWD inspector. RE's estimate of the total volume of dirt to be excavated is 630 cy. Examples of differing conditions encountered are: location of existing water line is different than where it's shown in the plan, existing waterline where shown in the plan to be connected to is inactive, differing condition at 5th/Clementina, connection holes and kill holes need to be expanded due to other utilities in the way. <b>COMPLETE, NO FURTHER ACTION; CMOD #17</b>	<b>CMOD #17</b> <b>Approved</b>
1250-0030	12/08/10	081-0030	Supplement bid item GE-4 "Allowance for differing site conditions" related to the installation of publicly owned facilities only (sewer, water, AWSS, Joint trench)	4	CMB-0030	Agree	04/13/11	+235,595	This change order is to supplement GE-4 for cost overrun related to the installation of publicly owned infrastructure only. GE-4 cost overrun for installation of privately owned infrastructure is being tracked separately and a separate change order will be issued. <b>COMPLETE, NO FURTHER ACTION; CMOD #16</b>	<b>CMOD #16</b> <b>Approved</b>

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1250-0031	12/08/10	081-0031	Unused allowance for bid item GE-8 "Allowance for cast-in-place utility vaults"	4				-0	Bid item GE-8 is an allowance to pay contractor for designing and constructing cast-in-place manholes as required for installation of new systems. Only one CIP vault was installed. <b>Credit amount included in Trend #43</b>	
1250-0032	12/08/10	081-0032	Unused allowance for bid item UD-5 "Handling and disposal of Class I Hazardous Waste"	4				-0	Bid item UD-5 is an allowance to pay contractor for handling and disposal of Class I Hazardous Waste. No class I hazardous waste was off hauled away from the job site. Class I soil found under the I-80 freeway was put back in the trench as backfill. This bid item is expected to remain unused. However, contractor is claiming to recover "General Conditions" cost. <b>Credit amount included in Trend #43</b>	
1250-0033	12/08/10	081-0033	Unused allowance for bid item UD-6 "Transportation of Class I Hazardous Waste"	4				-0	Bid item UD-6 is an allowance to pay contractor for transporting of Class I Hazardous Waste. No class I hazardous waste was off hauled away from the job site. Class I soil found under the I-80 freeway was put back in the trench as backfill. This bid item is expected to remain unused. However, contractor is claiming to recover "General Conditions" cost. <b>Credit amount included in Trend #43</b>	
1250-0034	12/08/10	081-0034	Cost overrun for bid item TR-6 "Allowance for manual traffic control"	4	CMB-0037	Agree	05/04/11	+68,820	Bid item TR-6 is an allowance to pay for off-duty police officers and parking control officers. Contract allowance amount is \$50,000.00. Contract specs calls for police officers at 4 intersections (4th/Howard, 4th/Folsom, 4th/Harrison and 4th/Bryant). The average cost of 1 police officer is about \$800.00 per day (\$100.00 per hour). The \$50,000.00 allowance is only good for 60 days for 1 police officer. Hence, additional money was needed for traffic control support. Final amount paid police officers is \$87,500.00. Additional billings for parking control officers (from Al Herce of DPT) is forthcoming; RE estimated this bill to be about \$60,000.00. <b>COMPLETE, NO FURTHER ACTION; CMOD #18</b>	CMOD #18 Approved
1250-0035	12/08/10	081-0035	Premium cost for requesting contractor to accelerate work on 4th Street between Howard and Folsom	2				-0	Due to archaeological discoveries, many trenches remained open and the project would not have enough time to complete installation of underground utilities and restore the roadway before the Holiday season. Without accelerating the work, the project would have had to pay rentals for the barriers, street plates and shoring for the unfinished trenches that would have remained. By accelerating the work and DPT allowing the contractor to work through the beginning of the Holiday Moratorium, the project avoided these rental costs, which is estimated to be greater than the premium cost of accelerating the work. <b>COR Not submitted by Contractor</b> <b>CLOSED COMPLETE, NO FURTHER ACTION</b>	
1250-0036	12/08/10	081-0036	Rental/Maintenance costs for support of Archeological Trenches (Part 1 of 4) \$255,840; Support Work During Archeologist Mitigation Efforts (Part 2 of 4) \$199,741; Mobilization and Equipment Standby Costs (Part 3 of 4) \$67,728; Additional Overhead/Indirect Costs During Archeological Delay Period (Part 4 of 4) \$124,186	2	CMB-0041	Agree	07/13/11 02/15/12 07/25/12 09/12/12	-0	Due to archaeological discoveries, contractor may potentially claim for compensation for his equipment that were idle for the duration of the waiting period. RE's estimate is based on Caltrans rate for equipment standby for 5 months (May to October). RE has not received any change order request related to this item. RE to verify if his equipment were indeed idle during this time period. <b>2/15:</b> Rental/Maintenance Costs for Support (Part 2 of 4); Addl Work as Result of Archeological Shutdown (3 of 4). <b>07/25:</b> Revised mod - compensation for 1 of 3) Rental/Maintenance, 2 of 3) Addl Work result of Archeological support, 3 of 3) Addl OH/Indirect cost. RE to add Equipment Standby time to revised mod. <b>09/12:</b> RE to Prepare Modification <b>10/29:</b> CMod 20 is being issued as a unilaterally change, by the SFMTA that represents the SFMTA's estimate of a fair and reasonable final compensation amount for the additional work. <b>COMPLETE, NO FURTHER ACTION</b>	CMOD #20 Approved
1250-0037	12/08/10	081-0037	Compensation for loss of production, inefficiency and disruption of work due to archaeological discovery	2				-0	Due to archaeological discoveries, contractor may potentially claim for compensation for loss of production, inefficiency and disruption of work. RE has not received any change order request related to this item. Amount shown is a ROM cost by the RE. RE expects a COR from the contractor but change justification is very unlikely. Initial draft COR was \$898,453. RE has adjusted to \$661,559 removing the month of October and option work. This was then revised to 800,000. There has been no official submittal from Synergy. SFMTA has directed Synergy to submit anything related to the Architectural delays through the claims process. This will be carried in the Potential Claim Log. <b>COMPLETE, NO FURTHER ACTION</b>	

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**Project Trend/Change Control Log**

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1250-0038	03/18/11	081-0038	Project Delay due to archaeological discovery and PG&E Issues.	2				-0- Due to archaeological discoveries compounded with PG&E's ability to perform service switchover to Olivet University and de-energize a live duct bank in conflict with 48" sewer. The project will realize an estimated 6 weeks of non-compensable delay to the substantial completion date of 4/6/11. 47 days estimated by RE. Contractor submitted COR 51 in the amount of \$1,144,776.74 on September 1st, 2011. RE responded requesting additional backup on October 19th, 2011. Subsequently, no additional information has been provided by the contractor, therefore, SFMTA has directed Synergy to submit anything related to the Architectural delays through the claims process. <b>This will be carried in the Potential Claim Log.</b>	
1250-0039	05/18/11	081-0039	Remove BP-4 (Waterproofing) from Contract	4				-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$40,000. <b>NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)</b>	N/A
1250-0040	05/18/11	081-0040	Delete SW-8 (24" Sewer) from Contract	4				-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$73,117. <b>NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)</b>	N/A
1250-0041	05/18/11	081-0041	Delete UD-5 and UD-6 (Class I Off haul and Handling) from Contract	4				-0- Bid items were not used. Contractor requesting compensation to recover for General Conditions cost. Bid items total amount is \$150,000. <b>NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)</b>	N/A
1250-0042	05/25/11	081-0042	Delete GE-6 (Hazmat) from Contract	4				-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$100,000. <b>NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)</b>	N/A
1250-9001	10/06/10	081-9001	Utility Companies refusal to contribute to utility support costs and work-around. (Voided. Recorded individually in TR-0059-TR-0061.)	7					VOIDED
1250-0043	08/03/11	081-0043	Unit Rate Adjustment for Entire 1250 Bid Items	4			(333,904)	Pursuant to General Provision GP-11, COR is to adjust contract value to account for fix overhead costs for bid items not performed or where the bid item performed varied by 25%. <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
<b>Contract 1250 Totals</b>							+2,694,211	<b>Total Changes to the Contract in the amount of \$2,694,211, represents a \$740,834 OVER RUN of the original allocated contingency of \$1,953,377.</b> <b>Changes that will be Utility Reimbursement credits through the Form B process in the amount of \$162,992 will offset some of this OVER RUN.</b> <b>Final Contract Closeout Total \$11,968,150 will be reduce by \$2,275,419 Utility Reimbursement credits for a Final Program cost of \$9,692,731 for CN 1250</b>	
<b>Contract 1251 - Utilities Relocation #2 (UMS)</b>									
1251-0001	03/18/11	082-0001	Modify traffic control plan by establishing a single travel lane on Stockton St. in lieu of time-based multiple lane requirements as stipulated in contract plans TR-001 to 004.	7				-0- After discussions with the Contractor and the Union Square Business Improvement District (BID), the SFMTA determined that modifying the lane requirements along Stockton St. and implementing the alternate pedestrian walkway design would be beneficial to the execution of CN 1251 in the following ways: increased public safety, increase construction production, and create a more pleasing environment to the public and merchant. COR #1 <b>COMPLETE, NO FURTHER ACTION; CMOD #4</b>	CMOD #4 Approved

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1251-0002	03/18/11	082-0002	1&3	CMB-0035	Agree	04/20/11	+67,634	Pursuant to a commitment between Barney's and SFMTA, Emergency Stair #4 (to be constructed in CN 1253) must avoid existing subsidewalk basement. It was determined that moving the conflicting stairs would require the Joint Trench to be constructed in a manner that would enable it to span the excavated area. The addition of the invert slab allowed for the needed span thereby allowing for a relocation of Emergency Stair #4. COR #4; PCC #1 <b>COMPLETE, NO FURTHER ACTION; CMOD #2</b>	CMOD #2 Approved
1251-0003	03/18/11	082-0003	1	CMB-0029	Agree	02/23/11	+148,919	During future station construction, the design team anticipates that excavation related settlement may cause damage to the brick sewers along Geary and O'Farrell Streets. This proposed modification will replace the vulnerable brick sewer within the influence zone with HDPE pipe that will not be as susceptible to settlement-induced damage. COR #9, PCC #2 <b>COMPLETE, NO FURTHER ACTION; CMOD #1</b>	CMOD #1 Approved
1251-0004	04/06/11	082-0004	2	CMB-0031	Agree	04/13/11	+189,584	Due to various differing site conditions as described in RFIs 15, 37, 38 and 44, changes to the secondary enclosure wall are required. The existing footing were found to be inconsistent, i.e. missing footing in one area, footing sticks out beyond existing wall, overpour on existing footing, existing wall to be 6" into private property. Contract plan SR-302 shows a consistent footing. COR #8 <b>COMPLETE, NO FURTHER ACTION; CMOD #3</b>	CMOD #3 Approved
1251-0005	04/06/11	082-0005	6				+66,084	Contract plans AW-501.1, 501.2, 501.4 and 501.4 show the existing AWSS to be replaced in place. However, existing PG&E conduits were found to be on top and parallel to the existing AWSS resulting in extra work in working around and/or shifting the existing electrical conduits. Contract plans JT-308 and 309 showed the existing electrical and AWSS to be separate. Estimate includes \$77,892.53 (Synergy FA Request) + \$25,000 (first digging west side) + \$10,000 (temp backfill during moratorium) + \$15,000 (plate rental west side at \$5k per month). Estimate does not include Synergy's cost to sequence his work. Updated projected cost impact from \$50,000 to \$127,893 based on compilation of force accounts received. RE negotiating <b>COMPLETE, NO FURTHER ACTION</b>	CMOD #24 Approved
1251-0006	04/20/11	082-0006	1	CMB-0039	Agree	06/08/11	+398,624	Due to changes to the limits of the UMS Station on Stockton Street between Post and Geary, the original utility design has changed. COR #24, PCC #4 <b>COMPLETE, NO FURTHER ACTION; CMOD #5</b>	CMOD #5 Approved
1251-0007	04/20/11	082-0007	1	CMB-0049	Agree	08/24/11	(434,957)	Due to changes to the limits of the UMS Station on Ellis street, the original utility design has changed. PCC #5 <b>COMPLETE, NO FURTHER ACTION; CMOD #5</b>	CMOD #5 Approved
1251-0008	04/20/11	082-0008	1					Based on field verification, it was determined that underpinning is no longer needed. Contract bid item SR-9 is for a total amount of \$116,000 measured by LF. However, CM team does not anticipate to recover the full amount because contractor may be entitled to retain general conditions cost and some excavation cost that was already performed but encumbered in Bid Item SR-9. Agreed credit of (\$58,000) to be included in Trend #60. <b>CLOSED, NO FURTHER ACTION</b>	
1251-0009	04/20/11	082-0009	4	CMB-0038	Agree	06/01/11	+261,584	Contract bid item TR-7 for manual traffic control in the amount of \$120,000 is insufficient to control traffic for the duration of the contract. The \$120,000 allowance only equates to one police officer for a duration of 7.5 months. At a minimum, it is anticipated that one police officer or PCO will be needed at Stockton/Post for the entire contract duration of 16 months. Additionally, one PCO is required for each intersection at Geary/Stockton and O'Farrell/Stockton. <b>COMPLETE, NO FURTHER ACTION; CMOD #4</b>	CMOD #4 Approved

- 1 - Owner Directed Change in Scope
- 2 - Unforeseen Conditions
- 3 - Errors and Omissions
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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	CMB No.	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
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1251-0010	05/25/11	082-0010	Accelerate Stockton east between O'Farrell and Market	1				+27,409	Contractor needed to rent additional excavators to work concurrently with the other block on Stockton between O'Farrell and Market. Amount: \$27,409; COR #25 <b>COMPLETE, NO FURTHER ACTION; CMOD #3</b>	<b>CMOD #3</b> Approved
1251-0011	06/22/11	082-0011	Potholing at 4th/Howard for PUC sewer design	1					Request from MOS utility design team to pothole for the intercept of a 36" force main sewer and 96" sewer. PUC requested that this be done in order to ensure that we have accurate utility information to avoid costly change orders during construction. Per direction from CMB on January 18, 2012, this request is denied. COR #50, PCC #6 <b>CLOSED, NO FURTHER ACTION: Per direction from CMB on January 18, 2012, this request is denied.</b>	
1251-0012	07/06/11	082-0012	Additional cost to lower the AWSS at O'Farrell, east of Stockton, due to numerous existing utility conflicts.	2	CMB-0042, CMB-0050	Agree	8/3/2011, 9/21/2011	+278,351	The AWSS is in conflict with AT&T, PG&E and several other utilities and needs to be installed under all these utilities at about 11' deep (instead of 6' depth as noted in Plan AW-501.4, sheet note #5). During negotiations with the Contractor several items of work were found to be missing for the original cost estimates which increase the amount to \$278,351. RFI #76, COR #31 <b>COMPLETE, NO FURTHER ACTION; CMOD #6</b>	<b>CMOD #6</b> Approved
1251-0013	07/06/11	082-0013	Accelerate start of construction in front of Macys West by trenchless construction method	7				-0-	Micropile installation on Stockton east between O'Farrell and Market has proven to be much slower than anticipated. To mitigate this potential delay, contractor requested to start construction in front of Macys West. COR 32 (CMB 0055 approval - see also Trend CN1251 #'s 04 & 10) <b>COMPLETE, NO FURTHER ACTION; CMOD #3 (No Cost Change)</b>	<b>CMOD #3</b> Approved
1251-0014	07/21/11	082-0014	Increase in Bid Item WD-10, Allowance for Additional Excavation and Backfill.	3	CMB-0055	Agree	09/14/11	+191,779	This allowance is for the contractor to perform additional excavation, backfilling and restoration associated with the water tie-ins and capping for the distribution piping system. The contractor has performed two water service tie-ins at an average cost of \$14,000 per tie-in. The current number of tie-ins and capping is 35 separate points. This amounts to a total cost of \$490,000. The current contract allowance amount is \$100,000, therefore an additional \$390,000 will be needed to augment is bid item. CMB made a partial approve of up to \$200K. The initial Contract Modification to supplement this allowance is in the amount of \$191,778.62. <b>RE's cost analysis of this trend confirms that the initial CMod amount of \$191,778.62 is sufficient to cover for all water tie-in/capping work.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #9</b>	<b>CMOD #9</b> Approved
1251-0015	08/03/11	082-0015	Additional traffic signal work at Post/Stockton	1				+17,530	Modification of the traffic signal at Post/Stockton is required to implement the detour shown in contract plan TR-010. There are no bid item to bill this work. COR #19 <b>COMPLETE, NO FURTHER ACTION; CMOD #8</b>	<b>CMOD #8</b> Approved
1251-0016	08/03/11	082-0016	Additional traffic signal work at Sutter/Mason	2				+32,054	Existing conduits shown in Plan ET-101 differs from what is actually in the field. City's response to RFI #73 directs contractor to install new conduits and conductors. RFI #73; COR #33 <b>COMPLETE, NO FURTHER ACTION; CMOD #8</b>	<b>CMOD #8</b> Approved
1251-0017	08/03/11	082-0017	Furnish and install AT&T Manhole 5830 on O'Farrell Street	6	CMB-0051	Agree	09/21/11	+25,000	AT&T was supposed to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. <b>AT&amp;T agreed to reimburse SFMTA (\$25,000) through the Form B process.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #7</b>	<b>CMOD #7</b> Approved
1251-0018	08/03/11	082-0018	Furnish and install AT&T Manhole 5829 on Geary Blvd.	6	CMB-0051	Agree	09/21/11	+31,000	AT&T was supposed to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. <b>AT&amp;T agreed to reimburse SFMTA (\$31,000) through the Form B process.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #7</b>	<b>CMOD #7</b> Approved

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- 2 - Unforeseen Conditions
- 3 - Errors and Omissions
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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
					Approval Action	Approval Date			
1251-0019	08/03/11	082-0019	6	CMB-0057	Agree	10/26/11	+31,000	AT&T was supposed to furnish and install AT&T vault #5833 on Ellis Street. The current design was to intercept the existing AT&T conduit in the middle of Ellis Street. It was discovered that the existing AT&T conduit actually run adjacent to the southern curb line along Ellis Street. Therefore, AT&T requested SFMTA for Synergy to extend the joint trench approximately 200 feet to the West and tie into their existing AT&T vault #403. This work will also require Synergy to enlarge vault #403 to accept the additional conduit. This additional work for AT&T will need to be reimbursed to SFMTA through the Form B process. Note: The agreed amount (\$31,000) is for enlargement of vault #403 only; the additional 200 feet of trench to be captured in the JT bid items. (See Trend 60) COR #43 <b>COMPLETE, NO FURTHER ACTION; CMOD #11</b>	CMOD #11 Approved
1251-0020	09/07/11	082-0020	6	CMB-0058	Agree	11/02/11	+19,537	PG&E requested to use GRS material in lieu of PVC in areas where PG&E conduits were expected to be exposed and temporary supported during future UMS station construction. PG&E agreed to reimburse SFMTA (\$19,537) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #21</b>	CMOD #21 Approved
1251-0021	09/07/11	082-0021	6					PG&E made changes to the locations of the service points and layout of some of the primary lines. In addition, due to changes to the limits of the UMS Station on Ellis Street, it was determined that Muni Vault 1850A is no longer needed. Cost for this trend in captured in Trend #31 or CMod #12. <b>CLOSED; NO FURTHER ACTION. Cost for this trend is captured in Trend #31/CMod #12</b>	
1251-0022	09/07/11	082-0022	7					During the design phase the representatives of the Hilton Hotel agreed to and signed a license agreement with the SFMTA to allow embedded eyebolt supports. Hilton's Dir of Property Ops now wants to have OCS poles rather than the embedded building eyebolt supports. However, the OCS designer was able to revise the OCS design to eliminate the need for either eyebolts or poles in front of Hilton Hotel, resulting in a \$2,000 credit. <b>CLOSED; NO FURTHER ACTION. Applicable bid items to be adjusted accordingly, See Trend #60.</b>	
1251-0023	09/07/11	082-0023	1	CMB-0065	Agree	1/25/2012, 2/29/12	+405,440	in labor costs for OCS installation has not been negotiated yet. 1/25: Condition agreed upon verification material from Contractor to be procured is available. (Verified 02/01/12). 02/29: CMod negotiated cost has been revised to incorporate original three items and the add'l OCS work on Folsom St. COR #52; PCC #7 Updated projected cost impact from \$490,000 to \$405,440. CMod #12 (Formally CMod #15) <b>COMPLETE, NO FURTHER ACTION; CMOD #12</b>	CMOD #12 Approved
1251-0024	09/07/11	082-0024	6	CMB-0059	Agree	11/16/2011, 05/02/12	+201,411	As a new requirement, PG&E had requested that a 5" slurry wall be installed between the gas line and wet utilities where the separation between the 2 utilities is less than 3 feet. PG&E agreed to reimburse SFMTA (\$201,410) through the Form B process. COR #58 <b>COMPLETE, NO FURTHER ACTION; CMOD #19</b>	CMOD #19 Approved
1251-0025	09/07/11	082-0025	6					PG&E requested to install additional conduits crossing Stockton Street at Geary and O'Farrell to minimize service interruption during future UMS Station construction. PG&E agreed to reimburse SFMTA through the Form B process. This item is captured under applicable JT Bid Item, see Trend 60. <b>CLOSED; NO FURTHER ACTION. Item is captured under applicable JT Bid Item, See Trend 60.</b>	
1251-0026	09/14/11	082-0026	2					The sub-basement in the public parking garage at O'Farrell/Mason extends beyond the property line up to the curb line. Therefore, regular foundations as per original design could not be installed. <b>CLOSED; NO FURTHER ACTION. Item is captured under applicable OCS Bid Item, See Trend 60.</b>	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
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1251-0027	09/20/11	082-0027	1	CMB-0056	Agree	11/30/11	+281,435	Acceleration is necessary to avoid potential delay impacts to Central Subway follow-on contracts. COR #40 <b>COMPLETE, NO FURTHER ACTION; CMOD #10</b>	CMOD #10 Approved
1251-0028	10/18/11	082-0028	6	CMB-0057	Agree	10/26/11	+157,000	AT&T was requested to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. <b>AT&amp;T agreed to reimburse SFMTA (\$157,000) through the Form B process.</b> COR #43 <b>COMPLETE, NO FURTHER ACTION; CMOD #11</b>	CMOD #11 Approved
1251-0029	10/26/11	082-0029	6					Vault 133 rebuild is superseded by Trend 40. Demolition of existing vaults 403 and 113 is superseded by Trend 43 <b>CLOSED; NO FURTHER ACTION. Demo of exiting vaults 403 and 113 are superseded by Trend 43. (See CMOD #23)</b>	
1251-0030	10/26/11	082-0030	6	CMB-0058	Agree	11/02/11	+46,366	PG&E asked SFMTA to enlarge vault 873. <b>PG&amp;E agreed to reimburse SFMTA (\$46,366) through the Form B process.</b> CMB approved a NTE amount of \$40K <b>COMPLETE, NO FURTHER ACTION; CMOD #21</b>	CMOD #21 Approved
1251-0031	10/26/11	082-0031	6	CMB-0058	Agree	11/02/11	+17,193	PG&E asked SFMTA to install additional conduits. <b>PG&amp;E agreed to reimburse SFMTA (\$17,193) through the Form B process.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #21</b>	CMOD #21 Approved
1251-0032	11/08/11	082-0032	6	CMB-0059	Agree	11/16/2011, 05/02/12	+92,292	PG&E gas drawings were not included in the bid package and there was no bid item to capture this work. Gas drawings was issued by PG&E in June 2011. <b>PG&amp;E agreed to reimburse SFMTA (\$92,292) through the Form B process.</b> Updated projected cost impact from \$202,400 to \$169,087 due to reduction in number of kill holes from 18 to 15. 04/11: Discovery of actual number of Kill/Tie locations being 26 instead of 15 will require confirmation from PG&E of the locations and the new cost of scope of work. <b>COMPLETE, NO FURTHER ACTION; CMOD #19</b>	CMOD #19 Approved
1251-0033	11/23/11	082-0033	1	CMB-0068	Agree	03/07/12	+408,700	Additional enclosure wall is design initiated change. COR #47, PCC #9 Updated projected cost impact from \$262,484 to \$408,700. 39 Calendar Day Time Extension <b>COMPLETE, NO FURTHER ACTION; CMOD #13 (formally CMOD #14)</b>	CMOD #13 Approved
1251-0034	01/10/12	082-0034	2	CMB-0069	Agree	04/04/12	+337,548	Existing utilities that are in active service were discovered in the City public right-of-way and are obstructing the performance of Contract work. Worst case scenario - "Not to Exceed" value) CM team will report actual amount value at a later date COR #71 CMB agreed to a Not-to-Exceed amount of \$346,456 on 4/4/12. All physical work was scheduled to complete by 4/13/12 <b>COMPLETE, NO FURTHER ACTION; CMOD #17</b>	CMOD #17 Approved
1251-0035	01/11/12	082-0035	1					UMS Design Team requested 1251 to pothole (6'Wx12'Lx8'D) on Stockton between Post and Geary to locate existing piles and tie-backs at Union Square. Cost for this scope of work from the Contractor is \$19,870.73. Per direction from the CMB on Jan 18th this request is denied and the DP2 designer will cover this potential future obstruction with a note on the drawings. COR #53 <b>CLOSED; NO FURTHER ACTION. Per direction of CMB on 1/18/12, this request is denied and DP2 Designer will cover this potential future obstruction with a note on the drawings.</b>	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	
					Approval Action	Approval Date				Actual/Forecast
1251-0036	01/11/12	082-0036	Install three 6" PG&E conduits from vault 5800 to PG&E "A" pullbox at 4th/Bryant.	6				CN 1252 Contract is requesting 1251 to install PG&E conduits in order to bring power in advance of the tunnel equipment arrival. The scope of work, which involves trenching at the busy 4th/Bryant intersection, was part of the 1252 contract, hence, a credit of same amount (\$54,892.07) to be due back to 1252. Based upon a field meeting and discussions with BIH on Jan 17th this work will be done under CN 1252 as originally planned. COR #55 <b>CLOSED; NO FURTHER ACTION. Based on field meeting with BIH on 1/17/12; this work will be completed under CN 1252 as planned.</b>		
1251-0037	01/17/12	082-0037	Install sewer lateral from the Gucci building (240 Stockton) to the main sewer on Maiden Lane. Work will involve plumbing modification inside building to raise invert.	3	CMB-0078	Agree	09/12/12	+27,428	After field investigation, the existing sewer lateral was found to connect to the Stockton main near Geary. However, the location where the lateral is connected to the main is inside the footprint of the UMS station, in which the main is shown in the contract plan to be slurry filled. The contract plan shows the lateral to be connected to the main on Maiden Lane but is not possible due to invert problem. At the CMB meeting on 1/18/12, Albert Hoe reported that he had instructed the design team during the design phase to investigate this lateral and make the connection to the sewer main at Maiden Lane. RE was asked to investigate if this could be a possible error and omission by the sewer design. (See Trends #44 and 45) <b>COMPLETE, NO FURTHER ACTION; CMOD #18</b>	CMOD #18 Approved
1251-0038	01/04/12	082-0038	Reimburse Synergy for JCDecaux work to remove kiosks	1	CMB-0064, CMB 0080	Agree	1/04/2012, 10/24/12	+29,273	JCDecaux refused to remove the remaining (2EA) kiosks without being paid for work already completed. The CMB approved on 1/04/12 Task Order No. 35 (Removal of 3EA sidewalk kiosks) as requested for the work already completed. On 10/24/12 the CMB approved Trend #38 removal of the remaining 2EA kiosks; work already completed and paid for as part of the approved CMB 0064 dated 01/04/12 for a total of 5EA kiosks removed. Total work priced at \$29,268. <b>COMPLETE, NO FURTHER ACTION; CMOD #22</b>	CMod #22 Approved
1251-0039	01/17/12	082-0039	Furnish and install 2ea benches along 5th Street	1				+4,752	Requested by Muni Operation. <b>COMPLETE, NO FURTHER ACTION; CMOD #22</b>	CMod #22 Approved
1251-0040	02/15/12	082-0040	Furnish and install AT&T Manholes 133 at Post/Stockton	6	CMB-0070	Agree	04/11/12	+45,000	AT&T requested SFMTA for Synergy to rebuild manhole 133 at Post/Stockton. COR #64 AT&T agreed to reimburse SFMTA (\$45,000) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #14</b>	CMOD #14 Approved
1251-0041	02/15/12	082-0041	Install additional 55 LF of AT&T trench to extend conduits from vault 5832 to vault 113 on O'Farrell Street	6	CMB-0070	Agree	04/11/12	+23,704	AT&T requested SFMTA for Synergy to extend their conduit from vault to vault instead of wye-casting into exiting duct bank. COR #63 AT&T agreed to reimburse SFMTA (\$23,704) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #14</b>	CMOD #14 Approved
1251-0042	02/15/12	082-0042	Install additional 95 LF of AT&T trench to extend conduits from vault 5831 to vault 129 on Geary Blvd.	6	CMB-0070	Agree	04/11/12	+31,525	AT&T requested SFMTA for Synergy to extend their conduit from vault to vault instead of wye-casting into exiting duct bank. COR #62 AT&T agreed to reimburse SFMTA (\$31,525) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #14</b>	CMOD #14 Approved
1251-0043	02/15/12	082-0043	Force account work for demolition of existing AT&T vaults 113 (Post/Stockton) and 403 (Ellis)	6	CMB-0076	Agree Conditionally	10/03/12	+52,607	Agreed cost shown in Trends 29 and 40 is for installing vaults only. Cost to demo existing vaults is tracked on force account (estimated cost at \$15k each vault). AT&T agreed to reimburse SFMTA (\$52,607) through the Form B process. CMB Agreed contingent on receipt of confirmation letter from AT&T for costs associated with these three trends (CMB 0076 approval - see Trend CN1251 #s 72 & 80) <b>COMPLETE, NO FURTHER ACTION; CMOD #23</b>	CMOD #23 Approved

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- 2 - Unforeseen Conditions
- 3 - Errors and Omissions
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- 7 - Other

**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
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1251-0044	02/15/12	082-0044	3	CMB-0078	Agree	09/12/12	+11,438	Contract plan SW-4 shows an existing lateral to be connected to new main. However, the 8" lateral is too big to be connected directly to the new 14" main necessitating a new connection to the manhole. However, numerous existing utilities were in the way and required installation of a new lateral at a higher elevation. Due to the raised lateral invert, modification to the building is also needed. <b>COMPLETE, NO FURTHER ACTION; CMOD #18</b>	CMOD #18 Approved
1251-0045	02/15/12	082-0045	3	CMB-0078	Agree	09/12/12	+30,260	Contract plan SW-3 shows 2 each existing laterals coming from the Union Square garage to be connected to the new main at approximate sta 128+55. However, the laterals were found to be connected to the downstream end of the existing main (toward Geary), which is called for to be abandoned in 1251 to make room for the future station. (See Trends #37 and 44) <b>COMPLETE, NO FURTHER ACTION; CMOD #18</b>	CMOD #18 Approved
1251-0046	03/06/12	082-0046	6				+80,000	The two (2) existing PG&E duct banks that were supposed to be intercepted by vault 584 were wider than shown on plan. Vault 584 was needed to be enlarged in order to capture the two (2) ductbanks. <b>PG&amp;E agreed to reimburse SFMTA (\$80,000) through the Form B process.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #24</b>	CMOD #24 Approved
1251-0047	04/10/12	082-0047	2	CMB-0082	Agree	10/31/12	+15,357	Contract plan JT-301 calls for an intercept vault to capture 2 (E) Muni ductbanks (DB). These DBs were found to be farther apart than shown on plan. The intercept vault needs to be widened.  (CMB 0082 approval - see Trend CN1251 #'s 47, 58 & 78) <b>COMPLETE, NO FURTHER ACTION; CMOD #26</b>	CMOD #26 Approved
1251-0048	04/10/12	082-0048	2					Contractor's hollow stem auger got stuck during drilling of micropile #27C in front of 17 Stockton. Contractor claims differing condition as cause for the stuck auger. Contractor is asking for 1 day compensable time extension. SFMTA is reviewing claim for entitlement. COR #67 <b>RE Denied COR (City Letter 26); however Contractor will most likely send rebuttal.</b> <b>CLOSED; NO FURTHER ACTION.</b>	
1251-0049	04/10/12	082-0049	2	CMB-0083	Agree	11/07/12	+9,058	Existing footing of One Stockton was found to be recessed from property line. City's response to RFI 171 called for additional rebar to compensate for the gap between back of new enclosure wall and existing footing. Also, the Owner's contractor of 17-19 Stockton asked that Synergy clear his work area so he can pour the primary wall and bring in his new switchgear. Synergy is asking 2 days compensable time extension. (CMB 0083 approval - see Trend CN1251 #'s 53, 59, and 64) <b>COMPLETE, NO FURTHER ACTION</b>	CMOD #27 Approved
1251-0050	04/10/12	082-0050	2	CMB-0074	Agree	08/15/12	+48,898	Type 770 pole foundation at SW 5th/Folsom could not be installed per plan due to a conflict with a cistern. Only solution is to remove an existing pole foundation (recently installed in 1251 as contract work) to make room for the 770 pole foundation. At 5th/Folsom, 2 DPT mast arms (not shown in original plan) need to be installed. At Pole #811, an existing concrete wall is in conflict with pole foundation.  (CMB 0074 approval - see Trend CN1251 #'s 67, 74 & 75) <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
1251-0051	04/10/12	082-0051	6				+23,633	PG&E requested to reroute existing duct bank running north out of MH 1803 at 4th/Pioneer Place into MH 5464 at Market/Ellis <b>PG&amp;E agreed to reimburse SFMTA (\$23,633) through the Form B process.</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #24</b>	CMOD #24 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1251-0052	04/10/12	082-0052	Reroute unforeseen existing waterline on Geary east of Stockton	2	CMB-079	Agree	10/10/12	+27,234	An unforeseen existing waterline was found to be in conflict with PG&E vault 573 and needs to be rerouted per City's response to RFI #182. (CMB 0079 approval - see Trend CN1251 #s 65 & 70). This is potentially a E&O issue due to unforeseen existing waterline on discovered along Geary Street (east of Stockton Street) not shown in the contract drawings. <b>COMPLETE, NO FURTHER ACTION; CMOD #28</b>	CMOD #28 Approved
1251-0053	04/10/12	082-0053	Additional cost for premium to accelerate contract work	1	CMB-083	Agree	11/07/12	+10,591	SFMTA directed Synergy to accelerate work to advance PG&E and AT&T cut-over and allow CN 1252 Contractor to start work at UMS COR #74 PG&E agreed to reimburse SFMTA (\$10,590) through the Form B process. 11/07/12 (CMB 0083 approval - see Trend CN1251#s 49, 59, and 64) <b>COMPLETE, NO FURTHER ACTION; CMOD #27</b>	CMOD #27 Approved
1251-0054	04/17/12	082-0054	Additional waterproofing at FIDM and north end of Crate & Barrel	2				+8,151	Sidewalk in front of FIDM and north end of Crate & Barrel did not have a sub-sidewalk basement, hence the original plan did not call for waterproofing of the primary wall. While excavating for the joint trench, contractor found the existing waterproofing to be spalling and peeling off from the primary wall. COR #72 <b>COMPLETE, NO FURTHER ACTION; CMOD #22</b>	CMOD #22 Approved
1251-0055	04/17/12	082-0055	Install Swiveloc lids on all PG&E vaults	6					PG&E requested SFMTA to add this scope to the 1251 contract for safety reason. COR #72 SFMTA decided to defer this work to the 1252 contract. <b>COMPLETE, NO FURTHER ACTION;</b>	
1251-0056	05/31/12	082-0056	Additional work on force account related to sewer installation	2				+45,156	Additional work due to unforeseen and differing conditions during installation of sewer. <b>COMPLETE, NO FURTHER ACTION; CMOD #15</b>	CMOD #15 Approved
1251-0057	05/31/12	082-0057	Additional work on force account related to water installation and NRG vault demolition	2				+39,599	Additional work due to unforeseen and differing conditions during installation of water and demolish existing NRG vaults that are in conflict with utility installation. <b>COMPLETE, NO FURTHER ACTION; CMOD #16</b>	CMOD #16 Approved
1251-0058	05/31/12	082-0058	Additional streetlight conduit on 5th Street between Harrison and Bryant	2	CMB-0083	Agree	10/31/12	+17,754	The existing streetlight pullboxes new cables were supposed to be connected to per contract plan did not have power. New conduit needs to be install from the power source. COR #75 (CMB 0082 approval - see Trend CN1251 #s 47, 76 & 78) <b>COMPLETE, NO FURTHER ACTION; CMOD #25</b>	CMOD #25 Approved
1251-0059	06/26/12	082-0059	Accelerate contract work at Barney's front	1	CMB-0083	Agree	11/07/12	+16,948	As a result of numerous meetings and complaints by Barneys, it was decided to accelerate contract work in order to restore Barneys sidewalk earlier (CMB 0083 approval - see Trend CN1251 #s 53, 49, and 64) <b>COMPLETE, NO FURTHER ACTION; CMOD #27</b>	CMOD #27 Approved
1251-0060	06/26/12	082-0060	Final Bid Item Reconciliation	4				(508,961)	Bid item analysis for entire contract as of 6/12/12.	CMOD #30 Approved
1251-0061	06/26/12	082-0061	Excavate for PG&E cutover at 177 Stillman	6				+7,424	PG&E requested Synergy to excavate for PG&E cutover at 177 Stillman. Reference document: Email from Michael Lightstone dated 12/9/11 PG&E agreed to reimburse SFMTA (\$7,424) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #24</b>	CMOD #24 Approved
1251-0062		082-0062	Additional waterproofing at Macys Men's wall	2				+24,774	Contract did not call for waterproofing at Macys Men's wall. However, when contractor dug for the joint trench, it was found that the existing waterproofing has deteriorated and needed to be replaced. COR# 20 <b>COMPLETE, NO FURTHER ACTION; CMOD #22</b>	CMOD #22 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1251-0063		082-0063	Excavation and restoration cost for PG&E gas tie-in and kill holes. Part II	6				+56,458	After completion of Part I (see trend 32), PG&E had offered to self-perform the excavation and restoration of the gas tie-in/kill holes because PG&E had crews available to perform the work. However, PG&E no longer have available crews, hence Synergy had to continue and finish excavating and restoring the last tie-in/kill holes. PG&E agreed to reimburse SFMTA (\$56,458) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMod #24</b>	CMod #24 Approved
1251-0064		082-0064	Accelerate finish and detail work of AT&T and PG&E vaults	1	CMB-0083	Agree	11/07/12	+4,704	In order to expedite turn-over of AT&T and PG&E vaults, SFMTA directed Synergy to accelerate the detailing and finish work of these vaults. SFMTA will pay Synergy premium cost for OT hours. 11/07/12 - (CMB 0083 approval - see Trend CN1251 #s 53, 59, and 49) <b>COMPLETE, NO FURTHER ACTION; CMod #27</b>	CMod #27 Approved
1251-0065		082-0065	Additional fittings for AWSS lateral and chipping of pole foundation at Market/Ellis	2	CMB-0079	Agree	10/10/12	+20,412	An existing Muni pole foundation is in the way of the AWSS lateral. Additional fittings are required to complete contract work. (CMB 0079 approval - see Trend CN1251 #s 52 & 70) This is potentially an E & O issue due to an existing Muni pole foundation is in the way of the AWSS lateral. <b>COMPLETE, NO FURTHER ACTION; CMod #28</b>	CMod #28 Approved
1251-0066		082-0066	Intercept PG&E conduits at Vault 573 at Geary east of Stockton	6				+6,466	During installation of PG&E intercept vault 573, PG&E had incorrectly identified the conduits to be intercepted. This error was discovered during cut-over process by PG&E. PG&E agreed to reimburse SFMTA (\$6,466) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMod #24</b>	CMod #24 Approved
1251-0067		082-0067	Additional feeder span, no-bo insulator and adjustment of guywire for the Folsom OCS bypass	3	CMB-0074	Agree	08/15/12	+32,149	SFMTA Electrical Designer had pointed out the new Folsom Bypass does not have enough capacity to power the new OCS necessitating installation of feeder spans. Also, adjustments to the guywire are necessary to mitigate conflict with new signal mast arms. COR #76 7/25/12 - RE presented COR to CMB; direction given to develop one CMod with all remaining items to be purchased for the new OCS bypass. (CMB 0074 approval - see Trend CN1251 #s 50, 74 & 75) <b>COMPLETE, NO FURTHER ACTION; CMod #20</b>	CMod #20 Approved
1251-0068		082-0068	Extended Overhead cost from July 19, 2012 to August 16, 2012	1	CMB-0075	Agree Conditionally	10/03/12	+106,967	Contract is expected to be extended beyond the approved July 18, 2012 completion due to the following reasons: contractor was slowed due to accommodation of AT&T and PG&E cut-over, for example, contractor has to provide windows of time for AT&T to occupy its work space to provide continuity and efficiency for AT&T cut-over, contractor has to advance cleaning and detailing of vaults to turnover to AT&T and PG&E, these work are typically done as punchlist, contractor now has to sequence work and reallocate resources; SFWD cut-over is taking longer than expected; PG&E gas cut-over was delayed due to inability to access Armani building, this delay held up completion of sewer MH, SFWD connection and restoration on O'Farrell east; added change order work, i.e. additional PG&E conduit at vault 573 and additional excavation for AT&T cut-over at 240 Stockton  CMB Agreed contingent on receipt of letter confirming e-mail as presented in the meeting and content viewed related to agreement and remaining actions and release of funds. <b>COMPLETE, NO FURTHER ACTION; CMod #24</b>	CMod #29 Approved
1251-0069		082-0069	Removal of abandoned PG&E gas valve (8each) and install anodes	6				+4,737	PG&E asked Synergy to remove all abandoned gas valves (8each) PG&E agreed to reimburse SFMTA (\$4,737) through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMod #24</b>	CMod #24 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1251-0070		082-0070	Core drill primary wall and install interior plumbing at Armani and Disney for the fire service water cutover	2	CMB-0079	Agree	10/10/12	+14,034	Existing fire service inside the building is a thin-wall steel pipe that extends out to the previously existing sub-sidewalk basement. However, 1251 had backfilled the subsidewalk basement per contract, which now made the steel pipe susceptible to corrosion. SFWD does not want to tie-in to the steel pipe due to corrosion issue plus the fact that the pipe is thin walled, which makes welding almost impossible. A ductile iron pipe needs to be installed from the main and into the building. COR #77  (CMB 0079 approval - see Trend CN1251 #'s 52 & 65) <b>COMPLETE, NO FURTHER ACTION; CMOD #28</b>	CMOD #28 Approved
1251-0071		082-0071	Install a new 8" backflow preventer for the fire service inside Macys Men's building	6					The new water main (installed in the 1251 Contract) is closer to the property line than the existing backflow preventer. State law stipulates that a backflow preventer be installed in between the property's fire suppression system and the water main. The SFWD refuses to make this connection until a proper backflow preventer is installed. SFMTA will insist on Macys to install its own backflow preventer. <b>CLOSED; NO FURTHER ACTION.</b>	
1251-0072	08/08/12	082-0072	Additional AT&T trench from new vault 5829 to existing vault 127 on Geary east of Stockton	6	CMB-0076	Agree	10/03/12	+23,993	AT&T requested new conduits to maintain continuity between the 2 vaults. <b>AT&amp;T agreed to reimburse SFMTA (\$23,993) through the Form B process.</b> <b>RE Tracking work on FAR</b>  CMB Agreed contingent on receipt of confirmation letter from AT&T for costs associated with these three trends (CMB 0076 approval - see Trend CN1251 #'s 43 & 80) <b>COMPLETE, NO FURTHER ACTION; CMOD #14</b>	CMOD #14 Approved
1251-0073	08/08/12	082-0073	Additional work to install water and electrical utilities for Flower Stand on Geary west of Stockton	1				+17,966	Contract bid allowance for providing utility services for flower stands (UD-14) had been exhausted during relocation of 2 flower stands. A third and final flower stand is still needed to be relocated. <b>COMPLETE, NO FURTHER ACTION; CMOD #22</b>	CMOD #22 Approved
1251-0074	08/08/12	082-0074	Traffic Signal modification at 5th/Folsom	1	CMB-0074	Agree	08/15/12	+16,429	Due to installation of OCS bypass on Folsom between 4th and 5th Streets, a left turn signal is required at 5th/Folsom. Additional signal heads and modification to the existing traffic signal is necessary. <b>RE Tracking work on FAR</b> (CMB 0074 approval - see Trend CN1251 #'s 50, 67, & 75 also). <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
1251-0075	08/08/12	082-0075	Unforeseen conditions related to pole foundation installation for the Folsom OCS Bypass	2	CMB-0074	Agree	08/15/12	+12,568	Contractor encountered unforeseen concrete and brick substructures and abandoned utility lines. <b>RE Tracking work on FAR</b> (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) <b>COMPLETE, NO FURTHER ACTION; CMOD #20</b>	CMOD #20 Approved
1251-0076	08/08/12	082-0076	Adjustment to OCS on Mason Street	2/3	CMB-0082	Agree	10/31/12	+14,988	Modify bracket arm at existing Pole #511 to alleviate tension load and bending of pole. Realign trolley wire on Mason between Geary and Eddy to smoothen transition when shifting from right lane to left lane. Also, add intermediate guywire to prevent excessive sagging of bracket arms at various locations. <b>RE Tracking work on FAR</b> (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) <b>COMPLETE, NO FURTHER ACTION; CMOD #26</b>	CMOD #26 Approved

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**CENTRAL SUBWAY PROJECT**  
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1251-0077	09/12/12	082-0077	2	CMB-0081	Agree Conditionally	10/31/12	+37,181	Qwest, TCG and UCCO requested Synergy to tie-in their existing conduits into the new vaults that Synergy installed per contract. The utility companies are responsible for connecting existing conduits into new vaults, therefore, this request is considered extra work. <b>Private Utilities companies agreed to reimburse SFMTA (\$37,181) through the Form B process.</b> <b>RE Tracking work on FAR</b> CMB agreement contingent upon CMod package to include evidence from all utilities that cost are reimbursable to SFMTA through the Form B process. <b>COMPLETE, NO FURTHER ACTION; CMOD #25</b>	CMOD #25 Approved	
1251-0078	09/12/12	082-0078	2	CMB-0082	Agree	10/31/12	+27,645	Several obstructions, i.e. buried concrete, boulders, brick, abandoned utilities were discovered during excavation and installation of OCS poles along Mason and 5th Streets. <b>RE Tracking work on FAR</b> (CMB 0082 approval - see Trend CN1251 #'s 47, 58 & 76) <b>COMPLETE, NO FURTHER ACTION; CMOD #26</b>	CMOD #26 Approved	
1251-0079	09/12/12	082-0079	2				+44,530	Unforeseen conditions were encountered during installation of select PG&E vaults including joint trenches leading to these vaults. <b>PG&amp;E agreed to reimburse SFMTA (\$44,530) through the Form B process.</b> <b>RE Tracking work on FAR</b> <b>COMPLETE, NO FURTHER ACTION; CMOD #24</b>	CMOD #24 Approved	
1251-0080	09/12/12	082-0080	2	CMB-0076	Agree	10/03/12	+56,806	Unforeseen conditions were encountered during installation of select AT&T vaults including joint trenches leading to these vaults. <b>AT&amp;T agreed to reimburse SFMTA (\$56,806) through the Form B process.</b> <b>CMB Agreed contingent on receipt of confirmation letter from AT&amp;T for costs associated with these three trends</b> (CMB 0076 approval - see Trend CN1251 #'s 43 & 72) <b>COMPLETE, NO FURTHER ACTION; CMOD #23</b>	CMOD #23 Approved	
1251-0081	09/13/12	082-0081	6	CMB-0107	Agree	02/13/13	+43,882	Contract Plan JT-014 calls for CDF cover on PG&E duct bank. However, PG&E requested to use regular concrete due to heat dissipation problem with CDF. <b>PG&amp;E agreed to reimburse SFMTA (\$43,881) through the Form B process.</b> 12/19/12 - Presented to CMB, direction given to finalize cost and obtain a Form B agreement with PG&E 02/13/13 - Revised CMod presented to CMB. PG&E agreed with negotiated reimbursement amount. <b>COMPLETE, NO FURTHER ACTION</b>	CMOD #24 Approved	
<b>Contract 1251 Totals</b>								+3,962,032	<b>Total Changes to the contract in the amount of 3,962,032 represents an UNDERRUN of allocated contingency in the amount of \$1,405,265.32.</b> <b>Changes that will be Utility Reimbursement credits through the Form B process in the amount of \$1,224,828 will increase the UNDERRUN.</b> <b>Final Contract Closeout Total \$20,794,581 will be reduce by \$7,618,112 Utility Reimbursement credits for a Final Program cost of \$13,176,469 for CN 1251</b>	
Contract 1252	COR No.	PCC No.	1252 Change Description	Change Type	CMB Change No.	Configuration Management Board Agree/Disagree	Decision Date	Actual/Forecast	Comments	Contract Modification No.

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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						Approval Action	Approval Date			
1252-0001	04/23/12	1	AWSS Conflict w/ Low Pressure Water	6	CMB-0091	Agree to Merit Agree to Cost	10/10/12 01/16/13	+16,907	AWSS contract work was made more difficult by the proximity of a water line which was closer than indicated on UT-501. See COR 008 for TIA request. 10/10/12 - Merit info presented to CMB - Agreed 01/16/13 - EE brought to CMB for cost NOT TO EXCEED \$16,900 - Agreed	
1252-0002	04/23/12	2	AWSS Add. Tie-Rods 4th-Harrison	6	CMB-0086	Agree to Merit Agree to Cost	10/10/12 12/19/12	+55,132	The AWSS line must be restrained a certain distance beyond the 90 degree elbow we are installing under contract 1252. The 1252 contract work includes excavating on both sides of this 12-foot portion of pipe. Additional work scope (per Michael Smith @ DPW): Station 162+80 to 162+90 - Restrain the existing 12-inch tee to the existing pipe north of the tee. Restrain any other joints that are not restrained on the existing pipe up to the new pipe to be installed. 10/10/12 - Merit info presented to CMB - Agreed 12/19/12 - EE brought to CMB for cost NOT TO EXCEED \$58,000 - Agreed	
1252-0003	04/23/12	3	AT&T Vault Conflict-4th & Harrison	6	CMB-0092	Agree to Merit Agree to Cost	10/10/12 01/16/13	+16,015	After excavation of the roadway surface and subgrade at Fourth and Harrison streets an AT&T vault was discovered to be in conflict with the current alignment of the 42" RCP sewer main. Verbal authorization was given by an AT&T representative to make modifications to the vault. COR 003 has been submitted by BIH in response to this issue. Work is to be charged via SFMTA Form B agreement to AT&T. 10/10/12 - Merit info presented to CMB - Agreed 01/16/13 - EE brought to CMB for cost NOT TO EXCEED \$21,089 - Agreed 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.	
1252-0004	05/18/12	6	PG&E live electrical delays	6	CMB-0088	Agree to Merit Agree to Cost	11/28/12 1/9/2013	+7,402	PG&E lines indicated on contract drawing UD-502 thru 504 were to be abandoned yet were not yet abandoned when BIH started work. They were abandoned on 5/21. 11/28/12 - Merit info presented to CMB - Agreed 01/09/13 - EE brought to CMB for cost NOT TO EXCEED \$7,600 - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement or cost reimbursement. COMPLETE, NO FURTHER ACTION: CMOD #10 - Final Cost \$7,402.36	CMOD #10 Approved
1252-0005	06/06/12	7	Oil filled pipe @ Launch Box	2	CMB-0093	Agree to Merit Agree to Cost	1/16/13 1/16/13	+9,980	Synergy Demo Crew exposed an existing 6" steel line which had oil in it on the West side of 4th St between Harrison and Bryant. 01/16/13 - Merit info presented to CMB - Agreed 01/16/13 - EE brought to CMB for cost NOT TO EXCEED amount \$10,000 COMPLETE, NO FURTHER ACTION: CMOD #05 - Final Cost \$9,979.81	CMOD #5 Approved
1252-0006	04/23/12	8	TIA - Associated w/ COR 001, COR 002, and COR 003	6		Agree to Merit	10/10/12	+269,904	TIA and Overhead Costs related to COR 001, 002 and 003. 10/10/12 - Merit info associated w/COR's 001, 002 & 003 presented to CMB - Agreed. 01/30/13 Elevation Ladder documentation presented for review of unresolved issue of payment of Indirect costs for TIA submittals- COR 008	
1252-0007	06/12/12	9	MOS - Impacts due to SFWD low psi water line	2	CMB-0143	Agree to Merit Agree to Cost	11/06/13	+5,727	Live PG&E Electrical Lines Conflict: BIH was notified that PG&E had live electrical lines running through each headwall work zone @ Moscone station. 8 inch Low Pressure Water Line Conflict: Contract drawings show this utility to be abandoned and capped prior to work. Synergy struck and damaged the water line. SFWD directed Synergy to excavate a kill hole so they could properly abandon the line. 11/04/12 - COR Evaluation for No Merit presented to CMB for - Agreed. Contractor did not follow contract specification 02.30.00 and 02.41.00 requiring the Contractor to verify the locations of any City or public service utility company facilities that may be affected by excavation and to ensure no damage to existing underground facilities. 11/06/13 - Merit info presented to CMB - Agreed for partial merit of cost associated with excavating two additional "kill-holes on 06/20/12 & 06/21/12. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$5,727.00 - Agreed	

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**Project Trend/Change Control Log**

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1252-0008	06/19/12	10	MOS - Demo PGE duct bank / SF City 911 fiber optic line	2	CMB-0094	Agree to Merit Agree to Cost	10/10/12 01/16/13	+4,916	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a PG&E duct bank that contained a live San Francisco 911 fiber optic line. 11/14/12 - Presented to CMB - The narrative will be rewritten CMB agrees with partial merit labor work involved in supporting the utility agencies. This item will be brought back to the CMB for approval. 01/09/13 - EE brought to CMB for cost NOT TO EXCEED \$4,919.54 - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #03 - Final Cost 4,915.54	CMOD #3 Approved
1252-0009	07/02/12	11	MOS - Traffic Signal line re-route south headwall	6	CMB-0095	Agree to Merit Agree to Cost	01/16/13	+37,500	After potholing Synergy discovered several traffic lines which were in the proposed location of the south MOS headwall. Traffic Lines re-routed. Merit info presented to CMB - Agreed 01/16/13 - CMB - NOT TO EXCEED \$37,500	
1252-0010	01/00/00	12	MOS - Archaeological Standby North Headwall	2	CMB-0096	Agree to Merit Agree to Cost	12/11/12 01/16/13	+16,893	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a layer of "Midden" or Native American debris. 12/11/12 - Merit info presented to CMB - Agreed 01/16/13 - EE brought to CMB for cost NOT TO EXCEED \$7,600 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #06 - Final Cost \$16,892.96	CMOD #6 Approved
1252-0011	07/06/12	13	MOS - SL conduit from PG&E vault @ north headwall	6		Agree to Merit	11/28/12	-0-	Permanent power is required to supply an existing Street Light box north of the MOS N headwall. 11/28/12 - Merit info presented to CMB - Agreed 04/01/13 - CM Team must obtain in writing from PG&E a utility agreement for cost reimbursement. Will be issued as a PCC with the approval of PG&E prior to requesting a proposal from the Contractor. CLOSED; NO FURTHER ACTION	
1252-0012	06/26/12	15	LB - Pre-Excavation for Slurry Walls	2	CMB-0087	Agree to Merit Agree to Cost	11/28/12 12/19/12	+96,000	Pre-excavation of slurry wall panels due to CDF encased sewer line. The concrete encasement was found by the Contractor to extend to a depth of 9'-11' below the top of guide wall or street surface. The 8" VCP sewer main and concrete encasement was incorrectly shown in the contract drawings to be approximately 4'-5' below the street surface. 11/28/12 - Merit info presented to CMB - Agreed 12/19/12 - EE brought to CMB for cost NOT TO EXCEED \$96,000 - Agreed	
1252-0013	07/02/12	17	MOS - Impacts @ North and South Headwalls due to live utilities	6	CMB-0144	Agree to Merit Agree to Cost	11/06/13	+43,219	Standby delays related to the discovery of traffic lines within the proposed location of the south MOS headwall. 11/14/12 - COR presented to CMB. CMB requested additional revisions to the evaluation. CMB agrees with partial merit. The COR will be brought back to the CMB for approval. 11/21/12 - COR revisited at mtg for clarification the issue is related to CMB action from item 3 - 7/25/12 (Mtg #88) specifically acted on 08/01/12 (CMB Mtg. 89) referred originally as Trend #15. CMB Agreed to No Merit to this contract change. 11/06/13 - Merit info presented to CMB - Agreed to DSC for equipment standby costs for a period of 16 working days. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$43,219 - Agreed	
1252-0014	Closed	19	UMS - Grant street 2 way conversion (e- & striping)	7				-0-	In order to implement a full street closure for Stockton Street at the UMS location the DPT recommended that Grant Street be converted from an existing one-way street to a two way street for vehicular traffic. Closed - Work is done. 07/18/12 - This potential change was brought before the CMB. Board's decision to have DPT perform the work. Work is completed. CLOSED; NO FURTHER ACTION	

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1252-0015	06/22/12	20	PROJECT WIDE - Utility Demo limit reduction credit	7					BIH's subcontractor Synergy Project Management (SPM) would like to minimize the limits of utility demo at the Launch Box, Moscone station, UMS station and TBM Retrieval Shaft locations. SFMTA to BIH/SPM "Build per Plan". CLOSED; NO FURTHER ACTION	
1252-0016	04/02/12	21	UMS - Reduced Duration	5	CMB-0073	Agree Cost (Conditionally)	08/01/12		No cost change for acceleration of utility relocation, ground improvements (jet grouting), and headwall construction at Union Square/Market Street Station. 08/01/12 - CMB approval condition upon incorporating correctness to backup documentation as required by & documented in CMB mtg. RE to prepare modification. COMPLETE; NO FURTHER ACTION: CMOD #08 - No Cost Change	CMOD #8 Approved
1252-0017	07/10/12	22	MOS - Asbestos Pipe at north headwall	2	CMB-0090	Agree to Merit Agree to Cost	12/12/12 01/09/13	+5,705	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered friable asbestos-laden transite pipe. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 - EE brought to CMB for cost NOT TO EXCEED \$6,000 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #05 - Final Cost \$5,707.05	CMOD #5 Approved
1252-0018	07/10/12	23	MOS - Brick Wall #2 discovered @ north headwall	2				+16,025	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a buried wall. 11/14/12 COR presented to CMB. Evaluation for merit will be rewritten and brought back to CMB for approval. 11/21/12 - Evaluation of merit presented to CMB - Agreed to No Merit to this contract change.	
1252-0019	08/10/12	26	MOS - Asbestos Pipe at south headwall	2	CMB-0085	Agree to Merit Agree to Cost	12/12/12 01/09/13	+27,630	Transite pipe was discovered during MOS south headwall excavation. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 EE brought to CMB for cost NOT TO EXCEED \$30,000 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #15 COMPLETE, NO FURTHER ACTION: CMOD#15 - Final Cost \$27,629.64	CMOD #15 Approved
1252-0020	08/10/12	27	MOS - Oil filled pipe at south headwall	2	CMB-0089	Agree to Merit Agree to Cost	12/12/12 01/09/13	+8,226	A pipe containing oil was discovered during MOS south headwall excavation. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 CMB - NOT TO EXCEED \$8,600 COMPLETE; NO FURTHER ACTION: CMOD #05 - Final Cost \$8,225.68	CMOD #5 Approved
1252-0021	06/19/12	29	MOS - Todco scaffolding reimbursement	2	CMB-0097	Agree to Merit Agree to Cost	12/12/12 01/16/13	+1,718	1252 contract work requires the removal of scaffolding erected by Fine Line Construction, the contractor performing renovations on the Woolf House. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 - EE brought to CMB for cost NOT TO EXCEED \$1,717 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #03 - Final Cost \$1,717.83	CMOD #3 Approved
1252-0022	Closed	closed	Disputed Work Items - NTP2 vs. NTP3	7				-0-	BIH interpretation of Special Provisions SP-3 NTP2 description includes activities that SFMTA interprets to be within NTP3. These activities include: Ellis Street and Green Street shafts and associated compensation grouting, MOS headwalls and jet grouting, jet grouting at cross passage 5, UMS head walls and jet grouting, OCS removal along Stockton Street from Geary to Ellis, and the TBM retrieval shaft. On April 13, SFMTA released the MOS headwalls and jet grouting, jet grouting at cross passage 5, UMS jet grouting, OCS removal along Stockton Street from Geary to Ellis, and preparatory and utility work necessary for the construction of the retrieval shaft. CLOSED; NO FURTHER ACTION.	
1252-0023	05/30/12		Manhole in east guidewall footprint	2				-0-	While performing excavation for the east side guidewalls at the TBM Launch Box, BIH's subcontractor CJA-NCC encountered a manhole near the bottom of the excavation which was unexpected. BIH has stated that removal of the manhole prior to the installation of the guidewalls was necessary to ensure the successful installation of the slurry walls. 05/20/12 - CM Team comment: Synergy traded this COR with SFMTA for shallow Force Main Installation. CLOSED; NO FURTHER ACTION.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
						Approval Action	Approval Date			
1252-0024	Closed	closed	2" gas line inside 16" casing	2				-0-	While performing excavation for the Sewer and AWSS trench at the intersection of Fourth and Harrison streets, BIHJV's subcontractor Synergy encountered what was identified to be a 16" depressurized gas main. This gas main contained a 2" gas line which is shown on contract drawing UD-502 to be abandoned/removed. CLOSED; NO FURTHER ACTION.	
1252-0025	04/23/12	5	CDF Encasement on 42" RCP	2				+140,596	While performing excavation for the east side guidewalls at the TBM Launch Box, BIH's subcontractor CJA/NCC encountered a CDF backfill at the existing 42" RCP sewer which reportedly had a significantly higher compressive strength than the 50-150 psi. which was anticipated. BIH claims that the CDF conflicted with the construction of the guidewalls and it could not be excavated by conventional means. Escalated to the IRL process	
1252-0026	Closed	closed	Damage to Live LPW main at 4th and Folsom	2				-0-	Synergy Demo Crew hit a blow-off valve on the 8" water line at the Southwest corner of the MOS headwalls. SFWD is to install a permanent cap per contract drawing WD-404. CLOSED; NO FURTHER ACTION.	
1252-0027	Closed		MOS - 76 Gas Station fencing	1				-0-	SFMTA requested BIH to install fencing around the perimeter of the 76 gas station at 4th and Folsom St. Issue closed, cost of fence paid by BIH in return for use of gas station lot. CMB - Temporary use of 800 Folsom Street site for construction staging. Use of this site would be a tradeoff between SFMTA and BIH. The Contractor would maintain the sites security and up-keep in exchange for not billing. CLOSED; NO FURTHER ACTION.	
1252-0028	Closed		LB - SPTC delays due to concrete encased 8" sewer	2				-0-	Closed. Combined with COR 015. 07/25/12 - Verbal information presented to CMB as a potential change. CLOSED NO FURTHER ACTION	
1252-0029	08/06/12	18	MOS - South Headwall re-design	1				+144,000	Costs related to leave end stops in place and a "T-Section" at the Moscone headwalls return walls. 11/14/12 - Presented to CMB. RE is recommending a possible compensation value of \$135K. CMB agrees with partial merit for labor and material cost of this COR. RE will proceed with scoping the work. 04/17/13 - Elevation Ladder of unresolved issue of End Stops presented to CMB - COR 018 09/18/13 - Contractor has submitted a Contract Claim No. 1 Permanent End Stops at MOS Headwall for \$169,379.17. CMB directed the CM Team to draft a letter rejecting the claim. Claim #1 has been negotiated for \$144K. CMod will be issued.	
1252-0030	08/02/12	24	Ellis - Utility demolition	3	CMB-0135	Agree to Merit Agree to Cost	12/6/2012 10/09/13	+35,628	BIH says that no utilities were shown at Ellis; however, Reference Drawing UE-126 shows utilities. 12/06/12 - Merit info presented to CMB - Agreed 10/09/13 - Engineers Cost Comparison brought to CMB for cost NOT TO EXCEED \$35,628.22 - Agreed	
1252-0031	Closed		Crack Gauges	4				-0-	BIH disagrees with SFMTA on the total number of crack gauges to be installed on the project. Per the contract drawings a total of 926 crack gauges are to be installed. BIH claims that a total of 50 are to be installed. CLOSED; NO FURTHER ACTION.	
1252-0032	08/07/12	28	Ellis asbestos abatement	2		Agree to Merit	12/06/12	+35,386	A steam line containing asbestos was discovered during potholing at the Ellis Street Shaft. 12/06/12 - Merit info presented to CMB - Agreed 01/10/13 - CM Comment - To be paid out of Environmental Mitigation allowance GE-8.	
1252-0033	-	30	LB - Class 1 Hazardous Material Haul off	2				+400,000	BIH trucking costs for Class 1 haul off generated at staging yard. Also see COR 054 regarding Class 1 Haz material haul off for Phase 2. 09/18/13 - Contractor has submitted a Contract Claim No. 2 Haz Mat Removal - Caltrans site (COR 30, 45 & 75) for 708,929.00. CMB directed the CM Team to draft a letter rejecting the claim. Claim #2 has been negotiated for \$400K cost to include COR's 030, 054 & 075.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1252-0034	01/00/00	70	LB - Jet Grout Quantity Overture	4	CMB-0115	Agree to Merit Agree to Cost	03/20/13 04/03/13	+768,600	The contract drawings call for the contractor to determine the extent of jet grouting at the launch box. Bid Item ES-3 has an estimated quantity of 2,831 CY of in-situ treated ground. The Contractor has currently installed 3,929 CY of Soilcrete (Jet Grout) for ground treatment. This translates to an additional quantity of 1,098 CY of ground treatment beyond the quantity listed for Bid Item ES-3. By subtracting 241 CY for the "scallop" portion of the columns the total is 857 CY. 03/20/13 - Merit info presented to CMB - Agreed 04/03/13 - EE brought to CMB for cost. NOT TO EXCEED \$599,900 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #22 - Contractor may pursue addl amt. \$168,700 for "scallop" portion of jet grout.	CMOD #22 Approved
1252-0035	01/00/00	unsubmitted	Utility Removal UD-304 and UD-503	6				-0-	RFI 00134 asks whether certain utilities indicated on drawings UD-304 (On Stockton inside limits of future UMS Station) and on UD-503 (On Fourth and Stillman Streets outside limits of Launch Box) may be left in place. Answer: "Confirmed, the utilities in question can be abandoned in place and are not required to be removed. The Engineer will seek an adjustment to Bid Item GB-3 for the elimination of this work." COR package not submitted by Contractor. CLOSED; NO FURTHER ACTION	
1252-0036	05/17/12	35	Additional Road Base on Fourth Street	2				-0-	BIH's subcontractor Synergy Project Management (SPM) discovered what they believe to be an additional layer of road base under the existing asphalt and road base layer while performing roadway demo work along the west side of Fourth street between Harrison and Bryant St. The additional layer is estimated by BIH/SPM to be approximately 8" - 12" thick. 12/06/12 - Evaluation of merit presented to CMB - Agreed to No Merit for this change. CLOSED; NO FURTHER ACTION	
1252-0037	01/00/00	unsubmitted	DPW permitting potential impacts	7				-0-	DPW Permitting issue to cause potential impacts. DPW is not issuing BIH permits for excavating the MOS headwalls, jet grouting at the LB, and excavating support at the LB, as they claim to have not been able to conduct a thorough review of the project's design documents and were not included in the design process. BIH may be required to re-sequence and stand many other potential impacts w/o said permits. COR package not submitted by Contractor. CLOSED; NO FURTHER ACTION	
1252-0038	05/30/12	38	Manhole in West Guidewall Footprint	3	CMB-0101	Agree to Merit Agree to Cost	12/05/12 01/23/13	+3,821	While performing excavation for the west side guidewalls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered a manhole foundation within the excavation at approximate station 165+70. It was necessary to chip away a portion of the existing manhole to gain the necessary clearance to construct the west slurry wall. 12/05/12 - CMB agreed with Evaluation of Merit 01/23/13 - EE brought to CMB for cost. NOT TO EXCEED \$4,052.17 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #12 - Final Cost \$3,820.84	CMOD #12 Approved
1252-0039		unsubmitted	Panel W-33 Obstruction	2				TBD	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered buried (wood pile?) debris located approximately 12 feet below the guide wall within Launch Box Diaphragm Wall Panel W-33. This trend is being tracked separately from Trend 20 because we believe it may be a different structure. BIH has not provided adequate information substantiating the merging of the two trends. CLOSED; NO FURTHER ACTION.	
1252-0040	08/23/12	PCC 1	PCC No.1 - Revisions to Moscone North Headwall Elevation (Top)	1	CMB-0099	Agree to Cost	01/16/13	+20,358	SFMTA initiated change to revise headwall elevations to facilitate a change in the roof elevation of MOS station. 01/16/13 CMB - NOT TO EXCEED \$20,500 Item is now being tracked as PCC 01 COMPLETE; NO FURTHER ACTION: CMOD #07 - Final Cost \$20,358.23	CMOD #7 Approved
1252-0041	08/23/12	PCC 2	PCC No. 2 - Revisions to UMS Headwall Concrete and Reinforcement Limits	1				-0-	SFMTA initiated change to revise UMS headwall concrete and reinforcement limits to provide a cost savings. 08/29/12 - Revised PCC presented to CMB PCC No longer being pursued.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
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1252-0042	08/24/12	31	Retrieval Shaft - Unmarked 12" Steel Pipe	2	CMB-0108	Agree to Merit Agree to Cost	01/02/13 02/27/13	+1,200	While performing excavation for the joint trench at the retrieval shaft BIH's subcontractor Synergy Project Management (SPM) discovered an abandoned 12" dia. steel pipe which appears to run continuously under Columbus Ave. 01/02/13 - Merit info presented to CMB - Agreed 02/27/13 - EE brought to CMB for cost NOT TO EXCEED \$1,250 - Agreed 04/01/13 - No reimbursement from SFWD. COMPLETE; NO FURTHER ACTION: CMOD #13 - Final Cost \$1,200	CMOD #13 Approved
1252-0043	08/31/12	32	LB - Panel W29 Wood Pile	2	CMB-0136	Agree to Merit Agree to Cost	11/28/2012 11/06/13	+121,917	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered what appeared to be a wood pile within Launch Box Diaphragm Wall Panel W-29. 11/28/12 - Merit info presented to CMB - Agreed 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$41,961 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	
1252-0044	09/04/12	33	Ret Shaft - 20" Water Line Conflict	2		Agree to Merit	11/14/12	-0-	During excavation for the joint trench at the retrieval shaft SPM discovered that the MRY Duct Bank is directly above an active 20" low pressure waterline. As a result the work at the Retrieval Shaft must reportedly be altered. 11/14/12 - Presented to CMB, the CMB agrees with some merit of this COR, element of change not define clearly. RE will proceed with scoping the work. Due to PCC 10 CLOSED; NO FURTHER ACTION	
1252-0045	09/11/12	34	LB - Panel W28 Wood Pile	2	CMB - 0137	Agree to Cost	11/06/13	+112,862	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered what appeared to be a wood pile within Launch Box Diaphragm Wall Panel W-28. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$43,294 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	
1252-0046	01/00/00	36	MOS - Catch Basin @ south headwall	3				-0-	A catch basin on the NW corner of 4th and Folsom interfered with the construction of the MOS Headwalls. Removal of the catch basin was needed in order for the headwalls to be built. BIH claims the catch basin was not shown in the contract drawings. Closed due to improper notification. COR package not submitted by Contractor. CLOSED; NO FURTHER ACTION	
1252-0047	01/00/00	37	UMS - 12" steel pipe removal	3	CMB - 0132	Agree to Merit Agree to Cost	6/5/2013 08/28/13	+3,379	A 12" steel pipe at the north UMS headwall location interfered with the demolition of other existing UMS utilities. BIH claims the steel pipe was not shown in the contract drawings. 06/05/13 - Merit info presented to CMB - Agreed 08/28/13 - EE brought to CMB for cost NOT TO EXCEED \$3,379.19 - Agreed	
1252-0048	09/07/12	39	MOS - 16" Steel Pipe removal @ northeast headwall	3	CMB-0102	Agree to Cost	01/23/13	+2,952	SPM removed an unmarked 16" steel pipe from the excavation of the NE MOS Headwall. Construction of the MOS headwall could not commence without this utility being removed. BIH claims the 16" steel pipe was not shown in the contract drawings. 01/23/13 - EE brought to CMB for cost NOT TO EXCEED amount \$2,951.99 - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #14 - Final Cost \$2,951.99	CMOD #14 Approved
1252-0049	01/00/00	40	MOS - Extra Road Base @ northeast headwall	2				-0-	BIH's subcontractor Synergy Project Management (SPM) discovered what they believe to be an additional layer of road base under the existing asphalt at the NE MOS headwall location. The road base in this location was approx. 20" thick on a patch that was roughly 25' x 25'. Closed due to improper notification. CLOSED; NO FURTHER ACTION	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
						Approval Action	Approval Date			
1252-0050	05/18/12	41	LB - Impacts due to live PG&E electrical lines (Synergy)	6	CMB-0098	Agree to Merit Agree to Cost	01/16/13	+1,217	Based on direction from the SFMTA, Synergy provided a full time flagger for one night shift of work @ the intersection of I-80 off-ramp near 4th/Bryant streets in order to assist PGE while they performed the abandoning of the existing live PGE electrical at the Launch Box location which was shown to be dead in the contract drawings. 01/13/13 - CMB agreed with Evaluation of Merit 01/16/13 - EE brought to CMB for cost NOT TO EXCEED \$1,245 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #10 - Final Cost \$1,216.60	CMOD #10 Approved
1252-0051	01/00/00	executed	Contract Amendment No. 2	1				(3,040,713)	COMPLETE; NO FURTHER ACTION: CMOD #02	CMOD #2 Approved
1252-0052	08/17/12	42	LB - Panel W25 Wood Pile	2	CMB-0138	Agree to Merit Agree to Cost	11/28/12 11/16/13	+126,489	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered an obstruction within Launch Box Diaphragm Wall Panel W-25. 11/28/12 - Evaluation of merit presented - CMB agreed 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$42,894 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	
1252-0053	08/22/12	43	LB - Panel W30 Wood Pile	2	CMB-0139	Agree to Merit Agree to Cost	11/28/12 11/06/13	+88,677	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered an obstruction within Launch Box Diaphragm Wall Panel W-30. 11/28/12 - CMB agreed with Evaluation of Merit 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$14,197 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	
1252-0054	09/19/12	44	MOS - 16" steel pipe removal @ southeast headwall	3	CMB-0109	Agree to Merit Agree to Cost	12/06/12 02/27/13	+1,600	SPM removed an unmarked 16" steel pipe from the excavation of the NE MOS Headwall. Construction of the MOS headwall could not commence without this utility being removed. BIH claims the 16" steel pipe was not shown in the contract drawings. 12/06/12 - CMB agreed with Evaluation of Merit 02/27/13 - EE brought to CMB for cost NOT TO EXCEED \$1,800 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #14 - Final Cost \$1,600	CMOD #14 Approved
1252-0055	06/09/12	45	Ret Shaft - Credit for reduced AT&T conduits	6				(331)	Credit to install 2 less conduits in the AT&T infrastructure at the Retrieval Shaft Joint Trench. The conduit notes on page JT-701 of the contract documents require 8 EA 4" conduits as laid out on the AT&T line. The reduced materials would result in 6 EA 4" conduits as a result. 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement. 09/18/13 - Contractor has submitted a Contract Claim No. 2 Haz Mat Removal - Caltrans site (COR 30, 45 & 75) for 708,929.00. The CMB directed the CM Team to draft a letter rejecting the claim.	
1252-0056	09/25/12	46	UMS - Unmarked steel pipes (6", 12", 14") / Duct Bank	6	CMB-0103	Agree to Merit Agree to Cost	12/06/12 01/23/13	+7,475	While performing excavation for the utility demolition at the south UMS headwall BIH/Synergy discovered a 6" dia. steel pipe, 16" dia. steel pipe, 18" dia. steel pipe, and a concrete duct bank. BIH claims the utilities were not shown in the contract drawings. 12/06/12 - CMB agreed with Evaluation of Merit 01/23/13 - EE brought to CMB for cost NOT TO EXCEED \$7,461 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #16 - Final Cost \$7,475.28	CMOD #16 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1252-0057	09/25/12	47	Ret Shaft - unmarked 10" steel pipe/duct bank	6	CMB-0104	Agree to Merit Agree to Cost	12/06/12 01/23/13	+2,108	Synergy Project Management (SPM), discovered an abandoned duct bank and 10" steel pipe which traveled underneath Columbus Avenue between Powell and Union Streets. Removal of the duct bank was necessary to complete the construction of the 36" RCP sewer main relocation work in this area. The status of the removal of the steel pipe is uncertain and may have not been necessary for the sewer main relocation. 12/06/12 - CMB agreed with Evaluation of Merit 01/23/13 - CMB - Not to Exceed \$2,201 04/01/13 - No reimbursement from SFWD COMPLETE; NO FURTHER ACTION: CMOD #13 - Final Cost \$2,108.04	CMOD #13 Approved
1252-0058	09/28/12	48	UMS - 3'x5' brick sewer at south headwall	6	CMB-0114	Agree to Merit Agree to Cost	12/06/12 03/13/13	+11,675	Synergy Project Management (SPM), discovered a brick sewer within the utility demolition limits at the UMS South headwall. The sewer encountered was larger than the 12" pipe which was shown in the contract drawings. Removal and disposal of the sewer commenced on September 26th and was completed by September 28th. Removal of the sewer was necessary for headwall construction. 12/06/12 - CMB agreed with Evaluation of Merit 03/13/13 - EE brought to CMB for cost NOT TO EXCEED \$12,474.65 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #16 - Final Cost \$11,675.00	CMOD #16 Approved
1252-0059	01/00/00	49	Ret Shaft - Tree trimming debris haul off	7				-0-	Synergy Project Management (SPM), was requested by the SFMTA to remove and dispose of debris near the Northeast corner of Columbus Avenue and Union Street. The debris resulted from tree trimming activities performed by MUNI operations. SFMTA Letter No. 119 of no merit sent to Contractor.	
1252-0060	10/10/12	50	Ret Shaft - 12" steel pipe removal at Union/Columbus	6	CMB-0110	Agree to Merit Agree to Cost	12/12/12 02/27/13	+2,200	On October 4th 2012, the Contractor discovered and removed a 12" Steel pipe at the intersection of Union Street and Columbus Avenue. Removal and disposal of the steel pipe was necessary in order to complete the proposed sewer re-location work near the Retrieval Shaft. Sewer work included the construction of a manhole which had been positioned in the field to avoid an existing MUNI duct bank. 12/12/12 - CMB agreed with Evaluation of Merit 02/27/13 - EE brought to CMB for cost NOT TO EXCEED \$2,600 - Agreed 04/01/13 - No reimbursement from SFWD COMPLETE; NO FURTHER ACTION: CMOD #13 - Final Cost \$2,200	CMOD #13 Approved
1252-0061	10/11/12	51	Ret Shaft - Elevation design conflict (30" low psi water / sewer)	3	CMB-0123	Agree to Merit Agree to Cost	03/13/13 7/10/2013	+13,386	03/13/13 - Merit info presented to CMB - Agreed 07/10/13 EE brought to CMB for cost NOT TO EXCEED \$21,100.	
1252-0062	09/07/12	53	Chinatown - Night drilling for instrumentation	7				-0-	Closed.	
1252-0063	-	54	LB Class 2 Hazardous Material Haul Off (Phase 2)	2				-0-	BIH trucking costs for Class 1 haul off generated at staging yard. Also see COR 030 regarding Class 1 Haz material haul off for Phase 1. Claim #2 has been negotiated cost to include COR's 030, 054 & 075.	
1252-0064	10/10/12		PCC No. 4 - Ret shaft sewer pipe material change	1				-0-	Change approximately 65 ft. of pipe for sewer bypass around the TBM Retrieval Shaft from 3' X 5' oval glass fiber reinforced pipe to a 48-inch (OD) HDPE SD-17 pipe with casing insulator placed inside a 54-inch diameter, 1/2-inch thick steel casing pipe. In addition, delete permanent sheet pile wall that was to have been placed along the west side of the trench to facilitate future maintenance access to the sewer along the shaft. CLOSED; NO FURTHER ACTION	
1252-0065	12/18/12		PCC No. 8 - UMS - Tree Removal	1				-0-	SFMTA is directing removal of a tree at the northeast corner of Stockton and O'Farrell St. CLOSED; NO FURTHER ACTION	
1252-0066	10/10/12		PCC No. 5 - Ret Shaft Water Dist. Pipe Material Change	1				-0-	Change material type of approximately 188 linear feet of 20-inch water line and approximately 125 linear feet of 30-inch water line from Welded Steel Pipe (WSP) to Ductile Iron Pipe (DIP) with TR-Flex joints. Install 6-inch thick concrete cap over 20-inch water line where cover is less than 24 inches. CLOSED; NO FURTHER ACTION	
1252-0067	10/26/12	58	Ret Shaft - Additional 10" steel pipe removal	6	CMB-0111	Agree to Merit Agree to Cost	12/12/12 02/27/13	+700	Work is a continuation of work performed in COR 047. 12/12/12 - CMB agreed with Evaluation of Merit 02/27/13 - EE brought to CMB for cost NOT TO EXCEED \$860.85 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #13 - Final Cost \$700	CMOD #13 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
						Approval Action	Approval Date			
1252-0068	10/10/12	PCC 3	PCC No. 3 - General Detour Signage	1	CMB-0113	Agree to Cost	10/03/12 02/27/13	-0-	Full closure of Stockton Street at Union Square was not anticipated under the 1252 Contract. The implementation of detour signage associated with the full closure of Stockton Street was to occur under the 1300 Contract. After the award of the 1252 Contract it was decided that a full closure of Stockton could be implemented to help reduce the headwall construction durations. As a result of the full closure the City Traffic Engineer has requested that a portion of the 1300 detour signs be installed now under the 1252 Contract to help alleviate traffic congestion and provide better detour signage around Union Square. 10/03/12 - PCC presented to CMB. CMB directed the RE to get a price quote from DPT do the work as a price comparison. This item will be brought back to the CMB at a later date. 11/14/12 - PCC presented to CMB. The CMB did not agree that Central Subway needed to take the lead on implementing detour signage, but suggested that the RE study the traffic activity and at the end of November report findings. 02/27/13 - Cost presented to CMB - Agreed to NTE \$6,152.60 Signs furnished and installed by SFMTA, PCC withdrawn. CLOSED; NO FURTHER ACTION	
1252-0069	11/08/12	PCC 6	PCC No. 6 - Supplemental instrumentation of BART tunnel lining.	1	CMB-0124 (voided) CMB-0129 (voided) CMB 0131	Agree to Merit Agree to Cost Agree to Cost	10/13/12 07/10/13 08/07/13 08/09/13	+307,861	Implement additional instrumentation of BART tunnel lining: (A) Existing bolt preload force – Determine the actual load in 12 bolts. (B) Bolt force sensor – Install 12 bolt force sensors at bolts for a total of 24 bolts. (C) Rail movement under dynamic train loading – Install dynamic strain gauges (2 per rail, 8 per tunnel). 10/31/12 - PCC presented to CMB for merit. CMB directed RE to proceed with obtaining a price quote from Contractor to perform the work. 05/08/13 - PCC 06 cost comparison was presented. CMB felt \$624K to perform the work was too high and requested IRP be contacted in writing to find out if the additional instrumentation monitoring was still warranted given the new alignment. 08/05: CS Letter No. 1972 presented - Tunnel Design Changes sent to IRP notified them of recent changes and developments in the tunneling contract. 07/10/13 - CMB - Not to Exceed \$650,127.62 IRP's response to SFMTA letter is still pending. 08/07/13 - EE brought to CMB for cost NOT TO EXCEED amount \$305K contingent upon revised estimate to reflect deletion in scope of work. 08/09/13 - Special CMB Mtg to clarify direction and approval to proceed with direction to the Contractor on extra work contained in PCC 06 (BART Work Scope reduction) The CMB Agreed to a NTE revised value of \$307,860 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #19	CMOD #19 Approved
1252-0070	01/00/00	unsubmitted	Full Closure of 4th Street	1				TBD	SFMTA allowed full closure of 4th Street in order to facilitate construction of Launch Box Slurry Wall Construction Week Ending 11/04/12 - 11/11/12.	
1252-0071	11/07/12	61	LB - Panel P-17 Buried Obstruction	2	CMB-0125	Agree to Merit	01/02/13	+377	CJA-NCC discovered an unmarked buried water main at Panel P-17, approximately 6' below the guidewall at CTL Station 165+52, while performing slurry diaphragm wall excavation. 01/02/13 - CMB agreed with Evaluation of Merit. 07/24/13 - CMB agreed to cost of reconciliation change - NTE \$1,100 - Agreed	
1252-0072	11/14/12	62	LB - Panel P-9 Buried Obstruction	2	CMB-0140	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+116,663	CJA-NCC discovered a buried obstruction while excavating slurry diaphragm wall panel P-9 at the Launch Box location. 01/02/13 - Presented to CMB for merit, CMB did not agree. CMB suggested inspector's daily tags as backup or reference the tag numbers in the write-up when force account work is involved. 01/23/13 - Revised write up presented CMB agreed with Evaluation of Merit. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$41,588 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1252-0074	11/16/12	65	LB – Panel P-12 Buried Obstruction	2	CMB-0141	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+112,313	CJA-NCC discovered a buried obstruction (water main) while excavating slurry diaphragm wall panel P-12 at the Launch Box location. 01/02/13 - Presented to CMB for merit, CMB did not agree. CMB suggested inspector's daily tags as backup or reference the tag numbers in the write-up when force account work is involved. 01/23/13 - Revised write up presented; CMB agreed with Evaluation of Merit. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$40,523 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL process.	
1252-0075	11/19/12	66	Retrieval Shaft - Unmarked 12" Steel Pipe	2	CMB-0112	Agree to Merit Agree to Cost	01/23/13 02/27/13	+3,700	While performing excavation for the joint trench at the retrieval shaft BIH's subcontractor Synergy Project Management (SPM) discovered an abandoned 12" dia. steel pipe which appears to be a Low Pressure Water Main. 01/23/13 - Merit info presented to CMB - Agreed 02/27/13 - EE brought to CMB for cost NOT TO EXCEED amount \$3,800 04/01/13 - No reimbursement from SFWD COMPLETE; NO FURTHER ACTION: CMOD #13 - Final cost \$3,700	CMOD #13 Approved
1252-0076	11/19/12	67	LB - Panel P-10 Buried Obstruction	2	CMB-0145	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+82,933	CJA-NCC discovered a buried obstruction or concrete encased clay sewer pipe, approximately 7' below the top of the guide wall while excavating slurry diaphragm wall panel P-10 at the Launch Box location. 01/02/13 - Presented to CMB for merit, CMB did not agree. CMB suggested inspector's daily tags as backup be attached or reference the tag numbers in the write-up when force account work is involved. 01/23/13 - Merit info presented to CMB - Agreed 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$49,984 - Agreed Direct Cost for CORs 32, 34, 42, 43, 62, 65, 67 have been negotiated. Time Impacts in IRL	
1252-0077	12/21/12		PCC 7 PCC No. 7 - BART Temporary Annex Wall	1	CMB-0106	Agree to Cost	01/30/13	+15,500	SFMTA is requesting Contractor construct temporary wall for Bart Annex for SFMTA use. 01/30/13 - NOT TO EXCEED Amount \$15,380 COMPLETE; NO FURTHER ACTION: CMOD #11 - Final Cost \$15,500	CMOD #11 Approved
1252-0078	12/28/12		PCC 9, FA CO 1 PCC No. 9 - UMS Headwall - Unknown Buried Pipe	1	CMB-0100	Agree to Merit Agree to Cost	01/16/13 01/16/13	+75,000	Related to COR 063. SFMTA instructed BIH to perform investigation into the 48" diameter steel pipe as it is a Differing Site Condition. 01/30/13 01/16/13 - EE brought to CMB for cost NOT TO EXCEED amount \$75,000 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #04	CMOD #4 Approved
1252-0079	01/09/13		PCC 10 FA CO 3 PCC No. 10 - Relocation of TBM Retrieval Shaft - Excludes Button Up Costs	1					Modify Bid Item ST-4 (Construction of Base Bid Permanent Retrieval Shaft) and ES-4 (Ground Treatment at Retrieval Shaft Breakouts) to relocate the TBM Retrieval Shaft to 1731-1741 Powell Street - (Excludes Utility Button Up and Site Restoration) 01/09/13 - Draft PCC10 presented to CMB for Contractor Design Activity to be paid on Force Account. NTE value \$20K presented to CMB as a draft copy, final copy distributed to the Contractor increased to \$50K. 02/20/13 - COST IS NOT REFLECTED HERE - SCOPE IS FUNDED BY OTHER CPT 690 \$\$\$\$ 03/06/13 - Cost proposal received from BIH. SFMTA will develop a detail estimate of what is believed to be the scope of work. 03/13/13 - PCC 10 presented for CMB change approval of \$50K NTE amount to perform design activities. CMB requested CM team return with a more detailed estimate, Contractor's cost proposal of the bulleted items as listed on the PCC and backup documentation as evidence of work completed by the Contractor. COMPLETE; NO FURTHER ACTION CMOD #20 (separate funding source used - CPT 690).	CMOD #20 Approved

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1252-0080	12/19/12		Segment Measuring Frequency	7					RFI 203.1 - In light of gauging frequency, and the difficulties of erecting a ring with cast in gaskets, BIH JV alternately proposes to assemble a ring on the Master ring at an interval of every 500th ring cast. The assembled ring would be comprised of randomly selected segments, or segments chosen by the Engineer. 12/11/13 - The CMB took exception to the deletion of the (\$1.3M) from the log without the consent of the Board. Direction was given to re-insert the credit and add a notation to the "comments section" the reasoning the dollar amount is no longer valid and should be removed.	
1252-0081	09/09/12		F21 and Old Navy Instrumentation Proposal	7					Wang Technology is proposing instrumentation changes to the Liquid Level Sensors and Tilt Beams in the basements of Old Navy and Forever 21.	
1252-0082	01/14/13	68	UMS – AT&T Vault Walkway @ N Headwall	2		Agree to Merit	01/16/13	+2,000	SPM discovered an walkway at the UMS north headwall. This walkway is located at the UMS north headwall and connects the south AT&T vault, located within the utility demolition limits, to an north AT&T, located outside of the utility demolition limits. SPM proposes to construct 3'x5' wall to the extents necessary, inside this walkway. The wall will be constructed of plywood and necessary reinforcement in order to create a bulkhead that will isolate the walkway and north vault from the south vault. 01/16/13 - CMB recommendation Contractor/Sub-contractor proceed on Force Account with a "Not to Exceed Amount" \$2K. 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #16 - Final Cost \$2,000.00	CMOD #16 Approved
1252-0083	11/08/12	69	UMS - Shoring Impacts due to 48" ATT Pipe at SW Headwall	2				+45,715	On or about 10-25-13, BIH/Synergy were installing sheet piles at the UMS SW head wall to demolish the existing basement wall in conflict with the head wall construction per contract requirements. During the driving of the sheet piles, Synergy struck a buried object which was later identified as a 48" Diameter steel pipe. See PCC 9 and 11. Synergy thought they were hitting a buried tie-back which was shown on the contract drawings. Synergy did not know at the time that they were hitting a buried 48" pipe. After hitting the buried object, Synergy installed additional sheet piles and enlarged the excavation area in order to clear the buried object and drive the sheet piles to the minimum embedment depth. Due to the larger excavation, Synergy is claiming impacts as a result of encountering this DSC including shoring revisions and for installing additional sheets. 06/05/13 - CM TEAM NOTES: COR 069 reopened by BIH to cover cost for enlarging excavation due to encountering the 48" buried pipe. Previously COR 069 was to cover capping and removal of the pipe until it was changed to PCC 11. 02/05/14 - CM TEAM NOTES: In IRL process	
1252-0084	01/24/13	PCC 11, FA CO 2	PCC No. 11 - UMS – Cap and Remove 48" Steel pipe	1	CMB-0105	Agree to Cost	1/23/13	+150,000	BIH/Synergy encountered a buried 48" Diameter steel pipe during work at the UMS S. Headwall. The pipe is located 6 feet from the south UMS headwall and 5 feet from the face of the curb. This PCC is to complete removal of pipe @ S. Headwall and Investigate and remove pipe if necessary @ the North headwall. 01/30/13 - EE brought to CMB for cost NOT TO EXCEED amount \$150,000 - Agreed 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement. COMPLETE; NO FURTHER ACTION: CMOD #09	CMOD #9 Approved
1252-0085	01/24/13	71	LB – Ramp Excavation Obstructions	2	CMB 0133	Agree to Merit Agree to Cost	4/3/2013 09/25/13	+5,594	BIHJV encountered numerous groups of wood piles while performing excavation of the Launch Box ramp. The wood piles are approximately 16"+ in diameter and are located along the north and south perimeter walls of the Launch Box ramp excavation area. 01/30/13 - CMB did not agree with merit of change suggestion the RE negotiate w/Contractor for another concession. 04/03/13 - COR merit evaluation presented to CMB again due to a greater number of obstruction encountered. CMB - Agreed to Partial Merit. 09/25/13 - EE brought to CMB for cost NOT TO EXCEED amount \$5,700.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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1252-0086	02/08/13	72	Ellis Shaft Jet Grout Obstruction	2				-0-	On February 6th, 2013, CJA/NCC was drilling column R3 of the Ellis Shaft and reported hitting an obstruction 52ft below existing grade. The obstruction reportedly caused the jet grout monitor to shear off. At this time it is not known what the obstruction is or if it caused the monitor to be sheared off. Contractor no longer pursuing. CLOSED; NO FURTHER ACTION	
1252-0087	02/14/13	73	MOS - 16" Pipe removal @ NE Headwall	2	CMB-0118	Agree to Merit Agree to Cost	3/13/2013 05/08/13	+940	BIH-JV's subcontractor, Synergy, encountered an abandoned 16" pipe while installing the 12" waterline at the north headwall of Moscone. The pipe was at the same elevation as the new 12" waterline and therefore needed to be removed to facilitate the installation of the new 12" waterline. 03/13/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 05/08/13 - CMB agreed to cost of reconciliation of change on FA - NTE \$989.00 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #17	CMOD #17 Approved
1252-0088	NA		Whole Foods - Unknown brick obstruction in Comp Grout Trench	0				-0-	BIH has decided not to submit a COR as production was not significantly impacted. CLOSED; NO FURTHER ACTION	
1252-0089	03/11/13	75	Hazardous Waste Disposal Denial - Spoils Containment Cost Impacts	7				-0-	BIH submitted change order request (COR) 030 seeking reimbursement for the demonstrated additional costs of excavating, handling and disposing of excavated material found to contain hazardous material to a permitted landfill over that which can be disposed of at an unregulated dump site. The SFMTA refused reimbursement for such costs under the hazardous waste bid item allowance. As a result of this determination, BIH is modifying its approach to the construction and handling operations of tunnel spoils generated during tunneling operations. 09/18/13 - Contractor has submitted a Contract Claim No. 2 Haz Mat Removal - Caltrans site (COR 30, 45 & 75) for 708,929.00 CMB directed the CM Team to draft a letter rejecting the claim. Claim #2 has been negotiated to include COR 30, 54 and 75.	
1252-0090	03/08/13	76	MOS - 16" Pipe removal @ SE Headwall	2	CMB-0119	Agree to Merit Agree to Cost	03/20/13 05/08/13	+1,116	BIH-JV's subcontractor, Synergy, encountered an abandoned 16" pipe while installing the 12" waterline at the south headwall of Moscone. The pipe was at the same elevation as the new 12" waterline and therefore needed to be removed to facilitate the installation of the new 12" waterline. 03/20/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 05/08/13 - CMB agreed to cost of reconciliation of change on FA - NTE \$1,116.00 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #17 - Final Cost \$1,116.00	CMOD #17 Approved
1252-0091	03/06/13	77	Comp Grout - WFB-5 Drilling Obstruction	2	CMB-0126	Agree to Merit Agree to Cost	04/03/13	+6,126	On March 06,2013, BIHJV encountered a potential Differing Site Condition (DSC) while drilling the compensation grouting hole WFB-5 located at Whole Foods and more precisely at CTL Station 160+38. This potential DSC consists of an obstruction located at a depth of 9' below grade which prevented CJA-NCC from drilling any further. 04/03/13 - Merit info presented to CMB - Agreed 07/24/13 - CMB agreed to cost of reconciliation change - NTE \$6,125.93 - Final Cost \$1,116.00	
1252-0092	03/07/13	78	Comp Grout - WF & ATT	2		Agree to Merit	3/20/13	-0-	BIHJV encountered multiple potential Differing Site Conditions (DSC's) of varying dimensions while excavating the compensation grouting trench for the drill holes located at Whole Foods and AT&T. 03/20/13 - Merit info presented to CMB - CMB agreed there was No Merit for this contract change. 05/24/13 - CM Team Notes - Contractor no longer pursuing due to failure to provide proper notification. CLOSED; NO FURTHER ACTION.	

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1252-0093	03/07/13	79	FA CO 4	2	CMB-116 CMB 142	Agree to Merit Agree to Merit (addl) Agree to Cost Agree to Addl Cost	03/20/13 04/24/13 04/26/13 11/06/13	+259,373	BIHJV encountered a potential Differing Site Condition (DSC) while sawcutting the pavement for the compensation grouting holes located at Old Navy. The original design was to drill the compensation grout holes between two existing PG&E lines. It was discovered in the field that there is not enough clearance between the existing PG&E lines for the original design to be possible and multiple other potential DSCs were also encountered including, but not limited to, tile duct banks, concrete of unknown contents, and steel pipes. 03/20/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 04/24/13 - Adtl info presented for rationale for Contractor to demob and remob drill rig due to insufficient clearance between existing PG&E lines to drill the grout holes - Agreed 04/26/13 - COR presented at a special CMB mtg to notifying CMB of need to have Contractor perform work on FA4 for a NTE amount of \$70K. 05/15/13 - Adtl request for funds to cover (Inefficiencies) - agreed for a not to exceed amount \$152,000. 11/06/13 - EE brought to CMB for cost NOT TO EXCEED \$37,380 for the (remaining cost) parts 2 and 3 of 4 - Agreed COMPLETE; NO FURTHER ACTION: CMOD #23	
1252-0094	03/12/13	80		2		Agree to Merit	04/03/13	+18,906	BIHJV's subcontractor, Synergy Project Management was performing the installation of low pressure water distribution piping at the Moscone north headwall and discovered an unknown material wrapping around the existing 20" waterline which appeared to contain asbestos material. 04/03/13 - Merit info presented to CMB - Agreed 07/10/13 - CM Team Notes - To be paid out of Environmental Mitigation allowance GE-8.	
1252-0095	03/11/13	81		2		Agree to Merit	04/03/13	+3,001	BIHJV's subcontractor, Synergy Project Management, encountered a potential Differing Site Condition (DSC) upon exposing the tie-in point for the 12" waterline at the south headwall of Moscone. The potential DSC consists of two 45 degree elbows in the existing 12" waterline at the point of the tee connection. SFWD has surveyed the field conditions and indicated that the tee connection will need to be moved to the west. 04/03/13 - Merit info presented to CMB - Agreed COMPLETE; NO FURTHER ACTION: CMOD #17 - Final Cost \$3,000.00	CMOD #17 Approved
1252-0096	03/13/13	82		2				+31,573	Upon exposing the existing 20" waterline at the south headwall of MOS, in preparation for installing the new 20" waterline shown on WD-403 and amended by RFI 0155, BIHJV's subcontractor Synergy Project Management encountered a potential DSC. The potential DSC consisted of a crossing conflict between the new 16" AWSS, the new 20" waterline, and the existing 6" PE gas. These three utilities cross at multiple locations however the existing depths are roughly the same. 01/22/14 - Item reviewed at the CMB mtg as a status update to potential cost exposure. Item now being discussed in the IRL process.	
1252-0097	03/19/13	83		2	CMB-127	Agree to Merit Agree to Cost	04/17/13 07/24/13	+1,420	During excavation for the Ellis Street Shaft, BIHJV's subcontractor, CJA-NCC, encountered a concrete obstruction at approximately 10 feet below grade. CJA-NCC spent 4 hours removing the obstruction. 04/17/13 - Merit info presented to CMB - Agreed 07/24/13 - CMB agreed to cost of reconciliation change - NTE \$1,424.52 - Agreed	
1252-0098	03/16/13	84		2				-0-	Water was discovered seeping into the Crate & Barrel basement in concert with secant pile installation at Pile #SRV-A. At the time, pile excavation was approximately 90 feet deep. BIHJV's subcontractor, CJA-NCC, stopped pile installation and placed lean concrete within the pile excavation. This allowed them to continue secant pile construction on other piles until which time SFMTA could provide appropriate mitigation for the water leak. 07/03/13 - CM Team will deny merit, notice not received within 7 days. CLOSED; NO FURTHER ACTION	

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1252-0099	04/05/13	PCC 12, FA CO 6	PCC No. 12 - Modifications to Tunnel Alignment at Market Street	1	CMB-131	Agree to Merit Agree to Cost (Conditionally)	08/14/13 08/14/13	+292,000	IFB Tunnel Profile conflicts with micro-piles installed under Contract 1251. Tunnel Profile needs to be revised (lowered) such that TBM and Tunnel structure is below previously installed micro-piles. Contractor shall revise compensation grouting design to conform to Contract requirements given the revised tunnel alignment. 04/03/13 - CMB agreed to Micropile profile change being forwarded to the Contractor. 04/10/13 - Updated alignment was presented superseding 04/03/10 version - (lowered 4.9%) 04/10/13 - Original Contractor submittal needs to be evaluated to verify the new alignment has been incorporated. 08/14/13 - Merit Evaluation and PCC 12 Cost NTE (Construction portion) was presented to the CMB for approval. The CMB agreed to merit contingent upon verification signature by the Designer (DP1) of additional work and cost associated with the change. NTE Value \$41,470.01 - Agreed	
1252-0100	03/26/13	85	SFWD Impacts at MOS North	2				+103,107	BIHJV's subcontractor CJA-NCC is in the process of constructing the Moscone Station headwalls, the sequence of construction is such that it requires the 12" and 20" waterlines on the eastside of 4th street to be rerouted prior to completing the headwalls. In accordance with the Contract the San Francisco Water Department (SFWD) is responsible for completing the waterline reroutes (chlorination and tie-in) in a specified duration. BIHJV claims the SFWD failed to complete this work in the contractual durations. As a result, BIHJV claims the headwall construction operation has been incurring stand by costs. 04/10/13 - Item reviewed at CMB meeting during review of Trend/Change Log COR's. CM team contends this is not a valid change and will reject the Contractor's claim of merit. Contractor has submitted a notification of Claim #3 for standby cost for this item. The CM Team will respond by 02/14/14.	
1252-0101	01/28/13	87	Cross Passage 5 - Value Engineering Change Proposal	5				(2,674)	As indicated in Contract Drawing No. ES-144, ground treatment for the excavation of CP5 was anticipated to be performed using jet grouting methods. BIHJV proposes to perform ground freezing from within the tunnels as an alternative ground treatment methodology, thereby avoiding the need to disrupt and impact the public by occupying 4th Street for an extended period. 04/24/13 - Item reviewed at CMB mtg. during review of Trend/Change Log COR's. CMB suggested a credit from the Contractor should be received for Bid Item ES-5. In addition suggested a minimal review of the BIH's proposed ground freezing method be done by the PB. COMPLETE; NO FURTHER ACTION: CMOD #25	
1252-0102	04/09/13		UMS - Secant Pile SRV-J Obstruction DSC	2				-0.	BIHJV's subcontractor, CJA-NCC, encountered a potential Differing Site Condition (DSC) while drilling for UMS Secant Pile #SRV-J. The DSC consists of what appears to be an abandoned utility pipe located approximately 10 feet deep. 04/24/13 - Information presented to CMB during review of Trend Log. CM Team states COR merit will be rejected due to notification of change not met in timely manner per the contract docs. 05/24/13 - CM Team update - Contractor no longer pursuing due to untimely notification of event. CLOSED; NO FURTHER ACTION.	
1252-0103	04/18/13	88	SFWD Impacts at MOS South	2				-0.	BIHJV's subcontractor CJA-NCC is in the process of constructing the Moscone Station headwalls, the sequence of construction is such that it requires the 12" and 20" waterlines on the eastside of 4th street to be rerouted prior to completing the headwalls. In accordance with the Contract the San Francisco Water Department (SFWD) is responsible for completing the waterline reroutes (chlorination and tie-in) in a specified duration. BIHJV claims the SFWD failed to complete this work in the contractual durations. As a result, BIHJV claims the headwall construction operation has been incurring stand by costs. 05/08/13 - Information presented to CMB during review of Trend Log. CM Team states COR will be rejected due to no merit. This item is not on the critical path. 06/17/13 - Contractor no longer pursuing. CLOSED; NO FURTHER ACTION.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
						Approval Action	Approval Date			
1252-0104	06/06/13		PCC 13 - SFWD Excavation, Support and Backfilling	1	CMB-0122 CMB 0128	Agree to Cost Agree to Addl Cost	6/19/13 08/09/13	+33,982	Excavation, support and restoration work at two locations required to facilitate fitting/valve installation work by the San Francisco Water Department. Installation of valves are to facilitate fire service connection crossover and cutting off of the existing water main. The existing water main is in the footprint of the UMS station piles and is to be abandoned. 06/05/13 - CMB agreed to change required; work must be completed sometime in June 2013 06/19/13 - Cost estimate presented; CMB agreed for a NTE of \$20K 08/07/13 - CMB viewed the estimate requesting the narrative be rewritten to tell the entire story of what has generated the change. 08/09/13 - Special CMB Mtg to clarify direction and approval to proceed with direction to the Contractor on extra work contained in PCC 13 (Macy's Backflow work). CMB approved additional work and scope for a NTE value of \$14,100 for a total change value of \$34,100 COMPLETE; NO FURTHER ACTION: CMOD #18 executed for \$20K. Supplementary CMOD #24 executed for #13,982 was issue for remaining cost.	CMOD #18 & 24 Approved
1252-0105	05/30/13	90	Abandoned Well at MOS Panel N-4	2				+450,000	BIHJV's subcontractor, CJA-NCC, discovered an obstruction that appears to be an abandoned monitoring well within the Moscone Slurry Wall Panel "N-4". Contractor claims impacts resulting from this alleged DSC include, but are not limited to, excavation inefficiency, the required backfilling of the panel with lean concrete on multiple occasions, and re-excavations of the panel. 06/19/13 - Information presented to CMB during review of Trend Log. CM Team states COR will be rejected due to several reasons of "no merit" Items in the IRL process	
1252-0107	12/13/12	92	Credit - North headwall panel N-2 at Moscone	7				(4,943)	During installation of the reinforcement cage at panel N-2 at the Moscone North Headwall a 1-inch dia. Polyester sling used for lifting could not be detached from the reinforcement cage. The slings were then casted in-place. SFTMA requested a credit CO for the CN 1300 contractor to demolish the concrete and slings and replace the structural concrete. 07/10/13 - NCR condition of the wall be provided in order to prepare engineer's estimate for credit amount. Negotiated amount to be deducted from pay estimate. COR has been rescinded.	
1252-0108	04/11/13	91	Credit - Secant pile SRV-H, UMS south headwall	7				(263)	During concrete placement, the dummy steel beam that was used to hold down the secant pile steel beam reinforcement for pile SRV-H @ the UMS south headwall could not be removed and was poured in-place. SFTMA requested a credit CO for the CN 1300 contractor to demolish this beam between El. 16.66' and the beam top. Negotiated amount to be deducted from pay estimate. COR has been rescinded.	
1252-0109	09/24/12	93	Credit - 65 feet of water pipe not installed at MOS	7				+86,882	Contract Drawings WD-403 & WD-404 shows the 20" low pressure water line cutting through an area in the intersection where the joint trench is in the way. BIHJV's subcontractor, Synergy Project Management, with SFMTA's concurrence, installed the water line tie-in per a configuration which resulted in approximately 65' less line required to be installed. SFTMA requested a credit CO to eliminate 65' of the line.	
1252-0110	02/06/13	94	Credit - Switching of the 12" and 20" lines at MOS	3				(30,466)	It was discovered that the field locations of the 12" water line and 20" water line were actually "switched" from the location shown in contract drawing WD-402 Rev.0. SFMTA requested a credit CO as less 20" water line was required to be installed than was originally anticipated.	

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1252-0111	07/16/13	95	Green St Shaft – Design Cost Impacts for Jet Grout	7				-0-	BIHJV: "BIH and CJA-NCC are in receipt of the SFMTA's revised submittal review comments for Submittal No 31.43.14-003 (review cycle 3) dated July 10, 2013, where the SFMTA determined that the previously submitted content does not fulfill the contract requirements. The submittal status was changed from "Approved" on March 21, 2013, to "Disapproved - Resubmit" on July 10, 2013. The SFMTA states that the submittal was reviewed in further detail and it was determined the submittal didn't fulfill the contract requirements. This new submittal determination will result in additional costs to the SFMTA." 07/24/13 - Information presented to CMB during review of Trend Log. CM Team preparing letter of no merit, due to disagreement of dwg shown. CLOSED; NO FURTHER ACTION	
1252-0112	07/16/13	96	Micropiles @ UMS Tangent Pile SRB-H	2		Agree to Merit	07/31/13	-0-	Excavation for battered secant pile SRB-H began on July 12. At approximate depth of 30', CJN reported hitting an obstruction. Two, 36" and 45" long, No. 18, Dywidag bars were discovered within spoils of the first bite of the clamshell bucket. The 2-1/2" diameter bar was consistent with the micro piles installed in the previous contract. 07/24/13 - Draft merit evaluation presented to CMB. CM Team reported further investigation needed to verify survey location of micropiles. CMB requested a specific dwg of 1251 As Built of piles be presented at next CMB. 1251 Contractor will be put on notice referencing the CS CN1251 Ltr. #018 - Future Potential Costs Due to Incorrect Micropile Placement. 07/31/13 - Merit Approval presented to CMB - Agreed. Notification of Possible Micropile Obstruction to CN1252 and possible CN1300 work was sent to CN1251 Contractor. COR was rescinded. CLOSED; NO FURTHER ACTION	
1252-0113	01/09/13		Relocation of TBM Retrieval Shaft - Columbus Ave. Restoration	1				+261,057	Modify Bid Item GE-3 (Utility Demo, Sewer, Road Demo, Pavement Restoration, etc.) to relocate the TBM Retrieval Shaft to 1731-1741 Powell Street - (Includes Utility Button Up and Site Restoration Only) 07/24/13 - Information presented to CMB during review of Trend Log. CMB requested LS Bid Item be broken-down based on contract work to see how much money would be put in to perform the restoration button up cost. In addition the CMB requested the item description be change to "Columbus Ave. Restoration" in order to not confuse it with PCC 10 Retrieval Shaft work. COMPLETE; NO FURTHER ACTION: CMOD #21	CMOD #21 Approved
1252-0114	07/24/13	97	Ellis Shaft – TAM ES2-01 and ES2-17	2		Agree to Merit	08/28/13	-0-	BIHJV's subcontractor, CJA-NCC, discovered gravel material within the drill spoils from two separate Ellis Shaft TAM installations, TAM ES2-01 and ES2-17 08/14/13 - Item reviewed at CMB during review of Trend/Change Log COR's. GBR's will be checked to see if gravel material is known to exist in the drill location. 08/28/13 - Merit info presented to CMB - Agreed	
1252-0115	08/07/13	98	Ellis Shaft – TAM ES2-16	2		Agree to Merit	08/28/13	-0-	BIHJV's subcontractor, CJA-NCC, discovered gravel material within Ellis Shaft TAM installations, TAM ES2-1 08/14/13 - Item reviewed at CMB during review of Trend/Change Log COR's. GBR's will be checked to see if gravel material is known to exist in the drill location. 08/28/13 - Merit evaluation presented to CMB - Agreed	
1252-0116	08/08/13	99	MOS – AWSS Vault Over pour @ South Headwall)	2	CMB 0134	Agree to Merit Agree to Cost	09/25/13	+2,394	BIHJV: "While performing AWSS work at the MOS South Headwall, Synergy crews found the mechanical joint Tee bolts, required for the AWSS point of connection, to be completely encased in concrete. The concrete encasement appeared to be concrete over pour remaining from a previous contractor's AWSS vault wall pour." 08/14/13 - Item reviewed at CMB during review of Trend/Change Log COR's. 09/25/13 - Merit evaluation presented to CMB - Agreed. 09/25/13 - Eng. Est. presented to CMB for cost NOT TO EXCEED \$2,400 - Agreed	
1252-0117	08/15/13	100	Ellis Shaft TAM ES2-08	2		Agree to Merit	08/28/13	-0-	BIHJV: "August 12, 2013, BIHJV's subcontractor, CJA-NCC, struck a hard unknown object while drilling the Ellis Shaft TAM ES2-08." 08/28/13 - Merit evaluation presented to CMB - Agreed CMB requested a investigation plan to be developed and included in this COR if the plan is implemented. COR Rescinded. CLOSED; NO FURTHER ACTION	

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1252-0118	08/23/13	101	Ellis Shaft TAM ES2-11	2				-0.	BIHJV's subcontractor, CJA-NCC, discovered gravel material within Ellis Shaft TAM installations, TAM ES2-11 09/11/13 - Viewed at CMB during review of Trend/Change Log COR's.	
1252-0119	09/03/13	102	UMS Jet Grout Column 18 DSC Headwall	2				-0.	While drilling down on column #18 at the UMS south headwall, BIHJV's subcontractor, CJA-NCC, encountered a hard unknown obstruction. 09/11/13 - Item reviewed at CMB mtg. during review of Trend/Change Log. 10/16/13 - DSC presented for merit approval - No action was taken by the CMB. The CM will investigate if the 1252 Contractor received the 1251 As built information by the start of operations. COR Rescinded. CLOSED; NO FURTHER ACTION	
1252-0120	09/05/13	103	Retrieval Shaft Additional Slip Lining Pipe Qty	4				-0.	RFI 251.1 SFMTA Response: Specification 33 31 00 1.01.A.22 Sewer Work, states, " Slip lining existing 3-foot by 5-foot brick sewer with 16-inch and 24-inch diameter HDPE Pipe (polyethylene pipe) nominal size SDR 26." As such, slip lining is to be performed for both the 16" and 24" diameter HDPE pipe. Branches indicated in the supplied sketch to be relined along Stockton and Columbus are acceptable. In addition, the 33-ft long branch that crosses the alignment at CTL 86+35 must also be relined. Acceptable alternative (to fused HDPE) pipe materials and sizes for this branch can be proposed by BIH. BIH shall submit the propose alternative for this branch of pipe for SFMTA review. The use of coupled PVC is not acceptable." 09/11/13 - Item viewed at CMB mtg. during review of weekly Trend/change log. No dwg for this work only a table. CM Team working with designer to make the determination. Item now being tracked under PCC 16. CLOSED; NO FURTHER ACTION.	
1252-0121	09/06/13	105	Retrieval Shaft Relocation of Seismograph	1				-0.	BIHJV: "BIHJV's instrumentation subcontractor, Wang, was directed to relocate one of the vibration monitoring devices (Seismograph) installed at the Retrieval Shaft area to monitor vibration induced by demolition operations of the existing Pagoda Theater building." 09/11/13 item reviewed at CMB meeting during review of weekly Trend/Change log. CMB doesn't agree with the relocation charge and requested a better definition of the item. 01/22/14 - Item viewed at CMB as an status update. SFMTA letter No. 241 sent to Contractor denying merit. CLOSED; NO FURTHER ACTION.	
1252-0122	04/19/13	89	UMS - Suspended Remobilization of Jet Grout Rig	7				+52,305	BIHJV: "The SFMTA directed BIHJV/CJA-NCC to suspend the planned remobilization of the Jet Grout Rig at the UMS location due to external affairs with local UMS businesses." 09/11/13 - Item reviewed at CMB mtg. during review of weekly Trend/change log. CMB questioned the timeliness of the COR also requesting a better definition of the item. Item has been elevated to the Issue Resolution Ladder (IRL) process.	
1252-0123	09/10/13	104	Retrieval Shaft - Additional Sewer Slip Lining 16" HDPE Pipe	4				+98,337	BIHJV: "BIHJV submitted RFI Nos. 275, 275.1 and 275.2 requesting clarification about specific sewer slip lining runs at the Retrieval Shaft, see Attachment Nos. 2, 4 and 6. The SFMTA responded, via RFI No. 275.2, stating that the slip lining is to be installed in a stacked configuration with the 24" over the 16" HDPE pipe, see Attachment No. 7. BIHJV and Synergy believe the SFMTA's response to install stacked HDPE slip lining pipes is additional work as the contract documents do not support this statement." 10/02/13 - Item reviewed at CMB mtg. during review of the weekly Trend/change log update. The CM states the DSC maybe eliminated. Waiting for a response from PUC now there is a as built condition. Letters are being written between SFMTA and SFPUC. 01/22/14 - Item viewed at CMB mtg as an update to potential cost exposure.	

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1252-0124	Notification - 9/17/13, PCC - 12/11/13		PCC 17	Green Street Sewer Changes	2		Agree to Merit	9/25/2013	+459,476	In preparation to beginning slip lining work at the intersection of Columbus/Green/Stockton, the Contractor performed a site investigation of the existing 3'x5' brick sewer. The Contractor discovered 4 unknown pipes intersecting the sewer. Received email from DPW on Oct 18 regarding proposed new direction to spray mortar sewer line in lieu of slip lining. DPW also requested additional slip lining on Columbus from Sta. 83+50 to Sta. 85+50. 09/25/13 - DSC presented for merit approval - Agreed. CMB directed the CM Team to ask the Contractor for recommendation to slipline as much of the sewer line as possible without rerouting the conflicting pipe lines. 01/22/14 - Item viewed at CMB mtg as a status update to projected cost exposure. Item will be tracked under PCC17.	
1252-0125	10/24/13		PCC 14	Modifications to AWSS Facilities at 4th and Bryant Streets	1				+33,749	Deletion of 12" AWSS diagonal sleeved pipe crossing and hydrant lateral. Installation of 12" AWSS restrained pipe and hydrant lateral. 10/16/13 - Draft PCC reviewed at CMB. The Board is in agreement with the modification. 10/23/13 - Engineers estimate for new work \$136,478 and deleted work (\$163,382) was presented to the CMB. PCC will be forwarded to the Contractor to price the work. In addition a cost estimate will be done for the work which would have been under the 1300 contract.	
1252-0126	10/14/13	108		Ellis shaft and Old Navy Grouting	2				+500,000	BIHJV's subcontractor, CJA-NCC, claims to have discovered material (cemented zones) different than that described in the Geotechnical Baseline Report in the Ellis Shaft and Old Navy Grouting Zones. 10/23/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. The CM stated this item will be rejected, due to a lack of information being supplied by the Contractor to validate the COR. SFMTA sent Letter No. 247 & 253 denying merit.	
1252-0127	10/25/13		FA CO 8	Remove and replace material at Retrieval Shaft CSM wall	1				+22,300	Contractor to remove hazardous material (approximately 250 CY) found in the footprint of the Retrieval Shaft Cutter Soil Mix (CSM) wall and replace with both clean material found on-site (approximately 190 CY) and import material (approximately 60 CY). 10/30/13 - Item reviewed at CMB during review of weekly Trend/Change log. Work to proceed on FA for a NTE amount of \$22,300.	
1252-0128	10/03/13		FA CO 7	Acceleration of Work Activities at Retrieval Shaft	1				+5,000	SFMTA to compensate BIHJV for premium time incurred on October 5th, 2013 to accelerate the completion of the site work and soundwall at the Retrieval Shaft. 11/06/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. 01/22/14 - Item reviewed at CMB mtg as a status update to potential cost exposure.	
1252-0129	10/30/13		0	UMPs on 96-inch Sewer	2				-0-	BIHJV's subcontractor Wang Technology claims to have encountered a DSC (brick structure) while drilling for utility monitoring points on Howard Street. 11/06/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log.	
1252-0130	Notification - 11/8/13, PCC - 12/9/13		PCC 16	Ret Shaft Sewer Changes	2				+642,048	BIHJV's subcontractor Synergy Project Management claims to have encountered the following DSCs while performing an investigation into planned slip lining work at the intersection of Columbus/Union/Powell: Internal clearance issues, unforeseen lateral connections, mixed debris and grease buildup inside sewer, and tighter radius than was anticipated for the planned junction structure. 11/20/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. The Board suggested the CM Team ask the PUC to tell us what they would like the Contractor to do. 02/05/14 - FACO 10 was presented for consideration to add a 16" pipe. The CMB took no action. Direction was given to investigate the use of the pipe and to determine the most cost effective approach to reach PUC's desired equivalency of the 36" pipe removed.	

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1252-0131	11/13/13	FA CO 9	Obstruction hit at CSM panel W6	2	CMB 0146	Agree to Merit Agree to Cost	12/11/13	+7,829	BIHJV's subcontractor Drill Tech claims to have encountered a DSC (unknown steel members) while performing Cutter Soil Mixing (CSM) on panel W6 at the Retrieval Shaft. 11/20/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. This item will be tracked on FA. 12/11/13 - Merit evaluation presented to CMB - Agreed. EE presented for cost NOT TO EXCEED \$9,000 - Agreed	
1252-0132	11/12/13	0	Material Hardness at Retrieval Shaft	2				TBD	BIHJV's claims to have encountered ground material characteristics that are significantly harder than anticipated based on the information provided during the negotiations of PCC 10 (Relocation of Retrieval Shaft). 11/20/13 - Item reviewed at CMB mtg. during review of weekly Trend/Change log.	
1252-0133	PCC - 11/25/2013	PCC 15	Deleted AWSS Work at Union St and Columbus Ave	1				(180,976)	PCC 15 issued to: 1.) Delete all work associated with the removal and disposal of the Auxiliary Water Supply System (AWSS) utilities as shown on Contract Drawing No. AW-501.1 Rev.0.2.) Delete all work associated with furnishing and installation of AWSS utilities as shown on Contract Drawing No. AW-501.9 Rev.0. Note: Monitoring of existing AWSS line to be performed in lieu of installation of new AWSS utilities. 12/11/13 - Item reviewed at CMB during review of weekly Trend/Change log. Item has been elevated to the Issue Resolution Ladder (IRL) process.	
1252-0134	PCC - 12/27/2013	PCC 18	Retrieval Shaft Site Supervision	1				TBD	PCC 18 issued to provide for the Contractor's supervision and engineering services during the compensation grouting activities at the Retrieval Shaft. 01/08/14 - Item reviewed at CMB meeting during review of weekly Trend/Chang log. 01/29/14 - PCC presented for review. CMB agreed with change.	
1252-0135	Notification - 12/18/13		Retrieval Shaft Comp Grout Array 045 Obstruction	2				-0	BIHJV's subcontractor, Drill Tech, encountered a concrete obstruction at the Retrieval Shaft location on December 17th, 2013 when performing survey layout of the design location for several of the comp grout holes in the 045 array. 01/08/14 - Item reviewed at CMB meeting during review of weekly Trend/Chang log. The CM reported the Contractor will be notified there is no merit for this change request. SFMTA denial letter No. 270 sent to Contractor.	
<b>Contract 1252 Totals</b>								<b>+3,715,335</b>	<b>Total Changes and Potential Change (trends) to the contract are currently \$3,715,335</b> <b>Out of Scope Changes to the Contract for Relocation of TBM (Trend 79, PCC 10) to be paid out of CPT690, funded separately. Not include in total above and being tracked separately from original Program Costs of \$1.5783B</b>	
<b>CONSTRUCTION TRENDS (Based on #1252 Trending Log and CMod) - SUBTOTALS:</b>								<b>+3,715,335</b>	<b>The \$3,715,335 represents an UNDERRUN of allocated contingency.</b> <b>Current Balance = (23,658,463 - 3,715,335 = \$19,943,129) This does not include potential reimbursements from utilities.</b>	
<b>DESIGN TRENDS</b>										
FD-001	07/31/10	084-0001	Narrowing of Platform at UMS	1	CMB-0006	Agree	08/04/10	(800,000)	[In "Current Forecast" - Sep2010 Cost Report.]	
FD-002	07/12/10	084-0002	Redux of Station Emergency Ventilation Fans (UMS)	1	CMB-0009	Agree (Conditionally)	08/25/10	(2,000,000)	Further actions: Designer required to receive Fire/Life/Safety approval before proceeding with this change. Designer to allocate cost impacts by Station (Current figures are "place-holders.". [In "Current Forecast" - Sep2010 Cost Report.]	
FD-002	07/12/10	085-0001	Redux of Station Emergency Ventilation Fans (CTS)	1	CMB-0009	Agree (Conditionally)	08/25/10	(500,000)	Further actions: Designer required to receive Fire/Life/Safety approval before proceeding with this change. Designer to allocate cost impacts by Station (Current figures are "place-holders.". [In "Current Forecast" - Sep2010 Cost Report.]	

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FD-003	07/31/10	085-0002	Lowering of CTS	1	To be verified	Info Only	08/25/10	+7,000,000	Presented to CMB for information/consideration.	
FD-004	07/29/10	084-0003	UMS Structural Configuration	1	CMB-0007	Agree	08/18/10	(8,000,000)	[In "Current Forecast" - Sep2010 Cost Report.]	
FD-005	08/22/10	084-0004	UMS Alternate Station Access/Vent Shaft @ Union Square	1	CMB-0010	Agree	12/29/10	(22,500,000)	Documentation to be filed.	
FD-006	08/03/10	084-0005	Station Headwalls - UMS	1	CMB-0008	Agree	08/18/10	-0-		
FD-006	08/03/10	086-0002	Station Headwalls - MOS	1	CMB-0008	Agree	08/18/10	-0-		
FD-007	08/03/10		Cross-passages	1	CMB-0018	Agree	09/15/10	-0-		
FD-008	07/30/10		Trolley Re-route @ Columbus & Powell	1	CMB-0017	Agree	09/15/10	+2,000,000		
FD-009	10/06/10	082-0003	ECP to Modify Sidewalk Vault Demolition and Construction Sequence to Facilitate Construction of Joint Utilities Trench and Future UMS Station	1	CMB-0019	Agree	12/15/10	+3,000,000		
FD-010	10/06/10	082-0004	Redesign Stockton Street Sanitary Sewer to conform to SFPUC Sewer Criteria that preclude placement of relocated sanitary sewer under sidewalks	1	CMB-0020	Agree	11/17/10	+2,000,000		
FD-011	10/06/10	082-0005	Reconfigure Routing of Water, Sewer and Gas laterals from buildings on north side of Ellis Street	1	CMB-0021	Agree	11/17/10	+500,000		
FD-012	10/06/10	082-0006	Recognize cost transfers from design allowances allocated to contingency to explicit line items in final design estimates	1	CMB-0022	Disagree	11/17/10	-0-		
FD-013	10/06/10	082-0007	Increase Extent of Sub-sidewalks Vault Secondary Closure Walls and Waterproofing	1	CMB-0023	Agree	11/17/10	+4,100,000		
FD-014	10/06/10	082-0008	Include OCS system for rerouting trolley buses to Fifth Street	1	CMB-0024	Agree	12/15/10	+3,100,000		
FD-015	10/06/10	082-0009	Subsidewalk Vault Secondary Closure Walls for Buildings at 800 Market and 838 Market	1	CMB-0025	Agree	11/17/10	+1,000,000		
FD-016	10/06/10	085-0003	Underpinning of Mandarin Tower	1	CMB-0011	over taken by FD-021	01/19/11	+5,000,000	Additional Information Pending.	
FD-017	10/06/10	085-0004	CTS Ground Improvement	1	CMB-0012	over taken by FD-021	01/19/11	+10,300,000	Additional Information Pending.	
FD-018	10/06/10	084-0006	UMS Apple Store Entrance	1	CMB-0013	Disagree	11/10/10	-0-	Additional Information Pending.	
FD-019	10/06/10	086-0003	MOS TOD Configuration	1	CMB-0014	Agree	11/10/10	TBD		
FD-020	10/06/10	084-0007	UMS Emergency Stair #4 Relocation	1	CMB-0015	Agree	11/10/10	TBD		
FD-021	01/14/11	085-0005	CTS Lowering and Stations Reconfiguration	1	CMB-0027	Agree	01/19/11	(18,000,000)	Agreement with changes to project configuration only. Additional Information required related to cost and schedule impacts. No agreement on Design cost impact, Design costs directly related to this change to be tracked separately	
FD-022	02/16/11	084-0008	Sewer Replacement along Geary & O'Farrell	1	CMB-0029	Agree	02/23/11	(134,000)	This trend has both an EPC number as well as a Construction Trend Number. See also Construction Trend No. 1251-0003	
FD-023	11/17/10	087-0001	Emergency walkways through crossover cavern changed from outside the main tracks to between the main tracks.	1	CMB-0032	Agree	07/27/11			
FD-024	11/17/10	087-0002	Diamond crossover on surface segment to a tandem (universal) crossover.	1	CMB-0033	Agree	08/24/11	(350,000)		
FD-025	04/13/11	083-0001	Bid Option for TBM Retrieval Shaft		CMB-0034	Agree	04/13/11	(10,000,000)	Will require changes to Bid Schedule to incorporate Traffic, Utilities and Pavement Demo/Restoration as incidental costs to the Bid Option. Estimated DP1 cost impact is approx. 80-100 hrs. of engineering time.	
FD-026	05/31/11	084,085,086	Air Replenishment System for Stations	1	CMB-0040	Agree	07/13/11	+1,245,000	Install air replenishment system at MOS, CTS and UMS to address the requirements of the SFFD Bulletin 5.07. The air replenishment system will be used to fill firefighter's self-contained breathing apparatus during firefighting operations in the three subway stations.	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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					Approval Action	Approval Date	Actual/Forecast			
FD-027	07/21/11	082-0010			CMB-0043	Agree	08/03/11	+500,000	1) Add secondary closure wall to supplement recently completed primary closure wall built by owner to isolate the sub-sidewalk basement of 1 Stockton Street (Apple Store). 2) Modify position of joint trench (and all associated conduits, ducts etc.) for secondary closure wall to be constructed.	
FD-028	08/03/11	086-0004			CMB-0052	Agree	09/07/11	+500,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. <b>Project Controls estimated \$321,645.</b>	
FD-029	08/08/11	085-0006			CMB-0053	Agree	09/07/11	+1,000,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. <b>Project Controls estimated \$411,895.</b>	
FD-030	08/08/11	084-0009			CMB-0054	Agree	09/07/11	+1,000,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. <b>Project Controls estimated 733,420.</b>	
FD-031	10/31/11								Accessibility Improvements at the SE corner of Union Square (UMS)	
FD-032	10/31/11								Union Square Entrance Reconfiguration (UMS)	
FD-033	10/31/11							+21,040,000	Additional Compensation Grouting due to Tunnel Settlement Alert and Trigger Levels (All Stations)	ECP dated 11/17/11. ECP being routed for approval.
FD-034	12/09/11				CMB-0062	Agree	12/14/11	+450,000	Operational Performance and Safety Enhancement at 4th and King	SFMTA Operations requested that the design of the 4th & King tie-in work be expanded to include a number of improvements at the junction involving the turn-back area extending to the scissors crossover at 6th & King. SFMTA Ops confirmed that the requested changes result in an arrangement that is consistent with standard operation practices and therefore does not involve new or unacceptable risks. CS 1553 Memorandum No. 0081. Conditionally agreed upon verification/resolution of Buy America issue for the switches. <b>3/14/12: "Buy America" issue no longer applicable. Revised ECP element - remove H&amp;K switch machines and replace with hydraulic/120V switch machines such as Nortrak or equal.</b>
FD-035	06/26/12				CMB-0071	Agree	07/11/12	+1,215,000	Tunnel Air Replenishment System	Design and construct a fire fighter air replenishment system for Central Subway tunnel as described in SF Fire Code 511.2, Bulletin 5.07 except as noted in the Central Subway Request for Approval of Variance for the ARS to SFFD on March 5, 2012, and subsequently approved by SFFD. Design Impact: ROM - \$215K Construction Impact: ROM - \$1M
FD-036	06/26/12				CMB-0072	Agree	07/18/12	+2,200,000	Surface Segment Sewers - 4th St.	Replace current unreinforced brick crown from 1906 as it may not be able to withstand loading for construction of the CS trackway section. Reconstruct manholes between Brannan and King Streets as existing are in conflict with proposed rail. Replace service laterals and provide sleeves for future replacement. Additional potential scope option of \$1.5M-Sewer and \$2.3M-Force Main may be requested. If so, it will be Cost to SFPUC
FD-037	08/27/12				CMB-0077	Agree (Conditionally)	08/29/12	+500,000	Platform Display System Signs	Modify Stations (Contracts 1253, 1254 and 1255) and Surface, Track and Systems (Contract 1256) technical specifications and drawings for the Platform Display System (PDS) to match the changes made to the PDS units being supplied under the Integrated Systems Replacement (ISR) Project, Contract No.1260. <b>08/29/12 - CMB agreement condition upon follow up action to evaluate procurement by CN1260</b>

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FD-038	11/7/2012 06/05/13	Elongated Sidewalk Bulb-out at Chinatown Station		CMB-0121	Agree	06/05/13	+36,000	<p>CTS Sidewalk Bulb out (Southwest corner Stockton/Washington To bring the Central Subway Project - Chinatown Station in closer conformance wit the City's General Plan, SF Planning Department in its May, 2012 GPR Letter (recommends) making design changes specifically the extension of the sidewalk bulb-out at Stockton Street to help create a "station plaza". This elongated bulbout on the southwest corner (SWC) of Stockton and Washington Streets in front of the station headhouse would also include bike racks, benches, trees and other landscape features.</p> <p>08/05/13 - CSDG designer estimate cost is not a CS expense. Addl funding source will need to be establish by San Francisco Planning to support the investigation study</p> <p>Design Impact: Estimated Construction Cost ROM \$36,200            Construction Impact:            Estimated ROM 97 Hrs.: DPW Pavement/Sidewalk Design Modification            Estimated ROM 60 Hrs.: CSDG bus door/mirror/tree/bike rack coordination</p>	
<b>FINAL DESIGN TRENDS (Based on All ECPs) - SUBTOTALS</b>							<b>+4,902,000</b>	<b>Incorporated budget increases have been absorbed by allocated and unallocated funds and the program budget to date remains \$1,578,300,000.</b>	
<b>OTHER TRENDS</b>									
X51-001	07/31/10	082-0001	1251 Revised estimate, escalation impact and contingency.	7			+9,532,314	Cost Transfer #0033 (Base \$\$), 0033a (Allocated Contingency), 0036 (Base \$\$ Escalation , 0036a (Allocated Contingency Escalation). [Sep2010 Cost Report]	BT-0033, BT-0033-A, BT0036, BT-0036-A
X51-002	07/31/10	082-0002	Form B Credit for 1251 Utilities	7			(7,697,949)	Reserve and Contingencies removed as per communications with PG&E. This is consistent with the 1250 utility agreement. [ Cost Transfer #0034 - Aug2010 Cost Report].	BT-0034
X52-001	07/31/10	083-0001	1252-(TUN) Revised estimate, escalation impact and contingency	7			(2,165,462)	Cost Transfer #0035 (Base \$\$), 0035a (Allocated Contingency), 0037 (Base \$\$ Escalation , 0037a (Allocated Contingency Escalation). [Sep2010 Cost Report]	BT-0037, BT-0037-A
X03-001	08/31/10	003-0001	OEWD's Pilot Training Program	7			+75,000	Workforce training pilot program in conjunction with the City/County's Office of Economic and Workforce Development (OEWD). Provides specialized training to SF residents to perform tunneling work. Central Subway financial responsibility being investigated. Requires further clarification	
X53-001	07/18/11	084-0001	CS 155-2 (DP2) CBP4 - Construction Budget Adjustment YOY	7	CMB-0044	Agree	07/27/11	Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure	
X53-002	10/25/11		Change UMS Advertise Date to April 4th, 2012					DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.	
X53-003	04/11/12	084-0002	CN1253 (UMS) Construction Budget Adjustment 90%				+55,720,600	CMB is currently vetting the 90% estimate of \$221,534,723 which represents a \$XX increase from the 65% base amount in 2010\$. Increase would deplete current YOY dollars and require use of unallocated contingency.	
X53-004	06/26/12	084-0002	Approve/Execute/Certify durations change for UMS Contract					Shortened the duration for Approve/Execute/Certify - UMS Contract from 40 to 24days to reflect an optimistic but doable duration for contractor submittals.	
X54-001	07/13/11	085-0001	CS 155-2 (DP2) CBP5 - Construction Budget Adjustment YOY	7	CMB-0045	Agree	07/27/11	Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure	
X54-002	10/25/11		Change CTS Advertise Date to May 23rd, 2012		CMB-0061	Agree	12/28/11	DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.	
X54-003	11/02/11		Change CTS Advertise Date to February 8th, 2012					Change CTS Advertise Date from May 23, 2012 to February 8, 2012 (-74 working days)	
X54-005	12/06/11		Revisions to CTS Construction Schedule		CMB-0060	Agree	12/28/11		
X54-006	12/07/11	085-0002	CS 155-2 (DP2) CBP4 - Construction Budget Adjustment - allowed	7					
X55-001	07/18/11	086-0001	CS 155-2 (DP2) CBP6 - Construction Budget Adjustment YOY	7	CMB-0046	Agree	07/27/11	Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure	
X55-002	10/25/11		Change MOS Advertise Date to June 25th, 2012					DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.	
X55-003	11/02/11		Change MOS Advertise Date to May 23rd, 2012					Change MOS Advertise Date from June 25, 2012 to May 23, 2012 (-22 working days)	

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**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

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X55-004	06/26/12	Change MOS Advertise Date to Aug 20, 2012						Change MOS to August 20, 2012		
X56-001	10/25/11	Change STS Advertise Date to July 27th, 2012						DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out the Station's Advertise Dates. STS Advertise Date is staggered from Station's Advertise Dates.		
X56-002	12/14/11	STS Construction Schedule Revision for Equipment Procurement								
X56-003	06/26/12	Change STS Advertise Date to October 1, 2012						Change STS Advertise Date to October 1, 2012		
X40-001	10/19/11	028-0001 SFPUC CDD Updated Budgets	7		Authorized		+505,127	1250 SFPUC CDD Monthly Service Report Final & 1251 SFPUC CDD Estimate	BT-0172, BT-0177	
X80-001	10/19/11	071-0001 DP1: CS 155-1 Modifications No. 2 & 3	see Prof. Serv		Authorized		+560,585	Modification No. 2: \$395,584.59, Modification No. 3: \$165,000. Individual details listed in Professional Services. See trend 1551-0002,1551-0005 - 1551-0009	BT-0170, BT-0171, BT-0173	
X80-002		071-0002 DP1: CS 155-1 Modification No. 4	7		Authorized		+135,898	Modification No. 4: \$135,898 Individual details listed in Professional Services. See trends 1551-0010 - 1551-0014.	BT-0187	
X80-003	10/27/11	029-0001 Increase City Auditor Budget	7		Authorized		+50,220	Reduce unallocated Contingency to increase City Auditor budget as authorized in Budget Authorization #51.	BR#51, BT-0181	
X80-004	10/27/11	232-0001 Increase SFCTA Budget	7		Authorized		+20,000	Increase SFCTA budget per Budget Authorization #51 to conduct travel forecast (TEP CEQA Modeling) to satisfy PMO review and SFMTA Fleet Plan light rail vehicle.	BR #51, BT-0182	
X80-005	7/1/10, 11/2/10, 3/24/11	072-0001 DP2: CS 155-2 Modification No. 1	7		Authorized		+1,010,000	Modification No. 1: \$1,010,600 Individual details listed in Professional Services. See trends 1552-0002, 1552-0003 and 1552-0005.	BT-0194, BR#53	
X80-006	5/6/10, 7/25/11, 9/22/11	072-0002 DP2: CS 155-2 Exercised Options	see Prof. Serv		Authorized		+366,771	Individual details listed in Professional Services. See trends 1552-0001, 1552-0007 and 1552-0014.	BT-0023, BT-0194	
X80-007	11/08/11	151-0001 Operations SFMTA Transit Services			Authorized		+50,000	CSP request services to support and test OCS for 30/45 trolley reroute. Authorized per Budget Revision #53	BR #53, BT-0189	
X80-008	09/01/11	081-0001 SFMTA Safety, Training, Security & Enforcement Div PCOs	7		Authorized		+60,000	CSP request PCOs to support 1251 and 1252 construction for one year. Authorized \$60,000 per Budget Revision #45.	BR #45, BT-0190	
X80-009	11/30/11	016-0001 SFMTA Sustainable Streets 30 and 45 re-route	7		Authorized		-0-	CSP request services to support 30/45 trolley reroute. \$162,600 was reduced from DPT staffing plan budget.	BT-0188	
X80-010	11/09/11	073-0001 DP3: CS 155-3 Modification No. 1	7		Authorized		+152,882	Modification No. 1: \$152,882 Individual details listed in Professional Services. See trends 1553-0012 and 1553-0013.	BT-0203	
X80-011	8/9/11, 9/22/11, 10/11/11, 11/9/11	073-0002 DP3: CS 155-3 Exercised Options	see Prof. Serv		Authorized		+1,026,398	Individual details listed in Professional Services. See trends 1553-0001 - 1553-0004, 1553-0006, 1553-0009 - 1553-0011, 1553-0014. Updated from \$971,686 to include Trend 1553-0014.	BT-0203	
X80-012		151-0002 OCS materials procured directly for work in reference to CN1251 CMOD#12.		CMB-0065	Agree	1/25/2012, 2/29/12	+126,149	See also Trend 1251-0023		
X80-013	05/30/12	073-0003 DP3: Provide Vibration Impact Analysis and Extend PC Support Technical and CSP Quality Manager	1				+133,906	Amend #2: Vibration Impact Analysis \$38,380 Amend #3: PC Support Tech \$34,483; Quality Manager - \$61,043	TBD	
X80-014	12/17/12	For combining the stations and track and systems into Contract 1300 (SSTS)	7					Combined all the Station and Track and Systems into one Contract. Removed the buffer float activities from the station to track and systems and overlapped work that can now be done concurrent.		
X80-015	12/17/12	Changing the Bid Opening date and condensing the Contract Duration for Contract 1300	7		Agree	11/14/12		Change bid opening to March 19, 2013 and reevaluated procurement durations, revised calendars for UMS Garage, revised production rates for steel. 11/14/13 CMB Agreed verbally to change @ Mtg #101		
X80-016	02/19/13	Change to Tunnel and CTS interface and buffer float Contract 1300 (SSTS)	7		Agree	01/23/13		Change (MPS) reducing the number of days currently in (from 550 calendar days from NTP to 450 calendar days) for the key interface between CTS and the tunnel completion. Reduced number of days will be issued as part of Add #3 of the 1300 contract. 1/23/13 CMB Agreed verbally to change @ Mtg #111.		
<b>OTHER TRENDS (Based on Various Trends)</b>								<b>+59,662,439</b>	<b>Current Forecast reflects a net +3,537,933 unfavorable impact for all Other Trends.</b>	

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<b>GRAND TOTALS</b>								+68,279,774	Current Forecast reflects an estimated net +68,279,774 3 unfavorable exposure to the project to date. Incorporated budget increases have been absorbed by allocated and unallocated funds and the program budget to date remains \$1,578,300,000.	
<b>PROFESSIONAL SERVICES TRENDS:</b> The following trends are listed for administrative purposes. The dollar amounts are reflected in the "Other Trends" section of this log in the form of cost (budget) transfers - i.e. CCOP's. The total values indicated for each professional contract are for tracking all potential cost exposures and may or may not be approved.										
<b>Contract CS-155-1</b>										
1551-0001	07/30/10		071-0001	Conform Contract Terms per Negotiations from 10/2/09 to 11/6/09	7			-0-	To be addressed in Amendment 1.	Amendment 1 Pending
1551-0002	02/18/11		071-0002	Project Office Delay (Adjustments for OH Rate and Team Productivity impact)	7	Authorized	07/29/11	+101,411	Amendment Signed by ED/CEO 7/29/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #2</b>	Amendment 2 Approved
1551-0003	02/18/11		071-0003	Additional Construction Support for CP-1	7					
1551-0004	02/18/11		071-0004	Redesign Required by Barney's and PUC for CP-2	7					
1551-0005	02/18/11		071-0005	Archeological Monitoring 16.20.C1 (total)	7	Authorized	07/29/11	+197,173	Amendment Signed by ED/CEO 7/29/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #2</b>	Amendment 2 Approved
1551-0006	02/18/11		071-0006	Eyebolts	7	Authorized	07/29/11	+50,000	Amendment Signed by ED/CEO 7/29/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #2</b>	Amendment 2 Approved
1551-0007			071-0007	Secondary Closure Walls 800/838 Market	1	Authorized	07/29/11	+47,400	Amendment Signed by ED/CEO 7/29/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #2</b>	Amendment 2 Approved
1551-0008			071-0008	Delete Optional Tasks - Tasks 1-14	1			-0-	Deleted Options in the amount of (\$529,952) in Amendment has been reversed through Budget Authorization #50. <b>COMPLETE, NO FURTHER ACTION; Amendment #2</b>	Amendment 2 Approved
1551-0009			071-0009	CTS Lowering	1	Authorized	12/08/11	+165,000	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #3</b>	Amendment 3 Approved
1551-0010			071-0010	Modify Sidewalk Vault Demo ECP-FD009	7	Authorized	12/08/11	+39,311	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #4</b>	Amendment 4 Approved
1551-0011			071-0011	Modify Stockton St. Sewer ECP-FD010	7	Authorized	12/08/11	+4,112	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #4</b>	Amendment 4 Approved
1551-0012			071-0012	Reconfigure Utilities N. Side Ellis ECP-FD011	7	Authorized	12/08/11	+2,448	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #4</b>	Amendment 4 Approved
1551-0013			071-0013	Extend SubSidewalk Closure Wall ECP-FD013	7	Authorized	12/08/11	+85,233	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #4</b>	Amendment 4 Approved
1551-0014			071-0014	Reroute OCS to Fifth St. ECP-FD014	7	Authorized	12/08/11	+4,794	Amendment Signed by ED/CEO 12/8/11 <b>COMPLETE, NO FURTHER ACTION; Amendment #4</b>	Amendment 4 Approved
1551-0015			071-0015	Retrieval Shaft Redesign - Sewer By Pass	7			+56,000	Awaiting documentation from Designer	
1551-0016			071-0016	Design Measures for Settlement Protection	7			+99,000	Awaiting documentation from Designer	
1551-0017			071-0017	Incorporate Headwalls MOS/UMS	1	Disagree at this time	11/01/11	+42,000	In letter dated November 1, 2011 DPM responded that until concurrence with DP2 on cost transfer or additional documentation, the requested change is denied.	
1551-0018			071-0018	Prepare Utility Composite	-	Disagree	11/01/11	+50,000	DPM responded that Program does not agree in letter dated November 1, 2011.	
1551-0019			071-0019	Incorporate Cross Passages	1	Disagree at this time	11/01/11	+43,000	In letter dated November 1, 2011 DPM responded that until concurrence with DP2 on cost transfer or additional documentation, the requested change is denied.	
<b>Contract CS-155-1 Total</b>								+986,882	Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP1 allocated contingency in the amount of \$696,483 of a total budget of \$705,000. Additional potential exposure is +\$391,411. Currently, overall contract value remains unchanged in the amount of \$6,500,000.	

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<b>Contract CS-155-2</b>										
1552-0001	05/06/10	072-0001	Optional Task 2.50 and Task 12.07	1		Authorized	05/06/10	+274,775	CS Letter 0473 from ED/CEO Optional Task 2.50 to support art enhancement activities NTE \$164,383 and Optional Task 12.07 to support design structures for Public Art NTE \$110,392.	
1552-0002	07/01/10	072-0002	Expanded Hydraulic Testing at CTS	7		Authorized	07/01/10	+26,100	Estimated cost breakdown is included in the 7/1/10 letter from CSDG and includes signed approval by SFMTA. Amendment No. 1 authorized by ED/CEO on 12/21/11. <b>COMPLETE, NO FURTHER ACTION; Amendment #1</b>	Amendment 1 Approved
1552-0003	10/11/10	072-0003	Additional Soil Borings at UMS Station - Task No. 3.10 Supplemental Investigations	7		Authorized	11/02/10	+34,500	Estimated cost breakdown is included in the 10/11/10 letter from CSDG and includes signed approval by SFMTA. Amendment No. 1 authorized by ED/CEO on 12/21/11. <b>COMPLETE, NO FURTHER ACTION; Amendment #1</b>	Amendment 1 Approved
1552-0004	02/11/11	072-0004	MOS TOD White Paper Proposal	1				+33,847	Conceptual study will assess a potential high rise building at the Moscone station headhouse. Estimated cost breakdown is included in the 2/11/2011 letter from CSDG - <b>On Hold</b> .	
1552-0005	03/24/11	072-0005	CTS - Alternate 5	7		Authorized	03/24/11	+950,000	CS Letter from DED dated 3/24/11 has agreed to a modification of \$950,000 for performing additional work. Amendment No. 1 authorized by ED/CEO on 12/21/11. <b>COMPLETE, NO FURTHER ACTION; Amendment #1</b>	Amendment 1 Approved
1552-0006	06/28/11	072-0006	Audited Overhead Rate Adjustment for Year 2010 - Request for Amendment	7				-0-	Estimated cost of \$406,320 is included in the 6/28/11 letter from CSDG. <b>See 1552-0006 Rev. 1 for most current estimate</b>	
1552-0007	07/25/11	072-0007	REVIT and CAD Support (to City Staff) Option to DP2 Contract (Optional Services Task 12.12)	1		Authorized	07/25/11	+79,200	CS Letter No. 0768 from ED/CEO dated 7/25/11 has authorized Optional Task 12.12 NTE \$79,200.	
1552-0008	08/03/11	072-0008	MOS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0-	CMB did not approve a \$60,000 proposed increase. Document References ECP FD028, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.	
1552-0009	08/03/11	072-0009	CTS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0-	CMB did not approve an \$80,000 proposed increase. Document References ECP FD029, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.	
1552-0010	08/03/11	072-0010	UMS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0-	CMB did not approve a \$100,000 proposed increase. Document References ECP FD030, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.	
1552-0011	08/17/11	072-0011	Audited Overhead Rate Adjustment for Year 2010 - Request for Amendment - Rev. 1	7				+426,322	Estimated cost breakdown is included in the 8/17/11 letter from CSDG. This is a revision to the 6/28/11 letter and cost breakdown.	
1552-0012	08/23/11	072-0012	Station Air Replenishment System	-		Disagree	10/17/11	+36,240	Estimated cost breakdown is included in the 8/23/11 letter from CSDG. DPM responded that program does not agree in letter dated 10/17/11.	
1552-0013	09/01/11	072-0013	COR for Additional Services Related to MOS Constructability Review and Assessment of Alternatives	-				-0-	Cost charged to Task 2.70- part of base work	
1552-0014	09/22/11	072-0014	Proposal for Additional Work to provide Structural Engineering Support (Optional Services)	1		Authorized Optional Task 12.01.C5 only	11/04/11	+35,724	Estimated cost breakdown is included in the 9/22/11 letter from CSDG. Referenced Optional Work Tasks 12.01.C5 and 12.07.C5 - Effort re-evaluated - proposed cost to be resubmitted. <b>CS Letter No. 1232 dated 11/4/11 from Director of Transportation has authorized Optional Task 12.01.C5 for the amount of \$12,796.</b>	Option
<b>Contract CS-155-2 Total</b>								<b>+1,896,708</b>	<b>Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP2 allocated contingency in the amount of \$1,046,324 of a total budget of \$4,890,707. Overall contract value remains unchanged in the amount of \$39,949,959.</b>	
<b>Contract CS-155-3</b>										
1553-0001	08/09/11	073-0001	Authorization to commence optional tasks 9.20J Technical Specifications Item J Facility SCADA	1		Authorized	08/01/11	+259,305	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option

- 1 - Owner Directed Change in Scope
- 2 - Unforeseen Conditions
- 3 - Errors and Omissions
- 4 - Quantity Variation
- 5 - Value Engineering
- 6 - Private Utilities
- 7 - Other

**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	
					Approval Action	Approval Date				Actual/Forecast
1553-0002	08/09/11	073-0002	ation to commence optional tasks 12.05 Architectu	1		Authorized	08/01/11	+257,129	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0003	08/09/11	073-0003	Authorization to commence optional tasks 12.13J Facility SCADA Design	1		Authorized	08/01/11	+169,553	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0004	08/09/11	073-0004	Authorization to commence optional tasks 12.12E traction power cables for CAD production	1		Authorized	08/01/11	+52,800	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0005	09/19/11	073-0005	Proposal to hire Wilson Ihrig to support Acoustics, Noise and Vibration tasks.	7		Authorized	03/08/12	+38,380	Signed by Director of Transportation 3/8/2012. <b>COMPLETE, NO FURTHER ACTION ; Amendment 2</b>	Amendment 2 Approved
1553-0006	09/22/11	073-0006	Proposal to exercise optional task 12.07 Public Art.	1		Authorized	11/04/11	+10,285	Letter dated 9/22/11 to DOM. PMCM response pending. Priced level of Effort assumed for this task. SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task.	
1553-0007	09/27/11	073-0007	Proposal to exercise optional sub-task 12.12 structural design of the OCS attachments.	7				+59,460	Letter dated 9/27/11 to DOM. <b>NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE.</b> PMCM has responded to clarify scope in stations and Tunnel Design. Awaiting resubmittal of request by DP3	
1553-0008	10/05/11	073-0008	Scope Clarification - Add Emergency and Location Signage.	7		Disagree A.12.08- Signage	11/09/11		Letter dated 10/5/11 to DOM. <b>NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE.</b> CS Memo No. 0882 from DOM to DP3 PM considers A.12.08 Signage as part of the work necessary to complete the trackway elements of the scope. The work in question is considered part of the base scope of services.	
1553-0009	10/11/11	073-0009	Proposal to exercise mechanical optional task A 12.11 to design a water line on the FBS station platform.	1		Authorized	11/04/11	+33,000	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0010		073-0010	Proposal to exercise Task 12.01 Surface Segment site Drainage	1		Authorized	11/04/11	+108,240	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0011		073-0011	Proposal to exercise Task 12.02 Sewer Relocation and Analysis Report.	1		Authorized	11/04/11	+81,374	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0012	11/09/11	073-0012	CTS - Alternate 5	7		Authorized	01/18/12	+88,855	Contract Modification No. 1 authorized by ED/CEO on 1/18/12 <b>COMPLETE, NO FURTHER ACTION; Amendment #1</b>	Amendment 1 Approved
1553-0013	11/09/11	073-0013	Proposal for Geotechnical Services	7		Authorized	01/18/12	+64,027	Letter dated October 7, 2011 to DOM. PM/CM response pending. Contract Modification No. 1 authorized by ED/CEO on 1/18/12 <b>COMPLETE, NO FURTHER ACTION; Amendment #1</b>	Amendment 1 Approved
1553-0014	02/06/12	073-0014	Authorization to commence optional tasks 12.12E traction power cables for CAD production, Optional task 2.50 Coordination with Art			Authorized	02/06/12	+54,712	SFMTA Letter 1381 from Director of Transportation dated 2/06/12 authorizing optional tasks 12.12e in the amount of \$41,280 and 2.50 for \$13,432 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0015	03/20/12	073-0015	Proposal for additional services in Response to Approved (ECP) FD-034 Operation Performance and Safety Enhancements to 4th and King and 6th and King.	1				+26,026	FD-034 was updated by CMB on 3/14/12. Proposal transmitted via letter CS1553 No. 0012 dated 3/20/12 to DOM. <b>Amendment #4 PENDING</b>	Option
1553-0016	03/23/12	073-0016	Proposal for additional work - Tunnel Air Replenishment System (Exercise Optional Service)	7		Authorized	04/26/12	+173,119	SFMTA letter 1658 from Director of Transportation dated 4/26/2012 authorizing \$173,119 in optional tasks. Included in FD-035 to be presented to CMB on 6/26/12	Option
1553-0017	05/14/12	073-0017	Extension of PC Support Technician	1		Authorized	05/04/12	+34,483	Signed by Director of Transportation 5/14/12 <b>COMPLETE, NO FURTHER ACTION; Amendment #3</b>	Amendment 3 Approved
1553-0018	05/14/12	073-0018	Extension of CSP Quality Manager	1		Authorized	05/04/12	+61,043	Signed by Director of Transportation 5/14/12 <b>COMPLETE, NO FURTHER ACTION; Amendment #3</b>	Amendment 3 Approved
1553-0019	04/09/12	073-0019	Authorization to commence optional task 12.02 Utility Plans for design of repositioned and reconstructed manholes for the 78 inch diameter sewer on 4th St.	1		Authorized	04/09/12	+52,712	SFMTA Letter 1630 from the Director of Transportation dated 4/9/2012 authorizing optional task 12.02 in the amount of \$52,712 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option

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- 7 - Other

**CENTRAL SUBWAY PROJECT**  
**Project Trend/Change Control Log**

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
					Approval Action	Approval Date	Actual/Forecast		
1553-0020	04/09/12	073-0020	1		Authorized	04/09/12	+109,000	SFMTA Letter 1630 from the Director of Transportation dated 4/9/2012 authorizing optional task 12.12 in the amount of \$109,000 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0021	04/26/12	073-0021	1		Authorized	04/26/12	+173,119	SFMTA Letter 1658 from the Director of Transportation dated 4/26/2012 authorizing optional task 12.11 in the amount of \$173,119 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0022	04/26/12	073-0022	1		Authorized	04/26/12	+30,000	SFMTA Letter 1658 from the Director of Transportation dated 4/26/2012 authorizing the increase in optional task 12.12e in the amount of \$30,000 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0023	05/21/12	073-0023	1		Authorized	05/21/12	+39,204	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.11 in the amount of \$39,204 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0024	05/21/12	073-0024	1		Authorized	05/21/12	+43,638	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.12 in the amount of \$43,638 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0025	05/21/12	073-0025	1		Authorized	05/21/12	+24,328	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.13 in the amount of \$24,328 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
1553-0026	05/21/12	073-0026	1		Authorized	05/21/12	+3,039	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 9.20 in the amount of \$3,039 <b>COMPLETE, NO FURTHER ACTION; OPTION</b>	Option
<b>Contract CS-155-3 Total</b>							<b>7,814,010.46</b>	<b>Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP3 allocated contingency in the amount of \$1,168,995 of a total budget of \$4,598,725. Overall contract value remains unchanged in the amount of \$19,919,526.</b>	

- 1 - Owner Directed Change in Scope
- 2 - Unforeseen Conditions
- 3 - Errors and Omissions
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# CMB LOG

## CENTRAL SUBWAY PROJECT - Configuration Management Board Change Control Log

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1250-0002	Chgs to Sewer on 4th between Howard and Folsom		\$ 107	CMB-0001	Agree	07/12/10
1250-0003	Quantity Adjustment for JT-6 and JT-7		\$ 192	CMB-0002	Agree	08/04/10
1250-0004	Demolition of existing brick and concrete footing on 4th between Howard and Folsom		\$ 170	CMB-0003	Agree	07/12/10
1250-0005	Modify AWSS at 4th/Bryant and 4th/Harrison		\$ 586	CMB-0004	Agree	08/04/10
1250-0006	Install four additional piles and reinforce existing foundation at 401 4th Street		\$ 130	CMB-0005	Agree	08/25/10
FD-001	Narrowing of Platform at UMS		\$ (800)	CMB-0006	Agree	08/04/10
FD-004	UMS Structural Configuration		\$ (8,000)	CMB-0007	Agree	08/18/10
FD-006	Station Headwalls - UMS/MOS		\$ -	CMB-0008	Agree	08/18/10
FD-002	Redux of Station Emergency Ventilation Fans - UMS/CTS/MOS		\$ (3,000)	CMB-0009	Agree (Conditionally)	08/25/10
FD-005	UMS Alternate Station Access/Vent Shaft @ Union Square		\$ (22,500)	CMB-0010	Agree	12/29/10
FD-016	Underpinning of Mandarin Tower		\$ 5,000	CMB-0011	Over Taken by FD-021	01/19/11
FD-017	CTS Ground Improvement		\$ 10,300	CMB-0012	Over Taken by FD-021	01/19/11
FD-018	UMS Apple Store Entrance		\$ -	CMB-0013	Disagree	11/10/10
FD-019	MOS TOD Configuration		TBD	CMB-0014	Agree	11/10/10
FD-020	UMS Emergency Stair #4 Relocation		TBD	CMB-0015	Agree	11/10/10
1250-0016	Additional AWSS modification at 4th/Harrison		\$ 156	CMB-0016	Agree	11/10/10
FD-008	Trolley Re-route @ Columbus & Powell		\$ 2,000	CMB-0017	Agree	09/15/10
FD-007	Cross-passages		\$ -	CMB-0018	Agree	09/15/10
FD-009	ECP to Modify Sidewalk Vault Demolition and Construction Sequence to Facilitate Construction of Joint Utilities Trench and Future UMS Station		\$ 3,000	CMB-0019	Agree	12/15/10
FD-010	Redesign Stockton Street Sanitary Sewer to conform to SFPUC Sewer Criteria that preclude placement of relocated sanitary sewer under sidewalks		\$ 2,000	CMB-0020	Agree	11/17/10
FD-011	Reconfigure Routing of Water, Sewer and Gas laterals from buildings on north side of Ellis Street		\$ 500	CMB-0021	Agree	11/17/10
FD-012	Recognize cost transfers from design allowances allocated to contingency to explicit line items in final design estimates		\$ -	CMB-0022	Disagree	11/17/10
FD-013	Increase Extent of Sub-sidewalks Vault Secondary Closure Walls and Waterproofing		\$ 4,100	CMB-0023	Agree	11/17/10
FD-014	Include OCS system for rerouting trolley buses to Fifth Street		\$ 3,100	CMB-0024	Agree	12/15/10
FD-015	Subsidewalk Vault Secondary Closure Walls for Buildings at 800 Market and 838 Market		\$ 1,000	CMB-0025	Agree	11/17/10
1250-0022	Install additional 30 feet of DIP and new AWSS at 4th/Harrison		\$ 160	CMB-0026	Agree	01/12/11
FD-021	CTS Lowering and Stations Reconfiguration		\$ (18,000)	CMB-0027	Agree	01/19/11
1250-0026	Supporting working around and protecting SFWD existing facilities		\$ 66	CMB -0028	Agree	02/09/11
1251-003	Extending Sewer lines on O'Farrell and Geary - CMod 001		\$ 149	CMB-0029	Agree	02/23/11
1250-0030	Differing site conditions during utility installations - CMod #16 - Public only		\$ 238	CMB-0030	Agree	04/13/11



# CMB LOG

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1251-0004	Additional work related to secondary basement closure wall, 150 Stockton Street		\$ 190	CMB-0031	Agree	04/13/11
FD-023	Change to the emergency walkway configuration in the cross cavern at CTS		\$ -	CMB-0032	Agree	07/27/11
FD-024	Change No. 5 diamond X-over on surface segment to tandem (universal) crossover		\$ (350)	CMB-0033	Agree	08/24/11
FD-025	Bid Option for TBM Retrieval Shaft		\$ (10,000)	CMB-0034	Agree	04/13/11
1251-0002	Installation of concrete slab under joint trench at Stockton and O'Farrell CMod #02 (NTE Total)		\$ 71	CMB-0035	Agree	04/20/11
1250-0029	Adjustment to Additional Excavation and Backfill Bid Item CMod #17		\$ 112	CMB-0036	Agree	05/04/11
1250-0034	Supplement Bid Item TR-06 DPT Traffic Control Allowance CMod #18		\$ 69	CMB-0037	Agree	05/04/11
1251-0009	Supplement Bid Item TR-07- Allowance for Manual Traffic Control with Add'l funds		\$ 263	CMB-0038	Agree	06/01/11
1251-0006	Revising layouts of utilities, northern portion of Stockton Street		\$ 399	CMB-0039	Agree	06/08/11
FD-026	Air Replenishment Systems in the three underground stations		\$ 1,245	CMB-0040	Agree	07/13/11
1250-0036	Rental/Maintenance costs for support of Archeological Trenches - 05/30: SFMTA Board approval due to contract value exceeding the 25% threshold remaining item will be handled through the claims process. CM will provide and update at a later date. 09/12/12: Rental/Maintenance costs for support of Archeological Trenches (Part 1 of 4), (Part 2 of 4), (Part 3 of 4), (Part 4 of 4)		\$ 597	CMB-0041	Agree	09/12/12
1251-0012	Compensate Contractor for additional expenses to modified installation of AWSS on O'Farrell East on Stockton St CMod #07 representing change, now CMod #06 (Refer to Approve CMB-0050, which notes the contract modification amount for this work)		-	CMB-0042	Agree	08/03/11
FD-027	1 Stockton Street (Apple Store) Secondary Closure Wall		\$ 500	CMB-0043	Agree	08/03/11
X53-001	CS 155-2 (DP2) CBP4 (UMS) - Construction Budget Adjustment YOY		-	CMB-0044	Agree	07/27/11
X54-001	CS 155-2 (DP2) CBP5 (CTS) - Construction Budget Adjustment YOY		-	CMB-0045	Agree	07/27/11
X55-001	CS 155-2 (DP2) CBP6 (MOS) - Construction Budget Adjustment YOY		-	CMB-0046	Agree	07/27/11
1250-0012 & 0013	Differing site conditions during utility installations - CMod #21 - Private only		\$ 98	CMB-0047	Agree	08/03/11
1250-0024	Costs associated with support, workaround and protection of existing AT&T utilities - CMod #19		\$ 95	CMB-0048	Agree	08/24/11
1251-0007	Costs associated with design changes to utility layouts along Ellis Street - CMod #05		\$ (435)	CMB-0049	Agree	08/24/11
1251-0012	Additional expenses related to modified installation of the AWSS on O'Farrell East of Stockton St - CMod #06 (Ref. CMB-0042 for original CMod presented for this work)		\$ 278	CMB-0050	Agree	09/21/11
1251-0017 & 0018	Installation of AT&T manholes 5829 and 5830 located on Geary at Stockton - CMod #07		\$ 56	CMB-0051	Agree	09/21/11
FD-028	MOS Revisions to Emergency Ventilation Requirements		\$ 500	CMB-0052	Agree	09/07/11
FD-029	CTS Revisions to Emergency Ventilation Requirements		\$ 1,000	CMB-0053	Agree	09/07/11

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
FD-030	UMS Revisions to Emergency Ventilation Requirements		\$ 1,000	CMB-0054	Agree	09/07/11
1251-0014	Increase Bid Item WD-10 Allowance for Add'l Excavation and Backfill - CMod #09		\$ 200	CMB-0055	Agree	09/14/11
1251-0027	AT&T installation additional cost to accelerate work - CMod #10		\$ 281	CMB-0056	Agree	11/30/11
1251-0019 & 0028	Installation of AT&T manholes 5828, 5831, 113, 5832 and 403 - CMod #11		\$ 188	CMB-0057	Agree	10/26/11
1251-0020, 0030 & 0031	PG&E Field Changes - Cost will be part of the Form B calculations and be included in the reimbursement from PG&E. ( <b>Formally CMod #12 New CMod number is 21</b> )		\$ 89	CMB-0058	Agree	11/02/11
1251-0024 & 0032	PG&E Field Changes - (Formally CMod #13 New CMod number is 19) 1/25: Revision to the number of Kill Tie in locations will reduced this CMod to \$315K when conditions are satisfactorily met. 04/11 : Discovery of the actual number of Kill/Tie locations being 26 instead of 15 will require confirmation from PG&E of the locations and the new cost of scope of work . 05/02: Previously approved CMod for \$349K on 11/16/11. Revised CMod approved for 12 Kill hole locations and "NTE" value. PGE email concurrence presented 05/23/12		\$ 303	CMB-0059	Agree	11/16/11
X54-005	Revisions to MPS - CTS Construction Schedule		\$ -	CMB-0060	Agree	12/28/11
X55-002	MPS - STS Construction Schedule Revision for Procurement of Equipment		\$ -	CMB-0061	Agree	12/28/11
FD-034	STS 4th and King Operational Performance and Safety Enhancements. 12/14/11: Agree contingent up "Buy America" waiver. 03/14: "Buy America" contingency no longer applicable. Revised ECP change element - Removing H&K switches and replace with hydraulic/120V. Revised CSP Design Criteria to reflect element design change. CMB approval of replacement agreed on 03/14/12. Revision made to the approved ECP at Mtgs. #71 & #72.		\$ 450	CMB-0062	Agree	12/14/11
CS-155-2	CS 155-2 (DP2) CTS Construction Budget Adjustment - (65% Submittal)		\$ 45,261	CMB-0063	Agree	12/21/11
1251 -0038 (TO-035 )	CN1251 (3EA) Kiosk Removal; previous work, and Addl (2EA) new work (see CMB 0080 approved on 10/24/12 for \$29,267.83) for all (5EA) Kiosks.		\$ -	CMB-0064	Agree	01/04/12
1251-0023	Overhead Contact System (OCS) Facilities along Folsom St. between 4th & 5th Streets and Installation of Foundations and Poles - <b>CMod #12 (Formally CMod #15)</b> Condition agreed upon verification material from Contractor to be procured is available. (Verified 02/01/12). 02/29: CMod negotiated cost has been revised to incorporate original three items and the add'l OCS work on Folsom St.		\$ 542	CMB-0065	Agree	02/29/12
CS-155-2	CS 155-2 (DP2) UMS Construction Budget Adjustment - (65% Submittal)		\$ 27,986	CMB-0066	Agree	02/01/12
CS-155-2	CS 155-2 (DP2) MOS Construction Budget Adjustment - (65% Submittal)		\$ 22,947	CMB-0067	Agree	02/01/12
1251 - 0033	Installation of Secondary Closure Wall at 1 Stockton St. (Apple Store) - <b>CMod #13 (Formally CMod #14)</b> (Negotiated Direct Cost \$264K, & Negotiated OH Cost \$143K)		\$ 409	CMB-0068	Agree	03/07/12

# CMB LOG

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1251-0034	Additional work related to discovery of conflicting utilities within the subsidewalk basement at 17-19 Stockton Street. (Worst case scenario - "NTE" value) CM team will report actual amount value at a later date.		\$ 346	CMB-0069	Agree	04/04/12
1251-0040, 0041, & 0042	Installation of approximately 150LF in additional AT&T trenching (including conduit packages) and the installation of AT&T Vault No.133 (Reimbursement to SFMTA for this compensation value via the Form B process - <b>CMod #14</b> )		\$ 100	CMB-0070	Agree	04/11/12
FD-035	Tunnel Air Replenishment System (ARS)		\$ 1,215	CMB-0071	Agree	07/11/12
FD-036	Surface Segment Sewers - 4th St. Base and SFPUC Option		\$ 2,200	CMB-0072	Agree	07/18/12
1252-025	UMS Reduced Duration - <i>08/01/12 :Condition upon incorporating correctness to backup documentation as required by &amp; documented in CMB mtg.</i>		\$ -	CMB-0073	Agree (Conditionally)	08/01/12
1251-0050, 0067, 0074 & 0075	Trend #50 - Installation of MUNI 770 Pole at 5th and Folsom Trend #67 - OCS Feeder Work On Folsom Trend #74 - Traffic Signal Modifications At 5th And Folsom Trend #75 - Unforeseen Conditions During Pole Foundation Installation On Folsom		\$ 1,100	CMB-0074	Agree	08/15/12
1251-0068	Additional time related overhead (TRO) costs resulting from the 29EA calendar day Contract extension		\$ 107	CMB-0075	Agree (Conditionally)	10/03/12
1251-0043, 0072 & 0080	Trend #43 FAR for Demolition of existing AT&T Vault #113 and 403 Trend #72 Additional AT&T trench from Vault #5829 and 127 Trend #80 Additional work related to installation of AT&T Vaults #5828, 5829, 5830, 5831, 5832 and 5833.		\$ 129	CMB-0076	Agree (Conditionally)	10/03/12
FD-037	Platform Display System Signs - <i>08/29/12 : Condition follow up action to evaluate procumbent by CN1260)</i>		\$ 500	CMB-0077	Agree (Conditionally)	08/29/12
1251-0037, 0044 & 0045	Gucci Store, Macy's West and Union Square Garage Sewer Installations		\$ 71	CMB-0078	Agree	09/12/12
1251-0052, 0065 and 0070	Trend #52 - Reroute Unforeseen existing waterline discovered along Geary St (east of Stockton St.) Trend #65 - Additional fittings for AWSS lateral and chipping of pole foundation at Market/Ellis Streets Trend #70 - Core drill primary wall and install interior plumbing at Armani and Disney for the completion of fire service water cutover work.		\$ 65	CMB-0079	Agree	10/10/12

# CMB LOG

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1251-0038, 0039, 0054,0062 and 0073	Trend #38 - Reimburse Synergy for JCDecaux's removal of 2EA kiosks and other Central Subway related work (TO #35 for this work approved on 01/04/12 - CMB 0064). Trend #39 - Furnish and install 2EA benches along 5th Street. Trend #54 - Additional waterproofing at FIDM and north end of Crate and Barrel. Trend #62 - Additional waterproofing at Macy's Men's wall . Trend 73 - Additional work to install water and electrical utilities for flower stand on Geary west of Stockton.		\$ 86	CMB-0080	Agree	10/24/12
1251-0077	Additional Work Related to Qwest, TCG and UCCO Infrastructure - Contingent CMod pig to include evidence from all utilities that cost are reimbursable to SFMTA		\$ 41	CMB-0081	Agree (Conditionally)	10/31/12
1251-0047, 0058, 0076, and 0078	Muni Vault 900A, Additional SL Work, Additional OCS Work		\$ 76	CMB-0082	Agree	10/31/12
1251-0049, 0053, 0059 and 0064	Contract Acceleration work and Additional Rebar work at 1 Stockton Street Trend #49 Additional cost related to installation of additional rebar at 1 Stockton Street Trend #53 Additional costs to accelerate Contract work related to AT&T and PG&E vaults Trend #59 Additional costs to accelerate Contract work as required to clear Barneys frontage Trend #64 Accelerate finishing/detailing work on AT&T and PG&E vaults		\$ 41	CMB-0083	Agree	11/07/12
1252	Retrieval Shaft Options (Board Action) for approval presented to the Directors by J.F.		-	CMB-0084	Agree	12/05/12
1252-COR26	MOS - Asbestos Pipe at south headwall - NTE \$30K		\$ 30	CMB-0085	Agree	01/09/13
1252-COR02	Pre-excavation to remove concrete encased sewer line. \$13K increase of original \$45K for a total of \$58K NTE		\$ 58	CMB-0086	Agree	12/19/12
1252-COR15	Additional work to restrain the AWSS line - NTE \$96K		\$ 96	CMB-0087	Agree	12/19/12
1252-COR06	PG&E live electrical delays - NTE \$7,600		\$ 8	CMB-0088	Agree	01/09/13
1252-COR27	MOS Oil Filled Pipe at south headwall - NTE \$8,600		\$ 9	CMB-0089	Agree	01/09/13
1252-COR22	MOS Asbestos Pipe at north headwall - NTE \$6K		\$ 6	CMB-0090	Agree	01/09/13
1252-COR01	AWSS Conflict with Low Pressure Water - NTE \$16,900		\$ 17	CMB-0091	Agree	01/16/13
1252-COR03	AT&T Vault Conflict -4th & Harrison - NTE \$21,089		\$ 21	CMB-0092	Agree	01/16/13
1252-COR07	Oil Filled pipe @ Launch Box - NTE \$10K		\$ 10	CMB-0093	Agree	01/16/13
1252-COR10	MOS - Demo Pea duct bank / SF City 911 fiber optic line - NTE \$4,915		\$ 5	CMB-0094	Agree	01/16/13
1252-COR11	MOS - Traffic Signal line re-route south headwall - NTE \$37,500		\$ 38	CMB-0095	Agree	01/16/13
1252-COR12	MOS - Archaeological Standby North Headwall - NTE \$16,892		\$ 17	CMB-0096	Agree	01/16/13
1252-COR29	MOS - Todco scaffolding reimbursement - NTE \$1,717		\$ 2	CMB-0097	Agree	01/16/13

# CMB LOG

## CENTRAL SUBWAY PROJECT - Configuration Management Board Change Control Log

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1252-COR41	LB Impacts due to live PG&E electrical lines (Flagging) NTE \$1,245		\$ 1	CMB-0098	Agree	01/16/13
1252-PCC01	Revisions to Moscone North Headwall Elevation (Top) NTE \$20,500		\$ 21	CMB-0099	Agree	01/16/13
1252 PCC09	UMS Headwall - Unknown Buried Pipe - NTE \$75K		\$ 75	CMB-0100	Agree	01/16/13
1252-COR.38	Manhole in West side Guidewalls Footprint - NTE \$4,052.17		\$ 4	CMB-0101	Agree	01/23/13
1252-COR39	MOS - 16" Steel Pipe Removal at North east Headwall - NTE \$2,951.99		\$ 3	CMB-0102	Agree	01/23/13
1252-COR46	UMS - Unmarked Steel Pipes (6", 12" and 14") & Duct Bank - NTE \$7,461.14		\$ 7	CMB-0103	Agree	01/23/13
1252-COR47	Retrieval Shaft - Unmarked 10" Steel Pipe / Duct Bank Removal - NTE \$2,201.54		\$ 2	CMB-0104	Agree	01/23/13
1252-PCC11	Cap and Removal of 48" Steel Pipe - NTE \$150,000		\$ 150	CMB-0105	Agree	01/23/13
1252-PCC07	BART Annex Wall - NTE \$15,380		\$ 15	CMB-0106	Agree	01/30/13
1251-05, 46, 51, 61, 63, 66, 69, 79, 81	<b>CMod #24 PG&amp;E:</b> 1. Trend 05 – Add'l wok to work around and shift existing PG&E conduits on Geary Blvd. at 2 locations 2. Trend 46 – Additional cost for enlarging PG&E Vault No. 584 on O'Farrell east of Stockton 3. Trend.51 – Intercept existing PG&E ductbank and terminate into Vault No. 5464 Market/Ellis 4. Trend 61 – Excavate for PG&E service cut-over at 177 Stillman 5. Trend 63 – Excavation and restoration for PG&E gas tie-in and kill holes (Pt.2) 6. Trend 66 – Intercept PG&E conduits at Vault No. 573 at Geary east of Stockton 7. Trend 69 – Removal of abandoned PG&E gas valve (8EA and installation of anodes 8. Trend 79 – Additional work related to the installation of PG&E Vault Nos. 467, 571, 573, 586 and 594 (including joint trench leading to these vaults). 9. Trend 81 – Use of regular concrete as opposed to cover PG&E electrical ductbanks.		\$ 333	CMB-0107	Agree	02/13/13
1252-COR031	Retrieval Shaft Unmarked 12" Steel Pipe - NTE \$1,250		\$ 1	CMB-0108	Agree	02/27/13
1252COR-044	MOS - 16" Steel pipe removal at headwall - NTE \$1,800		\$ 2	CMB-0109	Agree	02/27/13
1252-COR050	MOS - 12" Steel pipe removal at Union/Columbus Streets - NTE \$2,600		\$ 3	CMB-0110	Agree	02/27/13
1252-COR058	10" Steel pipe removal at Union and Columbus Streets - NTE \$860.86		\$ 1	CMB-0111	Agree	02/27/13
1252-COR066	MOS - 12" Steel pipe removal intersection of Union and Columbus - NTE \$3,800		\$ 4	CMB-0112	Agree	02/27/13
1252-PCC03	Modified Stockton St. Detour Signage Plan - NTE \$6,152.60		\$ 6	CMB-0113	Agree	02/27/13
1252-COR048	Removal of 3" x 5" brick sewer at UMS South Headwall - NTE \$12,474.65		\$ 12	CMB-0114	Agree	03/13/13
1252-COR070	LB Jet Grout Quantity Overrun - Bid Item ES-3 - NTE \$599,900		\$ 600	CMB-0115	Agree	04/03/13

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Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1252-COR079	Compensation Grouting - Old Navy - NTE \$70,000		\$ 70	CMB-0116	Agree	04/26/13
1252-COR079	Compensation Grouting - Old Navy (Inefficiencies) - NTE \$152,000		\$ 152	CMB-0117	Agree	05/15/13
1252-COR073	MOS - 16" Pipe removal at NE Headwall - NTE \$989		\$ 1	CMB-0118	Agree	05/08/13
1252-COR076	MOS - 16" Pipe removal at SE Headwall - NTE \$1,116		\$ 1	CMB-0119	Agree	05/08/13
1252-COR081	12" Waterline Tee Connection (MOS) South - NTE \$3,000.63		\$ 3	CMB-0120	Agree	05/15/13
FD-038	Elongated Sidewalk Bulb-out Chinatown Station at Stockton St. (CTS) 1254R - 1300Pkg		\$ 36	CMB-0121	Agree	06/05/13
1252-PCC13	UMS SFWD - Excavate, Support and Backfilling - NTE \$20K		\$ 20	CMB-0122	Agree	06/19/13
1252-COR051	Retrieval Shaft - Elevation Design Conflict (30" Low psi Water / Sewer)		\$ 21	CMB-0123	Agree	07/10/13
1252-PCC06	<del>Additional Instrumentation of BART Tunnel Lining - NTE \$650K - Voided - Superseded by CMB Change #0130</del>		\$ -	CMB-0124	Agree	07/10/13
1252-COR061	Launch Box - Panel - 17 Buried Water Main Obstruction - NTE \$1,100		\$ 1	CMB-0125	Agree	07/24/13
1252-COR077	Compensation grouting at WFB-5 Drilling Obstruction - NTE \$6,125		\$ 6	CMB-0126	Agree	07/24/13
1252-COR083	Ellis Shaft Concrete Obstruction - NTE \$1,424		\$ 1	CMB-0127	Agree	07/24/13
1252-PCC13	SFWD Excavation, Support and Backfilling NTE \$14,100K		\$ 14	CMB-0128	Agree	08/09/13
1252- PCC06	<del>Additional Instrumentation of BART Tunnel Lining - NTE \$305K - Voided - Superseded by CMB Change #0130</del>		\$ -	CMB-0129	Agree	08/07/13
1252-PCC06	Additional Instrumentation of BART Tunnel Lining - NTE \$307,470		\$ 307	CMB-0130	Agree	08/09/13
1252-PCC12	Modification to Tunnel Alignment at Market Street - NTE \$41,470		\$ 41	CMB-0131	Agree	08/14/13
1252-COR037	UMS - 12" Steel Pipe Removal - NTE \$3,379.19		\$ 3	CMB-0132	Agree	08/28/13
1252-COR071	LB Ramp Excavation of Steel Obstruction - NTE \$5,700		\$ 6	CMB-0133	Agree	09/25/13
1252-COR099	MOS - AWSS Vault Over pour @ South Headwall - NTE \$2,400		\$ 2	CMB-0134	Agree	09/25/13
1252-COR024	Ellis shaft Utility Demolition - NTE \$35,628.22		\$ 36	CMB-0135	Agree	10/09/13
1252-COR032	LB Panel W29 Wood Pile - NTE \$41,961.00		\$ 42	CMB-0136	Agree	11/06/13
1252-COR034	LB Panel W28 Wood Pile - NTE \$43,294.00		\$ 43	CMB-0137	Agree	11/06/13
1252-COR042	LB Panel W25 Wood Pile - NTE 42,894.00		\$ 43	CMB-0138	Agree	11/06/13

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Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1252-COR043	LB - Panel W30 Wood Pile - NTE \$14,197.00		\$ 14	CMB-0139	Agree	11/06/13
1252-COR062	LB - Panel P-9 Buried Obstruction - NTE \$41,588.00		\$ 42	CMB-0140	Agree	11/06/13
1252-COR065	LB – Panel P-12 Buried Obstruction - NTE \$40,523.00		\$ 41	CMB-0141	Agree	11/06/13
1252-COR079	Compensation Grouting – Old Navy (Remaining Costs) - NTE \$37,380.00		\$ 37	CMB-0142	Agree	11/06/13
1252-COR009	Impacts due to SFWD low psi water line - NTE \$5,727.00		\$ 6	CMB-0143	Agree	11/06/13
1252-COR017	Impacts @ North and South Headwalls due to live utilities - NTE \$43,219.00		\$ 43	CMB-0144	Agree	11/06/13
1252-COR067	LB – Panel P-10 Buried Obstruction - NTE \$9,984.00		\$ 10	CMB-0145	Agree	11/06/13
1252-FA-009	Obstruction hit at CSM panel W6 - NTE \$9,000		\$ 9	CMB-0146	Agree	12/11/13
1277- COR02	Demolition of parapet wall - NTE \$8,054.88		\$ 8	CMB-0147	Agree	02/05/14
1277- COR03	Hauling and disposal of Styrofoam debris NTE \$4,037.78		\$ 4	CMB-0148	Agree	02/05/14
	<b>Total</b>		<b>\$ 83,694</b>			