

CMB Meeting Minutes #180

DATE: August 14, 2014

MEETING DATE: **August 06, 2014**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:00 PM

ATTENDEES: J Funghi (JF), A. Hoe (AH), R. Redmond (RR), (ML), B. Lebovitz (BL), M. Latch (MK), S Tisell (ST), M. Acosta (MA), A. Clifford (AC), E. Stassevitch (ES), L. Zurinaga (LZ), B. Ward (BW)

COPIES TO: Attendees: S. Farhangi (SF), M. Henry (MH), M. Vilcheck, (MV), M. Kobler, (MK) J. Park (JP), J. Wang (JW), K. Shah (KS), R. Nguyen (RN), J. Xia (JX), V. Chow (VC), S. Jefferis (SJ), S. Espinal (SE), R. Hansen (RH), D. Kuehn (DK), B. Byrne (BB)
File No. M544.1.5.0890

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

SUBJECT: Configuration Management Board Meeting # 180 – Rev. No. 0

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

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	A. Clifford provided updated information of the pending construction milestone changes affecting cross passages 1 thru 5 for members of the Board not presented at the contract 1252 workshop (see attached).	
2-	A. Clifford presented for evaluation of merit COR 111 Material Hardness a Retrieval Shaft and Cutter Soil Mixing. During excavation of the retrieval shaft the Contractor claims to have encountered ground condition material that was significantly harder than anticipated. The CMB agreed to no merit for this issue, citing materials encountered (Franciscan rock) at the depth encountered should have been expected as indicated in the geotechnical report for site and surface. The CMB directed the RE to review CMod #20 and the Retrieval shaft total work to be performed, to see what information can be extracted to build a case for a credit, suggestion this issue should be discussed at a future CN1252 Partnering session.	
3-	M. Acosta presented PCC 14 Traffic Signal and Streetlight Changes at STS - The Contractor has submitted 49 RFI's related to road way lighting and traffic signal plans in several geographical locations along 4th Street. The Contractor has determined 19 of the 28 RFI responses to date have cost and schedule impact. A rough order of magnitude by the Contractor estimates the additional work to be around \$150K. MA stated there are an additional 10 RFI's to be answered, related to this work. The CMB agreed with sending a PCC to the Contractor to price the work for the 49 RFI's. Instructing the RE to put on record a response to the Contractor, clarifying SFMTA's position that the 32 additional days to complete the work referred to in the Contractor's	

ITEM #	DISCUSSION	ACTION BY DUE DATE
	letter #35, is not considered to be on the critical path, therefore it does not constitute a time impact delay.	
4-	As an administrative action S. Tisell presented FACO #25 for approval of completed potholing work associated with the relocation of the OCS pole. The Contractor determined the temporary design location as shown in (OV-101) drawing was not possible to install station piles, and overhead support cables. To move the work forward SFMTA provided a design location for installation of the pole in relation to the pile. The CMB agreed to the cost of \$2K for potholing work being tracked on force account. Instructing the RE to issue a PCC to the Contractor to price the work for relocation of the OCS pole foundation and a credit for work not being done.	
5-	As an administrative action S. Tisell presented FACO #30 for approval of completed work associated with Inadequate CDF Along Stockton Street at UMS. The Contractor claims the CDF material is not as depicted in CN1251 as-built drawings, under the sidewalk on the east side of Stockton Street, where type B piles are to be installed. The CMB agreed to the amount of \$50K for work associated with CDF repairs to be tracked on force account. Documentation presented today is for partial work in the area. It is anticipated this item will require future construction work for stabilization along the O' Farrell intersection.	
6-	S. Tisell presented UMS finding of facts for a different site condition in support of the Contractor's RFI 157.2, which depicts an incomplete PG&E ductbank between vault 470 and 467, along Stockton Street between Maiden Lane and Geary Streets. The incomplete ductbank work was to be installed under the previous utility contract 1251. The CMB agreed with sending a PCC to the Contractor to price the work. Due to the time sensitive nature the CMB authorized the work to precede for a not to exceed amount of \$32,980 , to be tracked on force account basis, provided the RE receives written confirmation from PG&E of their agreement of the total cost to be reimbursed. In addition the RE was instructed to review the CN1251 as-built drawings to determine what was actually installed by the Contractor.	ST 08/20/14
7-	Items on today's agenda not discussed will be included on next week's agenda.	

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	AC/MLe	08/13/14	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	AC/Mle	08/13/14	Open
2 & 3	08/28/13	08/28/13	1252 – COR 97 & 98 – gravel encountered action plan from Engineering of Record (DP1)	AC/Mle	08/13/14	Open
5	09/25/13	10/02/13	1300 – PCC CTS 0001 - Contractor Cost Proposal	MK	08/13/14	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	08/13/14	Open
1	10/16/13	10/16/13	1252 – COR 102 - Determine if the Contractor received 1251 as built information before they began operations	AC/Mle	08/13/14	Open
1	10/16/13	10/16/13	1252 – COR 102 - Graphic showing the location of the headwalls control line	AC/Mle	08/13/14	Open

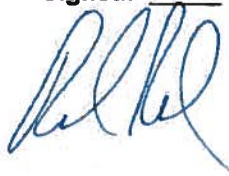
central subway

3	10/23/13	10/23/13	1252 – PCC 014 - Contractor Cost Proposal	JW/AC	08/13/14	Open
2	11/06/13	11/06/13	1252 - COR 017 – Notify utility of cost as Form B bill update under CN1250 or CN1251	AC/Mle	08/13/14	Open
2	11/13/13	11/13/13	1300 – Setup a meeting with DT to confirm the use to control traffic	VC	08/13/14	Open
NA	11/13/13	11/13/13	1252 – Confirm who is being billed for the use of PCO's at 5 th St.	AC/Mle	08/13/14	Open
2	11/20/13	11/20/13	1300 – PCC 00X - PGE Traffic Control - Utility verification letter	MK	08/13/14	Open
9	12/11/13	12/11/13	1252 - Trend Log Segment Measuring Frequency line item credit (1.3M)	AC/Mle	08/13/14	Open
2	01/08/14	01/08/14	1300 - PCC - Contractor Cost Proposal - Geoprobos	RR/ST	08/13/14	Open
4	01/08/14	01/08/14	1300 - PCC - Contractor Cost Proposal - Joint Trench Conduits	MK	08/13/14	Open
4	01/15/14	01/15/14	1300 - CTS confirmation from PG&E of cost for concrete encasement of lines	MK	08/13/14	Open
1	07/02/14	07/02/14	1300 - STS PCC 006 AT&T Addl Vaults and Ductbank - written agreement of cost & reimbursement to CSP	MA	08/13/14	Open
1	07/23/14	07/23/14	1300 - STS PCC - Reloc. of Comm. & Elect. Cabinets - Ref NC-1	JW	08/20/14	Open
6-	08/06/14	08/06/14	1300 - UMS - Confirmation of what was installed from CN1251 as built dwgs. (JT-302)	ST	08/20/14	Open
6-	08/06/14	08/06/14	1300 - UMS - Letter from PG&E validating intent to reimburse SFMTA for cost of JT work @ Maiden Ln - FACO #31	ST	08/20/14	Open

Meeting adjourned at 5:40pm

These meeting minutes have been prepared by B. Ward and reviewed by R. Redmond, 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: _____ [Date review completed]

 8/14/14

Meeting Agenda

Project No. M544.1, Contract No. CS-149
Program/Construction Management
Configuration Management Board (CMB) Meeting No. 180
August 06, 2014
3:00pm – 5:00pm
 Central Subway Project Office
 821 Howard St. 2nd Floor
 Main Conference Room

Attendees:

John Funghi		Brad Lebovitz		Luis Zurinaga	
Albert Hoe		Roger Nguyen			
Mark Latch		Richard Redmond			
Eric Stassevitch		Beverly Ward			

1. **1252** - COR 111 - Material Hardness at Retrieval Shaft - *Merit*
 - Schedule - Contract Milestone Changes - *Information*

2. **1300** - STS - PCC 14 Additional Work Related to Traffic Signals (Trend 6) - *Approval*
 - UMS - FACO #25 Potholing OCS pole at Market/ Ellis - *Approval*
 - UMS - FACO #30 Inadequate CDF along Stockton St. - *Approval*
 - UMS - Incomplete PG&E Ductbank near Maiden Ln - *FACO Approval*
~~CTS - COR 06 - Interim Sewer Routing on Washington St. Eng. Est. - *Approval*~~
(Previously discussed at CMB Mtg. 177 - 07/09/14)
~~CSDG - Construction Support Cost Tracking - *Information*~~

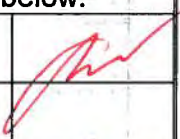





3. **Trend Log** -

4. **Other Business** -

Meeting Attendance Sheet

Project No. M544.1, Contract No. 149
Program/Construction Management
Configuration Management Board Special Meeting No. 180
August 06, 2014
3:00 p.m. – 5:00 p.m.
 Central Subway Project Office
 821 Howard, 2nd Floor
 Main Conference Room

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

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Please enter initials if your name is listed below. Please enter name, affiliation, phone number and email address if your name is not listed below.				
Acosta, Mike	SFMTA	(415) 701-5282	Mike.Acosta@sfmta.com	
Chow, Vivian	SFMTA	(415) 701-5264	Vivian.chow@sfmta.com	
* Clifford, Alex	CSP	(415) 243-0953	Alex.Clifford@sfmta.com	
Farhangi, Shahnam	SFMTA	(415) 554-0721	Shahnam.Farhangi@sfmta.com	
Funghi, John	SFMTA	(415) 701-4299	John.Funghi@sfmta.com	
Haley, John	SFMTA		John.Haley@sfmta.com	
Henry, Melvyn	SFMTA	(415) 701-5719	Melvyn.Henry@sfmta.com	
Hoe, Albert	SFMTA	(415) 701-4289	Albert.Hoe@sfmta.com	
Jefferis, Scott	SFMTA	(415) 238-4679	Richard.Jefferis@sfmta.com	
Kelly, Jim	SFMTA		Jim.Kelly@sfmta.com	
Kobler, Mike	CSP	(415) 850-4750	Mike.kobler@sfmta.com	
Kuehn, David	STV/PMOC	(510) 464-8053	David.kuehn@stvinc.com	
* Latch, Mark	CSP	(415) 701-5294	Mark.Latch@sfmta.com	
Lebovitz, Brad	STV/PMOC	(510) 464-8052	Bradley.lebovitz@stvinc.com	
Nguyen, Roger	SFMTA	(415) 701-4312	Roger.Nguyen@sfmta.com	

central **T** subway

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Park, Joon	SFMTA	(415) 701-4742	Joon.Park@sfmta.com	
Redmond, Richard	CSP	(415) 660-5407	Richard.Redmond@sfmta.com	RR
Shah, Kartik	SFMTA	(415) 701-5678	Kartik.Shah@sfmta.com	
Stassevitch, Eric	CSP	(415) 701-4426	Eric.Stassevitch@sfmta.com	ES
* Tisell, Steve	CSP	(415) 660-5396	steve.tisell@sfmta.com	
Vilcheck Mark	CSP	(415) 701-4293	Mark.Vilcheck@sfmta.com	
Wang, Jane	SFMTA	(415) 701-4287	Jane.Wang@sfmta.com	
Ward, Beverly	CSP	(415) 701-5291	Beverly.Ward@sfmta.com	BW
Zurinaga, Luis	SFCTA	(415) 716-6956	Luis.zurinaga@sfcta.org	LZ

*Steve Tisell was in attendance
but did not sign in.*

BW

NTP				BIH Contract New Date (per bih DRAFT cmod)	Workshop Agreed Milestone Date	Actual Completion Date	Number of days	Current Contract	Delta
1/27/2012	1	834	CP4	5/10/2014	5/10/2014	5/6/2014	834	9/10/2014	-123
1/27/2012	2	923	CP3	8/7/2014	8/5/2014	6/26/2014	921	9/10/2014	-34
1/27/2012	3	929	CP1&2	8/13/2014	8/13/2014	8/6/2014 (TBC)	929	7/19/2014	25
1/27/2012	4	1075	RS	1/6/2015	1/6/2015	12/26/14 (June)	1075	N/A	N/A

1/27/2012 910 7/25/2014

Milestones Per Contract

NO MILESTONE

VACATE RETRIEVAL SHAFT SITE

MILESTONE 1.

COMPLETE CP 1&2
929 DAYS FROM NTP

MILESTONE 2.

COMPLETE CP 3&4
957 DAYS FROM NTP

Milestones Revised

MILESTONE 3.

1075 DAYS FROM NTP

MILESTONE 1.

904 DAYS FROM NTP

MILESTONE 2B.

921 DAYS FROM NTP

MILESTONE 2A.

834 DAYS FROM NTP



Milestones originally envisaged to proceed North to South
Milestones now progress with the work, south to north

Tunneling Contractor had raised concerns regarding excavation work at YBM and UMS in close proximity to the tunnels

SFMTA raised concerns about contractor completing work in North Beach asap and vacating the site to ease disturbance to the community

SFMTA and BIH agreed that completing cross passage 4 early would benefit the project and provide alternate egress from the tunnels, creating a new milestone for north beach would limit impact on the community in this area

- RETRIEVAL SHAFT
- CROSS PASSAGE 1
- CROSS PASSAGE 2
- CROSS PASSAGE 3
- CROSS PASSAGE 4

PILING WORK AT UMS STATION

SLURRY WALL WORK AT YBM STATION

LEGEND

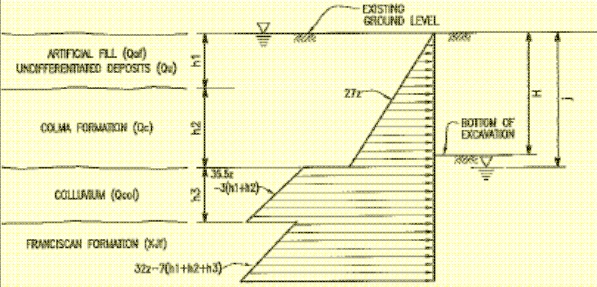
- Third Phase 2
- Third Phase 1
- Muni Metro
- Caltrain
- BART



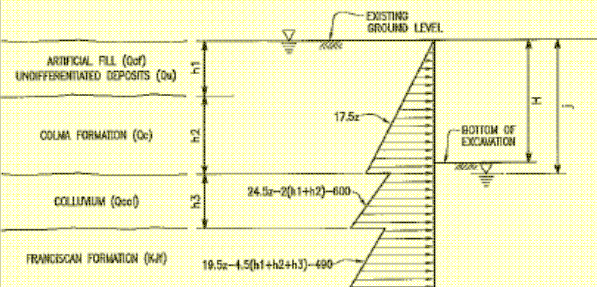
I:\1328B CS DP\CON\1278\Sheet Files\ES - Excavation and Ground Support\ES-012.dwg Lorico Tue May 28, 2013 8:07 am ES-012

DESIGN LATERAL EARTH PRESSURE FOR SUPPORT OF EXCAVATIONS

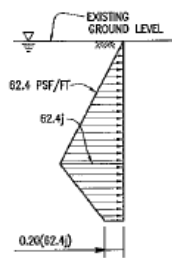
AT-REST PRESSURES



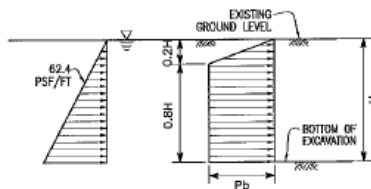
ACTIVE EARTH PRESSURES



NET GROUNDWATER PRESSURE

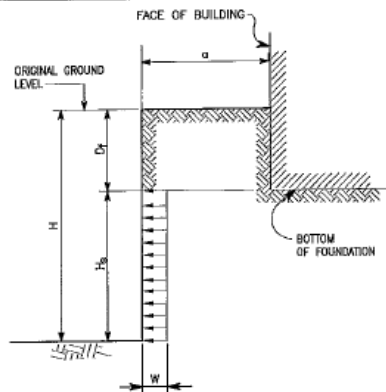


APPARENT PRESSURE DIAGRAM



LATERAL PRESSURE DUE TO SURCHARGE LOADS

BUILDINGS



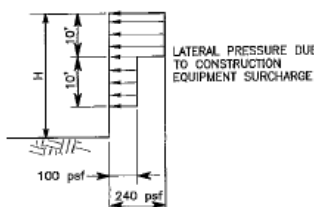
$$W = 0.4N \left(1 - \frac{d_1}{1.5H_0}\right) \text{ FOR } 0 \leq \frac{d_1}{H_0} \leq 1.5$$

$$W = 0 \text{ FOR } \frac{d_1}{H_0} \geq 1.5$$

WHERE:
 N = NET BUILDING CONTACT PRESSURE (PSF)
 $= q_f - 80d_1$
 q_f = THE SUM OF ALL THE DEAD LOADS OF THE STRUCTURE AND LIVE LOADS ACTING THEREON (PSF). (LIVE LOAD MAY BE REDUCED IN ACCORDANCE WITH UNIFORM BUILDING CODE, LATEST EDITION).
 a, H_0, d_1 AS SHOWN (FT).

THIS LATERAL PRESSURE W APPLIES ONLY WHERE BUILDINGS ARE NOT UNDERPINNED.
 TRAFFIC & CONSTRUCTION EQUIPMENT SURCHARGE SHOULD BE APPLIED TO HEIGHT d_1 IN ALL CASES.

TRAFFIC & CONSTRUCTION SURCHARGE



GENERAL NOTES

1. THE LOADING SHOWN ON THIS DRAWING WAS USED FOR THE DESIGN OF THE TEMPORARY TBM RETRIEVAL SHAFT AND SHALL BE USED FOR ANY OTHER TEMPORARY EARTH RETAINING STRUCTURES AT THE TBM RETRIEVAL SHAFT. THESE LOADS SHALL BE USED IF THE EXCAVATION SUPPORT DESIGN IS ALTERED. IN THE EVENT THAT THE DEPTH TO FRANCISCAN FM. IS SHALLOWER THAN SHOWN ON THIS DRAWING, MODIFICATION OF THE LOADS MAY BE CONSIDERED WITH APPROVAL OF DESIGN MODIFICATION BY ENGINEER.
2. CONTRACTOR SHALL PROVIDE SUFFICIENT TOLERANCES FOR EXCAVATION SUPPORT SYSTEM SUCH THAT OUT-OF-PLUMBNESS OF THE EXCAVATION SUPPORT SYSTEM WILL NOT ENDOUR ON THE REQUIRED EXTERIOR STRUCTURAL WALL THICKNESS.
3. CHANGES IN SOIL DESIGN EARTH PRESSURES AND RESISTANCES SHOWN ARE AT CHANGES IN SOIL TYPES AND ARE SUBJECT TO VERIFICATION AND EFFECT ON DESIGN DURING CONSTRUCTION.
4. SHORING WALL AND BRACING SYSTEMS SHALL BE ANALYZED USING THE AVERAGE OF ACTIVE AND AT-REST SOIL PRESSURE IN ADDITION TO HYDROSTATIC PRESSURE DIAGRAM WITH APPLICABLE SURCHARGES FOR ALL STAGES OF EXCAVATION, BRACING REMOVAL AND BRACING RELOCATION. THE SHORING WALL AND BRACING SYSTEM SHALL ALSO BE ANALYZED USING THE APPARENT PRESSURE DIAGRAM FOR ALL EXCAVATION STAGES WITH TWO OR MORE BRACING LEVELS IN-PLACE AS WELL AS ALL STAGES OF BRACING REMOVAL AND BRACING RELOCATION. NO REDUCTION IN SOIL PRESSURES COMPUTED FOR THE FULL DEPTH EXCAVATION CONDITION SHALL BE TAKEN DURING THE BRACING REMOVAL AND RELOCATION STAGES. THE DESIGN OF VARIOUS COMPONENTS OF THE SHORING SYSTEM SHALL BE BASED ON THE MOST-CRITICAL VALUES OBTAINED FROM THESE ANALYSES.
5. SOIL ARCHING SHALL NOT BE ASSUMED IN THE DESIGN OF SHORING MEMBERS.
6. SURCHARGE LOADS:

LATERAL PRESSURE FROM SURCHARGE LOADS SHALL BE SUPERIMPOSED ON SOIL AND HYDROSTATIC LATERAL PRESSURES.
 ALL EXCAVATION SHORING SYSTEMS SHALL BE DESIGNED FOR NO LESS THAN THE TRAFFIC AND CONSTRUCTION SURCHARGE SHOWN ON THIS DRAWING.
 THIS LATERAL PRESSURE IS BASED ON AN ASSUMED CONSTRUCTION EQUIPMENT SURCHARGE OF 600 PSF. FOR MORE SEVERE CONSTRUCTION LOADING, SPECIAL ANALYSIS MUST BE MADE.
 SURCHARGE FROM OTHER SOURCES (E.G., EXISTING STRUCTURES) SHALL BE CONSIDERED IN THE DESIGN OF EXCAVATION SHORING SYSTEMS AS APPROPRIATE.

BEARING CAPACITY

STRUCTURE	ALLOWABLE BEARING CAPACITY (PSF)
TBM RETRIEVAL SHAFT	10,000

THICKNESS OF SOIL LAYER & APPARENT PRESSURE MAGNITUDE

STRUCTURE	h1	h2	h3	P ₀	J
TBM RETRIEVAL SHAFT	22	32	22	13.5H	14+5

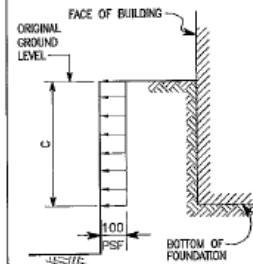
P₀ IS THE APPARENT PRESSURE IN UNITS OF PSF PER FOOT OF HORIZONTAL WALL LENGTH SHOWN IN THE APPARENT PRESSURE DIAGRAM ABOVE.

THE GEOLOGIC CONDITIONS AND CONTACTS ARE INTERPRETATIONS BASED ON AVAILABLE INFORMATION. THE ACTUAL CONFIGURATION OF SUBSURFACE GEOLOGIC UNITS AND MATERIALS MAY DIFFER FROM THESE INTERPRETATIONS.

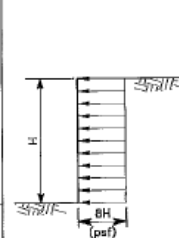
CONTRACTOR SHALL VERIFY VALUES SHOWN AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES DURING ALL STAGES OF CONSTRUCTION.

LATERAL PRESSURE DUE TO EARTHQUAKE

BUILDING



SOIL OR ROCK



LEGEND

- H HEIGHT OF EXCAVATION (ft)
- GROUNDWATER TABLE
- P_w WATER PRESSURE (pcf)
- psf POUND PER SQUARE FOOT
- pcf POUND PER CUBIC FOOT
- J VERTICAL DISTANCE (ft) FROM EXISTING GROUND SURFACE TO WATER TABLE INSIDE SHORING WALLS (TEMPORARY CONSTRUCTION CONDITION)



DESIGNED BY: K. TUNG
 CHECKED BY: M. ALBINO/SW/EA
 DRAWN BY: S. TIM
 IN CHARGE: D. ABRONIA/S
 PROJECT MANAGER: M. FANALE
 SUPERVISOR: K. FERRISS
 DATE: 05/23/2013



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
 DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM
 PHASE 2 - CENTRAL SUBWAY
 TEMPORARY TBM RETRIEVAL SHAFT

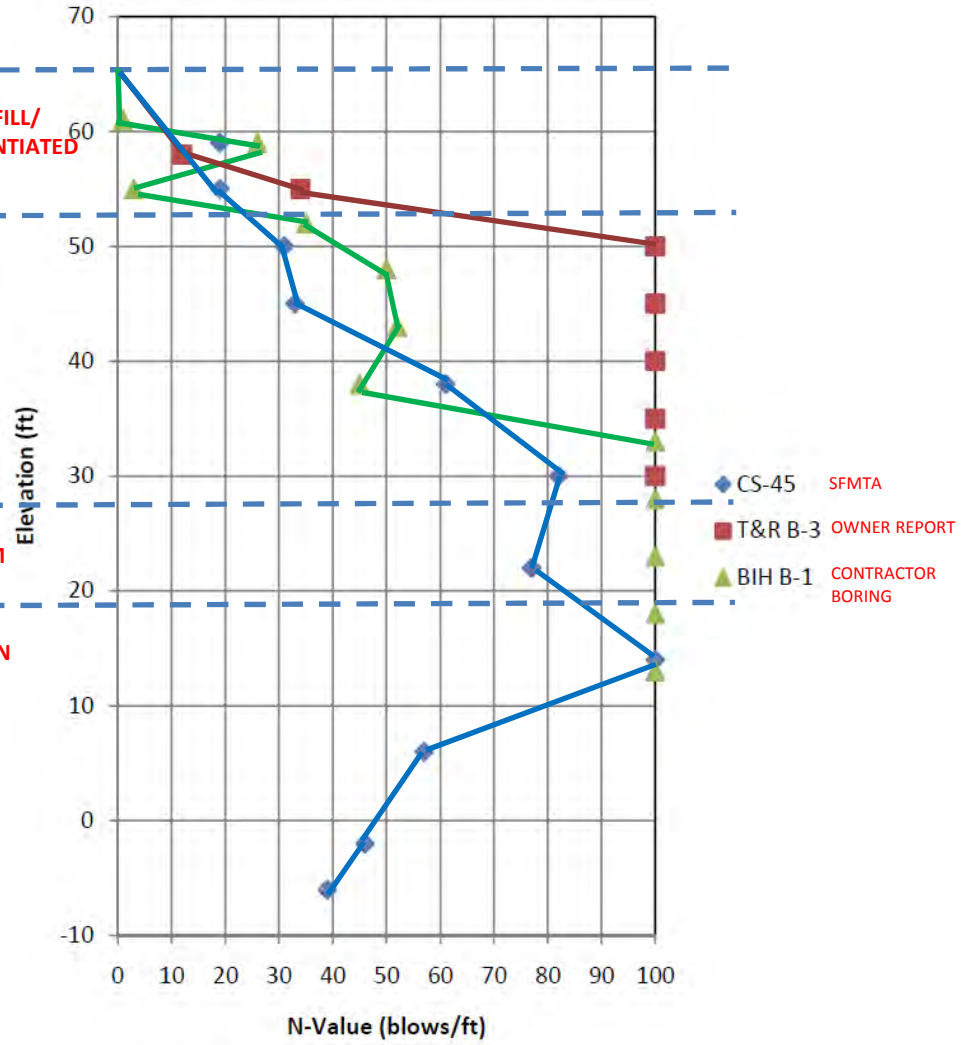
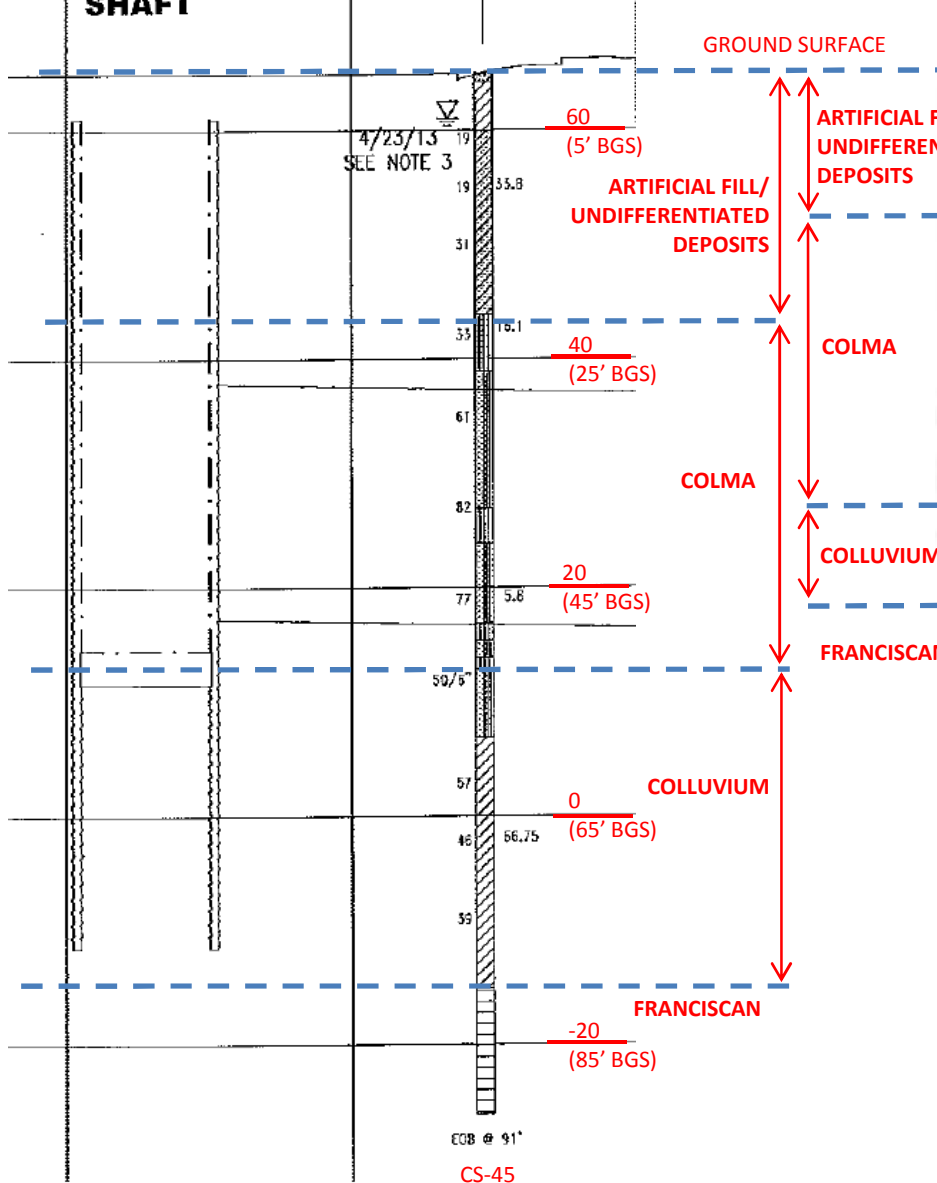
EXCAVATION AND GROUND SUPPORT
 SHORING DESIGN CRITERIA
 SHEET 2 OF 3

PROJECT NO.	1278
DATA CONTROL NO.	CL-24616
DRAWING NO.	ES-012
SHEET NO.	10
REVISION	0

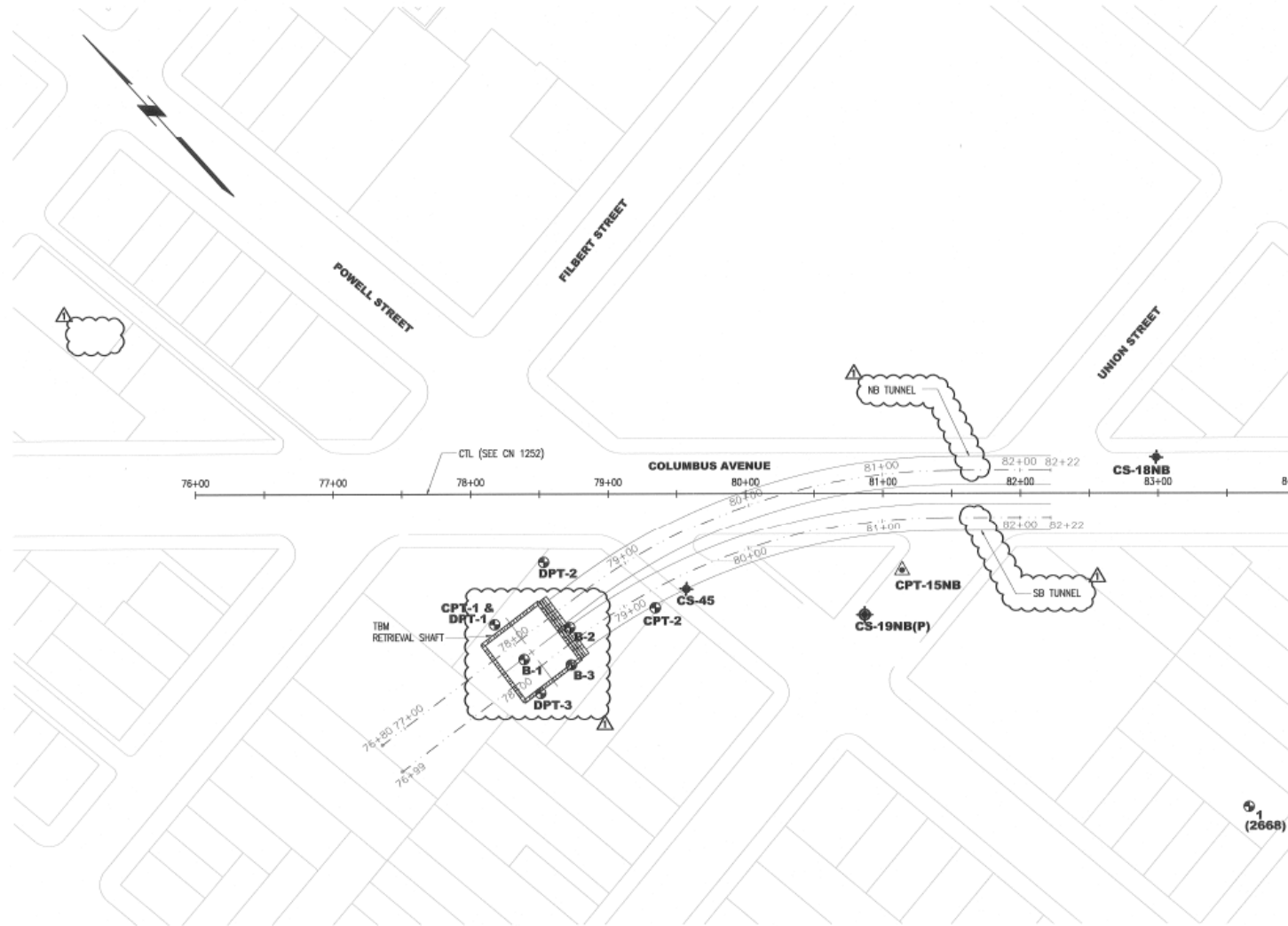
DATE	05/21/2013	DESIGNED FOR BDD	BY	KT	DATE	05/23/2013	CHECKED	MA	DATE	05/23/2013
DATE	05/23/2013	DESIGNED FOR BDD	BY	KT	DATE	05/23/2013	CHECKED	MA	DATE	05/23/2013

DESIGN DOCUMENTS | FIELD INVESTIGATION

TBM RETRIEVAL SHAFT



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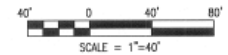


LEGEND

- ◆ BORING FOR CENTRAL SUBWAY
- ▲ CPT FOR CENTRAL SUBWAY
- ⊕ PIEZOMETER FOR CENTRAL SUBWAY
- ⊕ (cloud) EXISTING BORING, CPT OR TEST PIT BY OTHERS

NOTES:

1. BASE MAP DATA PROVIDED BY SFMTA.
2. SEE EXISTING BORINGS IN REFERENCE DOCUMENT (GEOTECHNICAL INVESTIGATION 1731-1741 POWELL STREET LA CORNETA PLACE, SAN FRANCISCO, CALIFORNIA, DECEMBER 1, 2008, PROJECT NO. 2766.03)
3. BORINGS/TEST PITS BY OTHERS INCLUDE UNIQUE I.D. (IN PARENTHESES), THESE LOGS ARE CONTAINED IN PROJECT FILES.
4. ALL BORINGS/PIEZOMETERS/TEST PIT LOCATIONS ARE APPROXIMATE.



FOR ORIGINAL SIGNATURES, SEE CL-24612, REV. 0

07/12/2013	ISSUED FOR CONTRACT 1252 CMOD 18	1	D.P.A.	R.T.	
05/31/2013	ISSUED FOR BID	0			
DATE	DESCRIPTION	NO.	BY	CHECKED	APPROVED



DESIGNED BY: K. STANG
 CHECKED BY: M. KURNENSKAYA
 DRAWN BY: S. YIM
 REVIEWED BY: D. ABRONHMS
 PROJECT MANAGER: M. FOWLER
 PREPARED BY: R. EDWARDS
 DATE: 05/31/2013



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

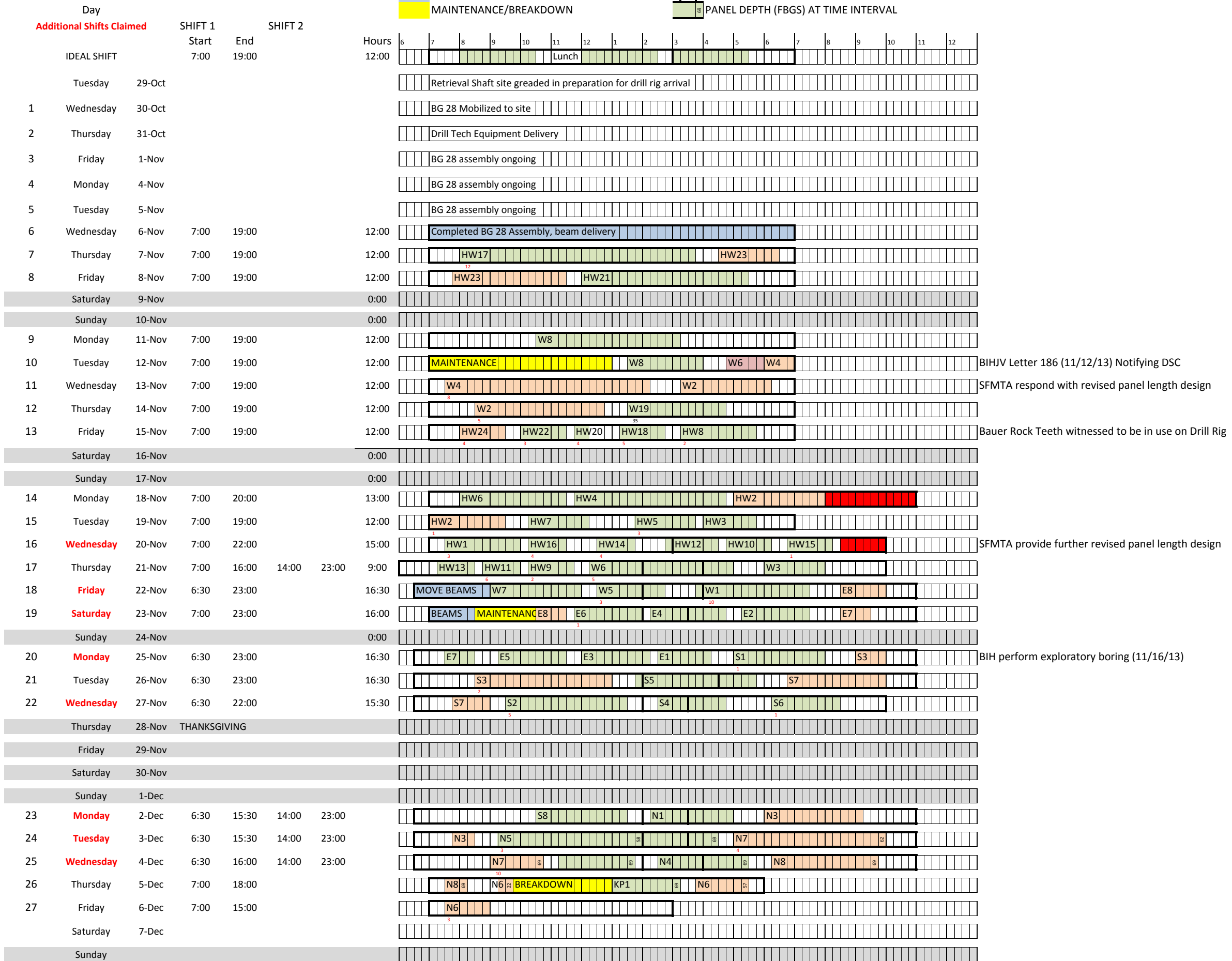
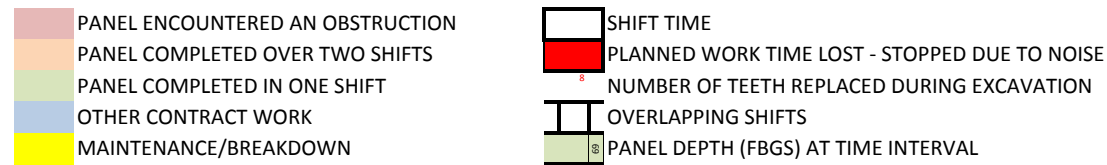
APPROVED

DIRECTOR OF TRANSPORTATION

THIRD STREET LIGHT RAIL PROGRAM
 PHASE 2 - CENTRAL SUBWAY
 TEMPORARY TBM RETRIEVAL SHAFT

GEOTECHNICAL
 EXPLORATION LOCATIONS

CONTRACT NO.	1278
SIGNAL CONTRACT NO.	CL-24612
DRAWING NO.	GT-101
SHEET NO.	6
REVISION	1



finer content (percent passing the US No. 200 sieve), Atterberg Limits. The laboratory tests are presented on the boring logs.

One representative soil sample from B-3 at 15 feet was submitted to CERCO Analytical, Inc. for a corrosivity analysis. The corrosivity test results are attached in Appendix C and summarized in Section 7.6.

5.0 SITE AND SUBSURFACE CONDITIONS

The existing building occupies most of the site; the building has about 30 feet of frontage on Columbus Avenue and 50 feet of frontage on Powell Street. The north and south sides of the site are occupied by 7-1/2-foot-wide, concrete-paved alleyways.

The regional geology map (Figure 3) indicates that the northeastern side of the site is underlain by fill. Based on the results of the borings, CPTs and DPTs, we judge the site is blanketed by 4.5 to 10 feet of fill consisting of medium dense sand and stiff clay with varying amounts of silt and the fill thickness increases towards northeast. However, DPT-2 indicates the fill may be up to 15 feet deep at the DPT-2 location. The fill layer encountered in CPT-2 consists of mostly sandy material and appeared to be consistent with Boring B-3. However, CPT-1 encountered clayey material. The upper portions of the fill contain bricks, concrete, and other debris, the log for CPT-2 indicates the upper few feet of fill in this area may contain loose gravel or large voids.

The fill is underlain by medium stiff to very stiff sandy clay and dense to very dense silty sand that extend to the maximum depth explored (31 feet), the soil samples obtained from Boring B-3 indicated the material at depth may be residual soil³ or completely weathered sandstone. Based on the results of borings we have reviewed at nearby sites and the geology map, weathered sandstone of the Franciscan formation may be present within 40 to 50 feet below ground surface (bgs).

Groundwater was measured in the two CPT locations (T&R, 2000) at a depth of eight feet. This depth corresponds to Elevation 51 and 56.5 feet in CPT-1 and CPT-2, respectively. Boring B-3 (T&R, 2008) encountered groundwater at 54.5 feet which is consistent with previous investigation. The results of the

³ Residual soil consists of soil that has resulted from weathering and decomposition of underlying bedrock.

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

EVALUATION OF MERIT

COR 111

Recommendation:

Accept justification of Merit for COR 111, Retrieval Shaft - Material Hardness Impacts for Cutter Soil Mixing, and Retrieval Shaft Excavation.

Quantum has not yet been established, however impacts may include:

- Additional labor & equipment costs
- Additional material costs
- Additional equipment maintenance, repair, refurbishment and replacement costs

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

Facts:

- The SFMTA issued a contract modification to BIH to relocate the Central Subway TBM retrieval shaft to the Pagoda Theatre site.
 - The SFMTA provided the design for the retrieval shaft structure and the temporary shoring of the structure
 - The SFMTA provided the criteria used in its design (shown on drawing ES-012) which was based on the boring CS-45 taken near the site.
- The package SFMTA provided to the contractor for the retrieval shaft included the following key information:
 - 57 cutter soil mix panels extending to a depth of 75' below ground surface
 - The various soil layers assumed in the design (ES-012 'Thickness of Soil Layer & Apparent Pressure Magnitude') (BGS = Below Ground Surface)
 - to 22' BGS - Artificial fill and undifferentiated deposits
 - between 22' and 54' BGS - Colma Formation
 - between 54' and 76' BGS – Colluvium
 - below 76' BGS – Franciscan
 - A soil boring (CS-45) taken on Powell Street (approximately 100' away). Due to the presence of an existing building at the site, this was the closest available boring location.
 - Boring CS-45 formed the basis for the above soil layers and thicknesses. The boring log showed the following characteristics (see attached):

SFMTA Contract No. 1252

Contractor:

Barnard Impregilo Healy JV (BIH)

- 25'- 40' below ground surface (BGS) N-Values increasing to approx. 80 (blows/ft)
- 40' – 60' BGS, N-Value increasing to 100 (blows/ft)
- 60' BGS and deeper, N-Value decreasing
- A geotechnical investigation report (reference document) for the site dated 2008 including details of previous borings taken at the site.
- Key Dates
 - 10/30/13 – (Wednesday) Drilltech mobilized to site.
 - 11/5/13 – (Tuesday) Assembly of the BG28 drill rig complete
 - 11/6/13 – (Wednesday) Drilling commenced at panel HW17
 - 11/12/13 – (Tuesday) BIHJV Letter 186 Notification of DSC
 - 11/13/13 – (Wednesday) SFMTA advised reduced panel depths
 - 11/16/13 – (Monday) BIH perform exploratory boring adjacent to shaft
 - 11/20/13 – (Wednesday) revised design (panel lengths further reduced) was provided to contractor
- During excavation of the first cutter soil mix panel, the contractor recorded excavating through 'hard' material.
- SFMTA was notified of a DSC by BIHJV Letter 186 dated 11/12/13. Drill Tech adjusted their operations (cutter teeth and air/slurry content of the downstroke mix) to optimize production. They also re-sequenced the CSM operation by relocating from the un-reinforced headwall panels to the reinforced panels of the shaft perimeter walls. This allowed SFMTA's designer time to analyze and ultimately shorten the panel depths of the remaining panels from 75' deep to between 69' and 55'.
- Drill Tech also began working double shifts to minimize overall schedule impacts.
- BIHJV completed an exploratory boring to determine the actual subsurface materials at the location of the excavation. The boring results are summarized as follows:
 - 25' – 40' BGS, N-Values increasing to 50 blows/6"
 - '100 blows/ft' equivalent
 - 40' – 57' BGS, N-Values increasing to 50 blows/4"
 - '150 (blows/ft' equivalent
 - 58' BGS and deeper, N-Values increasing to 50 blows/0.5"
 - '1200 blows/ft - equivalent
- SFMTA and BIH agreed to observe the ground conditions during open excavation of the retrieval shaft to determine the material within the shaft area.

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

Samples were taken at the following elevations, the samples were reviewed by the designer of record and determined to be as follows:

- 12' BGS (elev. 53') Colma (sample taken 2/5/14)
- 25' BGS (elev. 40') Colma (sample taken 2/7/14)
- 33' BGS (elev. 32') Colma (sample taken 2/24/14)
- 38' BGS (elev. 27') Colma/Colluvium (sample taken 2/25/14)
- 46' BGS (elev. 19') Franciscan (sample taken 3/14/14)
- 53' BGS (elev. 12') Franciscan (sample taken 3/20/14)

Justification:

The conditions confirmed in the field during excavation of the retrieval shaft differ materially from those shown in the Central Subway Design Documents.

The borings used for the design of the shaft showed the Franciscan formation to be at least 76' below ground surface. Franciscan material was observed (and sampled) during excavation of the retrieval shaft as shallow as 46' feet BGS, or approximately 30' higher than shown in the design documents.

Using the design documents provided, the contractor could not have reasonably allowed for the material encountered at the retrieval shaft to be as shallow or hard as encountered

The 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.

Quantum has not yet been determined.

The contractor has submitted a revised Change Order for \$259,485.52 for 8 additional shifts.

COR-111 Comprises the following:

Subcontractor Direct Costs

- Labor & Equipment (8 additional shifts)	\$ 150,206.31
- Tooling and Parts	\$ 33,232.83
- Equipment Maintenance	\$ 2,144.19
- BCM-5 Cutter box refurbishment (parts)	\$ 50,546.16
- BCM-5 Cutter box refurbishment (labor)	\$ 14,349.56

SFMTA Contract No. 1252	Contractor:	Barnard Impregilo Healy JV (BIH)
- 15% Markup on material purchases		\$ 12,566.85
- Credit applied (project allowed maintenance)		(\$ 20,000.00)
- Total Subcontractor Direct Costs		\$ 243,045.90
Prime Contractor - Markup		\$ 12,152.30
Prime Contractor – Bond/Insurance (1.68%)		\$ 4,287.33
<u>TOTAL COR-111</u>		<u>\$ 259,485.52</u>

Change Type: (2) Unforeseen Condition

By: _____ Date _____
Alex Clifford
Construction Manager

_____ Date _____
Configuration Management Board Approval

PROPOSED CONTRACT CHANGE

Contract No. 1300 Stations, Surface, Track and Systems Date 8-6-2014
 PCC No. 0014 STS
 PCC Title Traffic Signal and Streetlight Changes
 PCC Initiator Mike Acosta Dept. CM

Description of PCC:

1. Scope of work at 4th and Harrison intersection:
 - a. Delete new trolley pole 405 from scope of work.
 - b. Replace existing 8' mast arm with new 20' mast arm which includes transferring existing signal from old mast arm to new mast arm.
 - c. Add 20LF of traffic signal conduit and 2200LF traffic signal wiring.
 - d. Remove existing Pole Z.
 - e. Relocate 1 pedestrian signal.
 - f. Remove streetlight pole and provide new streetlight and wiring on traffic signal pole (in contract).
 - g. Refer to RFI Nos. 69, 70, 71, 72, 73, 76, 77, 78, 79 and Sketches "SK_STS_ET101", "SK_STS_ET102", "SK_STS_OV112".
2. Scope of work at 4th and Bryant intersection:
 - a. Remove and dispose 4 existing poles and foundations
 - b. Remove existing traffic signal controller and replace with new controller
 - c. Revise 6 traffic signal mounting types
 - d. Refer to RFI Nos. 81, 82, 83, 85, 132, 140, 141, 319, 320, 324, 343 and Sketches "SK_STS_ET103", "SK_STS_ET104".
3. Scope of work at 4th and Brannan intersection:
 - a. Remove 4 existing poles and foundations
 - b. Add 1 traffic signal head
 - c. Demolish traffic signal controller foundation
 - d. Revise 3 traffic signal mounting types
 - e. Refer to RFI Nos. 87, 88, 135, 326, 327, 342 and Sketches "SK_STS_ET106", "SK_STS_ET108".
4. Scope of work at 4th and Townsend intersection:
 - a. Remove 1 existing poles and foundations
 - b. Add 1 traffic signal head
 - c. Revise 1 traffic signal mounting type
 - d. Refer to RFI Nos. 90, 91, 94, 95 and Sketches "SK_STS_ET109", "SK_STS_ET110", "SK_STS_ET111".
5. Scope of work at 4th and King intersection:
 - a. Remove existing controller and foundation
 - b. Remove 3 existing traffic signals
 - c. Provide 2 traffic signal tenon mounts.
 - d. RFI Nos. 96, 97, 136, 137 and Sketches "SK_STS_ET112", "SK_STS_ET113", "SK_STS_ET114".

Spec. Ref.:

Technical Specifications 34 41 13 Traffic Signals

Drawing Nos.: STS Drawings: ET-101, ET-102, ET-103, ET-104, ET-106, ET-108, ET-109, ET-110, ET-111, ET-112, ET-113, ET-114, EL-122, EL-125, OV-112.
Attachments: Sketches: SK_STS_ET101, SK_STS_ET102, SK_STS_ET103, SK_STS_ET104, SK_STS_ET106, SK_STS_ET108, SK_STS_ET109, SK_STS_ET110, SK_STS_ET111, SK_STS_ET112, SK_STS_ET113, SK_STS_ET114, SK_STS_EL122, SK_STS_EL125, and SK_STS_OV112.
The Contractor shall submit a cost proposal and time extension proposal in accordance with General Provisions Section 6.02 B and Section 7.02 B.

Recommended by: _____ Date _____
Mike Acosta, Resident Engineer (SFMTA Representative)

Concur in Principle: _____ Date _____
Ben Volberding, Project Contract Administrator (SFMTA Representative)

FINDING OF FACTS

Contract No. 1300 Stations, Surface, Track and Systems Date 8-6-2014
 PCC No. 0014 STS
 PCC Title Traffic Signal and Streetlight Changes
 PCC Initiator Mike Acosta Dept. CM

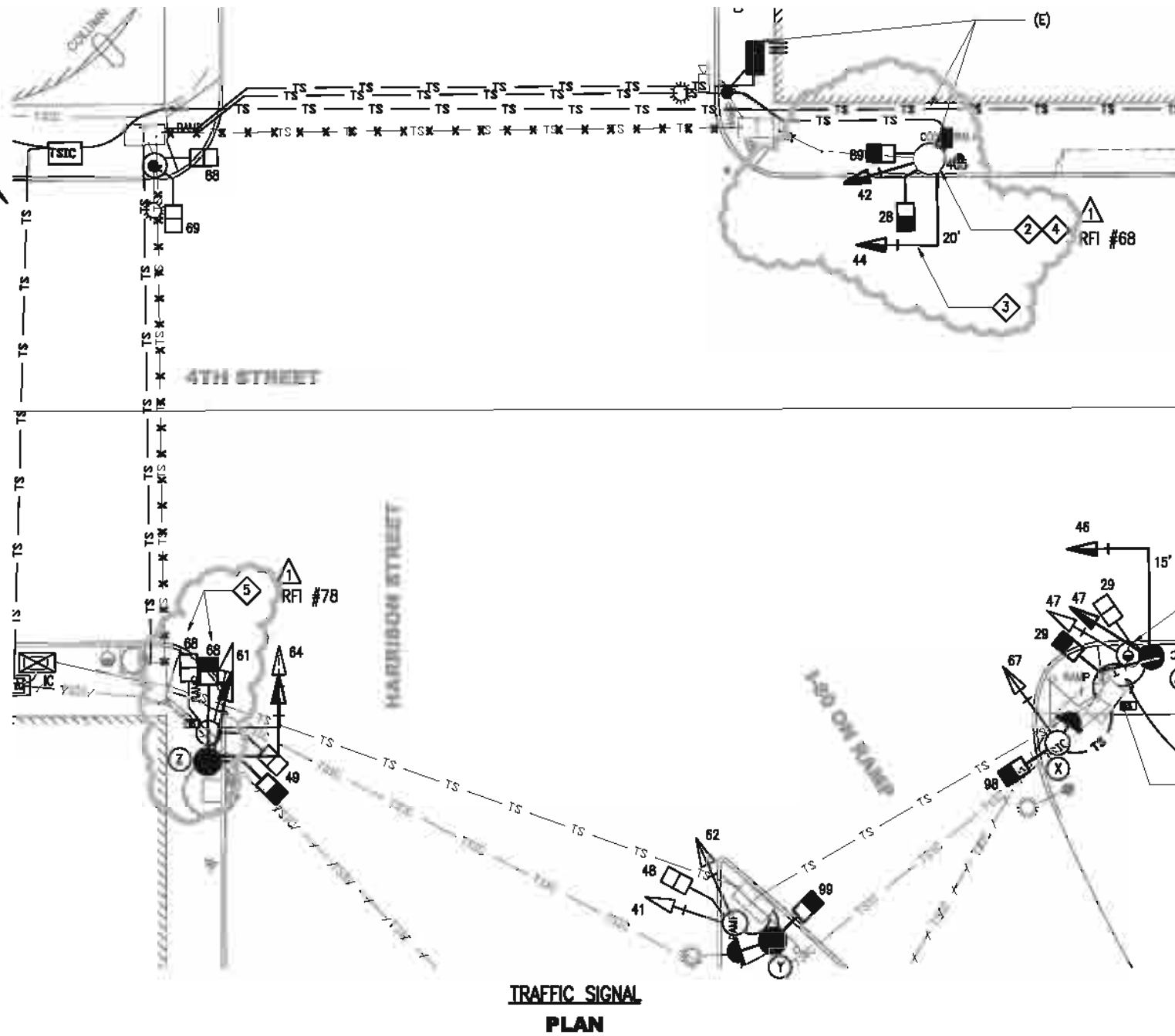
Description of PCC:

1. Scope of work at 4th and Harrison intersection:
 - a. Delete new trolley pole 405 from scope of work.
 - b. Replace existing 8' mast arm with new 20' mast arm which includes transferring existing signal from old mast arm to new mast arm.
 - c. Add 20LF of traffic signal conduit and 2200LF traffic signal wiring.
 - d. Remove existing Pole Z.
 - e. Relocate 1 pedestrian signal.
 - f. Remove streetlight pole and provide new streetlight and wiring on traffic signal pole (in contract).
 - g. Refer to RFI Nos. 69, 70, 71, 72, 73, 76, 77, 78, 79 and Sketches "SK_STS_ET101", "SK_STS_ET102", "SK_STS_OV112".
2. Scope of work at 4th and Bryant intersection:
 - a. Remove and dispose 4 existing poles and foundations
 - b. Remove existing traffic signal controller and replace with new controller
 - c. Revise 6 traffic signal mounting types
 - d. Refer to RFI Nos. 81, 82, 83, 85, 132, 140, 141, 319, 320, 324, 343 and Sketches "SK_STS_ET103", "SK_STS_ET104".
3. Scope of work at 4th and Brannan intersection:
 - a. Remove 4 existing poles and foundations
 - b. Add 1 traffic signal head
 - c. Demolish traffic signal controller foundation
 - d. Revise 3 traffic signal mounting types
 - e. Refer to RFI Nos. 87, 88, 135, 326, 327, 342 and Sketches "SK_STS_ET106", "SK_STS_ET108".
4. Scope of work at 4th and Townsend intersection:
 - a. Remove 1 existing poles and foundations
 - b. Add 1 traffic signal head
 - c. Revise 1 traffic signal mounting type
 - d. Refer to RFI Nos. 90, 91, 94, 95 and Sketches "SK_STS_ET109", "SK_STS_ET110", "SK_STS_ET111".
5. Scope of work at 4th and King intersection:
 - a. Remove existing controller and foundation
 - b. Remove 3 existing traffic signals
 - c. Provide 2 traffic signal tenon mounts.
 - d. RFI Nos. 96, 97, 136, 137 and Sketches "SK_STS_ET112", "SK_STS_ET113", "SK_STS_ET114".

<p>Reason/Need for PCC: 1. Changes are due to design corrections discovered when cross referencing between EL, ET and OV design disciplines and design interfaces between Contracts 1250, 1252 and 1300.</p>
<p>Location/Station: Intersections at 4th/Harrison, 4th/Bryant, 4th/Brannan, 4th/Townsend and 4th/King.</p>
<p>Configuration Control Analysis: The additional work contained in this PCC does not alter the original intent of the contract, which is to provide safe traffic signaling along 4th Street.</p>
<p>Recommended Action: Recommend to approve for merit and issue PCC to the Contractor to obtain a cost proposal.</p>
<p>Estimate: Rough Order Magnitude estimate is \$150,000 based on Tutor Perini Letter No. 35 dated December 17, 2013 for 19 RFIs that require changes. There are subsequent 14 RFIs received after receipt of TPC Letter 35 that require changes.</p> <p>A detail estimate is forthcoming.</p>
<p>Spec. Ref.: 34 41 13 Traffic Signals</p>
<p>Drawing Nos.: STS Drawings: ET-101, ET-102, ET-103, ET-104, ET-106, ET-108, ET-109, ET-110, ET-111, ET-112, ET-113, ET-114, EL-122, EL-125, OV-112.</p>
<p>Attachments: Sketches: SK_STS_ET101, SK_STS_ET102, SK_STS_ET103, SK_STS_ET104, SK_STS_ET106, SK_STS_ET108, SK_STS_ET109, SK_STS_ET110, SK_STS_ET111, SK_STS_ET112, SK_STS_ET113, SK_STS_ET114, SK_STS_EL122, SK_STS_EL125, and SK_STS_OV112.</p>

Recommended by: _____ Date _____
 Mike Acosta, Resident Engineer (SFMTA Representative)

Concur in Principle: _____ Date _____
 Ben Volberding, Project Contract Administrator (SFMTA Representative)

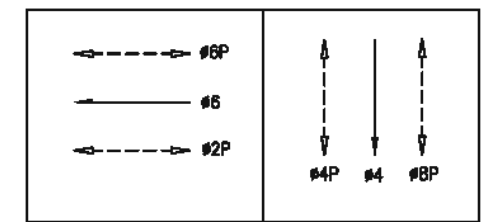


TRAFFIC SIGNAL PLAN

NOTES:

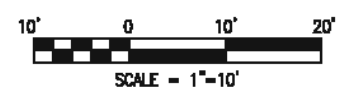
- CONNECT (N) TRAFFIC SIGNAL WIRES TO (E) TRAFFIC SIGNAL WIRES INSIDE (E) PULLBOX.
- DISCONNECT (E) TRAFFIC SIGNAL WIRING FROM (E) TRAFFIC SIGNAL DEVICES ON (E) TROLLEY POLE. PULL (E) WIRING BACK TO (E) TRAFFIC SIGNAL PULL BOX. AFTER INSTALLATION OF (N) 20' MAST ARM, RE-PULL (E) TRAFFIC SIGNAL WIRING FROM (E) PULLBOX THROUGH (E) POLE AND RECONNECT TO TRAFFIC SIGNAL DEVICES. SPLICE CABLES IF NECESSARY.
- REPLACE (E) 8' MAST ARM WITH 20' MASTARM.
- (E) TROLLEY POLE TO REMAIN.
- DISCONNECT (E) WIRING FROM (E) PED SIGNAL NO. 68 AND RELOCATE (E) PED SIGNAL NO. 68 FROM (E) POLE Z TO (N) POLE Z. RECONNECT (E) WIRING TO RELOCATED PED SIGNAL.

PHASE DIAGRAM



PHASE SEQUENCE

G	Y	R		HARRISON ST
R		G	Y	4TH ST
WM	FRH	RH		PED XING 4TH ST NORTH
	FRH	RH		PED XING 4TH ST SOUTH
RH		WM	FRH	PED XING HARRISON EAST
RH		WM	FRH	PED XING HARRISON WEST



FOR ORIGINAL SIGNATURES, SEE CL-23605 REV. 0

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DATE	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
05/25/2012	ISSUED FOR BID	0			



DESIGNED: W. SENG
 DRAWN: W. SENG
 CHECKED: S. PONG
 REVIEWED: T. TOLENTINO
 RECOMMENDED: C. MORGANSON
 APPROVED: R. EDWARDS
 DATE: 05/25/2012

REV. 0
 SEALED BY
 W. SENG



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
 TRAFFIC SIGNALS
 FOURTH STREET AND HARRISON STREET
 TRAFFIC SIGNAL PLAN

CONTRACT NO.	1256
SFMTA CONTROL NO.	CL-23605
DRAWING NO.	ET-101
SHEET NO.	811
REVISION	1

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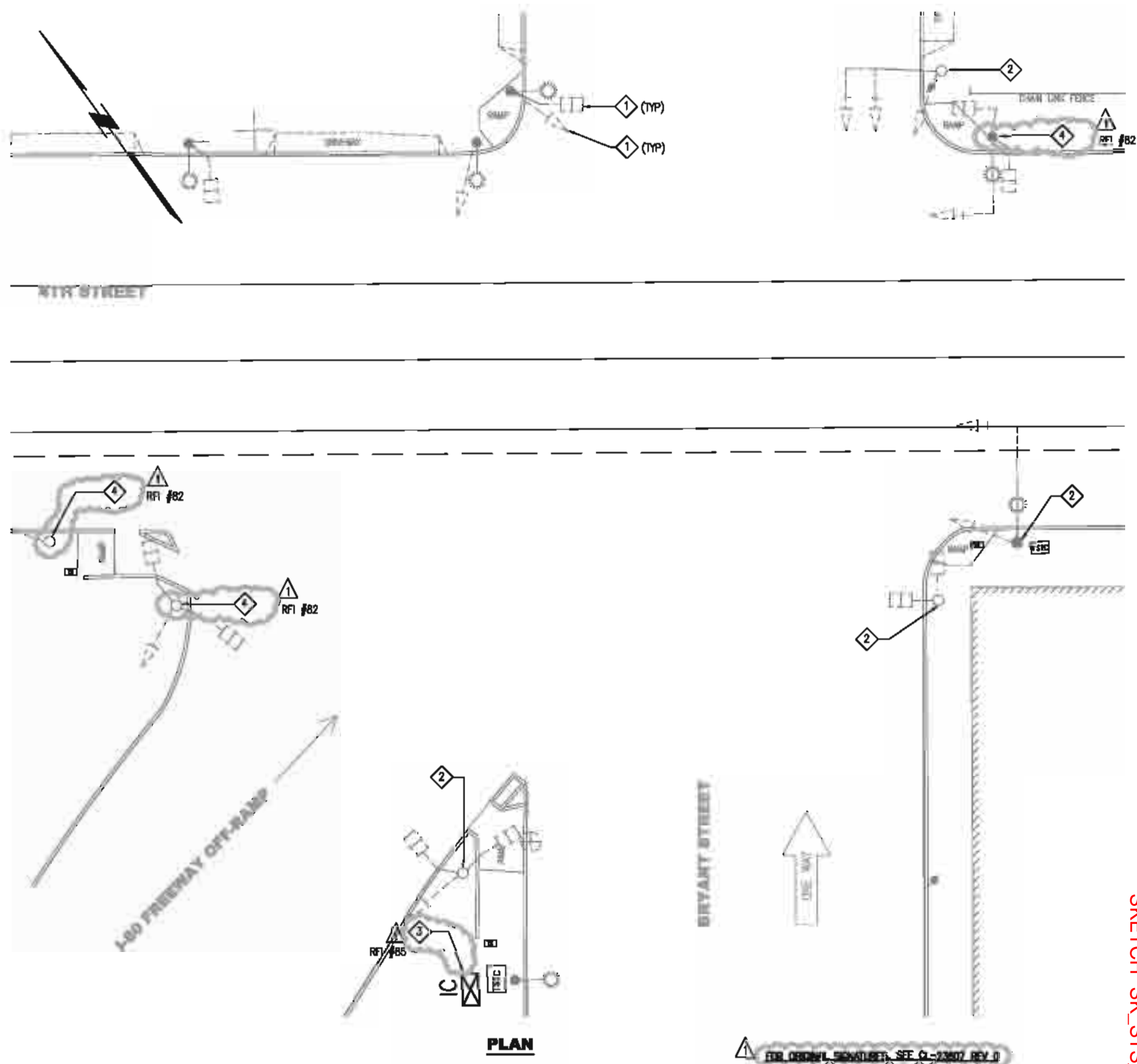
POLE AND EQUIPMENT SCHEDULE										
POLE No.	TYPE OF POLE	VEHICLE SIGNAL				PEDESTRIAN SIGNAL			REMARKS	
		No.	TYPE	MOUNTING	VISORS	LOUVERS	No.	TYPE		MOUNTING
3	MUNI POLE	47	3S8"	SV-1-T	T		29	1S-COUNT	SP-1	R/D PEDESTRIAN HEAD 29, SIGNAL HEAD 47 AND RELATED ACCESSORIES.
3N	MUNI POLE W/ 15' MAST ARM	46	3S12"	MMS	T		29	1S-COUNT	SP-1	F/I SIGNAL HEADS 46 AND 47, PEDESTRIAN HEAD 29, 15' MAST ARM, PUSH BUTTON, FIELD WIRING, AND RELATED ACCESSORIES.
X	TYPE 1A (10')	67	3S12"	TV-1-T	T		98	1S-COUNT	SP-1	PPB
Y	TYPE 1A (7')	-	-	-	-		99	1S-COUNT	TP-1	PPB
Z	17-2-100 W/20' CANTILEVER MAST ARM	61	3S12"	SV-1-T	T		49	1S-COUNT	SP-1	HEIGHT AT MAST ARM IS 24' FROM BASE OF POLE
40S	(E) 17-2-100 W/ 20' MAST ARM	42	3S12"	SV-1-T	T		28	1S-COUNT	SV-2-T	R/S (E) OF MAST ARM. PROVIDE (N) 20' MAST ARM TO (E) TROLLEY POLE. RELOCATE (E) SIGNAL HEADS 42 AND 44 FROM (E) MAST ARM TO (N) MAST ARM.
		44	3S12"	MMS	T		89	1S-COUNT	SV-2-T	

CONDUIT AND WIRING SCHEDULE	
CONDUIT RUN NUMBER	△
CONDUIT SIZE (INCH)	2
NOTES	
#14 WIRES	
VEH SIGNAL 46	3
VEH SIGNAL 47	3
PED SIGNAL 29	2
#14 NEUTRAL	3
#14 SPARE	
TOTAL #14 WIRES	11
#10 WIRES NEUTRAL	
CCTV POWER, 2/C #12	
CCTV CONTROL, 2/C #18	
CCTV VIDEO, RG-59	
STREETLIGHT, #10 WIRE	
12/C INTERCONNECT	
TS WIRING	

SKETCH "SK_STS_ET102"

FOR ORIGINAL SIGNATURES, SEE CL-23606 REV. 0

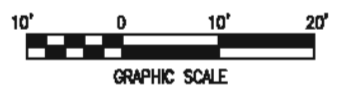
		DESIGNED W. SENG DRAWN W. SENG CHECKED S. PONG REVIEWED T. TOLENTINO RECOMMENDED C. MORGANSON APPROVED R. EDWARDS DATE 05/25/2012		REV. 0 SEALED BY W. SENG		CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION		CONTRACT NO. 1256 SFMTA CONTROL NO. CL-23606	
		THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS				DRAWING NO. ET-102 SHEET NO. 812		REVISION 0	



- NOTES:**
1. R/D (E) TRAFFIC SIGNALS, CONDUIT WIRING, AND RELATED ACCESSORIES ON POLE.
 2. R/D (E) TRAFFIC SIGNAL POLE AND FOUNDATION.
 3. REMOVE AND SALVAGE (E) TRAFFIC SIGNAL CONTROLLER AND RETURN TO CITY. DEMOLISH (E) FOUNDATION. REFER TO DWG ET-104 FOR (M) TRAFFIC CONTROLLER.
 4. R/D (E) POLE AND (E) FOUNDATION.

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SKETCH "SK_STS_ET-103"



FOR ORIGINAL SIGNATURES, SEE CL-23607 REV 0

DATE	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
05/25/2012	ISSUED FOR BID	0			

SFMTA

DESIGNED	W. SENG
DRAWN	W. SENG
CHECKED	S. PONG
REVIEWED	T. TOLENTINO
RECOMMENDED	C. MORGANSON
APPROVED	R. EDWARDS
DATE	05/25/2012

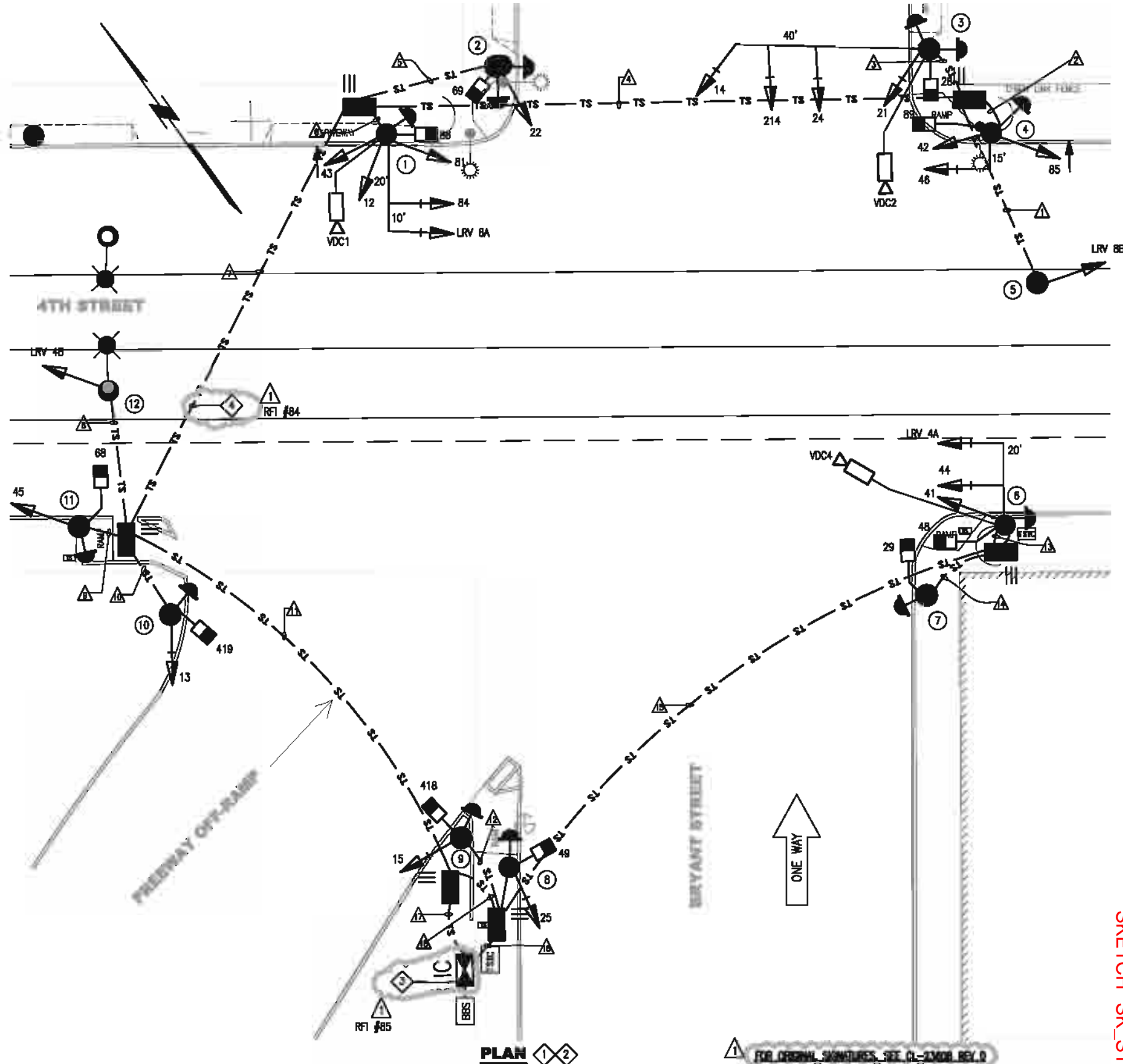
REV. 0
SEALED BY
W. SENG



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
 TRAFFIC SIGNALS
 BRYANT STREET AND FOURTH STREET
 DEMOLITION PLAN

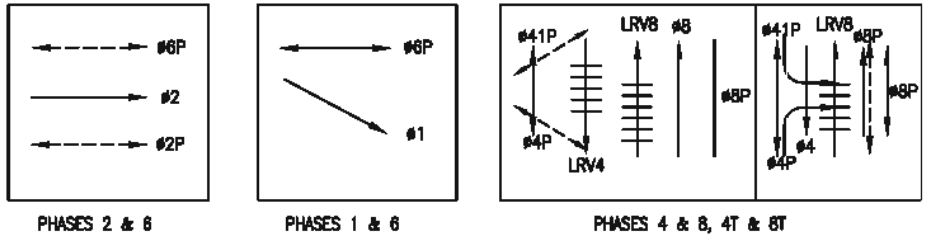
CONTRACT NO.	1256
SFMTA CONTROL NO.	CL-23607
DRAWING NO.	ET-103
SHEET NO.	813
REVISION	0



NOTES:

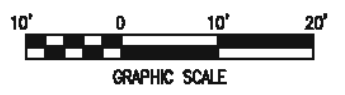
1. SEE DRAWING ET-104 FOR POLE, EQUIPMENT, CONDUIT, AND WIRING SCHEDULES.
2. CONTRACTOR SHALL FURNISH AND INSTALL EMERGENCY VEHICLE DETECTOR SYSTEM (OPTION GPS DETECTOR UNIT) AS PART OF TRAFFIC SIGNAL MODIFICATION WORK. PROGRAMMING AND TESTING OF DETECTOR SYSTEM WILL BE COORDINATED WITH SFMTA.
3. PROVIDE (N) TRAFFIC SIGNAL CONTROLLER AND (N) FOUNDATION IN SAME LOCATION AS (E) CONTROLLER.
RFI #85
4. CONNECT TO (E) 2" (PROVIDED UNDER CONTRACT 1252).
RFI #84

PHASE DIAGRAM



PHASE SEQUENCE

#2	BRYANT ST.	G	Y	R			
#1	FRWY - OFF RAMP	R		G	Y	R	
#4, #8	4TH STREET	R			G	Y	R
#6P	PED XING 4TH ST. (N/S)	W		FDW			DW
#2P	PED XING 4TH ST. (S/S)	W	FDW	DW			
#4P	PED XING BRYANT (W/S)	DW			W	FDW	DW
#8P	PED XING BRYANT (E/S)	DW			W	FDW	DW
#41P	PED XING FRWY OFF RAMP	DW			W	FDW	DW
#13	MUNI LRV4 (T4)	WT		FWT	RT		
#14	MUNI LRV8 (T8)	WT		FWT	RT		
#8	4TH STREET	R			G		R



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DATE	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
05/25/2012	ISSUED FOR BID	0			

SFMTA	DESIGNED W. SENG/A. HERCE
	DRAWN W. SENG
	CHECKED S. PONG
	REVIEWED T. TOLENTINO
	RECOMMENDED C. MORGANSON
	APPROVED R. EDWARDS
	DATE 05/25/2012

REV. 0
SEALED BY
W. SENG



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
**TRAFFIC SIGNALS
 BRYANT STREET AND FOURTH STREET
 TRAFFIC SIGNAL PLAN**

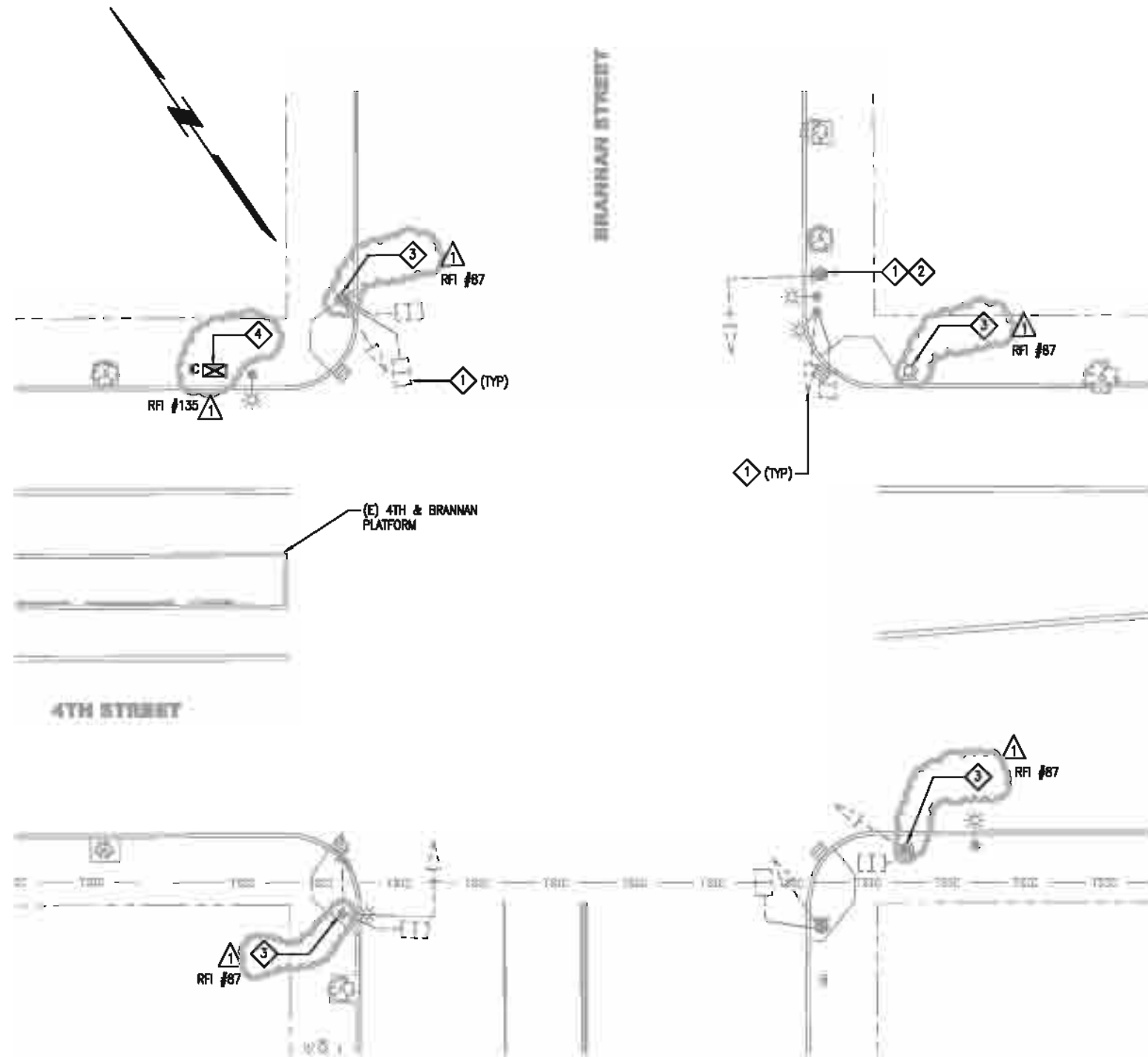
CONTRACT NO. 1256	REVISION 0
SFMTA CONTROL NO. CL-23608	
DRAWING NO. ET-104	
SHEET NO. 814	

NOTES:

1. R/D (E) TRAFFIC SIGNALS, CONDUIT WIRING, AND RELATED ACCESSORIES ON POLE.
2. R/D/ (E) TRAFFIC SIGNAL POLE.
3. R/D (E) POLE AND (E) FOUNDATION.
4. REMOVE AND SALVAGE (E) TRAFFIC SIGNAL CONTROLLER AND RETURN TO THE CITY. R/D (E) FOUNDATION.

RFI #87

RFI #135



PLAN

FOR ORIGINAL SIGNATURE SET CL-23610 REV. 0

SKETCH "SK_STS_ET106"



\\ntance\cap\M544.1\FinalDesign\DRAWINGS\CS155-3\1256\SHEET FILES\06_SYSTEMS\09_TRAFFIC SIGNALS\12560609ET106_R1_POC.dwg
 spang Wed Jul 23, 2014 12:16 pm ET-106

DATE	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
05/25/2012	ISSUED FOR BID	0			



DESIGNED	W. SENG/A. HENCE
DRAWN	W. SENG
CHECKED	S. PONG
REVIEWED	T. TOLENTINO
RECOMMENDED	C. MORGANSON
APPROVED	R. EDWARDS
DATE	05/25/2012

REV. 0
SEALED BY
W. SENG



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
**TRAFFIC SIGNALS
 BRANNAN STREET AND FOURTH STREET
 DEMOLITION PLAN**

CONTRACT NO.	1256
SFMTA CONTROL NO.	CL-23610
DRAWING NO.	ET-106
SHEET NO.	816
REVISION	1

POLE AND EQUIPMENT SCHEDULE

POLE NO.	TYPE OF POLE	VEHICLE SIGNAL				PEDESTRIAN SIGNAL			REMARKS
		NO.	TYPE	MOUNTING	VISORS	NO.	TYPE	MOUNTING	
1	MUNI COMBO POLE WITH 15' MAST ARM	81 84	3S12" 3S12"	SV-1-T MAS	T T	88	1S-COUNT	SP-1	APS
2	TYPE 1A (10')	22	3S12"	TV-1-T	T	68	1S-COUNT	SP-1	APS
3	TYPE 19-2-100 WITH 25' MAST ARM	26 24	3S12" 3S12"	MAS MAS	T T	28	1S-COUNT	SP-1	SIGNAL #26, SHALL BE 15' FROM END OF ARM
4	TYPE 1A (7')	-	-	-	-	28	1S-COUNT	TP-1	APS: FINAL LOCATION WILL BE DETERMINED IN THE FIELD
5	MUNI COMBO POLE	85	3S12"	SV-1-T	T	89	1S-COUNT	SP-1	APS
6	TYPE 1A (10')	LRV 4A LRV 8B	2S12" 2S12"	SV-1-T SV-1-T	T T	-	-	-	-
7	MUNI COMBO POLE WITH 20' MAST ARM	41 44	3S12" 3S12"	TV-2-1 TV-2-1	T T	48	1S-COUNT	SP-1	APS
8	MUNI COMBO POLE	82	3S12"	SV-1-T	T	29	1S-COUNT	SP-1	APS
9	MUNI COMBO POLE WITH 25' CANTILEVER MAST ARM	61 64	3S12" 3S12"	SV-1-T MAS	T T	68	1S-COUNT	SP-1	APS
10	MUNI COMBO POLE	45	3S12"	SV-1-T	T	49	1S-COUNT	SP-1	APS
11	TYPE 1A (10')	LRV 4B	2S12"	TV-1-T	T	-	-	-	APS
12	TYPE 1A (10')	LRV 8A	2S12"	TV-1-T	T	-	-	-	APS

NOTES:

- SEE ET-107 FOR TRAFFIC SIGNAL WORK AT 4TH AND BRANNAN INTERSECTION.
- ALL (N) CONDUIT SHALL BE SIZED AS NOTED AND PVC MATERIAL UON.
- F/I GROUND WIRE IN ALL CONDUITS PER GROUNDING LAYOUT DETAIL ON ET-152.
- F/I 3/8" PULL TAPE IN ALL SPARE CONDUITS AND IN ALL CONDUITS CONTAINING FIELD WIRES WHICH CROSS A STREET.
- USE (E) MOUNTING BRACKET FOR (N) TRAFFIC SIGNAL.
- USE (M) MOUNTING BRACKET FOR (E) TRAFFIC SIGNAL.
- SEE STANDARD DRAWING FOR TRAFFIC SIGNAL HEAD MOUNTING BRACKET DETAILS.
- SEE DPW STANDARD DRAWING 87,203 FOR STREETLIGHT SERVICE AND CIRCUIT REQUIREMENTS.
- F/I BELDEN #8489 CABLE BETWEEN THE FOLLOWING SIGNALS AND PROVIDE CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS:
 - APS UNIT ON POLE 1 & PED SIGNAL 68 ON POLE 8
 - APS UNIT ON POLE 2 & PED SIGNAL 89 ON POLE 4
 - APS UNIT ON POLE 3 & PED SIGNAL 29 ON POLE 7
 - APS UNIT ON POLE 4 & PED SIGNAL 88 ON POLE 1
 - APS UNIT ON POLE 6 & PED SIGNAL 28 ON POLE 3
 - APS UNIT ON POLE 7 & PED SIGNAL 49 ON POLE 9
 - APS UNIT ON POLE 8 & PED SIGNAL 48 ON POLE 6
 - APS UNIT ON POLE 9 & PED SIGNAL 69 ON POLE 2
 - APS UNIT ON POLE 10 & PED SIGNAL 68 ON POLE 8
 - APS UNIT ON POLE 11 & PED SIGNAL 69 ON POLE 2
- EXTERNAL CONDUIT SHALL BE PROVIDED FOR TRAFFIC SIGNAL WIRING W/ FEEDER.
- THE HEIGHT OF THE CANTILEVER ARM CONNECTION SHALL BE 24FT. FROM THE BASE OF POLE.

RFI #342

FOR ORIGINAL SIGNATURES, SEE CL-23612 REV D

CONDUIT AND WIRING SCHEDULE

CONDUIT RUN NUMBER	CONDUIT SIZE (INCH)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CONDUIT SIZE (INCH)	2	2	2	2-2"	2	2	2	2	2-2"	2	2	3-2"	2	2-2"	2
NOTES															
#14 AWG WIRES															
LRV SIGNAL 4A	2				2										2
LRV SIGNAL 8B	2				2										2
PED SIGNAL 89		2			2										2
VEH SIGNAL 85		3			3										3
PED SIGNAL 28				2	2										2
VEH SIGNAL 21				3	3										3
VEH SIGNAL 24				3	3										3
PED SIGNAL 69							2								2
VEH SIGNAL 22							3								3
PED SIGNAL 88								2							2
VEH SIGNAL 81								3							3
VEH SIGNAL 84								3							3
PED SIGNAL 48									2		2		2	2	2
VEH SIGNAL 41									3		3		3	3	3
VEH SIGNAL 44									3		3		3	3	3
PED SIGNAL 29										2	2		2	2	2
VEH SIGNAL 62										3	3		3	3	3
PED SIGNAL 68											2		2	2	2
VEH SIGNAL 61											3		3	3	3
VEH SIGNAL 64											3		3	3	3
PED SIGNAL 49												2	2	2	2
VEH SIGNAL 45												3	3	3	3
LRV SIGNAL 4B													2	2	2
LRV SIGNAL 8A														2	2
#14 NEUTRAL	2	2	3		2	3	3	2		3	2				
#14 SPARE				3					3			6	9	2	
TOTAL #14 AWG WIRES	6	7	11	19	7	11	11	7	15	11	7	28	30	32	58
VIDEO CABLE															
TOTAL #10 AWG WIRES, NEUTRAL										1			1	2	2
TOTAL #8 AWG WIRES, I/C SERVICE															
TOTAL #8 AWG WIRES, SL															
TOTAL #10 AWG WIRES, SL															
TOTAL 12/C INTERCONNECT CABLE															
TOTAL BELDEN #8489 CABLE					2					2			2	2	2
CONDUIT RUN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

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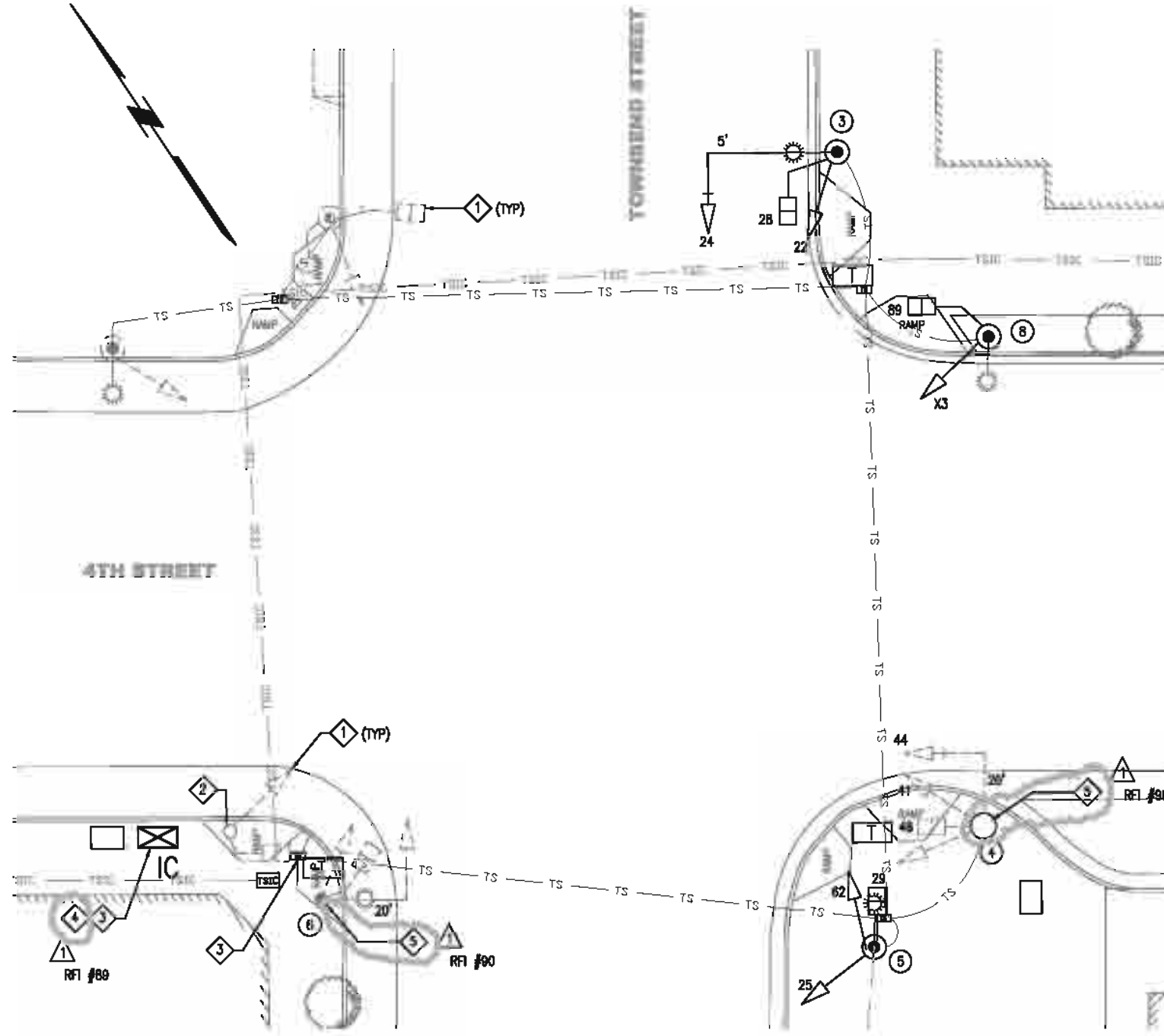
		DESIGNED: W. SENG/W. HENZE DRAWN: W. SENG CHECKED: S. PONG REVIEWED: T. TOLENTINO RECOMMENDED: C. MORSEMAN APPROVED: R. EDWARDS DATE: 05/26/2012		REV. 0 SEALED BY W. SENG		 CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED: EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION		THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS		CONTRACT NO. 1256 SFMTA CONTROL NO. CL-23612		DRAWING NO. ET-108 SHEET NO. 818		REVISION 1	
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◆ **NOTES:**

1. R/D (E) TRAFFIC SIGNALS, CONDUIT WIRING, AND RELATED ACCESSORIES ON POLE.
2. R/D (E) TRAFFIC SIGNAL POLE AND FOUNDATION.
3. DISCONNECT SIGNAL WIRING FROM TRAFFIC SIGNAL CONTROLLER PULL WIRING TO PULLBOX WIRING TO BE REPULLED THROUGH (N) PULLBOX AND CONDUIT. REFER TO ET-109 FOR RECONNECTION TO TRAFFIC SIGNAL CONTROLLER.

RFI #89
 ▲ 4. R/D (E) TRAFFIC SIGNAL CONTROLLER AND (E) FOUNDATION. REFER TO DRAWING ET-110 FOR (N) TRAFFIC SIGNAL CONTROLLER.

RFI #90
 ▲ 5. R/D (E) POLE AND (E) FOUNDATION.



PLAN

▲ FOR ORIGINAL SIGNATURES, SEE CL-23613 REV. 0



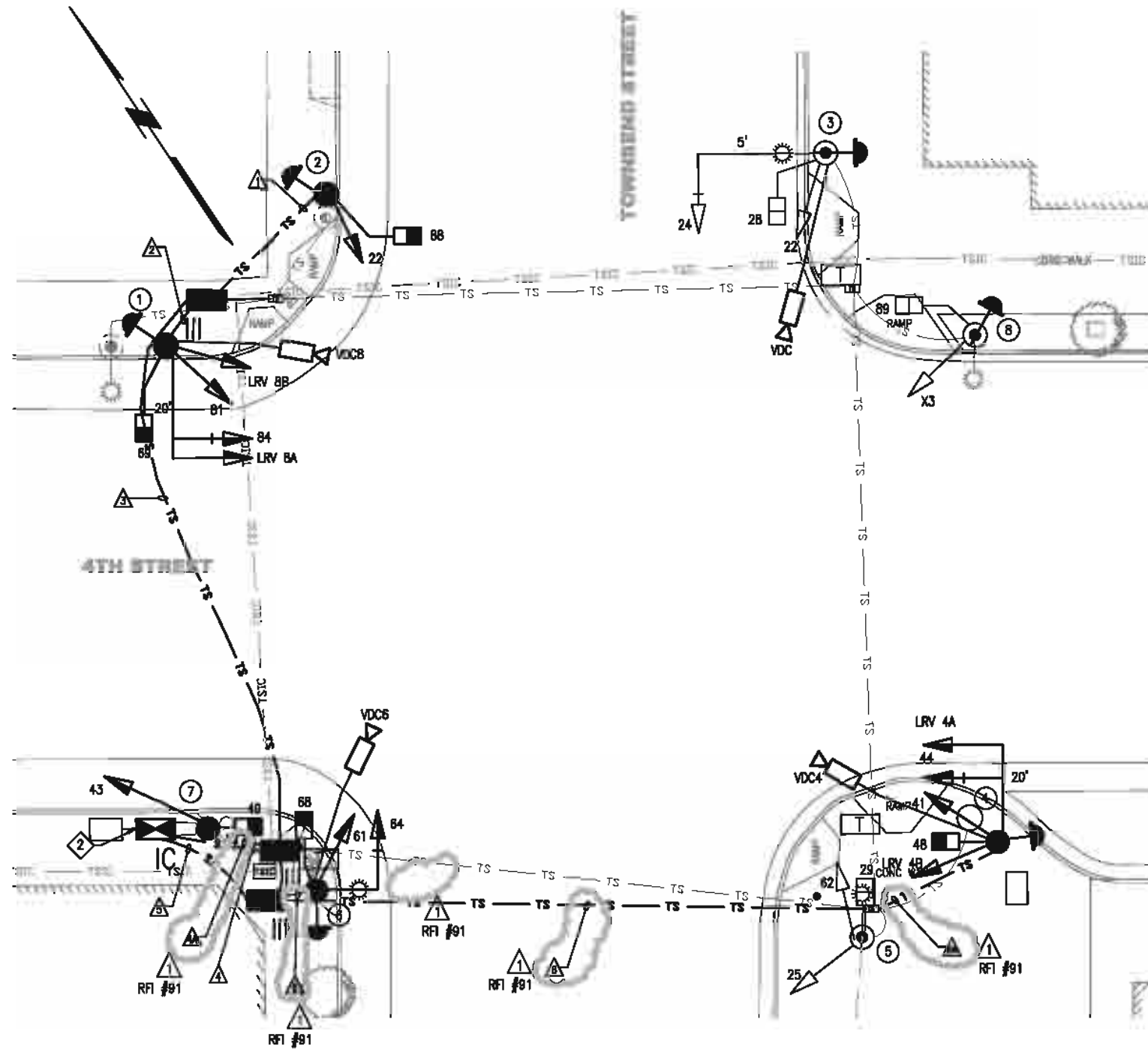
SKETCH "SK_STG" 11/11/09

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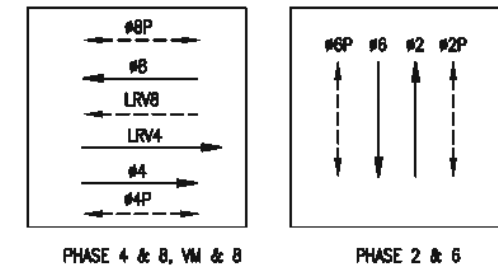
SFMTA		DESIGNED W. SENG/A. HENCE DRAWN W. SENG CHECKED S. PONG REVIEWED T. TOLENTINO RECOMMENDED C. MORGANSON APPROVED R. EDWARDS DATE 05/25/2012	REV. 0 SEALED BY W. SENG	CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS	CONTRACT NO. 1256 SFMTA CONTROL NO. CL-23613
DATE 05/25/2012 ISSUED FOR BID	DESCRIPTION TRAFFIC SIGNALS TOWNSEND STREET AND FOURTH STREET DEMOLITION PLAN	REV. NO. 0	BY W. SENG	CHECKED S. PONG	DRAWING NO. ET-109	REVISION SHEET NO. 819 0

NOTES:

- SEE DRAWING ET-110 FOR POLE, EQUIPMENT, CONDUIT, AND WIRING SCHEDULES.
- RECALL (E) AND (N) TRAFFIC SIGNAL WIRING FROM (E) PULLBOX TO (N) TRAFFIC SIGNAL CONTROLLER VIA (N) PULLBOX AND CONDUIT.
- CONTRACTOR SHALL MAINTAIN EXISTING OPTION GPS EMERGENCY VEHICLE DETECTOR SYSTEM AT ALL TIMES; TRANSFER THE EXISTING SYSTEM TO THE NEW TRAFFIC SIGNAL SYSTEM.



PHASE DIAGRAM



PHASE SEQUENCE

G	Y	R	TOWNSEND (EB & WB)	PHASE 2 & 6
R	G	Y	4TH STREET (NB & SB)	PHASE 8 & 4
WM	FRH	RH	PED XING 4TH STREET (NB & SB)	PHASE 8P & 2P
RH	WM	FRH	PED XING TOWNSEND (EB& WB)	PHASE 8P & 4P
RT	WT	WT	MUNI LEVEL 4	
RT	WT	WT	MUNI LEVEL 8X	

PLAN 1 3

FOR ORIGINAL SIGNATURES, SEE CL-23614 REV. 0

SKETCH "SK_STSL" ET-110



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DESIGNED: W. SENG/A. HENCE DRAWN: W. SENG CHECKED: S. PONG REVIEWED: T. TOLENTINO RECOMMENDED: C. MORGANSON APPROVED: R. EDWARDS DATE: 05/25/2012		REV. 0 SEALED BY W. SENG	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	CONTRACT NO. 1256 SFMTA CONTROL NO. CL-23614
DATE: 05/25/2012 DESCRIPTION: ISSUED FOR BID	REV. NO.: 0 BY: [] CHECKED: [] APPROVED: []			TRAFFIC SIGNALS TOWNSEND STREET AND FOURTH STREET TRAFFIC SIGNAL PLAN	DRAWING NO. ET-110 SHEET NO. 820 REVISION 1

POLE AND EQUIPMENT SCHEDULE

POLE NO.	TYPE OF POLE	VEHICLE SIGNAL				PEDESTRIAN SIGNAL			REMARKS
		NO.	TYPE	MOUNTING	VISORS	NO.	TYPE	MOUNTING	
1	MUNI COMBO POLE WITH 20' MAST ARM	LRV 8B 81 84 LRV BA	2S12" T 3S12" MAS 2S12" MAT	SV-1 SV-1-T SV-1-T MAT	T T T T	88	1S-COUNT	SP-1	
2	MUNI POLE	22	3S12"	SV-1-T	T	88	1S-COUNT	SP-1	
3	(E) TROLLEY POLE WITH 5' MAST ARM	(E)24 (E)22	MAS-8" 3S8"	SV-1-T SV-1-T	T T	(E)28	1S-COUNT	SP-1	
4	MUNI COMBO POLE WITH 20' MAST ARM	41 44 LRV 4A LRV 4B	3S12" 3S12" 2S12" T 2S12" T	SV-1-T MAS MAT SV-1	T T T T	48	1S-COUNT	SP-1	
5	(E) TYPE 1A (10')	(E)25 (E)82	3S12" 4S12"	SV-1-T SV-1-T	T T	(E)29	1S-COUNT	SP-1	
6	TYPE 17-2-100 WITH 20' MAST ARM	61 64	3S12" 4S12"	SV-1-T SV-1-T	T T	68	1S-COUNT	SP-1	
7	TRAFFIC SIGNAL POLE	43	3S12"	SV-1-T	T	48	1S-COUNT	SP-1	
8	(E) MUNI COMBO POLE	(E)X3	3S8"	SV-1-T	T	(E)89	1S-COUNT	SP-1	

NOTES:

- SEE ET-110 FOR TRAFFIC SIGNAL WORK AT 4TH AND TOWNSEND INTERSECTION.
- ALL (N) CONDUIT SHALL BE SIZED AS NOTED AND PVC MATERIAL UON.
- F/1 GROUND WIRE IN ALL CONDUITS PER GROUNDING LAYOUT DETAIL ON ET-152.
- F/1 3/8" PULL TAPE IN ALL SPARE CONDUITS AND IN ALL CONDUITS CONTAINING FIELD WIRES WHICH CROSS A STREET.
- NOT USED.
- NOT USED.
- SEE STANDARD DRAWING FOR TRAFFIC SIGNAL HEAD MOUNTING BRACKET DETAILS.
- SEE DPM STANDARD DRAWING 87.203 FOR STREETLIGHT SERVICE AND CIRCUIT REQUIREMENTS.
- PROVIDE BELDEN #B3488 CABLE BETWEEN THE FOLLOWING SIGNALS AND PROVIDE CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
 - APS UNIT ON POLE 1 & PED SIGNAL 68 ON POLE 8. RUN CABLE THRU (N) CONDUIT.
 - APS UNIT ON POLE 2 & PED SIGNAL 89 ON POLE 8. RUN CABLE THRU (E) CONDUIT.
 - APS UNIT ON POLE 3 & PED SIGNAL 88 ON POLE 2. RUN CABLE THRU (E) CONDUIT.
 - APS UNIT ON POLE 4 & PED SIGNAL 28 ON POLE 3. RUN CABLE THRU (E) CONDUIT.
 - APS UNIT ON POLE 6 & PED SIGNAL 48 ON POLE 4. RUN CABLE THRU (N) CONDUIT.
 - APS UNIT ON POLE 8 & PED SIGNAL 29 ON POLE 5. RUN CABLE THRU (E) CONDUIT.

RFI #91

CONDUIT AND WIRING SCHEDULE

CONDUIT RUN NUMBER	CONDUIT SIZE (INCH)						CONDUIT SIZE (INCH)		
	1	2	3	4	5	6	4A	5A	6A
CONDUIT SIZE (INCH)	2	2	2-2	2-2	2-2	2-2	2	2	2
NOTES									
#14 AWG WIRES									
LRV SIGNAL LRV 8A		2	2	2					
LRV SIGNAL 86		2	2	2					
VEH SIGNAL 22		3	3	3					
LRV SIGNAL LRV 88		2	2	2					
PED SIGNAL 88		2	2	2					
VEH SIGNAL 81		3	3	3					
VEH SIGNAL 84		3	3	3					
LRV SIGNAL LRV 4A					2	2			2
PED SIGNAL 48					2	2			2
VEH SIGNAL 43					3	3			3
LRV SIGNAL LRV 4B					2	2			2
PED SIGNAL 68					2	2			2
VEH SIGNAL 81					3	3			3
VEH SIGNAL 64					3	3			3
PED SIGNAL 48					2	2			2
VEH SIGNAL 44					3	3			3
VEH SIGNAL 41					3	3			3
#14 NEUTRAL	2	5					2	3	5
#14 SPARE		2	2	2					
VIDEO CABLE									
TOTAL #14 AWG WIRES	7	17	18	22	22	14	7	11	17
TOTAL #10 AWG WIRES, NEUTRAL									
TOTAL #10 AWG WIRES, NEUTRAL			1	1	1	1			
TOTAL #8 AWG WIRES, I/C SERVICE									
TOTAL #8 AWG WIRES, SL									
TOTAL #10 AWG WIRES, SL									
TOTAL 12/C INTERCONNECT CABLE									
TOTAL BELDEN #B3488 CABLE									
CONDUIT RUN NUMBER	1	2	3	4	5		4A	5A	6A

RFI #91

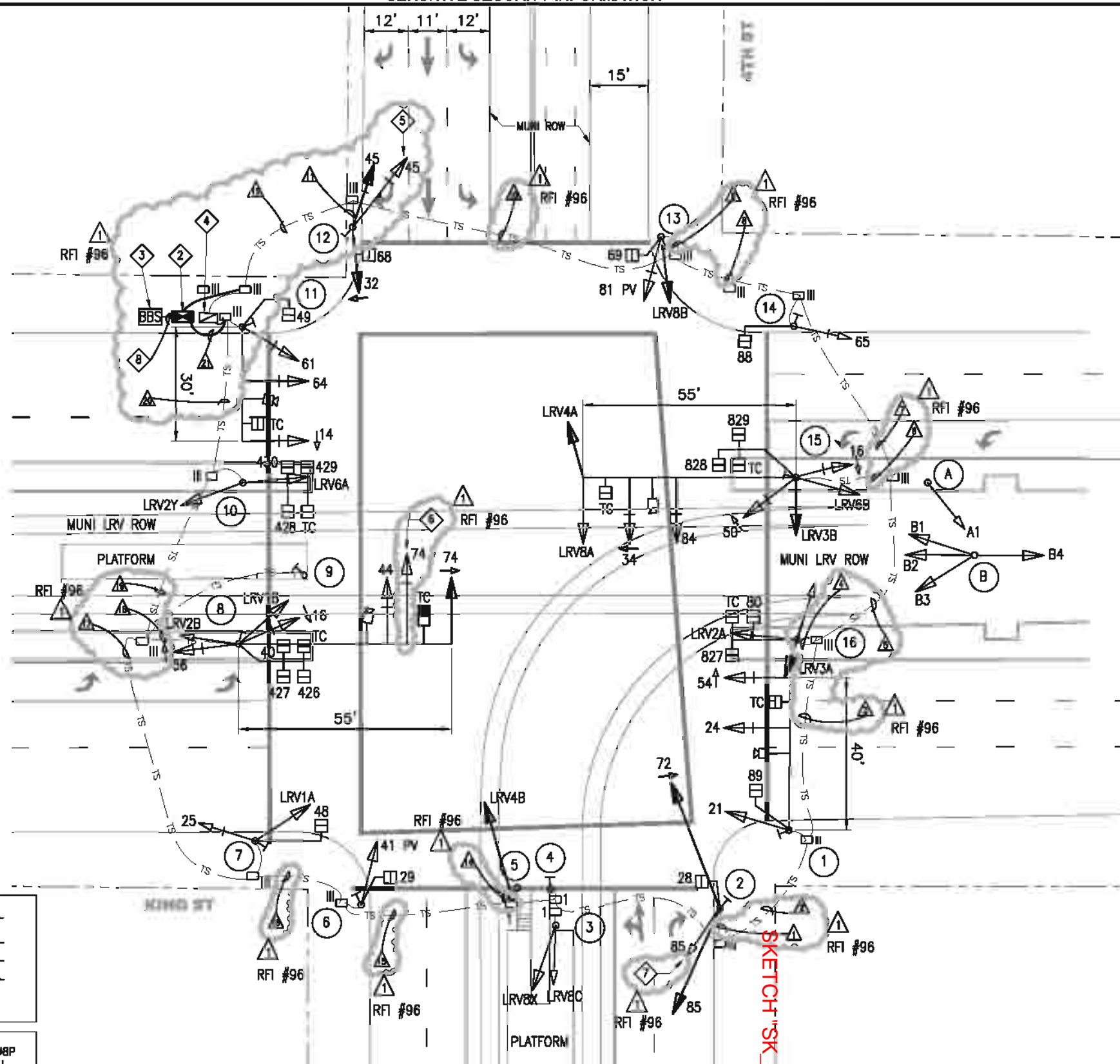
FOR ORIGINAL SIGNATURES SEE CL-23615 REV 0

SKETCH "ST-ST" E-111

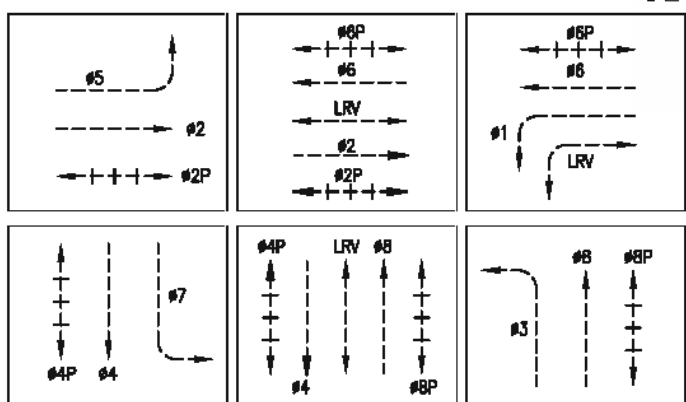
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		DESIGNED W. SENG DRAWN W. SENG CHECKED S. PONG REVISIONS T. TOLENTINO RECOMMENDED C. MORSEMANSON APPROVED R. EDWARDS DATE 05/25/2012	REV. 0 SEALED BY W. SENG	CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS	SHEET NO. ET-111 821	CONTROL NO. 1256 SFMTA CONTROL NO. CL-23615 REVISION 0
DATE	ISSUED FOR BID	0					

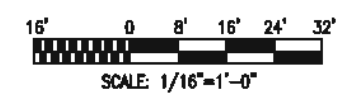
- NOTES:**
1. REPLACE EXISTING VDC WITH UPGRADED AUTO SCOPE MODE.
 2. F/1 ITS 340 IC CABINET AND CONTROLLER.
 3. F/1 BATTERY BACKUP SYSTEM (BBS).
 4. R/S (E) TRAFFIC SIGNAL CONTROLLER AND (E) FOUNDATION. PROVIDE (N) TYPE 3 PULLBOX IN SAME LOCATION AS EXISTING CONTROLLER.
 5. DISCONNECT (E) VEHICLE SIGNAL NO. 45 FROM (E) WIRING. R/D (E) SIGNAL REUSE (E) WIRING AND RECONNECT TO (N) SIGNAL NO. 45.
 6. DISCONNECT (E) VEHICLE SIGNAL NO. 74 FROM (E) WIRING. R/D (E) SIGNAL REUSE (E) WIRING AND RECONNECT TO (N) SIGNAL NO. 74.
 7. DISCONNECT (E) VEHICLE SIGNAL NO. 85 FROM (E) WIRING. R/D (E) SIGNAL REUSE (E) WIRING AND RECONNECT TO (N) SIGNAL NO. 85.
 8. PROVIDE 2" HDPE CONDUIT.



PHASE DIAGRAM



PLAN
FOR ORIGINAL SIGNATURES, SEE CL-23616 REV. 0



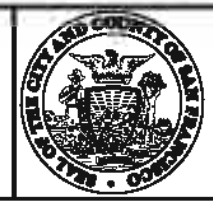
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DATE	ISSUED FOR	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
05/25/2012	ISSUED FOR BID		0			

SFMTA

DESIGNED BY: W. SENG/A. HERCE
 DRAWN BY: W. SENG
 CHECKED BY: S. PONG
 REVIEWED BY: I. TOLENTINO
 RECOMMENDED BY: C. MORGANSON
 APPROVED BY: R. EDWARDS
 DATE: 05/25/2012

REV. 0
SEALED BY
W. SENG



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

**TRAFFIC SIGNALS
 4TH AND KING STREETS
 TRAFFIC SIGNAL PLAN**

CONTRACT NO.	1256
SFMTA CONTROL NO.	CL-23616
DRAWING NO.	ET-112
SHEET NO.	822
REVISION	1

POLE AND EQUIPMENT SCHEDULE 7									
POLE NO.	TYPE OF POLE	LUMINAIRE (HPS) VOLTAGE/ WATTS	VEHICLE SIGNAL			PEDESTRIAN SIGNAL			REMARKS
			NO.	TYPE	MOUNTING (F/I)	NO.	TYPE	MOUNTING (F/I)	
1	(E) MUNI COMBO POLE WITH 39 1/2" MAST ARM		21 24 54 TC	3S12" 3S12" 3S12" LA 1S16"x16"	SV-1-T MAS MAS MAT	89	IS-C	SP-1-T	PPB CAMERA
2	(E) MISSION BAY POLE		72 88	3S12"(LA) 3S12"	SV-2-T	28	IS-C	SP-1-T	PPB 6
3	(E) TYPE 1-A (12')		LRV8C LRV8X	3S8" X 1S12" X	SV-1 SV-1	-	-	-	
4	(E) PPB POST		-	-	-	-	-	-	PPB
5	(N) TYPE 1A - (12')		LRV4B	2S12" T	TV-1	-	-	-	PPB 3 6
6	(E) MISSION BAY POLE		41	PV3S12"	SV-1-T	29	IS-C	SP-1-T	PPB
7	(E) TYPE 1-A (10')		25 LRV1A	3S8" 2S12" T	TV-2-T	48	IS-C	SP-1-T	PPB
8	(E) MUNI COMBO POLE WITH 55" MAST ARM		74 44 58 15 LRV1B LRV1B TC	3S12"(LA) 3S12" 3S12" LA 3S12" LA 2S8" T 2S12" T 1S16"x16"	MAS MAS SV-1-T SV-1-T SV-2-T MAT	40 427 TC 426	16" IS 16" x 16"	DET. 2	PPB CAMERA RFI #96
9	(E) PPB POST		-	-	-	-	-	-	PPB
10	(E) MUNI COMBO POLE		LRV6A LRV2Y	2S12" T 2S12" T	SV-1-T SV-1	430 428 429 TC	IS-C 16"x16"	DET. 2	
11	(E) MUNI COMBO POLE WITH 30" MAST ARM		14 61 64 TC	3S12" LA 3S12" 3S12" 1S 16"x16"	MAS SV-1-T MAS MAT	49	IS-C	SP-1-T	PPB CAMERA
12	(E) MUNI COMBO POLE		32 48	3S12"(LA) 3S12"	SV-3-T	88	IS-C	SP-1-T	PPB 6
13	(E) MISSION BAY POLE		81 LRV8B	PV3S12" 2S12" T	SV-1-T SV-1	69	IS-C	SP-1-T	PPB 6
14	(E) MUNI COMBO POLE		65	3S8"	SV-1-T	88	IS-C	SP-1-T	PPB
15	(E) MUNI COMBO POLE WITH 55" MAST ARM		LRV4A 18 50 LRV6B 34 84 TC LRV8A LRV3B	2S12" T 3S12" LA 3S12" LA 2S8" T 3S12"(LA) 3S12" 1S 16"x16" 2S12" T 2S12" T	MAT SV-1-T SV-1-T SV-1 MAS MAS MAT MAT SV-1	828 829 TC	IS-C 16"x16"	DET. 1	PPB CAMERA RFI #96
16	(E) MUNI COMBO POLE		LRV3A LRV2A K11	2S12" T 2S12" T 3S8" x	SV-1 SV-1 SV-1	80 827 TC	IS-C 16"x16"	DET. 1	6

POLE AND EQUIPMENT SCHEDULE 7						
POLE NO.	TYPE OF POLE	LUMINAIRE (HPS) VOLTAGE/ WATTS	VEHICLE SIGNAL			REMARKS
			NO.	TYPE	MOUNTING (F/I)	
A	(E) TYPE 1-A (10')		A1	4S8"	TV-1	MUNI SIGNAL
B	(E) TYPE 1-A (10')		B1 B2 B3 B4	4S12" 4S12" 4S12" 4S12"	TV-4	MUNI SIGNALS FOR TRACK SWITCHOVER

- NOTES:**
1. M.A. = MAST ARM
 2. REFER TO CHART ABOVE FOR SIGNALS MAINTAINED BY MUNI
 3. (E) EXISTING POLE TO REMAIN; (N) NEW POLE.
 4. F/I 3-SECTION LEFT ARROW SIGNAL
 5. F/I "TRAIN COMING" SIGN
 6. CONTRACTOR SHALL PULL (N) FIELD WIRING FROM THE (N) TRAFFIC SIGNAL HEAD TO THE CONTROLLER.
 7. BOLD TEXT INDICATE (N)

SKETCH "SK_STSTST1"

FOR ORIGINAL SIGNATURES, SEE CL-23617 REV. 0

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		DESIGNED: W. SENG CHECKED: S. PONG REVIEWED: T. TOLENTINO RECOMMENDED: C. MORGANSON APPROVED: R. EDWARDS DATE: 05/25/2012		REV. 0 SEALED BY W. SENG		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	CONTRACT NO. 1256 SFMTA CONTROL NO. CL-23617	DRAWING NO. ET-113 SHEET NO. 823	REVISION 0
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CONDUIT AND WIRING SCHEDULE

CONDUIT RUN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
CONDUIT SIZE (INCH)	(E) 2"	(E) 2"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	(E) 3"	
NOTES																															
#14 AWG WIRES																															
VEH SIGNAL 72	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
LRV SIGNAL LRV 3A				2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		
LRV SIGNAL LRV 4A						2	2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		
LRV SIGNAL LRV 3B						2	2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		
LRV SIGNAL LRV 8B									2	2		2	2		2	2		2	2		2	2		2	2		2	2			
VEH SIGNAL 32											3	3	3																		
LRV SIGNAL LRV 4B														2	2	2	2														
TRAIN COMING (TC) SIGNAL (POLE 8)																															
#14 NEUTRAL	1			1	2			1	1				1																		
#11 SPARE		3	3	3	3			3	3	3		3	3	3		3	3	3		3	3	3		3	3	3		3	3	3	
EXISTING #14 AWG WIRING	14	12	29	14	30	33	63	72	11	81	11	90			18	12	21	33	43	57											
TOTAL #14 AWG WIRES	18	18	35	17	47	39	75	81	14	95	15	107	17	3	23	17	28	35	49	63	8										
TOTAL #10 AWG WIRES, NEUTRAL																															
TOTAL #8 AWG WIRES, I/C SERVICE																															
TOTAL #8 AWG WIRES, SL																															
TOTAL #10 AWG WIRES, SL																															
TOTAL 12/C INTERCONNECT CABLE																															
TOTAL BELDEN #8489 CABLE																															
CONDUIT RUN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

- NOTES:**
- SEE ET-112 FOR TRAFFIC SIGNAL WORK AT 4TH AND KING INTERSECTION.
 - ALL (N) CONDUIT SHALL BE SIZED AS NOTED AND PVC MATERIAL UON.
 - F/I GROUND WIRE IN ALL CONDUITS PER GROUNDING LAYOUT DETAIL ON ET-152.
 - F/I 3/8" PULL TAPE IN ALL SPARE CONDUITS AND IN ALL CONDUITS CONTAINING FIELD WIRES WHICH CROSS A STREET.
 - SEE DPW STANDARD DRAWING 87,203 FOR STREETLIGHT SERVICE AND CIRCUIT REQUIREMENTS.
 - PROVIDE BELDEN #3489 CABLE BETWEEN THE FOLLOWING SIGNALS AND PROVIDE CONNECTIONS PER MANUFACTURER'S INSTRUCTION.
 - APS UNIT ON (N) POLE 5 AND (E) PED SIGNAL 29 ON (E) POLE 6. RUN CABLE THRU (N) CONDUIT FROM POLE 5 TO ADJACENT (E) PULLBOX AND THRU (E) CONDUITS TO PED SIGNAL 29.

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 spong Tue Aug 05, 2014 1:41 pm ET-114

SKETCH "SK_STS_ET114"

FOR ORIGINAL SIGNATURES SEE CL-23618 REV 0

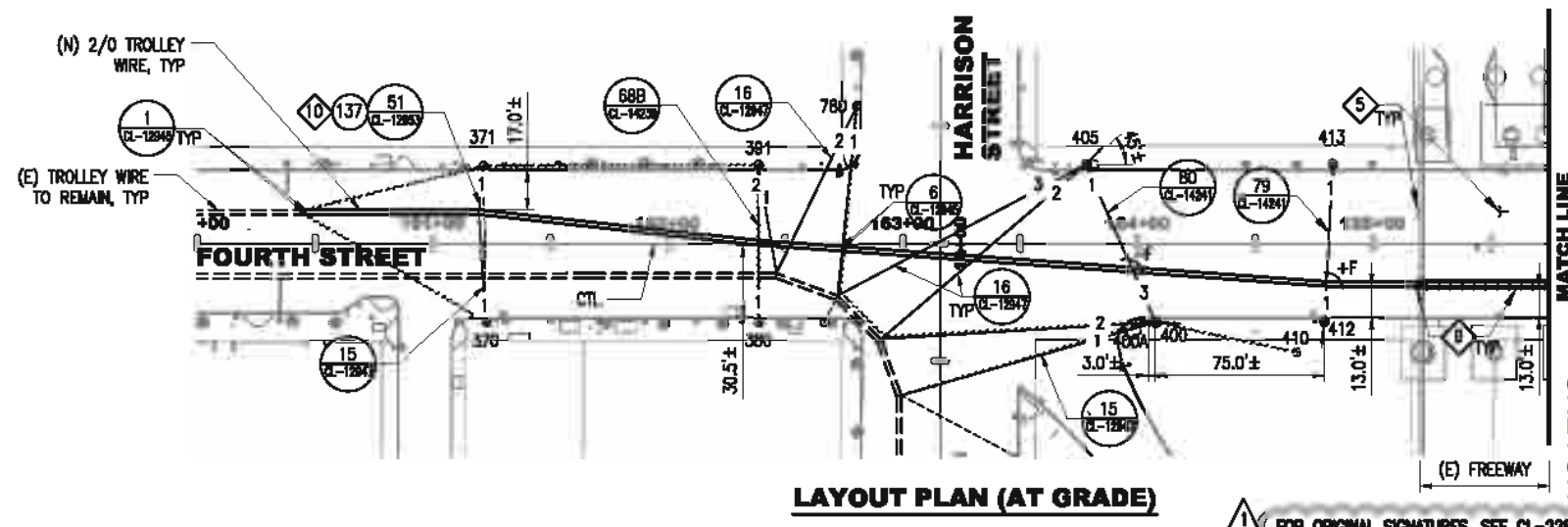
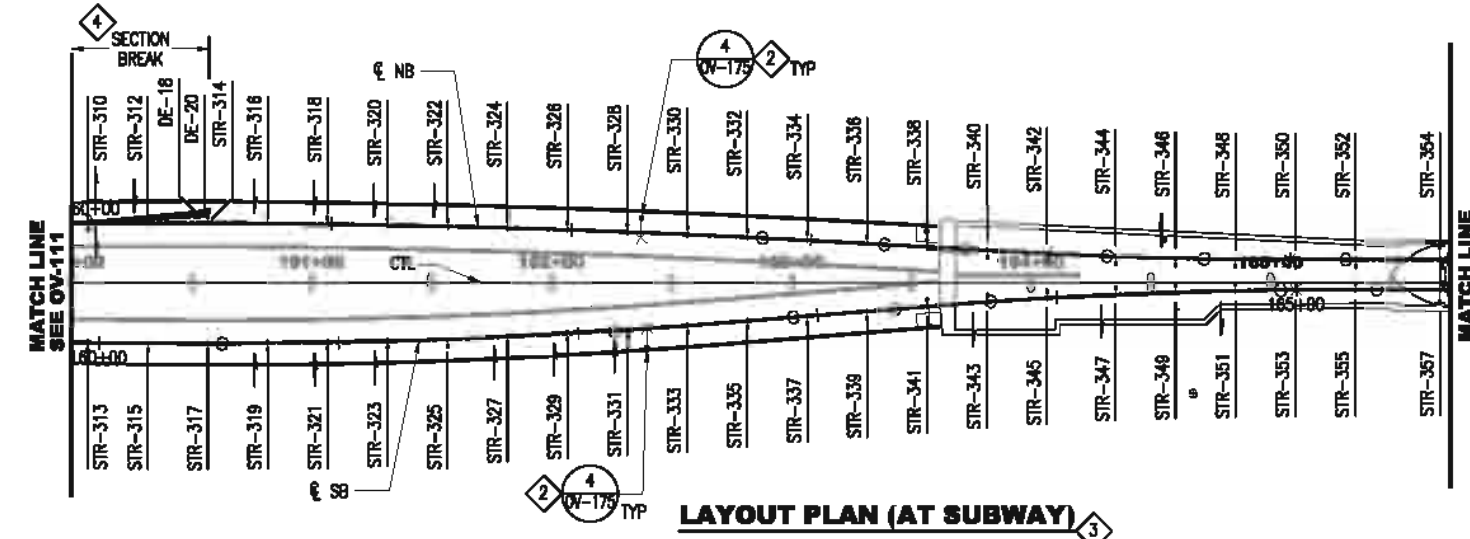
		DESIGNED: W. SENG DRAWN: W. SENG CHECKED: S. PONG REVIEWED: T. TOLENTINO RECOMMENDED: C. MORGANSON APPROVED: R. EDWARDS DATE: 05/25/2012		REV. 0 SEALED BY W. SENG		CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED EDWARD D. REISKIN DIRECTOR OF TRANSPORTATION		THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY SURFACE, TRACK AND SYSTEMS		CONTROL NO. 1256 SFMTA CONTROL NO. CL-23618	
DATE: 05/25/2012 ISSUED FOR BID								DRAWING NO. ET-114		REVISION SHEET NO. 824 1	

NORTHBOUND TRACK

STRUCTURE NUMBER	STR-310	STR-312	DE-18	DE-20	STR-314	STR-316	STR-318	STR-320	STR-322	STR-324	STR-326	STR-328	STR-330	STR-332	STR-334	STR-336	STR-338	STR-340	STR-342	STR-344	STR-346	STR-348	STR-350	STR-352	STR-354
STATIONING - NB TRACK	159+98.35	160+23.32	160+44.94	160+47.02	160+48.35	160+73.35	160+98.35	161+23.36	161+48.37	161+73.37	161+98.38	162+23.40	162+48.42	162+73.45	162+98.48	163+23.52	163+48.56	163+73.59	163+98.63	164+27.25	164+52.25	164+77.25	165+02.25	165+27.25	165+52.53
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-176	12/OV-176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IN-RUNNING																									
☉ OF WIRE TO ☉ OF TRACK	3"	3"	-	-	3"	3"	3"	3"	3"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	2"	0"	0"	0"	0"
MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	-	-	14'-2"	14'-2"	14'-3"	14'-3"	14'-3"	14'-4"	14'-4"	14'-4"	14'-5"	14'-5"	14'-5"	14'-5"	14'-5"	14'-6"	14'-7"	14'-8"	14'-10"	15'-1"	15'-3"	15'-6"	15'-11"
CONTACT WIRE HEIGHT (FT-IN)	12'-7"	12'-7"	-	-	12'-8"	12'-8"	12'-9"	12'-9"	12'-9"	12'-10"	12'-10"	12'-10"	12'-11"	12'-11"	12'-11"	12'-11"	12'-11"	13'-0"	13'-1"	13'-2"	13'-4"	13'-7"	13'-9"	14'-0"	14'-5"
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

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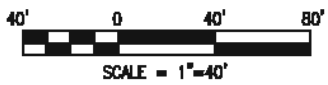
- FINAL SUPPORT STATIONING AND OFFSET TO BE FIELD VERIFIED.
- FOR LOCATIONS OF FEEDER TAPS, SEE TP-SERIES DRAWINGS.
- FOR PROFILE, SEE OV-148.
- FOR TYPICAL SECTION BREAK ARRANGEMENT, SEE OV-174.
- REMOVE AND SALVAGE EXISTING HARP ASSEMBLY.
- PROVIDE HANDHOLE COVER PER SPECIFICATIONS 34 23 13.
- PROVIDE POLE CAP PER SPECIFICATIONS 34 23 13.
- PROVIDE TROLLEY POLE IDENTIFICATION PER STANDARD DRAWING A-1708.
- PROVIDE HARP ASSEMBLY AND/OR WOOD TROUGH PER PLAN CL-22879.
- BEGIN TRANSITION OF TROLLEY WIRE HEIGHT TO 14'-6" ± 3" AT HARP ASSEMBLY WITH NO MORE THAN 1% GRADE.



POLE/EYEBOLT No	POLE		GLYMWIRE No			OVERHEAD NOTES
	TYPE	RAKE (IN/FT)	1	2	3	
370	-	-	400	-	-	1
			23.00	-	-	
371	-	-	850	-	-	1 6
			23.00	-	-	
380	-	-	500	-	-	1
			23.00	-	-	
391	-	-	650	500	-	1
			24.00	23.50	-	
400A	-	-	-	-	-	7 10
400	767	4/32	1200	400	500	2 3 4 6 14 17
			28.75	28.00	21.75	
405	770	3/32	500	1350	1150	1 6 17
			23.25	28.75	22.75	
410	-	-	-	-	-	8 9
412	761N	2/32	500	-	-	2 3 14 16
			18.75	-	-	
413	-	-	500	-	-	1 7
			18.25	-	-	
780	-	-	1250	800	-	1
			28.50	24.25	-	

SOUTHBOUND TRACK

STRUCTURE NUMBER	STR-313	STR-315	STR-317	STR-319	STR-321	STR-323	STR-325	STR-327	STR-329	STR-331	STR-333	STR-335	STR-337	STR-339	STR-341	STR-343	STR-345	STR-347	STR-349	STR-351	STR-353	STR-355	STR-357
STATIONING - SB TRACK	159+95.36	160+20.36	160+45.36	160+70.37	160+95.37	161+20.38	161+45.38	161+70.43	161+95.47	162+20.52	162+45.56	162+70.64	162+95.72	163+20.80	163+45.89	163+70.94	163+98.00	164+24.61	164+48.63	164+74.61	164+99.65	165+24.65	165+59.93
☉ OF WIRE TO ☉ OF TRACK	0"	0"	0"	4"	6"	4"	0"	4"	6"	4"	0"	0"	0"	0"	0"	2"	0"	2"	0"	2"	0"	0"	0"
MESSENGER WIRE HEIGHT (FT-IN)	14'-1"	14'-1"	14'-2"	14'-2"	14'-3"	14'-3"	14'-3"	14'-4"	14'-4"	14'-4"	14'-5"	14'-5"	14'-5"	14'-5"	14'-5"	14'-6"	14'-7"	14'-8"	14'-10"	15'-1"	15'-3"	15'-6"	15'-11"
CONTACT WIRE HEIGHT (FT-IN)	12'-7"	12'-7"	12'-8"	12'-8"	12'-9"	12'-9"	12'-9"	12'-10"	12'-10"	12'-10"	12'-11"	12'-11"	12'-11"	12'-11"	12'-11"	13'-0"	13'-1"	13'-2"	13'-4"	13'-7"	13'-9"	14'-0"	14'-5"
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



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	DESIGNED C. DAVID DRAWN C. DAVID CHECKED S. LEUNG REVIEWED T. TOLENTINO RECOMMENDED C. MORGANSON APPROVED R. EDWARDS DATE 05/25/2012	REV. 0 SEALED BY S. LEUNG 	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	CONTRACT NO. 1256
	DATE ISSUED FOR BID 05/25/2012				SFMTA CONTROL NO. CL-22839
	DRAWING NO. OV-112				REVISION 1

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

Tutor Perini
Over a century of excellence

SFMTA - 35

Tuesday, December 17, 2013

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: STS RFI's 006, 008, 013-016, 018, 019, 021, 026 -028, 030, 033, 034 037- 039

Dear Mr. Redmond,

To date, our electrical subcontractor for STS, Abbett Electric, has submitted 41 RFI's relating to the STS 1256, Road Way Lighting and Traffic Signal plans. SFMTA has returned 28 RFI's that Abbett has reviewed and also has determined that 19 of these RFI's have cost and potential schedule impacts. Abbett has requested pricing from suppliers and will be preparing detailed Change Order Requests that will be forwarded to SFMTA for review.

In addition to Abbett Electric's cost, TPC will have additional cost for Traffic Control, Survey and Monitoring/Documentation as well as other General Conditions required by the contract. Our subcontractor has advised us that the listed RFI changes will require 32 additional days to complete this work with a combined rough order of cost of \$150,000.

We anticipate that there will be additional cost and schedule impacts in the remaining unanswered RFI's and request that a Proposed Change Order with all of the changes be issued with revised drawings per Article 6.02 if you elect to proceed with these contract revisions.

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

Respectfully,
Tutor Perini Corporation



Patrick Jennings
Project Manager

cc: 10-4, 10-2.0024

Phone (415) 864-7500
 Contractor's California
 License No. 104855, C 10-A



COMMERCIAL
 INDUSTRIAL

ABBETT ELECTRIC CORPORATION

CONTRACTORS
 1850 Bryant Street
 San Francisco, California 94110

AEC LTR.: 2950-005

December 13, 2013

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

Pat Jennings:

Re: CHANGE ORDER ESTIMATED COSTS FOR RFI'S RECEIVED

The following is a current, to-date, list of returned RFI's with an estimated cost impact associated with the returned answered information received.

RFI's received through 12/10/2013:

<u>AEC RFI#</u>	<u>IP RFI#</u>	<u>DESCRIPTION</u>	<u>POTENTIAL COST IMPACT</u>	<u>ACTUAL WORK DURATION</u>	<u>ESTIMATED COST</u>
STS-006	69	TROLLEY POLE 405	YES	1 DAY	credit \$3,000.00
STS-007	70	TP405 MISSING TS	NO		
STS-008	71	NO TRAFFIC SIGNAL WIRE SHOWN ON DRAWING	YES	1 DAY	\$2,000.00
STS-0013	76	POLE 3N SPLICING CLARIFICATION	YES	1 DAY	\$1,000.00
STS-0014	77	SYMBOL MISSING ON DRAWING ET-001	YES	1 DAY	\$2,000.00
STS-0015	78	PEDESTRIAN SIGNAL HEAD	YES	1 DAY	\$1,000.00
STS-0016	79	EXISTING STREETLIGHT POLE NO. 2	YES	1 DAY	\$3,000.00
STS-0017	80	POLE NO. 2 MISSING SL, CONDUIT OR WIRE	NO		
STS-0018	81	STREETLIGHT POLE CLARIFICATION	YES	1 DAY	\$1,500.00
STS-0021	82	EXISTING POLES NOT SHOWN FOR REMOVAL	YES	3 DAYS	\$6,500.00
STS-0026	87	EXISTING POLES CLARIFICATION	YES	4 DAYS	\$8,000.00

<u>AEC RFI#</u>	<u>TP RFI#</u>	<u>DESCRIPTION</u>	<u>POTENTIAL COST IMPACT</u>	<u>ACTUAL WORK DURATION</u>	<u>ESTIMATED COST</u>
STS-0028	88	POLE NO. 7 VEHICLE SIGNAL HEAD TYPE	YES	1 DAY	\$ 500.00
STS-0029	89	(E) TRAFFIC SIGNAL CONTROLLER	NO	-----	
STS-0030	90	EXISTING POLES CLARIFICATION	YES	2 DAYS	\$5,000.00
STS-0033	94	VEHICLE SIGNAL TYPE	YES	1 DAY	\$ 500.00
STS-0034	95	POLE NO. 6 MOUNTING	YES	1 DAY	credit \$ 250.00
STS-0037	97	TENON TO BE ADDED TO POLE NO. 15	YES	1 DAY	\$1,500.00
				20 DAYS	\$29,250.00

RFI's received on 12/12/13:

<u>AEC RFI#</u>	<u>TP RFI#</u>	<u>DESCRIPTION</u>	<u>POTENTIAL COST IMPACT</u>	<u>ACTUAL WORK DURATION</u>	<u>ESTIMATED COST</u>
STS-0012	75	POLE Z-SIGNAL ARM CONNECTION BOX	NO	-----	
STS-0020	134	PG&E POLE CLARIFICATION	NO	-----	
STS-0027	135	DEMO CONTROLLER	YES	2 DAYS	\$2,500.00
STS-0032	92	POLE NO. 7 CLARIFICATION	NO	-----	
STS-0038	136	TENON TO BE ADDED TO POLE NO. 8	YES	1 DAY	\$1,500.00
STS-0039	137	POLE NO. 2 REMOVAL	YES	1 DAY	\$1,000.00
				4 DAYS	\$5,000.00

RFI's received on 12/13/13:

<u>AEC</u> <u>RFI #</u>	<u>TP</u> <u>RFI #</u>	<u>DESCRIPTION</u>	<u>POTENTIAL</u> <u>COST</u> <u>IMPACT</u>	<u>ACTUAL</u> <u>WORK</u> <u>DURATION</u>	<u>ESTIMATED</u> <u>COST</u>
STS-0011	74	POLE Y-TS POLE IN ADJACENT VICINITY	NO	-----	
STS-0019	132	STREETLIGHT POLE CLARIFICATION	YES	1 DAY	\$ 1,500.00
STS-0023	84	CONDUIT RUN NO. 8 CLARIFICATION	NO	-----	
STS-0024	85	TS CONTROLLER AND BBS SYSTEM CLARIFICATION	YES	7 DAYS	\$54,000.00
STS-0025	86	MUNI COMBO POLE NO. 6 CLARIFICATION	NO	-----	
				8 DAYS	\$55,500.00

The estimated cost associated with the aforementioned RFI's is: \$89,750.00

If you have any questions feel free to contact me at (415) 864-7500 or via email at: abbettelectric@att.net.

Sincerely,


 Jeffrey B. Abbett
 President

CP/PCC N/A

DSC FINDING OF FACT

- 1. REPORTED DATE OF OCCURRENCE 2/25/2014
- 2. DATE OF CONTRACTOR'S WRITTEN NOTICE 6/03/2014
- 3. TYPE OF WORK CONTRACTOR WAS PERFORMING Pot hole to verify clear area for installation

4. NATURE OF OBSTRUCTION

Contractor determined that the design location (as shown in OV-101) was not feasible due to location of OCS pole in relation to Pile ID# D69, and overhead support cables. RFI's 188, 188.1, and 322 were submitted and responded to by SFMTA clarifying SFMTA's position. The Contractor proposed potholing in alternative location via RFI 322, but did not proceed with potholing until end of May. TPC issued Letter #62 on 2/25/14 claiming delay. SFMTA responded via letter 110 on 3/12/14 directing contractor to provide clarification for their work sequencing as well as to proceed with pot holing to investigate whether their alternative position was feasible.

Email confirmation of pot holing was sent to RE on 6/03/2014. Photo attached to email provided evidence from pothole survey. Pot hole was found to have 4" flex duct, four-4" PVC, one-2" HDPE, and two-2" rigid lines. The distance from the top of lines was only 40.5" from top of pavement, which is not enough room for a special pole foundation for the OCS lines.

Further coordination meetings were held, and on June 25, 2014, the RE and Contractor agreed to the Contractor's proposed location, outside Pile ID # D63. RE issued direction to the Contractor to proceed on force account to pot hole the additional area.

- 5. LOCATION OF OBSTRUCTION Northwest corner of crosswalk between Ellis & Market, in front of Diesel Building.

6. METHOD USED TO OVERCOME OBSTRUCTION

Additional potholing near pile cluster at Pile ID #D63.

7. SIGNIFICANT IMPACT ON CONSTRUCTION PROGRESS, IF ANY.(SUPPLIED BY THE CONTRACTOR)

COST \$2,000

TIME N/A

8. CONCLUSION, WHETHER-OR-NOT OBSTRUCTION CAN BE CLASSIFIED AS A DIFFERING SITE CONDITION (BASED ON CONTRACT DOCUMENTS).

The RE has evaluated the conditions outlined in Article 3.04 and found that: an unforeseen condition was encountered.

9. ATTACHMENTS:

- SPECIFICATION Contract Number 1300, Stations, Surface, Track and Systems
- DRAWINGS OV-001, OV-101
- INSPECTION RPT n/a

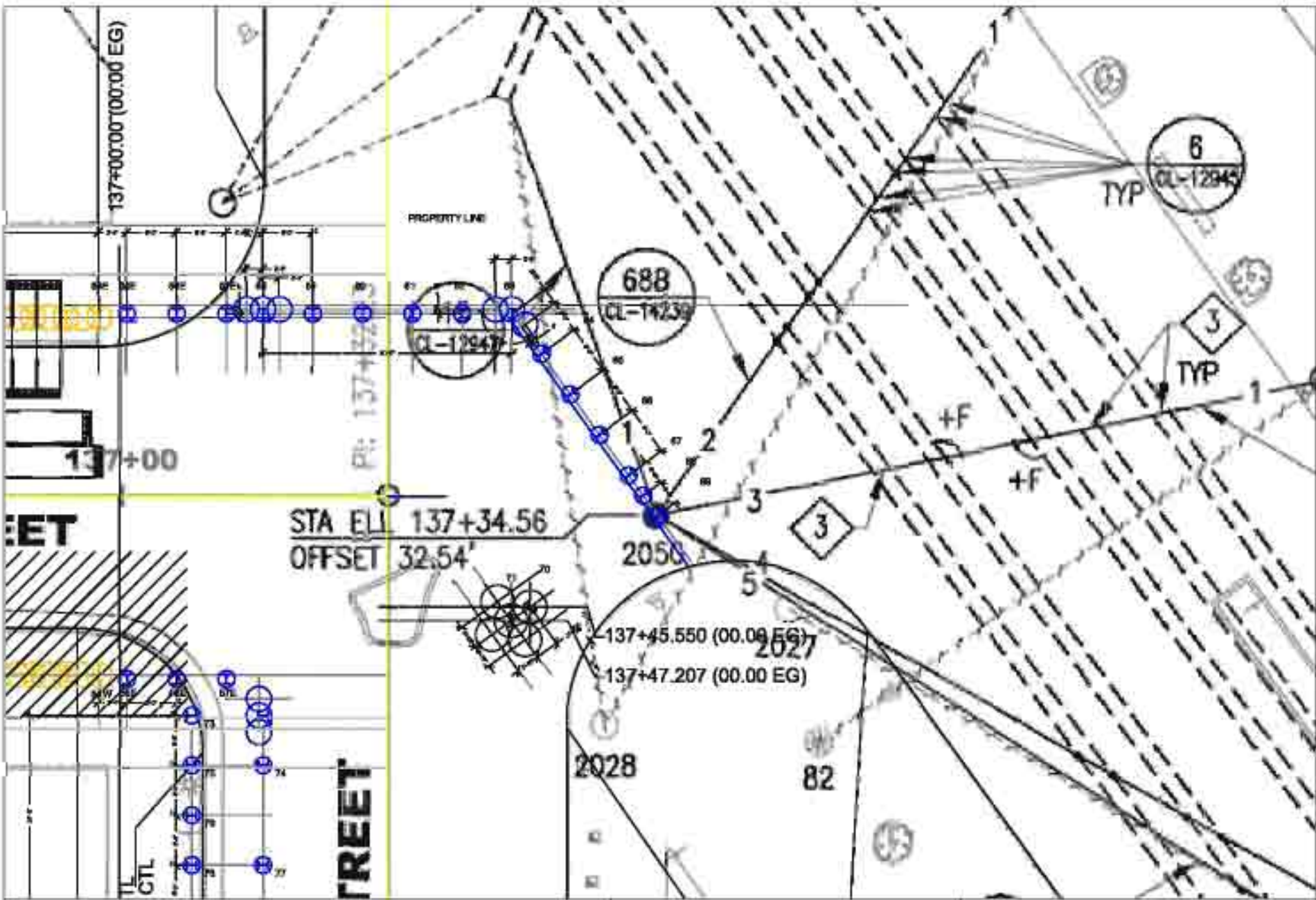
OTHER

RFI #188, 188.1, and 322. TPC Letter No. 62, SFMTA Letter No. 234

**Prepared
by:**

Richard Redmond, Construction Manager
SFMTA Representative

Date



REV	DATE	DESCRIPTION

Becht Inc.
 Central Subway - Union Square / Market Street Station
 13001 Chiles Street
 Dublin, CA 94568
 ph: (916) 383-8301

Drawing Title: Market St & Eddy Street Line Casts Outside Pole

Drawn By: CV Date: 10/18/2013 Scale: 1/8" = 1'-0"

DATE

LOCATION South West Corner

DRAWING T-305

POTHOLE Muni Pole

SIZE / UTILITY 4" FLEX Duct 4-4" PVC 1-2" HDPE
2-2" Rigid

T.O.P. 40 1/2" 2-6" Rigid PG&E 65" 1-4" FLEX DUCT

B.O.P. 53" 2-6" Rigid PG&E 72" 30" T.O.P.
45" B.O.P.

D.O.H. 65"

AC / CONC DEPTH 10" All 4"

DIST. FROM CURB ^{For South} Pile line 41 1/4" 4" FLEX Duct

OTHER 47 1/4", 54", 59 1/2", 65 3/4", 2" HDPE 72", 2" Rigid
73 1/2", 2" 81 1/2"



Monday, June 30, 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: (UMS) MUNI OCS Pole at Market and Ellis

Dear Mr. Jennings,

On June 25th, SFMTA met with TPC to review options for Phase 2 of the OCS temporary sequencing plan, as shown on OV-101. TPC maintains its stance that the temporary OCS pole, as shown on drawing OV-101, does not allow it to install the UMS station piles, excavate, and install station roof beams. SFMTA and TPC discussed various suggestions for different OCS pole and overhead line configurations.


The location for a temporary pile that was settled on to be ideal was near the triple pile cluster "Pile D63". This temporary pole location would be only a few feet outside the UMS station footprint, and would allow virtually all phases of work in the UMS south concourse area to proceed and would streamline phasing.

The Contractor has already potholed the amount required to explore other areas, and additional potholing could be considered extra work. TPC is hereby directed to pothole the location, as per the attached drawing noted as "New Temp OCS Pole". Please see the attached FACO, with a not-to-exceed amount of \$2,000, directing the Contractor to proceed on force account with the pot holing.

If you have any questions, please do not hesitate to contact me in the future.

Yours truly,



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

Attachments: TPC Temp OCS Pole Location Sketch, and FACO #25

Cc: John Fungli, SFMTA
Eric Stassevitch, SFMTA
Albert Hoe, SFMTA
Jane Wang, SFMTA
Ben Volberding, SFMTA
Roger Nguyen, SFMTA
Steve Tisell, SFMTA
Nicolas Huff, SFMTA
CS File No. M544.1.3.1300.0030

FORCE ACCOUNT CHANGE ORDER

Title: **UMS – Muni OCS Pole at Market FACO #25**

SFMTA Project: Central Subway Project (544.1)

Contract No. 1300 FA Change Order No. 025

Package UMS Date June 27, 2014

TO: Tutor Perini, Contractor

You are ordered to perform work as follows:

TPC has SFMTA met with TPC to review options for Phase 2 of the OCS temporary sequencing plan, as shown on OV-101. TPC maintains its stance that the temporary OCS pole, as shown on drawing OV-101, does not allow it to install the UMS station piles, excavate, and install station roof beams. SFMTA and TPC discussed various suggestions for different OCS pole and overhead line configurations.

The location for a temporary pile that was settled on to be ideal was near the triple pile cluster "Pile D63". This temporary pole location would be only a few feet outside the UMS station footprint, and would allow virtually all phases of work in the UMS south concourse area to proceed and would streamline phasing.

The Contractor shall proceed on Force Account and perform all work to pothole near the Type D Pile #63 "cluster".

The work specified above will be paid for on a force account basis as set forth in Section 6.05, Force Account Work, of the General Provisions. Payment for this work will not be allowed without an executed Contract Modification.

Work under this Force Account Change Order shall not exceed \$2,000.00 without an approved supplemental Force Account Change Order. The Contractor shall notify the SFMTA promptly in writing when costs under this Force Account Change Order exceed 80% of the not-to-exceed amount.

Prepared by: Steve Tisell

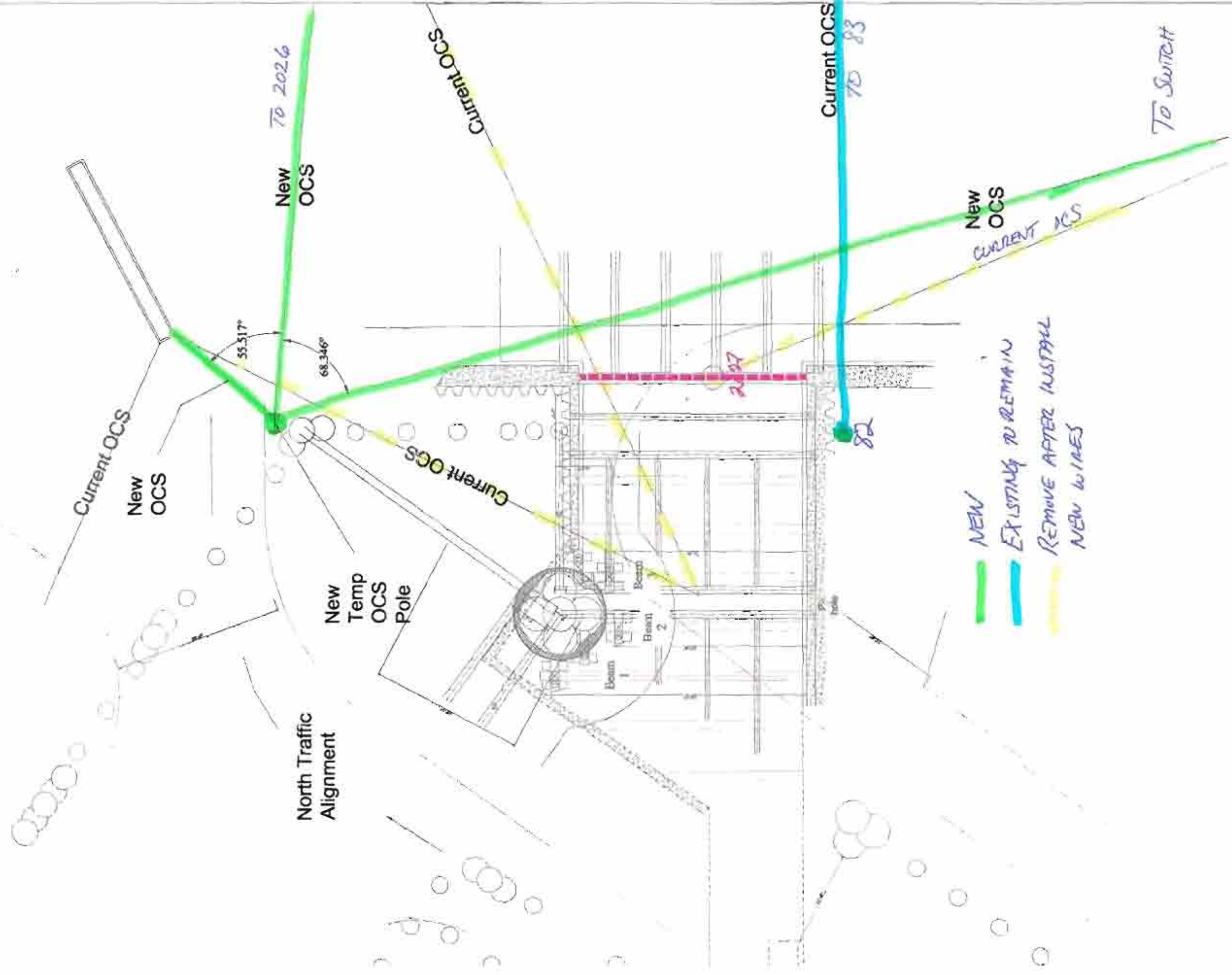
Date: June 27, 2014

Approved:

Construction Manager  Rich Redmond

CM  Date: _____

Original: Contractor
Copies: Construction Manager
Contract File



- NEW
- EXISTING TO REMAIN
- REMOVE AFTER INSTALL NEW WIRES

Tutor Perini
CORPORATION

CENTRAL SUBWAY - SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
CONTRACT # 1300

To Switch

Current OCS
To 83

New OCS
To 2026

Current OCS

New OCS

Current OCS

New OCS
Current ACS

New Temp OCS Pole

North Traffic Alignment

Beam 1

Beam 2

2027

82

55.517°

68.346°

Tuesday, July 22, 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: (UMS) MUNI OCS Pole at Market and Ellis – Temporary Pole Foundation Design

Dear Mr. Jennings,

In an effort to move the Work forward, attached please find the design for the pole foundation for temporary OCS Pole #2050 (shown on UMS--OVS-101) for Contractor's use. The design accommodates the two-phase, temporary sequence of OCS work at the subject location, based on the potholing that was completed recently – near triple cluster "Pile D63".

The temporary pole relocation and foundation design shall be the Contractor's responsibility. In accordance with Section 01 56 10 Temporary Site Construction, Article 1.01.B states that Contractor shall provide all temporary construction required in the execution of the Work that is not to be part of the completed facilities to be provided under this Contract. Further on Drawing ST-791, Note 6 states, "Contractor to design foundation in temporary stage. For loading see reference drawings." The reference drawing (CL-7971_Rev2) shows the loading criteria for Type 770, which is the designated pole type for Pole #2050.

TPC has stated via a string of emails on July 3, 2014 that it does not believe the design of the temporary pole foundation is part of its scope and that pole foundations are pre-designed. TPC cites Note 21/OV-001 maintaining that Pole #2050 is to be supported by a standard foundation. That is incorrect. TPC cites only one of two notes for Pole #2050, when in fact two notes apply: Note 21 in oval and Sheet Note 2 in diamond.

Note 21/OV-001 states the following: "Provide steel trolley pole as specified on the OCS schedule. See standard drawing CL-7971, Rev2. Provide special pole foundation as indicated."

Note 2/OV-101 states: "See ES-series drawings for special pole foundation."

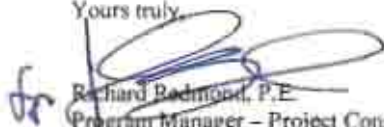
Note 21 refers to the pole type; in this case it is Pole Type 770 for Pole #2050. Further this note also instructs the contractor to provide the special pole foundation.

Note 2 refers to the foundation; in this case, it is a special foundation, not standard design shown on CL-7921. The reference to "ES-series" is a typo, as foundation designs are typically shown on ST-series drawings. Drawings OV-102 and OV-103 correctly cite ST-drawings in reference to special pole foundation. As stated above, Note 6 on ST-791 states that Contractor is to design the foundation in temporary stage.

SFMTA reserves its right to seek credits for the design work, as well as the reduced OCS scope of work. The work to install the temporary foundation and pole has always been a part of the Work, and the Contractor is directed to proceed forthwith with either the attached design, or an alternative design of TPC's choosing upon approval of the Engineer.

If you have any questions, please do not hesitate to contact me in the future.

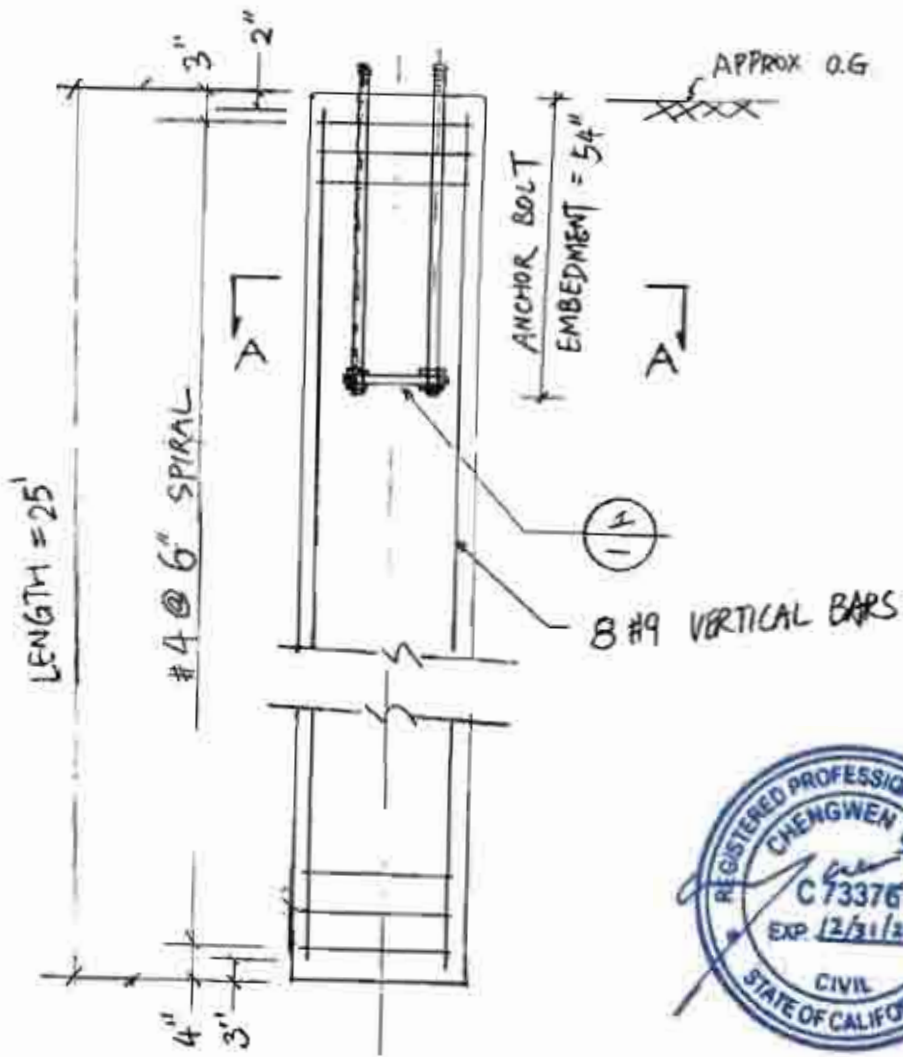
Yours truly,


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

Attachments:

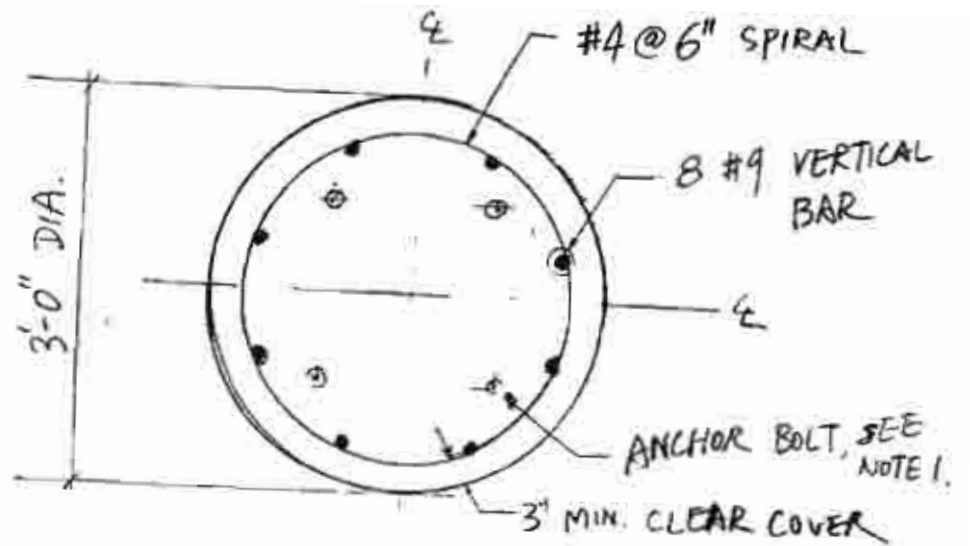
1. Pole #2050 OCS foundation design
2. Phase 1 OCS Loading
3. Phase 2 OCS Loading

Cc: John Funghi, SFMTA
Eric Stassevitch, SFMTA
Albert Hoe, SFMTA
Jane Wang, SFMTA
Steve Tisell, SFMTA
Nicolas Huff, SFMTA
Ben Volberding, SFMTA
CS File No. M544.1.3.1300.0030



OCS FOUNDATION

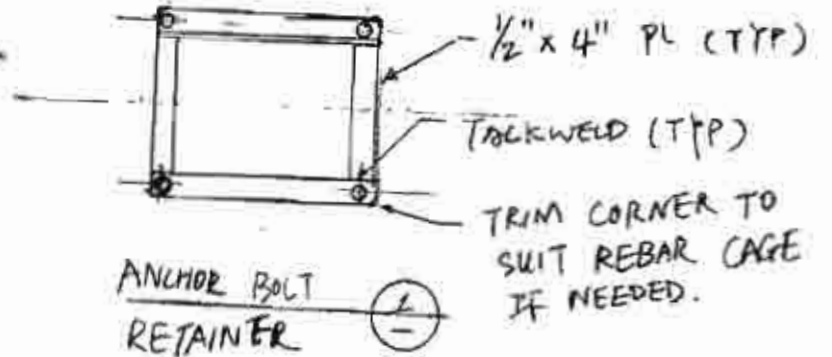
NTS



SECTION

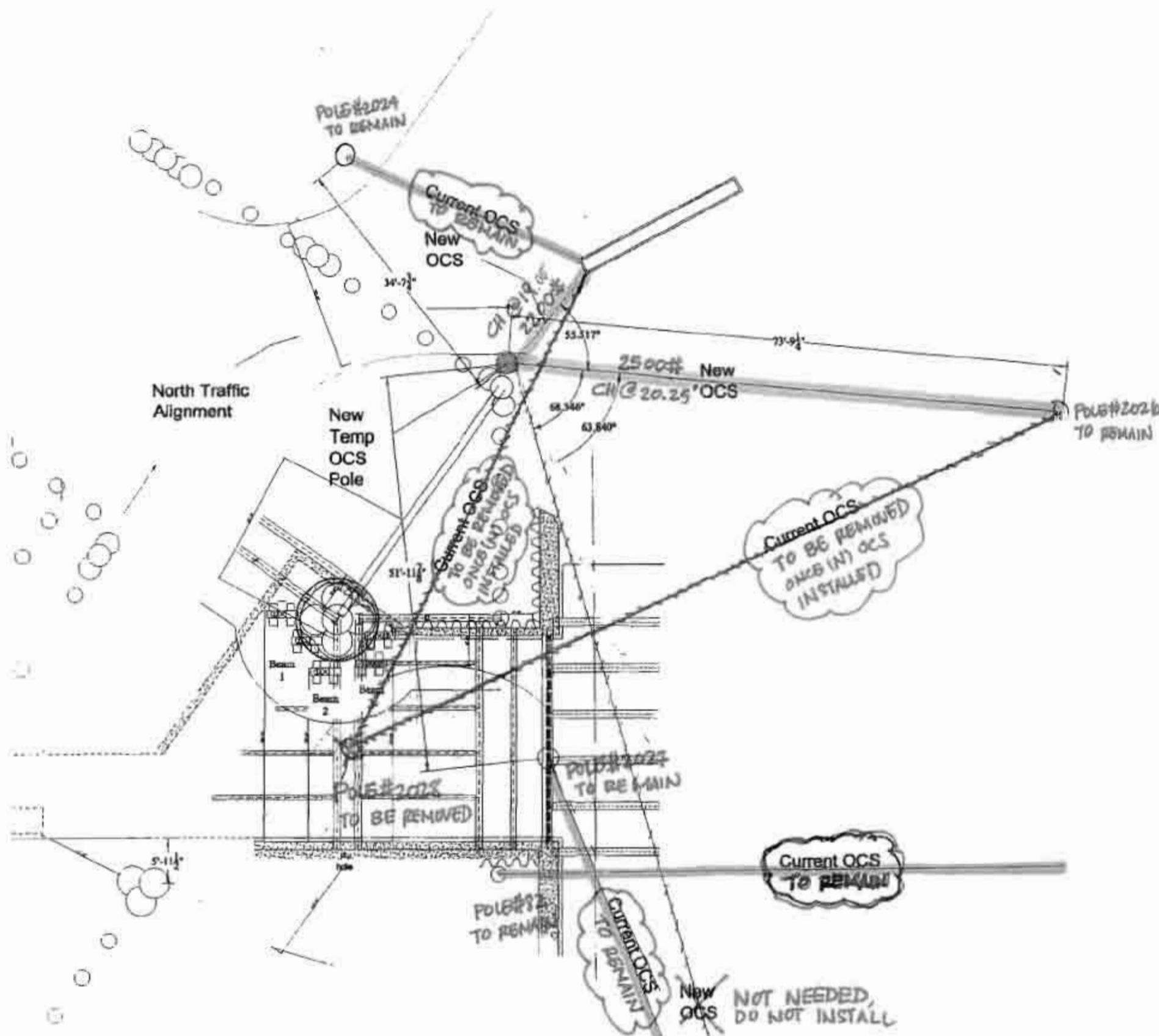
NTS

A



NOTE

1. REFER TO POLE NO. 770 OF DRAWING CL-7971 FOR INFORMATION NOT PROVIDED.



- (N) TEMP OCS POLE TYPE 770
- RESULTANT FORCE ON POLE = 4000#
- DESIGN FOUNDATION FOR STANDARD POLE CAPACITY FOR 770 TYPE, PER TABLE ON CL-7971
- MAX ALLOWABLE MOMENT = 183 K-FT

- (E) OCS TO REMAIN
- (N) OCS TO BE INSTALLED
- (E) OCS TO BE REMOVED ONCE (N) OCS IS INSTALLED

NOTE: ADJUST (E) OCS SPANS TO REMAIN ACCORDINGLY TO MAINTAIN (E) TW HEIGHT.

Tutor Perini
CORPORATION

CENTRAL SUBWAY - SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
CONTRACT # 1300

OCS SCHEDULE					OVERHEAD NOTES
CABLE No.					
	2	3	4	5	
					(8) (10) (1)
0					(1)
15					(1)
30					(1)
45					(8) (10)
					(8) (10)
10	2500	2200	1100	600	(21) (2)
15	19.50	19.75	27.00	26.50	

FOR POLE# 2026

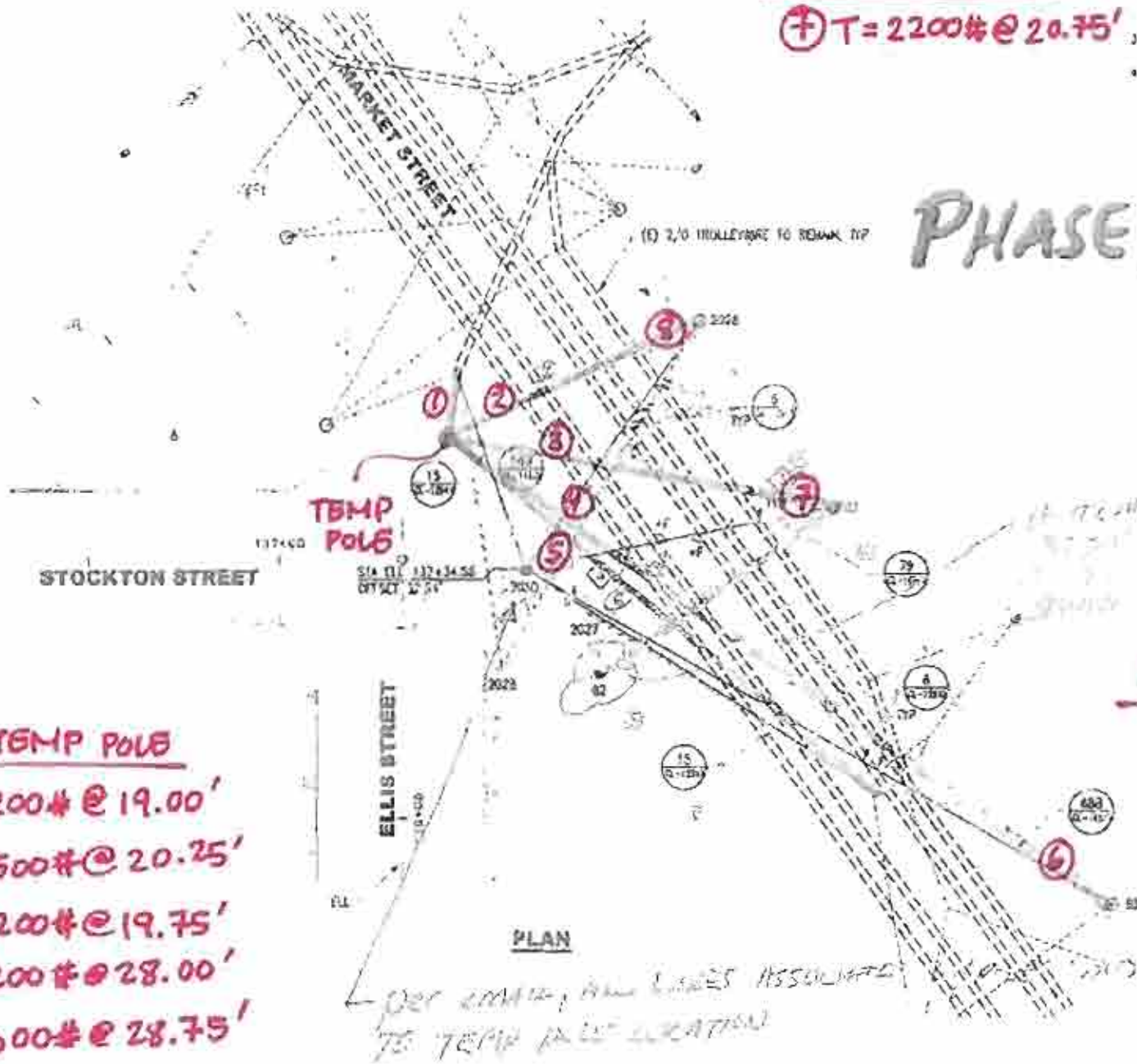
⑧ T = 2500# @ 19.75'

FOR POLE# 83

⊕ T = 2200# @ 20.75'

- 3. PRUNGE ONE ITEM 88 AND TWO OF ITEM 49.
- 4. STORE AND PROTECT ALL PARTS OF (E) HISTORIC POLE TO BE RE-INSTALLED. SEE DN-102.

PHASE II



FOR TEMP POLE

- ① T = 2200# @ 19.00'
- ② T = 2500# @ 20.25'
- ③ T = 2200# @ 19.75'
- ④ T = 1200# @ 28.00'
- ⑤ T = 600# @ 28.75'

FOR POLE# 85

⑥ T = 1200# @ 24.00'

- * (N) TEMP OCS POLE TYPE 770
 - RESULTANT FORCE ON POLE = 6000#
 - DESIGN FOUNDATION FOR STANDARD POLE CAPACITY FOR TYPE 770, PER TABLE ON CL-7971.
 - MAX ALLOWABLE MOMENT = 183 k-ft.

Huff, Nicolas

From: Jim Nies <Jim.Nies@tutorsaliba.com>
Sent: Tuesday, June 03, 2014 7:35 AM
To: Tisell, Steve
Cc: Huff, Nicolas; Brett Chabert; Pat Jennings
Subject: Muni Pole Pothole at Market
Attachments: UMS muni pole pothole.jpg

Steve,

The pot hole to find a new location for the muni pole issue at Market Street appears to have netted negative results, see attached pic. TPC requests that you inquire a solution from the Designer responsible for this design coordination issue and provide TPC direction on how to proceed. We are available to meet anytime and offer our assistance in resolving this issue.

Regards,

Jim Nies

Tutor Perini
CORPORATION

Phase 2 Central Subway Project
530 Bush Street, Suite 302
San Francisco, California 94108
Mobile (818) 314-2557

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CP/PCC N/A

DSC FINDING OF FACT

- | | | |
|----|--|---|
| 1. | REPORTED DATE OF OCCURRENCE | <u> 4/01/2014 </u> |
| 2. | DATE OF CONTRACTOR'S WRITTEN NOTICE | <u> 4/01/2014 </u> |
| 3. | TYPE OF WORK CONTRACTOR WAS PERFORMING | <u> Pot hole to verify clear area for installation </u> |

4. NATURE OF OBSTRUCTION

Contractor submitted NDSC, claiming CDF used to backfill the utilities near the Type B and Type C piles (Letter No. 104, 4/1/14 and No. 142, 5/7/14 respectively) was not per the Contract No. 1251 as-builts. While the assertion was valid, sand was used for the top 1"-3" of the CDF as a level surface for the sidewalk, SFMTA did not believe that the conditions qualified as a DSC.

Contractor claimed extra work to remediate the sand lenses with slurry fill. The slurry would stabilize the sand from falling out and undermining the sidewalk. Once stabilized, Tutor would not have to shore the excavation cut in order to install the Type B and C piles. SFMTA never made any representation that CDF could be used in lieu of shoring, and the Contractor did not submit any substantiation that the CDF was self-supporting. SFMTA rejected NDSC's via Letter No 163, on 4/22/14, and Letter No. 183 on 5/14/14. SFMTA requested valid substantiation that CDF was self-supporting and could be used in lieu of shoring. Tutor submitted inadequate validation for their NDSC assertion via Letter No. 149 on 5/16/14, which SFMTA rejected via letter No. 195 on 5/22/14.

The Contractor took core samples of the CDF and performed compressive tests. The analysis was provided via letter No. 179 on 6/18/14. CSDG reviewed, and general agreed with TPC's assertion for areas where building basements were present, but not in street intersections or areas with no building basements. Per PM/CM meeting on 7/7/14, verbal authorization was granted to issue FACO for TPC to proceed with CDF repairs. FACO #30 was issued on 7/9/14 via Letter 242R.

- | | | |
|----|-------------------------|--|
| 5. | LOCATION OF OBSTRUCTION | <u> Along most of UMS Stockton Street site alignment, underneath sidewalks. </u> |
|----|-------------------------|--|

6. METHOD USED TO OVERCOME OBSTRUCTION

Excavate soil lense back to face of cut. Clean top of joint trench. Place 2 slack sand slurry mix to stabilize.

7. SIGNIFICANT IMPACT ON CONSTRUCTION PROGRESS, IF ANY.(SUPPLIED BY THE CONTRACTOR)

COST \$50,000

TIME N/A

8. CONCLUSION, WHETHER-OR-NOT OBSTRUCTION CAN BE CLASSIFIED AS A DIFFERING SITE CONDITION (BASED ON CONTRACT DOCUMENTS).

 CSDG reviewed and generally concurred with TPC's in-situ testing and analysis of CDF.

9. ATTACHMENTS:

- | | |
|----------------|---|
| SPECIFICATION | <u> Contract Number 1300, Stations, Surface, Track and Systems </u> |
| DRAWINGS | <u> Contract 1251 As-built Drawing JT-327 and JT-322. </u> |
| INSPECTION RPT | <u> n/a </u> |

SFMTA Letter No.'s 242R, 195, 183, and 163

TPC Letter No.'s 188, 179, 149, 142, and 104

OTHER

**Prepared
by:**

Richard Redmond, Construction Manager
SFMTA Representative

Date

Wednesday, July 9, 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: (UMS) Response to TPC Letter 179 & 188 – NOPC Inadequate CDF along Stockton

Gentlemen:

SFMTA is in receipt of both TPC Letters 179 and 188, dated June 18 and June 30th, 2014, regarding an alleged Differing Site Condition (DSC) that exist due to fact that controlled density fill (CDF) was not solely used as backfill for the trenches needed to relocate the utilities along Stockton Street in the 1251 Project, as indicated on the reference 1251 Contract Drawings. Letter 179 and 188 are the fourth and fifth letters in this series.

SFMTA has reviewed TPC Letter No. SFMTA-179 and the accompanying analysis entitled *Joint Trench Stability for Adjoining Excavation*, for the purpose of evaluating the feasibility of relying upon the existing controlled density fill (CDF) to be self-supporting and, therefore, eliminating the need for shoring during excavation for construction of the pile caps at UMS.

In addition, SFMTA has reviewed the Contractor's proposed repair of CDF where subsurface investigation indicates that the CDF is interrupted by soil lenses of varying depth. Taking into consideration the depth of excavation and the (cohesion and density) properties of the CDF, in our opinion the CDF, if constructed as indicated in the Contract 1251 drawings, would be self-supporting at those locations where sub-sidewalk basements are present adjacent to the station excavation (resulting in no lateral earth pressure on CDF from adjacent buildings) and, therefore, would not require shoring for support of excavation.

The product data submitted for the project (Cell-Crete CCC30-68 Mix Design) indicates that the cellular concrete (CDF) has a relative low unit weight of 30 pounds per cubic foot. At the intersections, where no sub-sidewalk basements exist, we require that TPC provide calculations to demonstrate the global stability of the joint trench (sliding or rotation) when it is subjected to lateral loading. The current analysis only includes surcharge loading, which is inaccurate.

SFMTA's review of the Contractor's proposed repair of the CDF along Stockton Street (attached), where the CDF is found to have been interrupted by soil lenses of varying depth. In general, SFMTA's opinion, the Contractor's planned repair procedure, which will be performed in maximum 4' reaches, appears to be acceptable for the purpose of shoring for support of excavation assuming the CDF joint trench at the intersections meets the global stability requirement. SFMTA's comments are as follows:

1. How is the slurry being injected for a proper bonding and to keep the slurry in place while curing?
2. What measures are being taken to ensure the adequate extents (width and depth) of slurry placement?
3. Confirm that the proposed procedure for slurry placement will not result in void behind the slurry.
4. Confirm that sand backfill will remain in place within 1'-6" of a natural gas line.

TPC is hereby directed to proceed with their proposed repairs on Force Account Change Order No 30, and to track their time and materials. As mentioned above, the Contractor did not properly model the CDF to take the full lateral loads. He only looked at the surcharge loads. This is only applicable at conditions or areas with building basements. Otherwise, lateral soil loads due to adjoining building foundation pressures will impart too much stress on the CDF and the CDF will not be able to sustain the loads. Therefore, SFMTA will only track the time and materials related to areas with building basements. Street intersections, in particular, are not compensable.

In order for the costs to be accepted, the Contractor is required to notify the SFMTA inspector before the repairs start, as per the Contract. The inspector will verify if the area does not have a sub-sidewalk basement, and approve the work to proceed. Otherwise, the Contractor's time to repair in areas where there is no basement, the cost of the work will not be accepted, but will be tracked as disputed work.

Please feel free to contact me if you have any questions.

Yours truly,



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

Attachments:

1. TPC Letter 179 & 188
2. FACO #30

Cc: John Funghi, SFMTA
Eric Stassevitch, SFMTA
Albert Hoe, SFMTA
Jane Wang, SFMTA
Steve Tisell, SFMTA
Nicolas Huff, SFMTA
Ben Volberding, SFMTA
CS File No. M544.1.3.1300.0030

FORCE ACCOUNT CHANGE ORDER

Title: **UMS – Inadequate CDF along Stockton FACO #30**

SFMTA Project: Central Subway Project (544.1)

Contract No. 1300

FA Change Order No. 030

Package UMS

Date July 8, 2014

TO: Tutor Perini, Contractor

You are ordered to perform work as follows:

TPC is hereby directed to proceed with their proposed repairs on Force Account, and to track their time and materials. As mentioned above, the Contractor did not properly model the CDF to take the full lateral loads. He only looked at the surcharge loads. This is only applicable at conditions or areas with building basements. Otherwise, lateral soil loads due to adjoining building foundation pressures will impart too much stress on the CDF and the CDF will not be able to sustain the loads. Therefore, SFMTA will only track the time and materials related to areas with building basements. Street intersections, in particular, are not compensable.

The work specified above will be paid for on a force account basis as set forth in Section 6.05, Force Account Work, of the General Provisions. Payment for this work will not be allowed without an executed Contract Modification.

Work under this Force Account Change Order shall not exceed **\$50,000.00** without an approved supplemental Force Account Change Order. The Contractor shall notify the SFMTA promptly in writing when costs under this Force Account Change Order exceed 80% of the not-to-exceed amount.

Prepared by: Steve Tisell

Date: July 8, 2014

Approved:

Construction Manager Rich Redmond

CM  Date: 7/8/14

Original: Contractor
Copies: Construction Manager
Contract File

Huff, Nicolas

From: Wang, Jane
Sent: Wednesday, July 02, 2014 3:45 PM
To: Huff, Nicolas; Tisell, Steve
Cc: Redmond, Richard; Acosta, Michael
Subject: FW: CN1300:TPC Letter #179 UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Pil
Attachments: UMS Existing Conditions Layout.pdf; CDF Repair.pdf

Nico – can you take a stab at preparing the response? We're conceding where there's basement, TPC can rely on the CDF. Elsewhere, they have to demonstrate the overall stability of the joint trench from sliding/rotating when it's subjected to lateral pressure. (If they can demonstrate that, then there would be merit in these areas too.) You may want to touch base with Gabe to confirm locations of the basements and what the as-built conditions should be or documented elsewhere.

Thanks,

Jane Wang
821 Howard Street
San Francisco, CA 94103
(415) 701-4287

From: Read, Aileen
Sent: Wednesday, July 02, 2014 3:26 PM
To: Wang, Jane; Redmond, Richard
Subject: FW: CN1300:TPC Letter #179 UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Pil

And here are the attachments.

Aileen Read, CSDG
(415) 243-4730

From: Read, Aileen
Sent: Wednesday, July 02, 2014 2:38 PM
To: Wang, Jane; Redmond, Richard
Subject: RE: CN1300:TPC Letter #179 UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Pil

Per your request, we have reviewed TPC Letter No. SFMTA-179, and the accompanying analysis entitled *Joint Trench Stability for Adjoining Excavation*, for the purpose of evaluating the feasibility of relying upon the existing controlled density fill (CDF) to be self supporting and, therefore, eliminating the need for shoring during excavation for construction of the pile caps at UMS. In addition, we have reviewed the Contractor's proposed repair of CDF where subsurface investigation indicates that the CDF is interrupted by soil lenses of varying depth. Taking into consideration the depth of excavation and the (cohesion and density) properties of the CDF, in our opinion the CDF, if constructed as indicated in the Contract 1251 drawings, would be self-supporting at those locations where sub-sidewalk basements are present adjacent to the station excavation (resulting in no lateral earth pressure on CDF from adjacent buildings) and, therefore, would not require shoring for support of excavation. The product data submitted for the project (Cell-Crete CCC30-68 Mix Design) indicates that the cellular concrete (CDF) has a relative low unit weight of 30 pounds per cubic foot. At the intersections, where no sub-sidewalk basements exist, we recommend that TPC be requested to

provide calculations to demonstrate the global stability of the joint trench (sliding or rotation) when it is subjected to lateral loading.

1. In addition, we have reviewed the Contractor's proposed repair of the CDF along Stockton Street (attached), where the CDF is found to have been interrupted by soil lenses of varying depth. In general, in our opinion, the Contractor's planned repair procedure, which will be performed in maximum 4' reaches, appears to be acceptable for the purpose of shoring for support of excavation assuming the CDF joint trench at the intersections meets the global stability requirement. However, we have a few comments/concerns, as noted below: How is the slurry being injected for a proper bonding and to keep the slurry in place while curing?
2. What measures are being taken to ensure the adequate extents (width and depth) of slurry placement?
3. Confirm that the proposed procedure for slurry placement will not result in void behind the slurry.
4. Confirm that sand backfill will remain in place within 1'-6" of a natural gas line.

Below is a summary of the basis for our conclusions.

1. The joint trenches constructed under Contract 1251 run along the east and west sides of Stockton Street. These joint trenches vary from on the order of 6 to 8 feet in width and 10 to 13 feet in depth. The trenches are specified to be backfilled with CDF except within 1'-6" of a natural gas line, where the trench is to be backfilled with sand. (Typically, the natural gas line is near the top of the joint trench.) Per Contract 1251 Specifications Section 03 30 00, Article 2.03A(2), the dry unit weight of the CDF shall be limited to 90 pounds per cubic foot, and CDF shall attain a minimum strength of 50 psi to a maximum of 150 psi at 28 days. The product data submitted for the project (Cell-Crete CCC30-68 Mix Design) indicates that the cellular concrete (CDF) has a density of 30 pounds per cubic foot; core test results indicate the compressive strength of the cellular concrete on the day of testing ranged from 85 psi to 375 psi.
2. The depth of excavation for construction of the pile caps for UMS along Stockton Street ranges from 8.5 to 10.5 feet; therefore, the CDF constructed under Contract 1251 is expected to extend below the depth of excavation.
3. As indicated on Contract 1253 Drawing ES-108 (attached for reference), for the extent of UMS along Stockton Street, the existing adjacent buildings include basements and sub-sidewalk basements that extend below the depth of excavation for the UMS pile caps. As a result, there is no lateral earth pressure above the building foundations and the building surcharge loads are imposed on the UMS structure below the depth of excavation for the pile caps.

Aileen Read, CSDG
(415) 243-4730

From: Seng, Wuthea
Sent: Friday, June 27, 2014 6:47 AM
To: Read, Aileen
Cc: CN, 1300; Tisell, Steve; Huff, Nicolas; Redmond, Richard; Wong, Garland; Zhao, Jin; Seng, Wuthea; Wang, Jane
Subject: RE: CN1300:TPC Letter #179 UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Pil

Aileen,

Oops, please ignore this request, transmittal 1271. We've already request you to review this letter under

transmittal 1211. See attached email.

Wu

-----Original Message-----

From: Seng, Wuthea

Sent: Friday, June 27, 2014 6:29 AM

To: Read, Aileen; Tisell, Steve; Huff, Nicolas; Redmond, Richard; Zhao, Jin; Wong, Garland; Seng, Wuthea

Cc: CN, 1300

Subject: CN1300:TPC Letter #179 UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Pil

Aileen,

Please see attached.

You can view this document in Contract Management by clicking the following link (you will need a Contract Management User Name and Password):

<http://10.31.139.42:7001/exponline/documentrequestforward.do?redirect.rd=true&masterkey=0b94f30ae2884413990397ee1a&basesystemtype=LOT&projectname=1300CSP4&groupname=CMCSP1>

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

Tutor Perini
Over a century of excellence
SFMTA - 179

6/18/2014

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: UMS Response to SFMTA's SLN 195 NOPC CDF at Type C Piles

Dear Mr. Redmond,

SFMTA's final paragraph in its SLN 195 states in part "*Again, TPC has yet to demonstrate that an actual DSC exists, but has merely put the Owner on notice.*" This statement is unequivocally false because there clearly exists two lenses of soil shown in the site photos included in our initial letter of DSC, SLN 104 dated April 1, 2014, in what is supposed to be a homogeneous mass of CDF. Please reference Contract 1300 Drawing Sheet Numbers ES-104 through ES-108 clearly indicating the extent of the utility trench and referencing the 1251 Contract drawings. In the 1251 Contract drawings sheet numbers JT-322 and JT-327 clearly demonstrate that the limits of the CDF extend to the underside of the sidewalk. Both Contracts are in agreement on this designed condition.

Regardless, attached is our Professional Engineer's stamped analysis titled Joint Trench Stability for Adjoining Excavation clearly proving that 1) the CDF will support itself and will not need to be shored based on the physical properties of the CDF and 2) that use of the CDF in this manner is per CalOSHA standards.

Again, as pointed out previously, this existing condition requires a repair of the soil lenses such that the repaired CDF can stand up similar to the original CDF configuration. The most cost effective and timely repair procedure was provided to you previously in our serial letter numbered 104, dated April 1, 2014, which is attached. Seventy-Eight (78) calendar days have elapsed since you were initially notified formally of this condition via our serial letter numbered 104. Valuable time has been lost in not performing the necessary repairs to the CDF in the Type C pile area. Please issue a PCC for this extra work immediately, which we recommend to be performed on a Time & Material basis, and/or provide alternate direction in order to mitigate ongoing delays to the work.

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

Respectfully,
Tutor Perini Corporation



Patrick Jennings
Project Manager

cc: File, Michael Cash TPC, Gilbert Williams TPC, Michelle Luce TPC, 10-2.0176

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

Tutor Perini
Over a century of excellence

SFMTA - 149

5/16/2014

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: Response to SFMTA's SLN 0183 – NQPC Inadequate CDF at Type C Piles

Dear Mr. Redmond,

TPC has received and carefully reviewed SFMTA's letter numbered 0183 and offers the following:

This DSC is mainly about Type C piles in the South Concourse at this time, as this is the first area excavated to place the roof deck, but it will also carry into the Type B piles as previously discussed. The Type B piles, based on photos provided, are anticipated to have significantly larger areas where the CDF has not been placed as shown in the Contract Documents.

TPC's statement in SLN 142 that "TPC was encouraged last week when an employee of SFMTA unequivocally stated that the CDF installed under the sidewalks along Stockton was indeed designed to serve as excavation support when digging to the structure's roof because there isn't enough room between the piles and the sidewalk to install sheet pile[.]" is factual and undeniable. TPC agrees that nowhere in the order of precedence is any individual's opinion listed. However, the statement made was not an opinion, it was stated that the intent of the installation of the CDF was to provide a self-supporting material since there isn't enough room to install sheet piling. Because the drawings are quite clear in this instance, TPC assumed that this was the intent.

Regarding the Cal/OSHA remark and as discussed orally previously, any type of material can be used for excavation support over 5 feet if TPC's engineer can provide substantiation that the material will stand up to the anticipated loads.

SFMTA states that no merit is found in our notice because TPC hasn't suggested a remedy or mitigation, which is incorrect, because TPC suggested a remedy in its SLN 104. Regardless of the solution, SFMTA needs to recognize the DSC and issue TPC a PCC with instructions. TPC thinks that the current best course of action for the "C" pile area would be to support the sidewalk and seal the sand backfill under the sidewalk with a two-sack slurry from the saw cut in the sidewalk on a T & M basis per the attached sketch. The subsequent course of action would be to pot hole to a depth of 10' at multiple locations to determine uniformity and completeness of CDF backfill. Note any missing CDF and find solutions – again

on a T & M basis. For the "B" pile area we should pot hole when available and determine appropriate measures on a T & M basis.

SFMTA's statement that there should be approximately 45 inches to install shoring at the "C" piles is flawed since the calculations are based on reference drawings, not the Contract Drawings. Subtract the sidewalk and SP-38 barricade width of 9'-6" from the distance between the CLT to Property Line of 32'-8" results in a clear space of 23'-2". Add the width of a Type C pile or 1'-6" to the pile spacing of 21'-6" and the result is 23'-0". This results in a clearance of 2", not 45". The available area for shoring at the "B" piles will be analyzed later if necessary.

Finally, TPC appreciates the sketches provided with SFMTA's SLN 183 because the sketch confirms that the 6'-11" wide by 12' deep block of CDF as shown on UMS ES-123 has not been provided and that the block of CDF has been interrupted with layers of sand, a change made under the previous contract.

Please be advised that SFMTA's incorrect and frivolous rejection of TPC's notice of DSC may delay the work. Considering the above, we request that the warranted PCC be issued promptly.

Please contact the undersigned at 415-638-6052 if you have any questions.

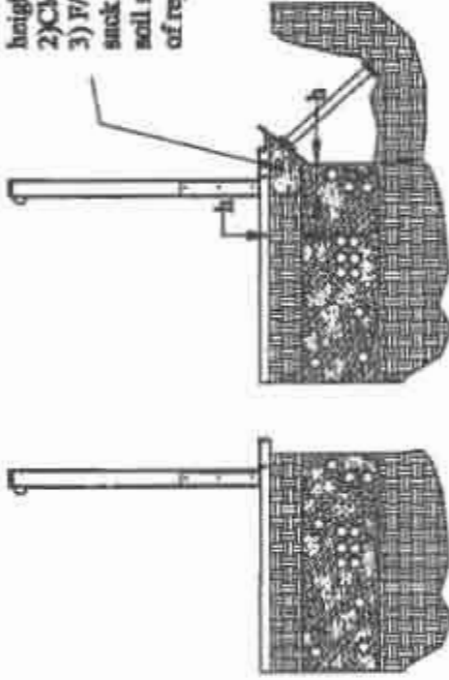
Respectfully,
Tutor Perini Corporation



Patrick Jennings
Project Manager

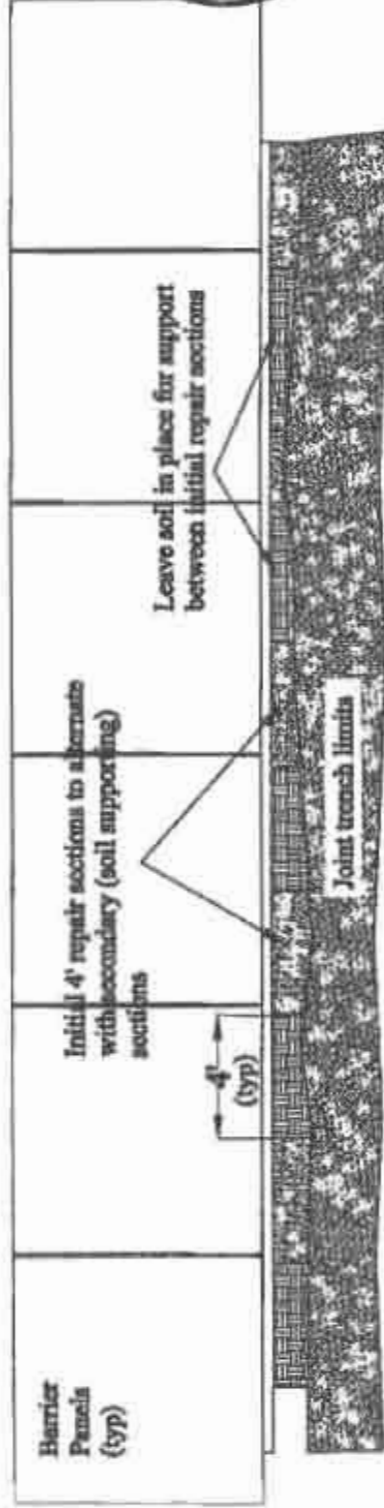
cc: File, 10-2.0093

- 1) Excavate soil lens back from face of cut equal to height in 4' max. reaches.
- 2) Clean top of JT
- 3) F/P 4' placements of 2 sack sand slurry (maintain soil support for 4' each side of repair).



Proposed mitigation of soil lens between JT and sidewalk

Current section at JT/sidewalk



Approx. east piles below
 S-headwall=250'
 Slurry Estimate- 1x1x250/27=
 10 to 15cy

CENTRAL SUBWAY
 SAN FRANCISCO
 MUNICIPAL TRANSPORTATION AGENCY
 CONTRACT # 1300

CDF REPAIR @ STOCKTON ST. (UMS)

SKETCH #1

Tutor Perini Corporation
530 Bush St, Suite 302
San Francisco, CA 94108
Tel: 415/838-6052

Tutor Perini
Over a century of excellence

SFMTA - 104

4/1/2014

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: UMS Notice of Differing Site Conditions – Inadequate CDF at Type B Piles

Dear Mr. Redmond:

This letter is to notify SFMTA of a differing site condition in that CDF material under the sidewalk at UMS, in the line of Type B piles, is not as depicted in the Contract Documents.

UMS ES-123 shows a utility trench on both the East and West sides of Stockton where Type B piles are to be installed. Tutor Perini relied on the dimensions provided and that the envelope of 6'-11" wide by 12' to 13' deep (both to vary) were of adequate depth to serve the purpose of standing and supporting the sidewalk and adjacent excavations without additional means since the 1251 drawings JT-322 and JT-327 show a solid homogeneous CDF backfill.

TPC has found that the Contract Drawings do not represent the actual conditions in the field. The plans show the sidewalk placed right on the CDF fill but we have found a varying lens of soil in a depth of 5" to 18" below the sidewalk. Below this soil we have found the CDF fill material at an average depth of 30", which is far less than the depths shown on ES-123. Below this CDF is more soil to the depth of our investigation of about 5' as shown in the attached photos. The stability of the SP-38 Custom Barricade relies on the sidewalk being fully supported by the CDF, especially the saw cut edge. Stabilizing this face to contain the CDF and the soil in addition to supporting the pedestrian walkway is critical. Of ultimate importance is stabilization while excavating down to the roof level; this is what TPC believes the 12 to 13 feet of CDF was intended to provide.

Our recommendation to resolve the previous contractor's failure to perform its work correctly is to install a simple cantilevered sheet pile wall system and backfill as needed to provide the stabilization necessary.

This matter is created by site conditions not being as shown on the Contract Documents. Please issue a change order and a directive that the proposed mitigation be executed forthwith.

Please contact the undersigned at 415-638-6052 if you have any questions.

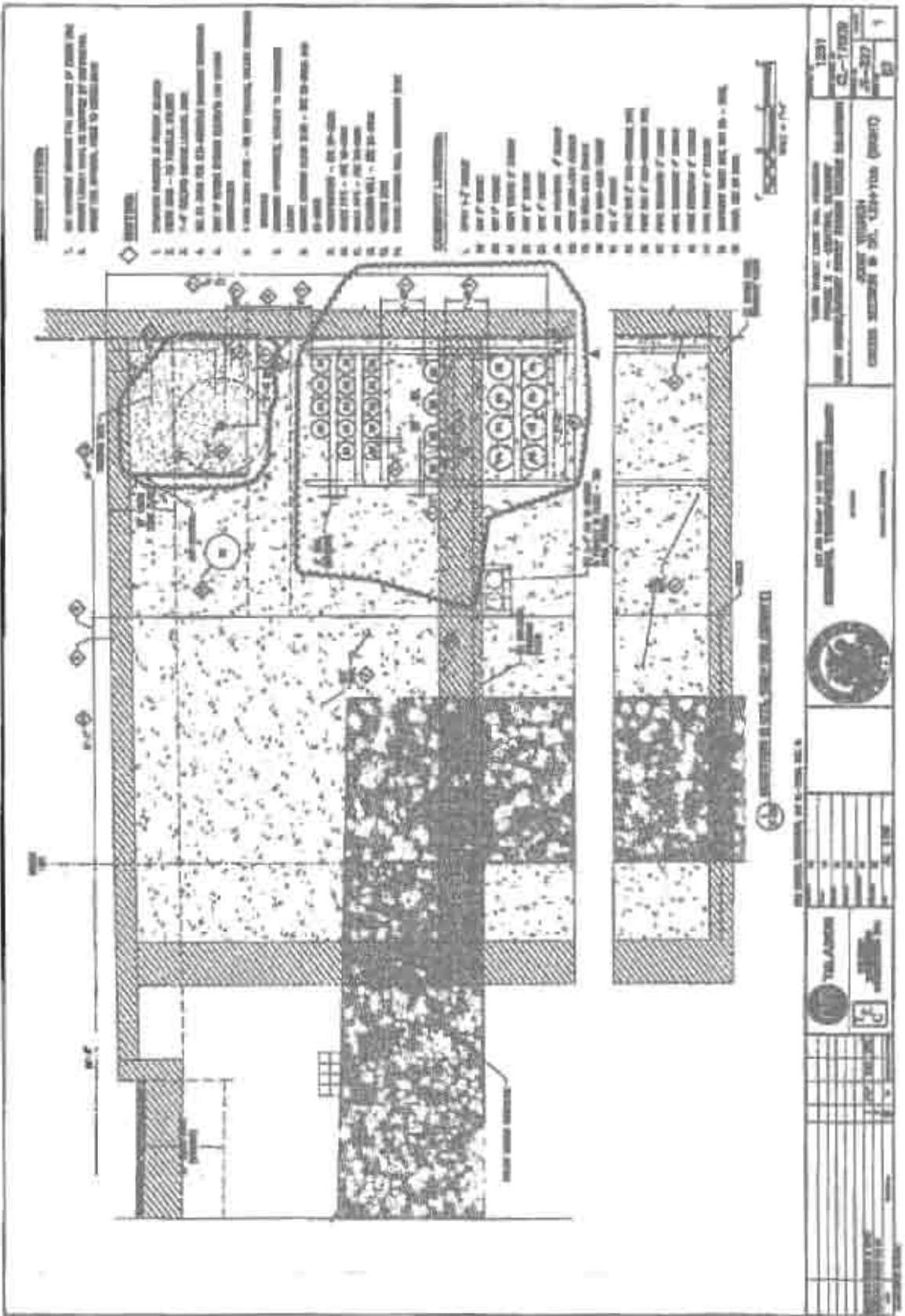
Sincerely,

TUTOR PERINI CORPORATION



Patrick M. Jennings
Project Executive

cc: File, 10-2.0093



GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT.
4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
5. ALL UTILITIES SHALL BE PROTECTED AND MARKED PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL MAINTAIN PROPER RECORDS OF ALL CONSTRUCTION ACTIVITIES.
7. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INSURANCE COVERAGE.
9. ALL MATERIALS SHALL BE STORED PROPERLY AND PROTECTED FROM THE ELEMENTS.
10. THE CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK SITE AT ALL TIMES.

LEGEND:

- 1. CONCRETE
- 2. BRICK
- 3. BLOCK
- 4. GYPSUM BOARD
- 5. INSULATION
- 6. GLASS
- 7. METAL
- 8. WOOD
- 9. ASPHALT
- 10. GRAVEL
- 11. SAND
- 12. FINISH

ROOM SCHEDULE:

Room No.	Room Name	Area (sq. ft.)
101	RECEPTION	150
102	OFFICE	120
103	CONFERENCE	200
104	RESTROOM	50
105	STORAGE	80
106	MEETING	180
107	TRAINING	300
108	WORKSHOP	400
109	LABORATORY	500
110	OFFICE	120
111	CONFERENCE	200
112	RESTROOM	50
113	STORAGE	80
114	MEETING	180
115	TRAINING	300
116	WORKSHOP	400
117	LABORATORY	500
118	OFFICE	120
119	CONFERENCE	200
120	RESTROOM	50

PROJECT INFORMATION:

Project Name: [REDACTED]

Client: [REDACTED]

Address: [REDACTED]

City: [REDACTED]

State: [REDACTED]

Zip: [REDACTED]

Phone: [REDACTED]

Fax: [REDACTED]

Website: [REDACTED]

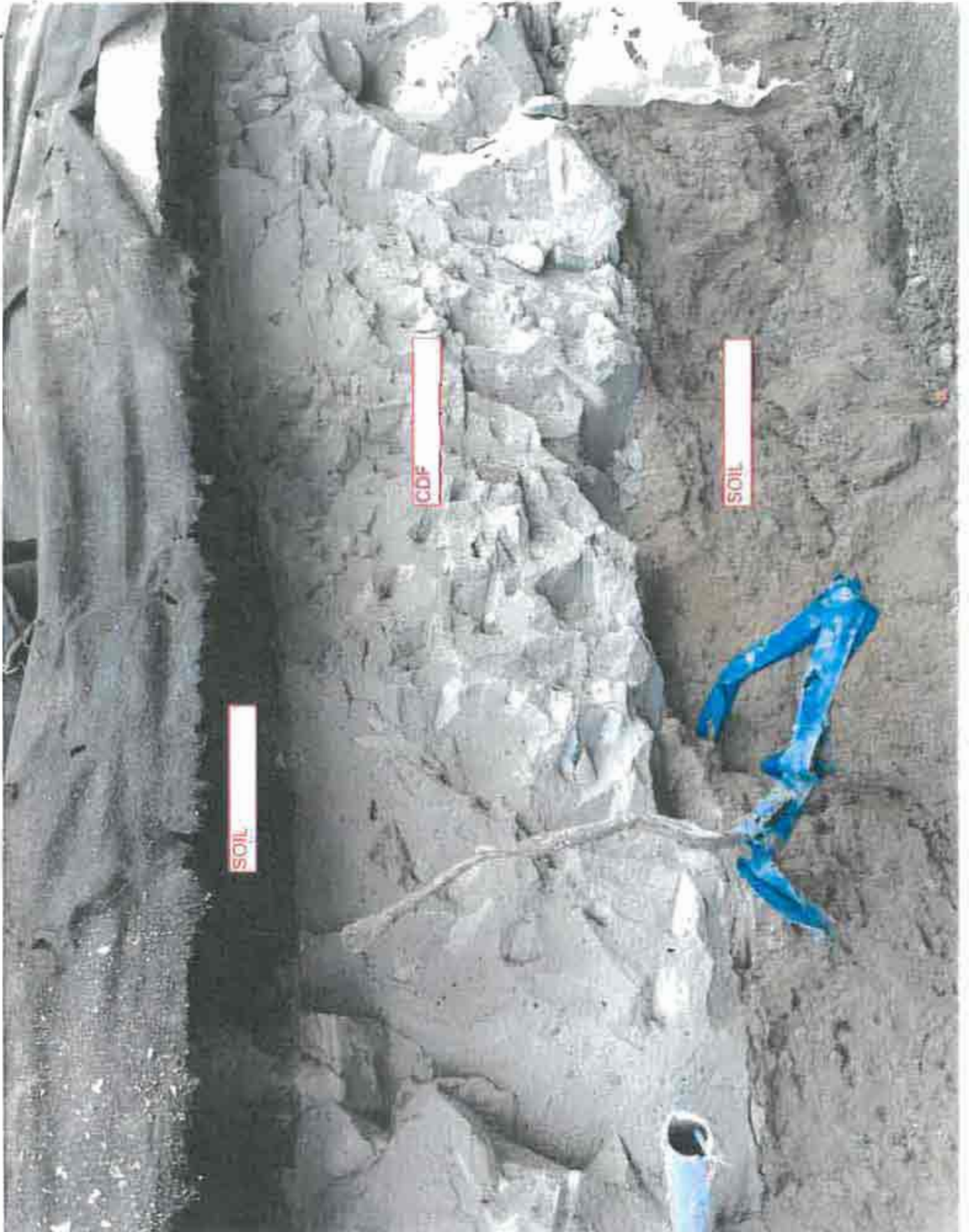
Architect: [REDACTED]

Engineer: [REDACTED]

Contractor: [REDACTED]

Start Date: [REDACTED]

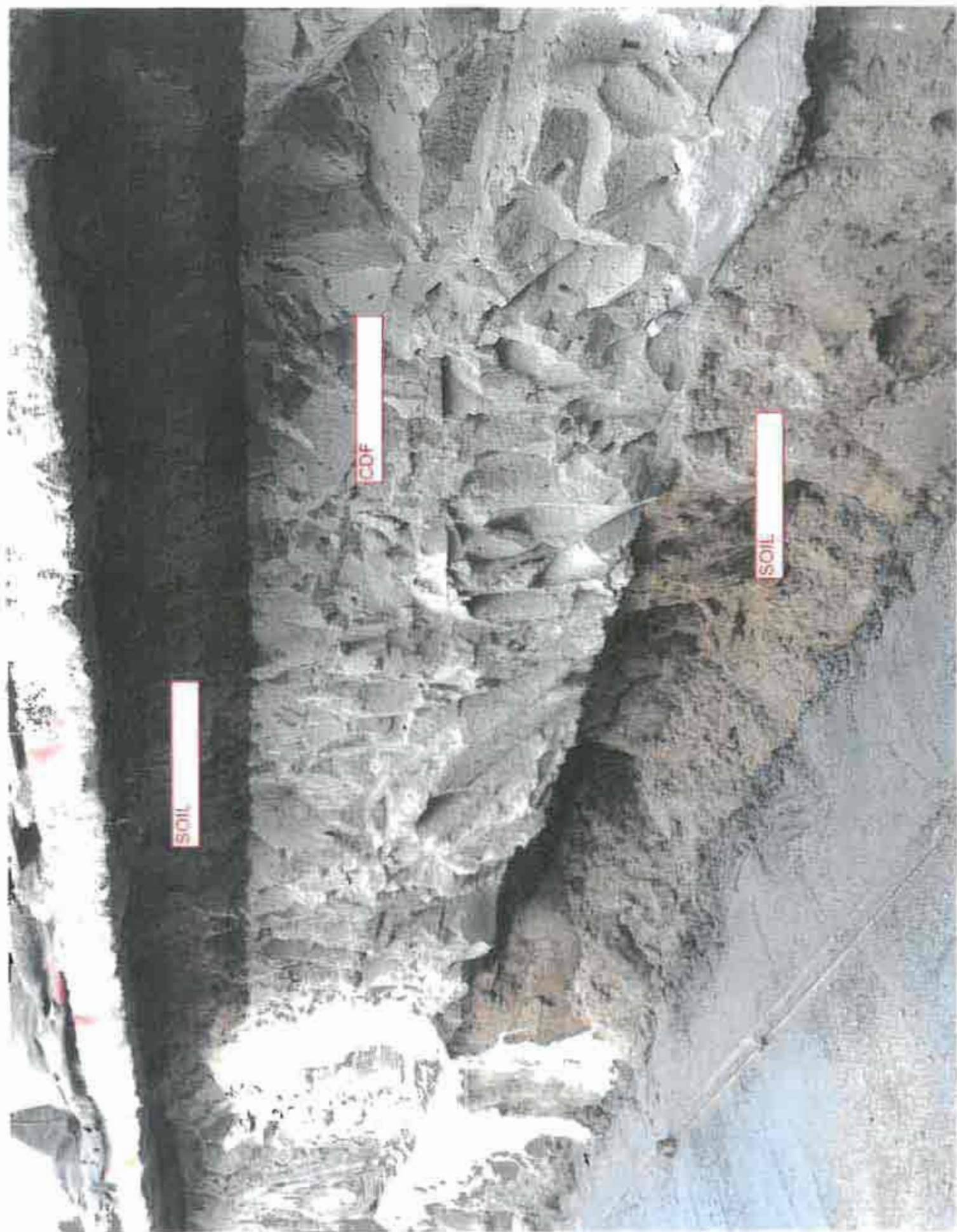
End Date: [REDACTED]



SOIL

CDF

SOIL



Joint Trench Stability for Adjoining Excavation

The primary function of Contract 1251 was to relocate utilities in Stockton St. to a 7' wide by 13' deep corridor on either side of Stockton St. Per that contract, this assortment of communications, power, natural gas, sewer and water was encased in a fluid, lightweight, cellular slurry that assured consolidation around all conduits. Record documents of the fill material from Cell-Crete are attached. They provide empirical data to support future engineering assumptions. One assumption of Tutor Perini Corporation was that this cemented monolith, with all the conduits, was capable of standing full height without additional mechanical means of support. This assumption is supported by both the anticipated design parameters, which expected unconfined compressive strengths of 50 to 150 psi and the 28 day cylinder tests that ranged from 55 to 184 psi. The cement slurry product needed to be soft enough to be excavated, should maintenance be needed in the future.

In addition to design specification strengths, and installation day testing, Tutor Perini Corp has taken cores for a final confirmation of the insitu strength of this Cell-Crete material. The attached Smith Emery Laboratory Sampling Report provides unconfined compressive strengths for four locations in the joint trench encasement. The lowest break is 85 psi; the average of 14 samples is 231 psi.

The test cylinder sample dimensions match the height to width ratio of this massive joint trench monolith, 3" horizontal to 6" vertical. Our 9' +/- deep excavation needs a 4' wide base to model the unconfined test cylinder.

Table 16A- Uniform and Concentrated Loads (attached) identifies sidewalks and driveways shall be designed for 250 #/sf loading $(250\#/sf) \times (1/144sf/in^2) = 1.73\#/in^2$. The weakest break of 85#/in² is still 50 times stronger than required by the UBC.

Title 8- Construction Safety Orders 1541.1 Appendix A (attached) provides discussion of stable rock (suitable for vertical unsupported cut). Stable Rock- natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed. The attached photo shows the excavated Cell-Crete for the installation of the guide walls. The angular breaks and amplitude demonstrate a very stable uniform material, well suited for vertical excavation.

Appendix A provides a discussion of what Type A cohesive soil characteristics are. Type A soils need compressive strengths of 1.5 tons/sf or greater. The weakest Cell-Crete break is 6 ton/sf, the average break is 13 ton/sf, by insitu test, the Cell-Crete is 8.7 times greater than the requirements of Type A cohesive soil.

The best qualifier that this material should be categorized as stable rock versus cemented soil is the controlled and qualified mix design (attached). Even rock with higher compressive strength cannot be assured of a homogeneous mix, without fractures. Additionally, although not by design, this monolith is reinforced with all the conduits.

Based on the referenced qualifications of the in-place encasement material, the subject utility joint trench is adequate to maintain a vertically excavated surface of 10' depth.



(B) Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

(C) Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.

(D) Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.

(2) Additional requirements for shield systems used in trench excavations. The sides of the shield shall extend a minimum of 18 inches above the vertical walls of compound excavations as shown in Appendix B, figures B-1, B-1.2 and B-1.3. On vertically cut trenches, the shield shall extend to at least the catch point of the trench. Excavations of earth material to a level not greater than 2 feet below the bottom of a shield shall be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

(h) Uprights shall extend to the top of the trench with the lower end of the upright not more than 2 feet from the bottom of the trench.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. New section including Appendices A-F filed 8-26-91; operative 9-25-91 (Register 92, No. 13).
2. Change without regulatory effect amending Appendix B, subsection (c)(3)(C) filed 5-29-92; operative 7-29-92 pursuant to section 100, title 1, California Code of Regulations (Register 92, No. 27).
3. Change without regulatory effect amending Appendix A, subsection (b), Soil classification system filed 10-22-92 pursuant to section 100, title 1, California Code of Regulations (Register 92, No. 43).
4. Change without regulatory effect amending subsection (b)(1)(B) filed 12-18-95 pursuant to section 100, title 1, California Code of Regulations (Register 95, No. 51).
5. Editorial correction rewording subsection (g)(1)(A) (Register 97, No. 6).
6. Amendment of subsections (b) and (b)(4)(A), new subsection (g)(1)(A), and amendment of subsection (g)(2) filed 3-5-97; operative 4-4-97 (Register 97, No. 10).
7. New subsection (h) and amendment of Appendix D, subsection (g)(7) filed 4-9-2001; operative 5-9-2001 (Register 2001, No. 15).
8. Change without regulatory effect clarifying graphics in Appendices B and E filed 7-14-2006 pursuant to section 100, title 1, California Code of Regulations (Register 2006, No. 29).
9. Editorial correction of Appendix A, subsection (d)(1)(B) (Register 2010, No. 34).
10. Editorial correction of Appendix A, subsection (d)(2)(B)2. (Register 2010, No. 50).

Appendix A

Soil Classification

(a) Scope and application.

(1) Scope. This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils.

(2) Application. This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in Section 1541.1(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with Appendix C to this article, and when aluminum hydraulic shoring is designed in accordance with Appendix D. This appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in Section 1541.1(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix.

(b) Definitions.

Cemented soil. A soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

Cohesive soil. Clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be ex-

cavated with vertical side slopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

Dry soil. Soil that does not exhibit visible signs of moisture content.

Fissured. A soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

Granular soil. Gravel, sand, or silt (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.

Layered system. Two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

Moist soil. A condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

Plastic. A property of a soil which allows the soil to be deformed or molded without cracking, or appreciable volume change.

Saturated soil. A soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or shear vane.

Soil classification system. A method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the environmental conditions of exposure.

Stable rock. Natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Submerged soil. Soil which is underwater or is free seeping.

Type A soil. Cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:

- (1) The soil is fissured; or
- (2) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
- (3) The soil has been previously disturbed; or
- (4) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
- (5) The material is subject to other factors that would require it to be classified as a less stable material.

Type B soil:

- (1) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf but less than 1.5 tsf; or
- (2) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
- (3) Previously disturbed soils except those which would otherwise be classed as Type C soil.
- (4) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
- (5) Dry rock that is not stable; or
- (6) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

Type C soil:

- (1) Cohesive soil with an unconfined compressive strength of 0.5 tsf or less; or
- (2) Granular soils including gravel, sand, and loamy sand; or
- (3) Submerged soil or soil from which water is freely seeping; or
- (4) Submerged rock that is not stable, or



TABLE 16-A—UNIFORM AND CONCENTRATED LOADS

USE OR OCCUPANCY		UNIFORM LOAD ¹ (psf)	CONCENTRATED LOAD (pounds)
Category	Description	x 0.0479 for kN/m ²	x 0.0254 for kN
1. Access floor systems	Office use	50	2,000 ²
	Computer use	100	2,000 ²
2. Armories		150	0
3. Assembly areas ³ and auditoriums and balconies thereof	Fixed seating areas	50	0
	Movable seating and other areas	100	0
	Stage areas and enclosed platforms	125	0
4. Corridors and stairways		60 ⁴	0
5. Exit facilities ⁵		100	0 ⁶
6. Garages	General storage and/or repair	100	0
	Private or pleasure-type motor vehicle storage	50	0
7. Hospitals	Wards and rooms	40	1,000 ²
8. Libraries	Reading rooms	60	1,000 ²
8.A. [For 8.] Public libraries	Reading rooms	60	1,000
	Fixed-stack rooms	150	1,300
	Mobile compact stacks and microfilm storage	300	1,500
	Stack rooms	125	1,500 ²
9. Manufacturing	Light	75	1,000 ²
	Heavy	125	1,000 ²
10. Offices		50	2,000 ²
11. Printing plants	Press rooms	150	2,500 ²
	Composing and linotype rooms	100	2,000 ²
12. Residential ⁷	Basic floor area	40	0 ⁸
	Exterior balconies	60 ⁴	0
	Decks	40 ⁴	0
	Storage	40	0
13. Restrooms ⁹			
14. Reviewing stands, grandstands, bleachers, and holding and telescoping seating		100	0
15. Roof decks	Same as area served or for the type of occupancy accommodated		
16. Schools	Classrooms	40	1,000 ²
17. Sidewalks and driveways	Public access	250	0
18. Storage	Light	125	0
	Heavy	250	0
19. Stairs		100	3,000 ²
20. Pedestrian bridges and walkways		100	0

¹See Section 1607 for live load reductions.

²See Section 1607.5.3, first paragraph, for area of load application.

³Assembly areas include such occupancies as dance halls, ball rooms, gymnasiums, playgrounds, planet, theaters and similar occupancies that are generally accessible to the public.

⁴When snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the unassumed loads caused by drift buildup or a greater snow design as determined by the building official. See Section 1614. For special-purpose roofs, see Section 1607.4.4.

⁵Exit facilities shall include such areas as corridors serving an occupant load of 10 or more persons, exterior exit balconies, stairways, fire escapes and similar areas.

⁶Individual stair treads shall be designed to support a 300-pound (133 kN) concentrated load placed in a position that would cause maximum stress. Such stair treads may be designed for the uniform load set forth in the table.

⁷See Section 1607.5.3, second paragraph, for concentrated loads. See Table 16-B for vehicle barriers.

⁸Residential occupancies include private dwellings, apartments and hotel guest rooms.

⁹Restroom loads shall not be less than the load for the occupancy with which they are associated, but must not exceed 50 pounds per square foot (2.4 kN/m²).

Transmittal

CS CN 1251 Transmittal No. 0382

To: Javier Romero Synergy PM 30 Grant Avenue, Suite 300 San Francisco, CA 94108	From: Marlon Washington for Peter Chin
Attn:	Project No./Contract No.: M544.1 / CN 1251
Date: April 21, 2011	Contract Title: Union Square/Market St Station Utilities Relocation
	Phase: Construction
	Subject: SUB #047.1 - Control Density Fill (CDF)-Light Weight Concrete - Cell-Crete - Mix #CCC30-68
	Reference: 03-30-00-2.03

Sent via:		<input type="checkbox"/> mail	<input type="checkbox"/> overnight	<input checked="" type="checkbox"/> messenger	<input type="checkbox"/> hand-delivered
		<input type="checkbox"/> fax - No:	<input type="checkbox"/> email - Address:		
The following:				For your:	
<input type="checkbox"/> copy of letter/memo	<input type="checkbox"/> minutes/agenda	<input type="checkbox"/> .cd / dvd	<input type="checkbox"/> task order	<input type="checkbox"/> contract modification	<input type="checkbox"/> specifications
<input type="checkbox"/> half-size drawings	<input type="checkbox"/> full-size drawings	<input type="checkbox"/> sketches/maps/layouts	<input type="checkbox"/> reference material	<input type="checkbox"/> other	
<input type="checkbox"/> estimate	<input type="checkbox"/> schedule	<input type="checkbox"/> NCR	<input type="checkbox"/> RFV/RFC	<input type="checkbox"/> RFV/RFC response	<input type="checkbox"/> submittal
<input type="checkbox"/> submittal rejection	<input type="checkbox"/> submittal disapproval	<input type="checkbox"/> submittal approval as noted	<input checked="" type="checkbox"/> submittal approval	<input checked="" type="checkbox"/> information/use	<input type="checkbox"/> action
				<input type="checkbox"/> review/comment	<input type="checkbox"/> response
				<input type="checkbox"/> incorporation of comments	<input type="checkbox"/> signature
				<input type="checkbox"/> acceptance/approval	<input type="checkbox"/> resubmission
				<input type="checkbox"/> corrective action	<input type="checkbox"/> other
				Requested Return Date: NA	

Item No.	Copies	Description	Rev. No.	Date
1	1	SUB #047 - Control Density Fill (CDF)-Light Weight Concrete - Cell-Crete - Mix #CCC30-68	1	4/20/2011
<i>If enclosures are not as noted, kindly notify us at once.</i>				

Remarks:


Marlon Washington (for Peter Chin)
Document Control Assistant

SFMTA Central Subway Project No. M544.1
Contract No. 1251 Doc No. 10619
File No.: M544.1.3.1251.3030.c
Routing Date: 4/21/11 Initials: MW

cc: Gabriel Fernandez, CS Inspector (w/attachments)
Mennor Chan, Design Manager - PB/Telamon (w/attachments)
CS File No. M544.1.3.1251.3030.c

Synergy Project Management, Inc.
 160 Executive Park Blvd. Suite 4760
 San Francisco, CA 94134
 Phone (415) 487-3000 Fax (415) 487-3001

SUBMITTAL CONTROL FORM
SFMTA Central Subway Contract 1261
Union Square / Market St. Station Utilities Relocation

To: SFMTA Central Subway
 821 Howard Street, 2nd Floor
 San Francisco, CA 94103
 Attn: Mike Acosta, Resident Engineer

Submital Control No. 47.1

Spec Section & Subsection No. 03 30 00-2.03

Date Submitted to SFMTA: 4/12/2011

Prepared By: Synergy Project Management
 Name of Contractor/Subcontractor/Supplier

Date Received by SFMTA:

Contact: Javier Romero 925-863-8031
 Name Tel. No.



Contractor's QC Manager's/Team's Certification that
 Submittal is in Compliance with Contract Requirements:

Javier Romero 4.12.11
 Javier H. Romero Date

SUBMITTALS

Item	No. Of Copies, 6 (unless noted otherwise in Spec)	Description	SFMTA Action*	SFMTA Action By (Signature)
1	6	Control Density Fill (CDF)- Cell-Crete Mix Design No. GCC30-68	A	<u>[Signature]</u>
	6	Test Results for Mix Design GCC30-68		



FOR REVIEW

To:	Affiliation	Name	Copies	Sent Date	Due Date	Date Rcvd by Reviewer	Return Date to RE
<input type="checkbox"/>	PBT PE						
<input type="checkbox"/>	DPW - BCM						
<input type="checkbox"/>	DPW - BCE						
<input type="checkbox"/>	SFMTA						
<input type="checkbox"/>	OTHER:						

Reviewer's Remarks:

Date Transmitted to Contractor: _____

Lead Reviewer: Mike Acosta [Signature] RE 4/20/11
 Print Name Signature Title Date
 RE PBT PE Mike Acosta [Signature] 4/20/11
 Print Name Signature Title Date

*SFMTA Action - Legend:

A: Approved B: Approved as Noted C: Disapproved - Resubmit D: Rejected N: No Action Required



OFFICE

NORTHERN CALIFORNIA

885 Zephyr - Hayward, CA 94544
(510) 471-7257 (800) 696-0433 F(510) 471-6426

April 12, 2011

Synergy Project Management
ATTN: Javier Romero
30 Grant Street
San Francisco, CA
415-467-3000
F415-467-3001

Project: Central Subway Union Square / Market Street
San Francisco, CA

Re: Cell-Crete CCC30-68 Mix Design

For this project we are using a 30 pcf density cellular concrete with a .68 water cement ratio. We call this mix CCC 30-68. The provided test results for this submittal are of this mix taken in a laboratory setting. At no time will strengths, well above the design specification be achieved. The range of this material is typically between 50 and 150 psi with occasional breaks up to 200 psi. This material is always excavatable!

The following discussion is replicated from our Submittal and describes the quality control field process. I have changed the sample size from 1/5th to 1/3rd of a bucket due to a change in our field procedures that is not represented in the submittal language.

Quality Control and Quality Assurance

The material is inspected and sampled using a 1/3 rd cubic foot bucket. This sample is weighed and compared to the density in the specific mix design. If adjustments are required, they are made and the procedure repeated. Once the sampled density conforms to the mix design density, the placement of the material is started. Density samples are taken by Cell-Crete approximately every fifteen (15) minutes for the first hour to insure uniformity. Thereafter the density samples are taken every half hour, again to insure uniformity. Agency or Prime Contractor personnel may or may not be present during sampling. Cell-Crete personnel will take samples whether or not others are there to observe.

Cell-Crete personnel will take or assist the Testing Lab personnel in taking Compression Test Samples in accordance with Elastizell's Sampling and Testing Procedures or Contract

Page 1 of 2

SPECIALTY CONCRETE CONTRACTORS

CORPORATE OFFICE 155 East Railroad Avenue - Menlo Park, Ca 94025-4852 (628) 357-3500 (800) 660-4062 FAX (628) 357-2537
NORTHERN CALIFORNIA 885 Zephyr Ave. - Hayward, CA 94544 : (510) 471-7257 (800) 696-0433 FAX (510) 471-6426
SAN DIEGO 530 Upper Street, Suite A - Escondido, CA 92029 - (760) 291-1240 (877) 291-1240 FAX (760) 291-1242
ARIZONA 1108 E Phoenix St. - Payson, AZ 85541 - (928) 468-5265 FAX (928) 468-2365

CALIFORNIA
#243404

ARIZONA
#104888

NEVADA
#10689

UTAH
#4835089-5101

IDAHO
#11808-4-500

ALASKA
#28478

7 of 26



OFFICE

NORTHERN CALIFORNIA

995 Zephyr • Hayward, CA 94544
(510) 471-7257 (800) 696-0433 R(510) 471-6426

Specifications. The samples are made in special Styrofoam molds that contain four (4) - 3 inch by 6 inch cylinders. Two sets will be taken, one for the Prime or Agency and one for our own use. The Testing Lab will be responsible for storing, transporting and testing the samples.

These cylinders will be sent to the Elastizell laboratory in Ann Arbor Michigan and the local testing agencies representative. Both labs will break the samples and report their results.

While the procedures for inspecting cellular concrete are not the same as collecting a tag from the truck driver as with a ready mix product, they are simple and provided by Cell-Crete. We believe that after a very short time they will become second nature and you will wish you had this kind of control over all your cement based products.

Sincerely,
Scott Taylor, PE, MBA
Cell-Crete Corp.
415-419-6876

Page 2 of 2

SPECIALTY CONCRETE CONTRACTORS

CORPORATE OFFICE 135 East Railroad Avenue • Modesto, Ca 95110-4052 (202) 857-3500 (800)680-8082 FAX (202)857-2537
NORTHERN CALIFORNIA 995 Zephyr Ave. • Hayward, CA 94544 • (510) 471-7257 (800) 696-0433 FAX (510) 471-6426
SAN DIEGO 530 Upper Street, Suite A • Escondido, CA 92029 • (760) 291-1240 (677) 291-1240 FAX (760) 291-1242
ARIZONA 1108 E. Phoenix St. • Payson, AZ 85541 • (623) 468-3265 FAX (623) 468-2385

CALIFORNIA 4243404 ARIZONA 4104880 NEVADA 710628 UTAH #4833088-5301 IDAHO #15888-501 ALASKA #29473

B of 26

ELARTDELL CORPORATION OF AMERICA
STANDARD MIX DESIGN

Mix No, *CC090-02*

THIS STUDY FOR:
MARKING CODE:
CAST DATE:
CAST DENSITY:
WATER/CEMENT RATIO:
FOAM TYPE & LOT #:
SPECIAL COMMENTS:

1000 20 30

FOAMAIR VOLUME:
FOAM DENSITY (POF):
FOAM RATE (CFM):
QUANTITY OF CEMENT(S):

1.00
3.3
32
492.1425

SEE DESIGN PLAN
1 C + (MIX RATIO)

C =

ST CUBIC FOOT
C = ST OF * CAST DENSITY
3.2 C = ST OF * 32
1.55 C = 510
C = 492.1425 # * 1/32.32 POF =
W = 327.5271 # * 1/32.4 POF =

AIR VOLUME
2.42204 CF
5.59121 CF
7.79728 CF
ST CF
15.3897 CF AIR

TOTAL VOLUME =
VOLUME 1 CUBIC YARD =
DIFFERENCE =

FOAM VOLUME =
FOAM WATER =
CONDENSED WATER =

10.2287 CF * 1.25 = 12.7859 CF
25.4225 CF * 3.2 POF = 81.3520 #
327.5271 # * 32.4177 # = 10614.68 #

31.9246 GALLONS
1 CUBIC YARD

BATCH QUANTITIES PER

492.1425 # CEMENT
492.1425 # /

492.1425 #

1 CUBIC YARD

CEMENT = 492.1425 #

WATER = 320.4154 # / 3.22 # / GAL #

31.9246 GALLONS

FOAM = 25.4225 CF / 32 CFM =

4.2255 MIN * NO SW = 84.3479 SECONDS

Elastizell

CORPORATION OF AMERICA

P.O. BOX 1462 ANN ARBOR, MICHIGAN 48106
(734) 761-6900 FAX (734) 761-8018
www.elastizell.com

October 6, 2010

MIX No. CC-70-60

Cell-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

Re: Altmont Annulus

Project #: HB 5038

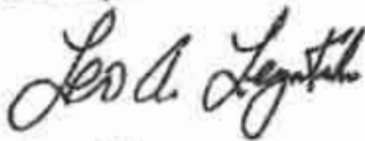
Gentlemen:

Here are 28-day cylinder test results for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
09/03/10	27.4 pcf	172 psi
09/07/10	26.8 pcf	119 psi
09/08/10	28.5 pcf	184 psi

WATER
62.4 %/ft³

Very truly yours,
Elastizell Corporation of America



Leo A. Legniski
President

AS - DEXTER

CONCRETE RESEARCH CORP

709 425 8876 F. 452-264

CYLINDER TEST REPORT

Mix. No. CC030-63

Sample received 10/4/10
OFFERING COMMAND: Mob
Applicator: Cell-Crete
STACK:

Project Name: Altamont Annex
Location:

Project #: H85038

Update: 10/6/10

10-6-10
3

Cyl. #	CYL DIA	CYL HT	STRIP WTS	STRIP DENSITY	TEST DATE	TEST AGE DAYS	TEST WTS	TEST DENSITY	LOAD #	PS
9/3/2010 31.2 PCF	3	5.63	0.67	29.1	10/6	33	0.65	27.4	1213	172
	3	5.68	0.68	29.4						0
				0.0						0
				0.0						0
9/7/2010 30 PCF	3	5.38	0.62	28.2	10/6	29	0.69	26.8	838	119
	3	5.38	0.63	28.7						0
				0.0						0
				0.0						0
9/8/2010 38.8 PCF	3	5.50	0.67	29.8	10/6	28	0.64	28.5	1298	184
	3	5.50	0.68	30.2						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
				0.0						0
			0.0	0						

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**CORPORATION OF AMERICA**

P.O. BOX 1482 ANN ARBOR, MICHIGAN 48106
(734) 761-8900 FAX (734) 761-8016
www.elastizell.com

January 5, 2011

MIX NO. 00030-65

Cell-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

Re: Pacific Clarifier

Project #: HE5084

Gentlemen:

Here are cylinder test results for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
A-11/18/10	31.0 pcf	153 psi
B-11/18/10	31.0 pcf	109 psi

Very truly yours,
Elastizell Corporation of America

Leo A. Legatski
President



CORPORATION OF AMERICA

P.O. BOX 1482 ANN ARBOR, MICHIGAN 48106
(734) 781-8800 FAX (734) 781-8018
www.elastizell.com

January 12, 2011

MIX NO. CCE 90-60

Cell-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

Re: Pipeline No. 5 Present - B

Project #: HE 5013

Gentlemen:

Here are cylinder test results for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
10/08/10	28.7 pcf	55 psi
10/27/10	27.9 pcf	145 psi

Very truly yours,
Elastizell Corporation of America

Leo A. Logiaki
President

FEB-11-2011 17:12
From cor102 - DECKER

Elastizell Research Ctr

CYLINDER TEST REPORT

FYE

Date Received: 2/4/11

MIX NO. *CC090-6B*

Application: Cell-Crete

Project Name: Willow Glen Shopping Center
Location:

Project #: HB5122

Spec *13*

Updated: 2/11/11

CYL # Cast Density Date	CYL DIA	CYL HT	STRP WTP	STRP DNSTY	TEST DATE	TEST AGE DAYS	TEST WTR	TEST DNSTY	LOAD #	PSI
12/8/2010 33 PCF 11.45 lbs	3	6.00	0.82	33.4 0.0 0.0 0.0 0.0	2/8	62	0.78	31.8 0.0 0.0 0.0 0.0	1268	179 0 0 0 0
12/27/2010 10:00 AM 11.1 lbs 33 PCF	3	6.00	0.80	32.6 0.0 0.0 0.0 0.0	2/8	48	0.74	30.2 0.0 0.0 0.0 0.0	563	80 0 0 0 0
12/27/2010 3:00 PM 11 lbs 33 PCF	3	5.88	0.74	30.8 0.0 0.0 0.0 0.0	2/8	45	0.69	28.7 0.0 0.0 0.0 0.0	587	63 0 0 0 0
1/4/2011 8:40 AM 33 PCF	3	5.78	0.77	32.8 0.0 0.0 0.0 0.0	2/8	33	0.72	30.4 0.0 0.0 0.0 0.0	1182	167 0 0 0 0
1/14/2011 3:00 PM 11 lbs 33 PCF	3 3	5.88 6.00	0.78 0.74	30.4 30.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2/8 2/11	28 28	0.68 0.66	28.8 26.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	695 735	96 104 0 0 0 0 0 0 0 0

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Elastizell

CORPORATION OF AMERICA

P.O. BOX 1482 ANN ARBOR, MICHIGAN 48106
(734) 761-8900 FAX (734) 761-8016
www.elastizell.com

MIX NO. CCK 90-00

November 3, 2010

Cell-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

RECEIVED
NOV 08 2010
CELL-CRETE CORP

Re: Livermore Trunch

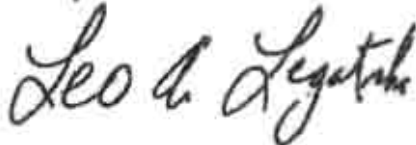
Project #: HE 5038

Gentlemen:

Here are 28-day cylinder test results for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
10/02/10	31.6 pcf	157 psi
10/02/10	28.7 pcf	100 psi
10/02/10	26.2 pcf	88 psi
10/02.10	23.8 pcf	77 psi
10/02/10	21.3 pcf	92 psi

Very truly yours,
Elastizell Corporation of America



Leo A. Logatski
President

17 of 26

Elastizell

CORPORATION OF AMERICA

P.O. BOX 1482 ANN ARBOR, MICHIGAN 48106
(734) 781-8900 FAX (734) 781-8016
www.elastizell.com

MIX NO. C00790-168

January 5, 2011

Cell-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

Re: Ranger Pipeline

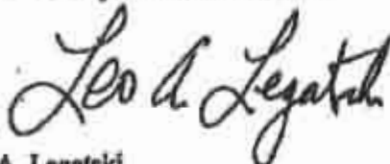
Project #: HE 5013

Gentlemen:

Here is the cylinder test result for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
11/12/10	31.6 pcf	82 psi

Very truly yours,
Elastizell Corporation of America



Leo A. Legatski
President



CORPORATION OF AMERICA

P.O. BOX 1462 ANN ARBOR, MICHIGAN 48106
(734) 761-6800 FAX (734) 761-8028
www.elastizell.com

Mix No. CCC90-58

August 11, 2010

Coll-Crete Corporation
995 Zephyr Ave.
Hayward, CA 94544

Re: Bay Divisian Pipeline

Project #: HB 5013

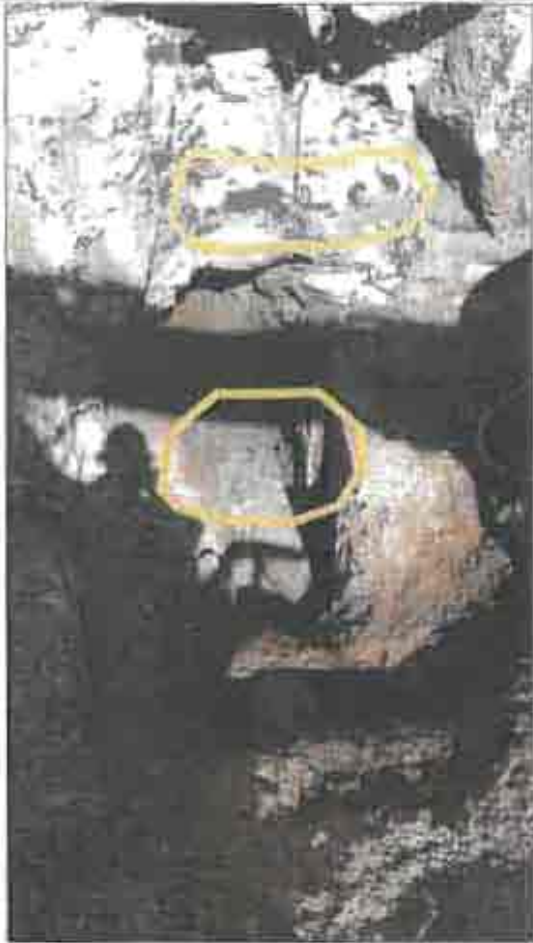
Gentlemen:

Here is the cylinder test result for the referenced project.

<u>Date Cast</u>	<u>Test Density</u>	<u>Compressive Strength</u>
06/25/10	29.1 pcf	70 psi

Very truly yours,
Elastizell Corporation of America

Leo A. Logatski
President



Pile 38 area (east side)



Pile 34 area (west side)



Permit No. _____
 Jurisdiction _____
 SI Job No. _____

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name: CENTRAL SUBWAY

Job Address: _____

Location of Proc: PILE 38 EAST @ 5' BELOW CURB

Supplier: _____

Weather: _____ Type of Sample Taken: _____

Mix Design No.: _____ PSI of Concrete: _____

Design Stamp: _____ Max. Size Samples Taken: _____ Test Yard Name: _____

Number of Cylinders Cast: _____ Air Test Results: _____ Unit Weight Obtained (pcf): _____ Slabage Samples Taken: _____

I, performed water control duties including addition of water, Slump Test, verified slip tickets for compliance to approved mix design and cast cylinders at the following locations:

Set #	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 1: <u>P.38.0.7</u>					
Set 2: <u>P38.0.8</u>					
Set 3:					
Set 4:					
Set 5:					

Notes: Lab Use Only, concrete break results will follow by separate report after completion

Set	Age	Date	Load	PSI
<u>P.38.0.7</u>		<u>6/4</u>	<u>1460</u>	<u>245</u>
<u>P.38.0.8</u>		<u>6/4</u>	<u>495</u>	<u>85</u>

Age	Date	Load	PSI

Age	Date	Load	PSI

The Material Tested () MET () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested in Accordance with the Requirements of Approved Documents

Early Break Reported: Yes No Age to Break: _____ Form Modified: _____

Any special loads? If yes, explain: _____

23 of 26

Date: 6-4-24 Employee ID: 997 Name: _____ V.2.1

Permit No. _____
 Jurisdiction _____
 SF Job No. _____

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name: **CENTRAL SUBWAY**

Job Address: _____

Location of Pour: **PUE 38 FIRST @ 9' BELOW CURB**

Supplier: _____

Weather: _____ Type of Sample Tubes: _____

Mix Design No.: _____ PSI of Concrete: _____

Design Stamp: _____ Place from Sample Tubes: _____ Test Yield Factor: _____

Number of Cylinders Cast: _____ Air Test Results: _____ Test Weights Obtained (lbs/cu ft): _____ Shrinkage Sample Tubes: _____

L, preferred water control details including addition of water, Slump Test, verified trip tickets for compliance to approved mix design and cast cylinders at the following locations:

Set 1:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
P-58-01					
P38-03					
Set 3:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 4:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 5:	Temp: C/A	Time:	Mix Time:	Load:	Slump:

Reveal-Lab-Use Only, concrete test results will follow by separate report after completion

Set: 01	Age	Date	Load	PSI	Set: 03	Age	Date	Load	PSI
		6-4	580	100			6-4	720	125

Set: _____	Age	Date	Load	PSI	Set: _____	Age	Date	Load	PSI

The Material Tested () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested in Accordance with the Requirements of Approved Documents

Early Break Required: Yes No Age to Break: _____ Force Method: _____

Any rejected loads? If yes, explain: _____

24 of 26

Date: **6-4-14** Employee ID: **779** Name: _____ V 2.1

Permit No. _____
 Jurisdiction _____
 SE Job No. _____

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name: CENTRAL SUBWAY

Job Address: _____

Location of Pile: PILE 34 WEST @ 7' BELOW CURB

Driller: _____

Weather: _____ Type of Sample Taken: _____

Mix Design No. _____ PSI of Concrete: _____

Design Stamp: _____ Rate from Sample Taken: _____ Total Yards Placed: _____

Number of Cylinders Cast: _____ Air Test Results %: _____ Unit Weight Observed (pcf): _____ Statistical Sample Taken: _____

I performed water control duties including addition of water, Slump Test, verified slip tickets for compliance to approved mix design and cast cylinders at the following location:

Set 1:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
<u>P34.0.1</u>					
<u>P34.0.2</u>					

Breaks: Lab Unit Only presents break results will follow by separate report after completion

Set:	Age	Date	Load	PSI	Set:	Age	Date	Load	PSI	Set:	Age	Date	Load	PSI
<u>P34-01</u>					<u>P34-02</u>									
	<u>6-4</u>		<u>605</u>	<u>105</u>		<u>6-4</u>		<u>565</u>	<u>100</u>					

Set:	Age	Date	Load	PSI	Set:	Age	Date	Load	PSI

The Material Tested () MET () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested in Accordance with the Requirements of Approved Documents

Early Break Request: Yes No Age to Limit: _____ Stress Noted: _____

Any rejected loads? If yes, explain: _____

25 of 26

6.4.14 999
 Date Employee ID Name V 2.1

Form No. _____
 Institution _____
 SS Job No. _____

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name: CENTRIA SUBWAY

Job Address: _____

Location of Test: PILE 34 WEST @ 3' BELOW CURB

Supplier: _____

Vendor: _____ Type of Sample Taken: CORE

Mix Design No.: _____ PSI of Concrete: 50-160

Design Stamp: _____ Pile Head Sample Taken: _____ Total Yards Poured: _____

Number of Cylinders Cast: _____ Air Test Results %: _____ Unit Weight Observed (lb/cu ft): _____ Holdings Samples Taken: _____

I performed water control duties including addition of water, Slump Test, verified trip tickets for compliance to approved mix design and cast cylinders at the following locations:

Set 1:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
<u>P.34106</u>					
<u>P.34107</u>					
Set 3:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 4:	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 5:	Temp: C/A	Time:	Mix Time:	Load:	Slump:

Remarks: Lab Use Only, concrete break results will follow by separate report after completion.

Set: <u>06</u>	Age	Date	Load	PSI	Set: <u>07</u>	Age	Date	Load	PSI
	<u>6-4</u>		<u>2160</u>	<u>325</u>			<u>04</u>	<u>1835</u>	<u>320</u>

Age	Date	Load	PSI

Age	Date	Load	PSI

The Material Tested () MET () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested In Accordance with the Requirements of Approved Documents

Early Break Required: Yes No Age to Test: _____ Form Sheet No.: _____

Any rejected tests? If yes, explain:

6.4.14 779
 Date Employee ID

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X

Permit No. _____
 Jurisdiction _____
 SS Job No. 65320

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name: Central Subway

Job Address: _____

Location of Pile: Pile 104

Supplier: _____

Weather: _____ Type of Sample Taken: _____

Job Design No.: _____ PSI of Concrete: _____

Design Stamp: _____ Place from Sample Taken: _____ Total Yards Placed: _____

Number of Cylinders Cast: _____ Air Test Results %: _____ Unit Weight Obtained lbs/cu ft: _____ Striking Sample Taken: _____

I performed water control duties including addition of water, Slump Test, verified air tickets for compliance to approved mix design and cast cylinders at the following locations:

Set #	Sample ID	Temp: C/A	Time:	Mix Time:	Load:	Slump:
Set 1:	<u>P104-01</u>					
Set 2:	<u>P104-03</u>					
Set 3:	<u>P104-05</u>					
Set 4:	P104-02					
Set 5:						

Breaks: Lab Use Only, concrete break results will follow by separate report after completion

Set: <u>01</u>				Set: <u>03</u>				Set: <u>05</u>			
Age	Date	Load	PSI	Age	Date	Load	PSI	Age	Date	Load	PSI
	<u>6-16</u>	<u>1150</u>	<u>200</u>		<u>6-16</u>	<u>3240</u>	<u>570</u>		<u>6-16</u>	<u>1455</u>	<u>255</u>

Set: _____

Age	Date	Load	PSI

Set: _____

Age	Date	Load	PSI

The Material Tested () MET () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested in Accordance with the Requirements of Approved Documents

Early Break Required: Yes No Age to Break: _____ Pressure Breaked: _____

Any rejected loads? If yes, explain:

Permit No. _____
 Jurisdiction _____
 SE Job No. **68320**

SMITH-EMERY SAN FRANCISCO SAMPLING REPORT

Job Name _____
 Job Address _____
 Location of Pour **Pile 95**
 Supplier _____
 Weather _____ Type of Sample Taken _____
 Mix Design No. _____ PSI of Concrete _____
 Design Slump _____ Fresh Bore Sample Taken _____ Total Yards Placed _____
 Number of Cylinders Cast _____ Air Test Results % _____ Unit Weight Obtained (lb/cu ft) _____ Storage Samples Taken _____

I, performed water control duties including addition of water, Slump Test, verified trip tickets for compliance to approved mix design and cast cylinders at the following locations:

Set 1:	Temp:	Time:	Mix Time:	Load:	Slump:
P95-02	C/A				
P95-01	C/A				
P95-01	C/A				
P95-03	C/A				
P95-4	C/A				

Breaks: Lab Use Only, concrete break results will follow by separate report after completion

Set: 02				Set: 03				Set: 04			
Age	Date	Load	PSI	Age	Date	Load	PSI	Age	Date	Load	PSI
	6-16	1450	245		6-16	1530	255		6-16	1595	265

Age	Date	Load	PSI	Age	Date	Load	PSI

The Material Tested () MET () DID NOT MEET the Requirements of the Approved Documents
 The Material () WAS () WAS NOT Sampled and Tested in Accordance with the Requirements of Approved Documents

Early Break Required: Yes No Age to break: _____ Person Notified: _____

Any rejected loads? If yes, explain: _____

28

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

Tutor Perini
Over a century of excellence

SFMTA - 188

6/30/2014

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: UMS Notice of Differing Site Conditions – Inadequate CDF along Stockton

Dear Mr. Redmond,

This letter is to notify SFMTA that the differing site condition stipulated in our SLN 104 dated 4/1/14 continues unresolved because CDF material under the sidewalk on the east side of Stockton on the south side of O'Farrell intersection was again found not to be as shown in the Contract Documents (please see the attached photographs). In order to mitigate this situation promptly in advance of the pending guide wall work, we formed and filled the voids under the sidewalk with a two-sack slurry mix under the direction of our licensed engineer, Bob Smythe. Please be advised that we continue to be impacted by this differing site condition and will track our time and cost impacts accordingly.

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

Respectfully,
Tutor Perini Corporation



Patrick Jennings
Project Manager

cc: File, 10-2.0093









Tutor Perini Corporation
530 Bush St, Suite 302
San Francisco, CA 94108
Tel: 415/638-6062

Tutor Perini
Over a century of excellence

SFMTA - 149

5/16/2014

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: Response to SFMTA's SLN 0183 – NOPC Inadequate CDF at Type C Piles

Dear Mr. Redmond,

TPC has received and carefully reviewed SFMTA's letter numbered 0183 and offers the following:

This DSC is mainly about Type C piles in the South Concourse at this time, as this is the first area excavated to place the roof deck, but it will also carry into the Type B piles as previously discussed. The Type B piles, based on photos provided, are anticipated to have significantly larger areas where the CDF has not been placed as shown in the Contract Documents.

TPC's statement in SLN 142 that "TPC was encouraged last week when an employee of SFMTA unequivocally stated that the CDF installed under the sidewalks along Stockton was indeed designed to serve as excavation support when digging to the structure's roof because there isn't enough room between the piles and the sidewalk to install sheet pile[.]" is factual and undeniable. TPC agrees that nowhere in the order of precedence is any individual's opinion listed. However, the statement made was not an opinion, it was stated that the intent of the installation of the CDF was to provide a self-supporting material since there isn't enough room to install sheet piling. Because the drawings are quite clear in this instance, TPC assumed that this was the intent.

Regarding the CalOSHA remark and as discussed orally previously, any type of material can be used for excavation support over 5 feet if TPC's engineer can provide substantiation that the material will stand up to the anticipated loads.

SFMTA states that no merit is found in our notice because TPC hasn't suggested a remedy or mitigation, which is incorrect, because TPC suggested a remedy in its SLN 104. Regardless of the solution, SFMTA needs to recognize the DSC and issue TPC a PCC with instructions. TPC thinks that the current best course of action for the "C" pile area would be to support the sidewalk and seal the sand backfill under the sidewalk with a two-sack slurry from the saw cut in the sidewalk on a T & M basis per the attached sketch. The subsequent course of action would be to pot hole to a depth of 10' at multiple locations to determine uniformity and completeness of CDF backfill. Note any missing CDF and find solutions – again

on a T & M basis. For the "B" pile area we should pot hole when available and determine appropriate measures on a T & M basis.

SFMTA's statement that there should be approximately 45 inches to install shoring at the "C" piles is flawed since the calculations are based on reference drawings, not the Contract Drawings. Subtract the sidewalk and SP-38 barricade width of 9'-6" from the distance between the CLT to Property Line of 32'-8" results in a clear space of 23'-2". Add the width of a Type C pile or 1'-6" to the pile spacing of 21'-6" and the result is 23'-0". This results in a clearance of 2", not 45". The available area for shoring at the "B" piles will be analyzed later if necessary.

Finally, TPC appreciates the sketches provided with SFMTA's SLN 183 because the sketch confirms that the 6'-11" wide by 12' deep block of CDF as shown on UMS ES-123 has not been provided and that the block of CDF has been interrupted with layers of sand, a change made under the previous contract.

Please be advised that SFMTA's incorrect and frivolous rejection of TPC's notice of DSC may delay the work. Considering the above, we request that the warranted PCC be issued promptly.

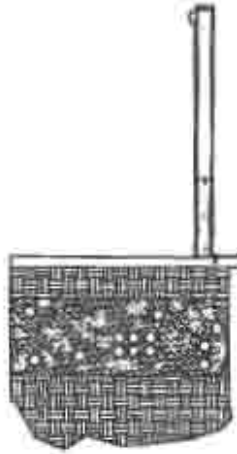
Please contact the undersigned at 415-638-6052 if you have any questions.

Respectfully,
Tutor Perini Corporation

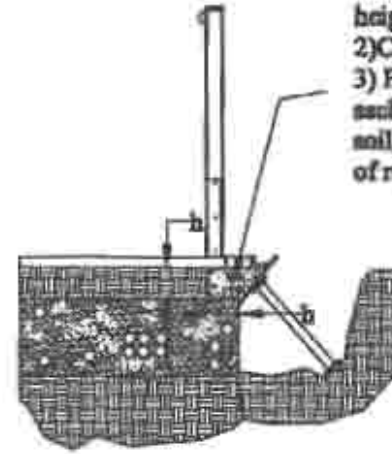


Patrick Jennings
Project Manager

cc: File, 10-2.0093

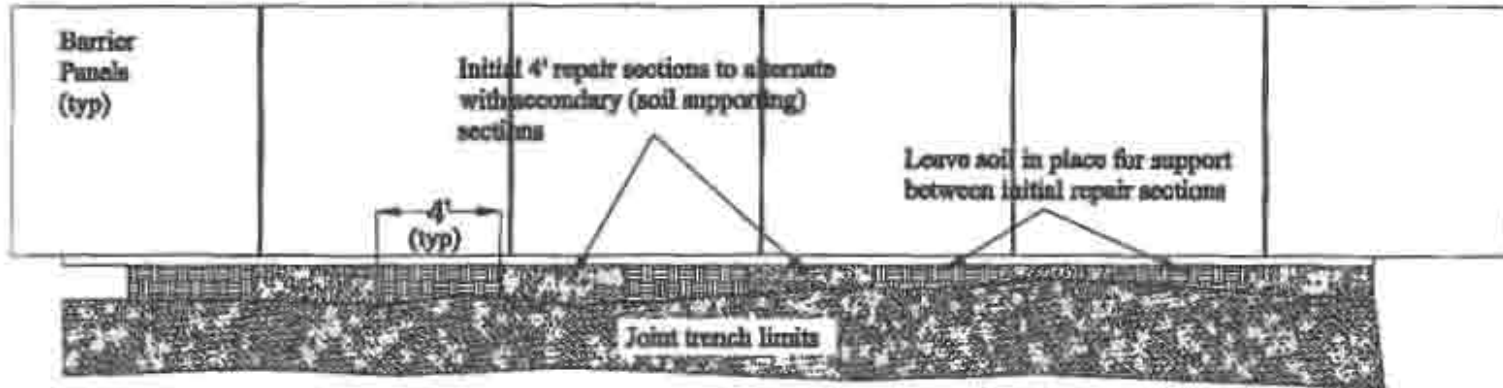


Current section at JT/sidewalk



Proposed mitigation of soil lens between JT and sidewalk

- 1) Excavate soil lens back from face of cut equal to height in 4' max. reaches.
- 2) Clean top of JT
- 3) F/P 4' placements of 2 sack sand slurry (maintain soil support for 4' each side of repair).



Approx. cost piles below
 S-headwall=250'
 Slurry Estimate- 1x1x250/27=
 10 to 15cy

CENTRAL SUBWAY
 SAN FRANCISCO
 MUNICIPAL TRANSPORTATION AGENCY
 CONTRACT # 1300

CDF REPAIR @ STOCKTON ST. (UMS)

SKETCH #1

CP/PCC N/A

DSC FINDING OF FACT

- | | | |
|----|--|---|
| 1. | REPORTED DATE OF OCCURRENCE | <u> 3/25/2014 </u> |
| 2. | DATE OF CONTRACTOR'S WRITTEN NOTICE | <u> 7/23/2014 </u> |
| 3. | TYPE OF WORK CONTRACTOR WAS PERFORMING | <u> Potholing for existing utilities </u> |
| 4. | NATURE OF OBSTRUCTION | |

Contractor first submitted RFI 157.2 on 3/25/14 depicting an empty duct bank (4-6" and 2-3" conduits) between PG&E vault 470 and 467 as incomplete, see attachment 1. RFI also maintained that conduit was installed using rigid steel (GRS), in lieu of PG&E Greenbook standard specifying Schedule 80 PVC. NDSC was submitted on 7/23/14, claiming that the issue had the potential to delay pile installation.

PG&E provided a rough estimate for the materials to be used to both complete the stubs, which were not completed under the previous utility relocation contract 1251. PG&E's list also included the quantities of using GRS in lieu of the PVC. They are as follows:

Stockton Street north of Geary to Maiden (Manhole 467 to manhole 470).

- * approx. 180' – 6" galvanized rigid steel conduit (with couplings)
- * approx. 80' – 3" galvanized rigid steel conduit
- * 6 – 6" rigid steel 5' radius 90 degree sweeps
- * 2 – 3" rigid steel 5' radius 90 degree sweeps
- * 12 – 6" rigid steel bell end fittings
- * 2 – 3" rigid steel bell end fittings
- * 6 – 6" rigid steel union couplings
- * 3 – 3" rigid steel union couplings
- * reel of 2500# pull tape
- *conduit spacers as necessary to stabilize/suspend or otherwise support conduits
- *Credits are due to SFMTA regarding concrete encasement.

SFMTA's engineer's estimate is \$32,980, without the markup for Subcontractor, OH&P, Bond, and insurance. The estimate included all the ancillary support work (traffic, potholing, demo, restoration, etc) which had already been performed as part of base contract work.

- | | | |
|----|-------------------------|---|
| 5. | LOCATION OF OBSTRUCTION | <u> Along Stockton Street, between Maiden Ln. and Geary St. Between PG&E Vaults 470 and 467. </u> |
|----|-------------------------|---|

6. METHOD USED TO OVERCOME OBSTRUCTION

Phase 1: Contractor to complete the stubs & sweeps from PG&E vault 467, and coordinate conductor connections and installation. Conductors to have extra length for jumping pile install. Type A pile installation to continue North from Geary along west side of Stockton St to North bulkhead near Maiden Lane.

Phase 2: Contractor to coordinate power service disconnection from PG&E vault 470 and service connection from vault 467. Contractor will continue North with the remainder of piles and 'jump' conductors around piles to avoid service disruption, per contract .

Proceeding with pile installation Northward eliminates the power service conflict with the Dior building and Arthur-Barren building. Per TPC NDSC Letter 203, dated 7/25/14.

7. SIGNIFICANT IMPACT ON CONSTRUCTION PROGRESS, IF ANY.(SUPPLIED BY THE CONTRACTOR)

COST \$32,980

TIME N/A

8. CONCLUSION, WHETHER-OR-NOT OBSTRUCTION CAN BE CLASSIFIED AS A DIFFERING SITE CONDITION (BASED ON CONTRACT DOCUMENTS).

Contract Drawing no. JT-302 (see Attachment 2) details ductbank as being complete from Vaults 470 to 467 and servicing the Dior and Arthur-Barron buildings .

9. ATTACHMENTS:

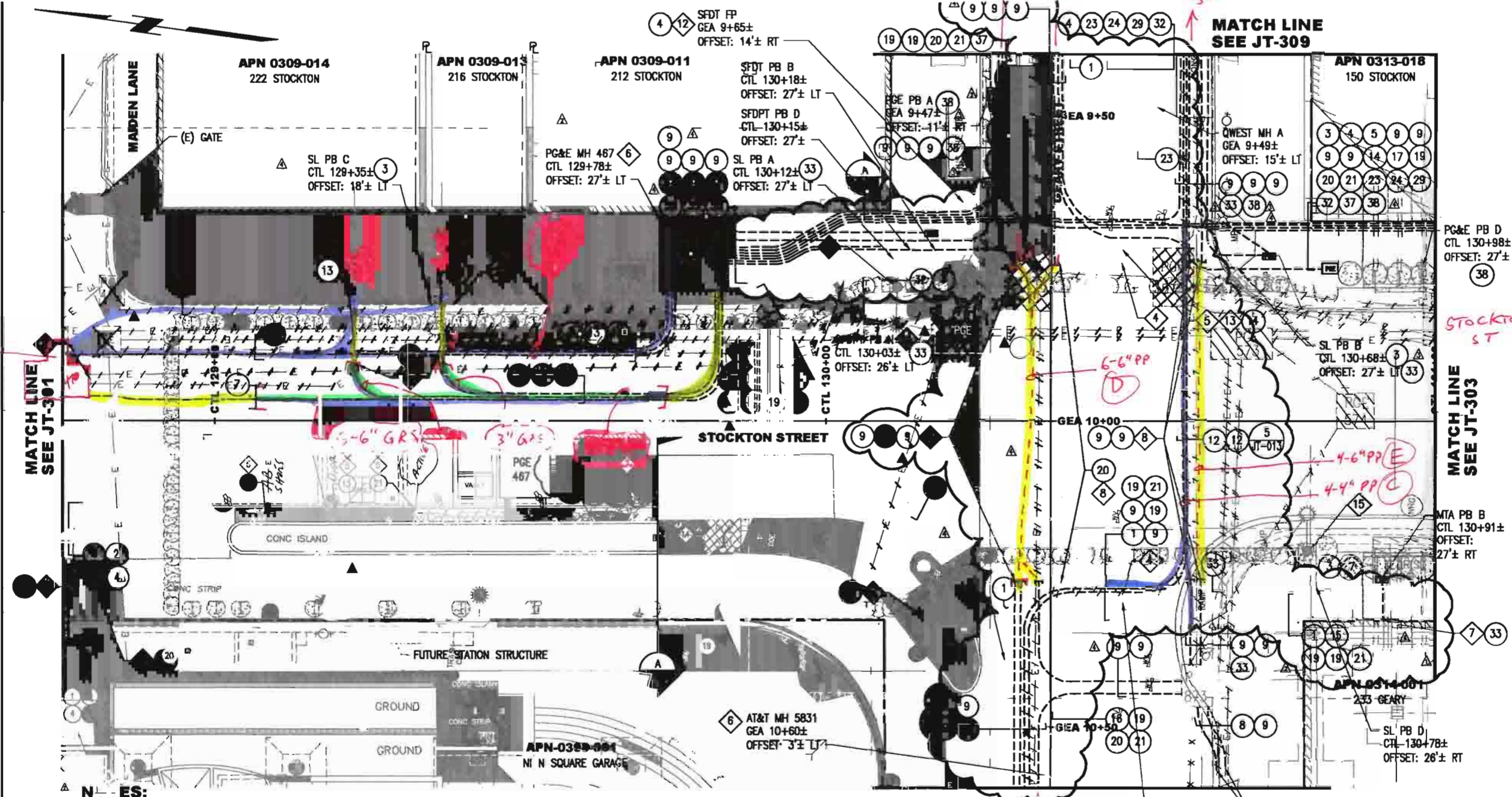
SPECIFICATION	Contract Number 1300, Stations, Surface, Track and Systems
DRAWINGS	1251; JT-302 ; 1253: JT-302; T. Reimer Email, 6/25/2014
INSPECTION RPT	n/a
OTHER	

Prepared by:

Richard Redmond, Construction Manager
SFMTA Representative

Date

FinalDesign\Drawing-821\2-Civil\Joint Trench\Sheet Files CP02\M54422\JT302_RS.dwg
Wilson Mon Jun 11, 2012 11:22 am JT-302



CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	UTILITY AGENCY
1	4-5", 2-2"	MRY
2	6-5", 2-2"	MRY
3	1-1 1/2"	SFPUC SL
4	1-4"	SFDPT
5	4-2"	SFDPT
6	8-6"	PG&E
7	6-6"	PG&E
8	4-6"	PG&E
9	2-6"	PG&E
10	1-6"	PG&E
11	3-5"	PG&E
12	2-4"	PG&E
13	1-4"	PG&E
14	1-6"	PG&E GAS
15	1-2"	PG&E GAS
16	12-4"	AT&T
17	14-4"	AT&T
18	10-4"	AT&T
19	6-4"	AT&T
20	4-4"	AT&T
21	2-4"	AT&T
22	1-4"	AT&T
23	4-QUADLOCK	QWEST
24	2-QUADLOCK	TCG
25	1-4"	MCI
26	2-2"	MRY
27	2-4"	MCI
28	2-5"	PG&E
29	2-QUADLOCK	UCCO
30	3-4"	AT&T
31	5-4"	AT&T
32	1-2"	SFDPT
33	1-3"	MTA
34	3-6"	PG&E
35	6-4"	PG&E
36	6-4"	MRY
37	1-2"	AT&T
38	1-3"	PG&E

NOTES:

1. CONNECTION TO EXISTING DUCTBANK BY UTILITY OWNER. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER.
2. STUB CONDUITS INTO EXISTING PULLBOX/VAULT. COORDINATE WORK WITH PULLBOX/VAULT OWNER.
3. MAINTAIN EXISTING SERVICE OR PROVIDE INTERIM SERVICE UNTIL NEW SERVICE IS CUT-OVER.
4. CAP EXISTING GAS LINE (BY PG&E).
5. STUB NEW CONDUIT(S) TO WITHIN 2 FEET OF EXISTING CONDUIT(S). CONNECTION TO EXISTING CONDUIT(S) BY UTILITY OWNER. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER. SEE DETAILS 1 & 2 ON DWG JT-013.
6. COORDINATE INSTALLATION OF NEW VAULT AND CONNECTION TO EXISTING DUCTBANK WITH UTILITY OWNER.
7. INTERCEPT AND COUPLE NEW CONDUIT TO EXISTING CONDUIT. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER.
8. STUB AND CAP CONDUITS FOR FUTURE EXTENSION. STUB SHALL BE SET AT 4'-0" BELOW FINISH GRADE. PROVIDE STATION OFFSET OF CAP TO RESIDENT ENGINEER.
9. COORDINATE LOCATION OF NEW CONDUITS WITH PROPERTY OWNER.
10. ADJUST MUNI OVERHEAD CONTACT SYSTEM AS NECESSARY TO FACILITATE UTILITY WORK. COORDINATE WORK WITH RESIDENT ENGINEER.
11. WALL PENETRATION, SEE SD-DWGS AND/OR DET. 4, JT-013, AS APPLICABLE.
12. EXACT LOCATION OF PULL STATION TO BE DETERMINED BY RESIDENT ENGINEER.
13. GAS CONNECTION (BY PG&E).
14. MODIFY (E) CONDUIT & WIRES TO CONNECT TO (N) PB.
15. EXTEND EXISTING TRAFFIC SIGNAL CONDUIT AND CONDUCTORS TO NEW POLE.

FOR ORIGINAL SIGNATURES, SEE CL-17792, REV. 0.

DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED
10/18/2011	REVISED PG&E LAYOUT				
08/12/2011	REVISED PG&E DISTRIBUTION & SERVICE POINTS (PCC 6)				
05/04/2011	REVISED STREET LIGHT SERVICE POINTS	PW	MC	RE	
04/06/2011	REVISED JT LAYOUT	PW	MC	RE	
08/27/2010	ADDED PG&E CONDUITS	PW	MC	RE	
07/08/2010	ISSUED FOR BID				

PB TELAMON
TELAMON ENGINEERING CONSULTANTS INC.

DESIGNED	PW
DRAWN	PW
CHECKED	FR
REVIEWED	MC
RECOMMENDED	MF
APPROVED	RE
DATE	11/11/2011

REV. 0
SEALED BY
P. WILSON



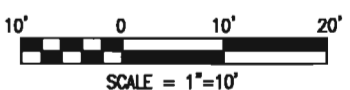
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
CARTER R. ROHAN
EXECUTIVE DIRECTOR/CEO

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

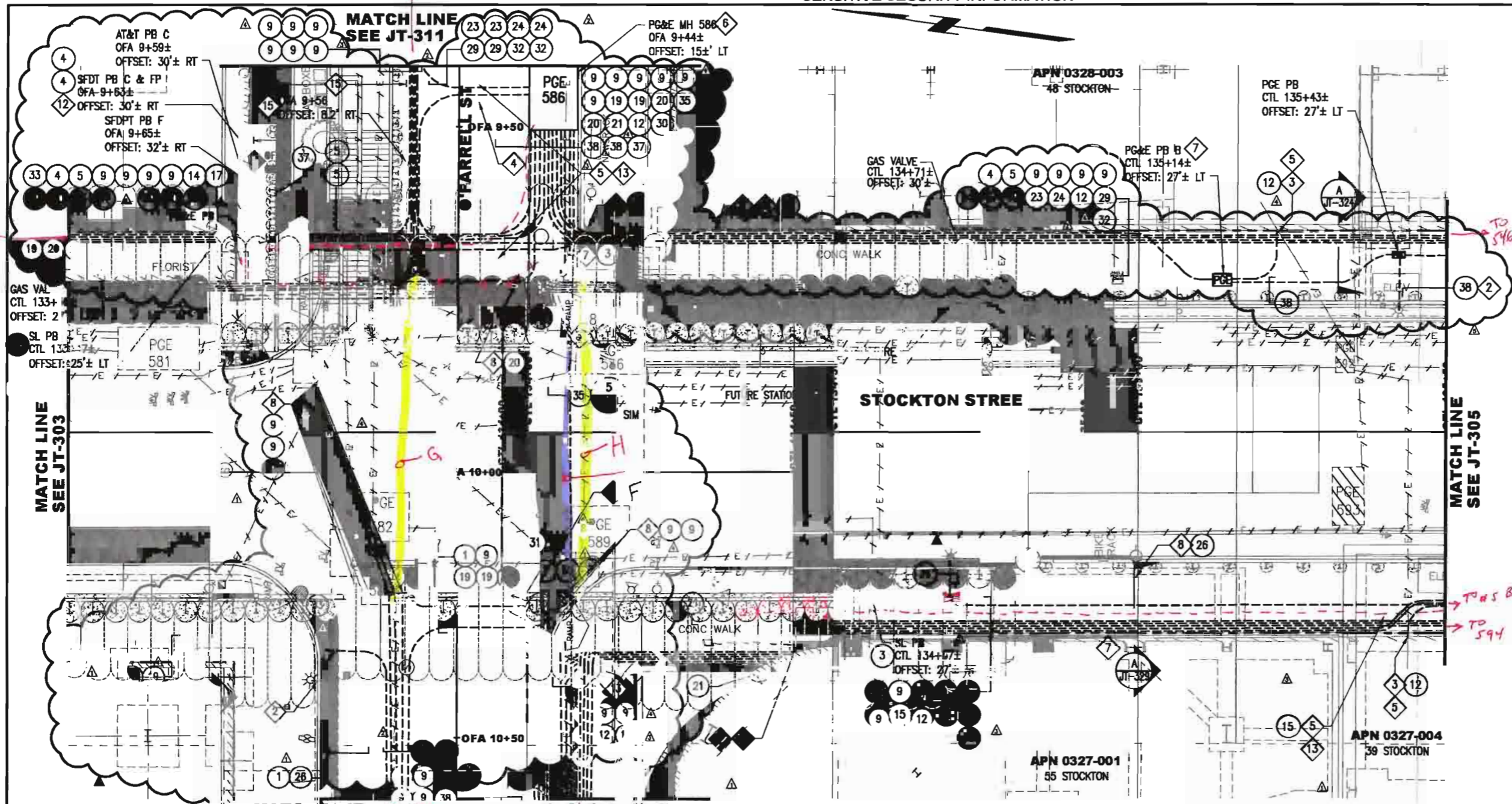
JOINT TRENCH
CTL 128+75 TO 131+00

CONTRACT NO.	1251
SFMTA CONTROL NO.	CL-1779
DRAWING NO.	JT-302
SHEET NO.	70



INSTALLER ATTITUDE
NOT INSTALLER
INSTALLER NOT CONNECTED

C = ACTIVE DUCT BANK 4-4" PP (RED CONCRETE)
D = INSTALL 6-6" PP AFTER WALL INSTALLED, TRANSFER CIRCUITS FROM C
E = INSTALL 4-6" PP BETWEEN STUBS APART ROOF & WALLS COMP



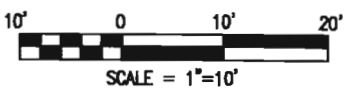
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	UTILITY AGENCY
1	4-5", 2-2"	MRY
2	6-5", 2-2"	MRY
3	1-1 1/2"	SFPUC SL
4	1-4"	SFDT
5	4-2"	SFDP
6	8-6"	PG&E
7	6-6"	PG&E
8	4-6"	PG&E
9	2-6"	PG&E
10	1-6"	PG&E
11	3-5"	PG&E
12	2-4"	PG&E
13	1-4"	PG&E
14	1-6"	PG&E GAS
15	1-2"	PG&E GAS
16	12-4"	AT&T
17	14-4"	AT&T
18	10-4"	AT&T
19	6-4"	AT&T
20	4-4"	AT&T
21	2-4"	AT&T
22	1-4"	AT&T
23	4-QUADLOCK	QWEST
24	2-QUADLOCK	TCG
25	1-4"	MCI
26	2-2"	MRY
27	2-4"	MCI
28	2-5"	PG&E
29	2-QUADLOCK	UCCO
30	3-4"	AT&T
31	5-4"	AT&T
32	1-2"	SFDT
33	1-3"	MTA
34	3-6"	PG&E
35	6-4"	PG&E
36	6-4"	MRY
37	1-2"	AT&T
38	1-3"	PG&E
39	1-2"	MRY

NOTES:

1. CONNECTION TO EXISTING DUCTBANK BY UTILITY OWNER. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER.
2. STUB CONDUITS INTO EXISTING PULLBOX/Vault. COORDINATE WORK WITH PULLBOX/Vault OWNER.
3. MAINTAIN EXISTING SERVICE OR PROVIDE INTERIM SERVICE UNTIL NEW SERVICE IS CUT-OVER.
4. CAP EXISTING GAS LINE (BY PG&E).
5. STUB NEW CONDUIT(S) TO WITHIN 2 FEET OF EXISTING CONDUIT(S). CONNECTION TO EXISTING CONDUIT(S) BY UTILITY OWNER. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER. SEE DETAILS 1 & 2 ON DWG JT-013.
6. COORDINATE INSTALLATION OF NEW Vault AND CONNECTION TO EXISTING DUCTBANK WITH UTILITY OWNER.
7. INTERCEPT AND COUPLE NEW CONDUIT TO EXISTING CONDUIT. COORDINATE SCHEDULE FOR WORK WITH UTILITY OWNER.
8. STUB AND CAP CONDUITS FOR FUTURE EXTENSION. STUB SHALL BE SET AT 4'-0" BELOW FINISH GRADE. PROVIDE STATION OFFSET OF CAP TO RESIDENT ENGINEER.
9. COORDINATE LOCATION OF NEW CONDUITS WITH PROPERTY OWNER.
10. ADJUST MUNI OVERHEAD CONTACT SYSTEM AS NECESSARY TO FACILITATE UTILITY WORK. COORDINATE WORK WITH RESIDENT ENGINEER.
11. WALL PENETRATION, SEE SD-DWGS AND/OR DET. 4, JT-013, AS APPLICABLE.
12. EXACT LOCATION OF PULL STATION TO BE DETERMINED BY RESIDENT ENGINEER.
13. GAS CONNECTION (BY PG&E).
14. MODIFY (E) CONDUIT & WIRES TO CONNECT TO (N) PB.
15. RESERVE ZONE - NO NEW UTILITIES WITHIN THIS AREA.

Page 2 of 2
 NOT INSTALLED
 G = INSTALL 8-6" PP BETWEEN STUBS (36" DEPTH) ONCE WALL INSTALLED - TRANSFER CIRCUITS FROM F
 H = INSTALL 4-6" PP BETWEEN STUBS (36" DEPTH) AFTER WALLS & ROOF COMP
 F = CURRENT ACTIVE 6-4" AT 12"-18" DEPTH (REV CONCRETE)



FOR ORIGINAL SIGNATURES, SEE CL-17794, REV. 0.

DATE	DESCRIPTION	BY	CHECKED	APPROVED
10/18/2011	REVISED PGE, AT&T & MRY LAYOUT	PW		RE
08/12/2011	REVISED PGE DISTRIBUTION & SERVICE POINTS (PCC 8)	PW		RE
05/05/2011	REVISED PGE SERVICE POINTS	PW	MC	RE
04/06/2011	REVISED FOR ELEC, GAS, MCI LAYOUT	PW	MC	RE
08/27/2010	ADDED PG&E CONDUIT	PW	MC	RE
07/08/2010	ISSUED FOR BID	PW		RE

PB TELAMON

DESIGNED: PW
 DRAWN: PW
 CHECKED: FR
 REVIEWED: MC
 RECOMMENDED: MF
 APPROVED: RE

DATE: JUL 8, 2010

TEC
TELAMON ENGINEERING CONSULTANTS INC.

REV. 0 SEALED BY P. WILSON

APPROVED
 CARTER R. ROHAN
 EXECUTIVE DIRECTOR/CEO

CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

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

CONTRACT NO. 1251
 SHEET CONTROL NO. CL-1779-
 DRAWING NO. JT-304
 SHEET NO. 72

JOINT TRENCH
 CTL 133+25 TO 135+50

Y:\FinalDesign\Drawing-821\2-Civil\Joint Trench\Sheet Files CP02\M54422JT304_R5.dwg
 pwilson Mon Jun 11, 2012 11:32 am CTL 133+25 TO 135+50

MATCH LINE
SEE JT-309

APN 0313-018
150 STOCKTON

APN 0309-014
222 STOCKTON

APN 0309-013
216 STOCKTON

APN 0309-011
212 STOCKTON

CONTRACTOR TO USE EXTREME CAUTION WORKING NEAR 12KV LINES

PGE
467

STOCKTON STREET

UMS STATION STRUCTURE

CTL 130+36.86
= GEA 10+00

APN 0314-001
233 GEARY

APN 0308-001
UNION SQUARE GARAGE

NEW SIDEWALK BULBOUT, SEE RP DRAWINGS

MATCH LINE
SEE JT-301

MATCH LINE
SEE JT-308

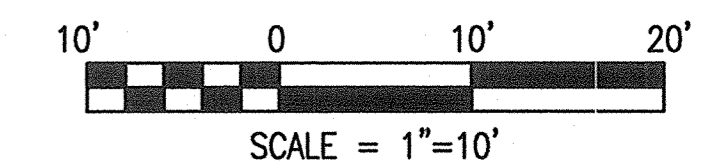
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	UTILITY AGENCY
1	4-5", 2-2"	MRY
2	6-5", 2-2"	MRY
3	1-1 1/2"	SFPUC SL
4	1-4"	SFDT
5	4-2"	SFDPT
6	8-6"	PG&E
7	6-6"	PG&E
8	4-6"	PG&E
9	2-6"	PG&E
10	1-6"	PG&E
11	3-5"	PG&E
12	2-4"	PG&E
13	1-4"	PG&E
14	1-6"	PG&E GAS
15	1-2"	PG&E GAS
16	12-4"	AT&T
17	14-4"	AT&T
18	10-4"	AT&T
19	6-4"	AT&T
20	4-4"	AT&T
21	2-4"	AT&T
22	1-4"	AT&T
23	4-QUADLOCK	QWEST
24	2-QUADLOCK	TCG
25	1-4"	MCI
26	1-2"	MRY
27	2-4"	MCI
28	2-5"	PG&E
29	2-QUADLOCK	UCCO
30	3-4"	AT&T
31	5-4"	AT&T
32	1-2"	SFDT
33	1-3"	MTA
34	3-6"	PG&E
35	6-4"	PG&E
36	6-4"	MRY
37	1-2"	AT&T
38	1-3"	PG&E

NOTES:

- CONNECT NEW CONDUITS TO EXISTING CONDUIT STUBS.
- STUB CONDUITS INTO EXISTING PULLBOX/VAULT. COORDINATE WORK WITH PULLBOX/VAULT OWNER.
- MAINTAIN EXISTING SERVICE OR PROVIDE INTERIM SERVICE UNTIL NEW SERVICE IS CUT-OVER. COORDINATE TEMPORARY WORK REQUIRED TO CONSTRUCT STATION WITH RESPECTIVE UTILITY OWNERS.
- CAP EXISTING GAS LINE (BY PG&E). PROVIDE EXCAVATION TO SUPPORT WORK BY PG&E.
- STUB NEW GAS LINE TO WITHIN TWO FEET OF EXISTING GAS LINE. COORDINATE GAS CONNECTION BY PG&E. PROVIDE EXCAVATION TO SUPPORT WORK BY PG&E.
- UTILITIES SHOWN ON THIS PLAN REPRESENT NEW AND EXISTING UTILITIES EXTANT AT THE COMPLETION OF THE STATION CONSTRUCTION.
- CONNECT NEW CONDUITS TO EXISTING MUNI FEEDER RISER POLE.
- REPLACE EXISTING PG&E CONDUITS UPON COMPLETION OF STATION CONSTRUCTION. COORDINATE WORK WITH PG&E.
- COORDINATE NEW ELECTRICAL AND/OR TELEPHONE SERVICE CONNECTIONS FOR FLOWER STANDS.
- COORDINATE SUPPORT AND WORK AROUND OF EXISTING UTILITIES WITH UTILITY OWNER.
- SEE EP DRAWINGS FOR LOCATION OF ROOF PENETRATION.
- CONDUITS ARE VACANT AND ARE TO BE USED TO MAINTAIN ELECTRIC SERVICE IN THE AREA DURING STATION WALL CONSTRUCTION. COORDINATE WORK WITH PG&E. PG&E SHALL BE REQUIRED TO CUT OVER SERVICE BETWEEN MH 467 & MH 470 ONLY ONCE DURING STATION CONSTRUCTION.
- SHIFT CONDUCTORS AS NECESSARY TO CONSTRUCT STATION WALL, COORDINATE WORK WITH AT&T.
- CONDUITS/VAULTS TO BE ABANDONED UPON COMPLETION OF STATION WALLS. CONDUITS/VAULTS ARE OCCUPIED AT BEGINNING OF STATION CONSTRUCTION.
- SEE UD DRAWINGS FOR DEMOLITION OF PREVIOUSLY ABANDONED UTILITIES WITHIN STATION FOOTPRINTS.

16. CONTRACTOR SHALL REMOVE (E) BURIED STEEL PLATE ABOVE (E) PG&E CONDUITS PRIOR TO STATION CONSTRUCTION.



FOR ORIGINAL SIGNATURES, SEE CL-18441, REV. 0.

DATE	DESCRIPTION	REV. NO.	BY	CHECKED	APPROVED
01/18/2013	ISSUED FOR CONTRACT 1300 ADDENDUM NO. 3	1	pw		
02/15/2012	ISSUED FOR BID	0			

central subway design group

TE

TELAMON ENGINEERING CONSULTANTS INC.

DESIGNED
P. WILSON

DRAWN
F. BAYANI

CHECKED
D. ZUJURING

REVIEWED
D. YAWORSKY

RECOMMENDED
A. READ

APPROVED
R. EDWARDS

DATE
02/15/2012

REV. 0
SEALED BY
P. WILSON



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED

EDWARD D. RESKIN
DIRECTOR OF TRANSPORTATION

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

JOINT TRENCH
CTL 128+75 TO 131+00

CONTRACT NO. 1253	
SFMTA CONTROL NO. CL-18441	
DRAWING NO. JT-302	REVISION
SHEET NO. 127	1

\\Sv6nas003.muni.sfgov.org\m544.1\FinalDesign\DRAWINGS\CS155-2\1253\SHEET FILES\02_CIVIL\06_JOINT TRENCH\12530206JT302.dwg
 FBayani Mon Jan 14, 2013 12:56 pm JT-302

CONFORMED

UMS PCC New Work Estimate:
PG&E Conduits on Stockton St. North of Geary St. to Maiden:

Engineer's Estimate
Contract No. 1300 - UMS
8/6/14

WBS Item	Description	Quant.	Unit	MHRS	Total Labor	Total Eq.Rent	Total Perm.Matl.	Total Const.Matl.	Total Subc.	Total Cost	Unit Cost
10	Install Duct Bank	50	LF	127	\$7,006	\$2,283	\$16,320	\$0	\$585	\$26,193	\$523.86
	Subtotal:			127	\$7,006	\$2,283	\$16,320	\$0	\$585	\$26,193	
	1st Tier Sub OH&P	15%	%		\$1,050.86	\$342.39	\$2,447.96	\$0.00	\$29.25	\$3,870	
	Subtotal:				\$8,057	\$2,625	\$18,768	\$0	\$614	\$30,063	
	Bond & Insurance Markup 1st Tier Sub	2.214%	%		\$178	\$58	\$416	\$0	\$14	\$666	
	Subtotal:				\$8,235	\$2,683	\$19,183	\$0	\$628	\$30,729	
	Prime Contractor Markup	5%	%		\$411.75	\$134.15	\$959.16	\$0.00	\$31.39	\$1,536	
	Subtotal:				\$8,647	\$2,817	\$20,142	\$0	\$659	\$32,266	
	Bond & Insurance Markup Prime Contractor	2.214%	%		\$191	\$62	\$446	\$0	\$15	\$714	
	Total Construction Cost:	50	LF	127	\$8,838	\$2,880	\$20,588	\$0	\$674	\$32,980	\$659.60

Huff, Nicolas

From: Tisell, Steve
Sent: Thursday, June 26, 2014 11:09 AM
To: Huff, Nicolas
Subject: FW: materials for Central Subway Geary & Maiden lane cutover

Should you have any questions or concerns regarding this or any other issues, please feel free to contact me.

Thanks,
Steve E. Tisell, PE

Resident Engineer – UMS Station
SFMTA – Central Subway Project
530 Bush Street, 4th Floor
San Francisco, CA. 94103
(510) 715-0937 Cell

From: Reimer, Thomas M [<mailto:TMR2@pge.com>]
Sent: Wednesday, June 25, 2014 1:33 PM
To: Tisell, Steve
Cc: Phillips, David
Subject: materials for Central Subway Geary & Maiden lane cutover

Steve,

Estimate for materials for Central Subway electric stub completions:

Geary & Stockton going east west crossing Geary at the north side of the intersection.

- * approx. 300' - 6" Galvanized rigid steel conduit with threaded couplings (comes in 10' lengths with both ends threaded and a single coupling)
- * 12 - 6" pvc couplings slip to threaded for transition from plastic to threaded steel
- * 2- 6" 5' radius 90 degree sweeps galvanized rigid steel
- * 12 - 6" 5' radius 22 degree sweeps needed to adjust on street crossing because stubs may not be directly across from each other.
- * reel of 2500# pull tape

Conduits must be encased in concrete at transition to plastic to stabilize joints. Entry into manholes 570, 873, 467, 571, 573 are necessary to mandrel and install pull tape – A QEW is required at all vaults entries.

Stockton Street north of Geary to Maiden (Manhole 467 to manhole 470).

- * approx. 180' - 6" galvanized rigid steel conduit (with couplings)
- * approx. 80' - 3" galvanized rigid steel conduit
- * 6 - 6" rigid steel 5' radius 90 degree sweeps
- * 2 - 3" rigid steel 5' radius 90 degree sweeps
- * 12 - 6" rigid steel bell end fittings

FACO #31



- * 2 – 3” rigid steel bell end fittings
- * 6 – 6” rigid steel union couplings
- * 3 – 3” rigid steel union couplings
- * reel of 2500# pull tape

Vault entries at 470, 467 necessary to grout conduits, mandrel and install pull tape.

Vault entries must be made with QEW present. Conduits should extend into the vault approximately 1” and shall be grouted inside and out.

I also recommend conduit spacers as necessary to help stabilize suspended or otherwise supported conduits.

All measurements are approximate. Access to additional conduit and fittings should be secured prior to work should additional materials become necessary.

Thanks,
Tom Reimer
Energy Experts International
707 508-7408

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To learn more, please visit <http://www.pge.com/about/company/privacy/customer/>

FORCE ACCOUNT CHANGE ORDER

Title: **UMS – Incomplete PG&E Duct Bank near Maiden Ln FACO #31**

SFMTA Project: Central Subway Project (544.1)

Contract No. 1300 FA Change Order No. 031

Package UMS Date August 5, 2014

TO: Tutor Perini, Contractor

You are ordered to perform work as follows:

TPC is hereby directed to proceed with completing the empty duct bank between vaults 470 and 467 on Force Account, and to track their time and materials. The duct bank was installed using rigid (GRS) conduit in lieu of PVC, and is to be completed with GRS, as noted below. SFMTA will only track the time and materials related to the cost to complete the rigid conduit that was not completed under the previous utility relocation contract, as per the following estimated quantities:

Stockton Street north of Geary to Maiden (Manhole 467 to manhole 470).

- * approx. 180' – 6" galvanized rigid steel conduit (with couplings)
- * approx. 80' – 3" galvanized rigid steel conduit
- * 6 – 6" rigid steel 5' radius 90 degree sweeps
- * 2 – 3" rigid steel 5' radius 90 degree sweeps
- * 12 – 6" rigid steel bell end fittings
- * 2 – 3" rigid steel bell end fittings
- * 6 – 6" rigid steel union couplings
- * 3 – 3" rigid steel union couplings
- * reel of 2500# pull tape
- *conduit spacers as necessary to stabilize/suspend or otherwise support conduits
- *Credits are due to SFMTA regarding concrete encasement.

The work specified above will be paid for on a force account basis as set forth in Section 6.05, Force Account Work, of the General Provisions. Payment for this work will not be allowed without an executed Contract Modification.

Work under this Force Account Change Order shall not exceed **\$32,980.00** without an approved supplemental Force Account Change Order. The Contractor shall notify the SFMTA promptly in writing when costs under this Force Account Change Order exceed 80% of the not-to-exceed amount.

Prepared by: Steve Tisell

Date: July 8, 2014

Approved:

Construction Manager Rich Redmond

CM _____ Date: _____

Original: Contractor
Copies: Construction Manager
Contract File

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00001	11/12/13	CTS-FACO #1 Potholing @Stockton&Was	CLO	Unforeseen Condition			\$13,000	Field work completed. TPC to submit FACO Summary. Cost to be paid under contract allowance 13.	4
00002	12/6/13	STS FACO #15 Add. ATT Manhole, PB	CLO	Private Utilities	6		\$625,208	Included in Contract Modification No. 04 Contract Specifications 33 41 10, 2.04 and 3.05 specified that all manholes and pullboxes are to be furnished and installed by AT&T. However, AT&T requested that these manholes and pullboxes be installed by the Contract 1300 contractor pending AT&T approval of a fair and reasonable cost. - PCC #6 issued to TPC. -Cost shown is Contractor's proposal. Presented to CMB on 11/20/13 and approved on 7/2/14 for \$625,208.40. CMod is forthcoming.	
00003	12/11/13	CTS Auth. Compensate Contr Traffic	CLO	Private Utilities			\$0	This work was not performed.	
00004	12/11/13	CTS Liquidated Damages Failure Traf	OPN	Other			(\$3,500)	On November 26, 2013, Tutor Perini workers closed Washington Street earlier than the approved as noted Traffic Control Plan allowed. Submittal 01 55 26.54-010 clearly stated the road is to be closed at 8:00 pm Tuesday, November 26th, 2013. Additionally, at 4:50 p.m. Monday, November 25 an e-mail message was sent to Brett Chabert and Gabe Bautista which included the time of the closure, and authorization to procure Police Officers for the closure. The police officers showed up at 8:00 pm November 26th, 2013 for the scheduled closure.	
00005	1/17/14	UMS Geoprobe Credit	CLO	Other	7		(\$30,320)	Assessment of LD's per MTA discretion. Description of PCC: Credit from the Contractor for not performing and handling six (6) core samples. The locations of the six cores were to be determined by an Archaeologist, according to field conditions, and were to be located within the UMS Station footprint. Depth of cores were to be drilled (at a minimum) to 60' below existing ground surface.	
00006	1/22/14	STS Traffic Signal RFIs	OPN	Errors and Omissions			\$150,000	Contractor found various discrepancies in the Contract ET drawings related to traffic signals. RFIs were submitted and responded to clarify the discrepancies. RE to revise ET drawings and issue PCC. Cost shown is rough order magnitude.	
00007	3/7/14	CTS-FACO #2 Connecting (E) Ductbank	OPN	Private Utilities			\$10,000	Field work completed. TPC to submit FACO Summary	
00008	3/7/14	CTS-FACO #3 Enlarge Excavation SFWD	CLO	Other			\$10,000	Field work completed. TPC to submit FACO Summary.	4
00009	3/7/14	CTS-FACO #4 Joint Trench Unid. Cond	OPN	Private Utilities			\$25,000	Included in Contract Modification No. 04 Field work completed. TPC to submit FACO Summary.	
00010	3/10/14	CTS-FACO #5 Unidentif 3" Metal Pipe	OPN	Private Utilities			\$350	Field work completed. TPC to submit FACO Summary.	
00011	3/10/14	CTS-FACO #6 TC for AWSS line Passin	CLO	Private Utilities			\$5,000	Field work completed. TPC to submit FACO Summary.	4
00012	3/10/14	CTS-FACO #7 Relocate AWSS Fire Hydr	CLO	Unforeseen Condition			\$10,000	Included in Contract Modification No. 04. Field work completed. TPC to submit FACO Summary.	4
00013	3/10/14	CTS-FACO #8 AWSS Line inside Sewer	CLO	Unforeseen Condition			\$0	Included in Contract Modification No. 04. This FACO was rescinded. TPC did not perform.	
00014	3/10/14	CTS-FACO #9 Add Traffic Signage @Po	CLO	Owner Directed CIP			\$1,000	Field work completed. TPC to submit FACO Summary.	4
00015	3/10/14	CTS-FACO #10 NEW AWSS Fire HydrantW	CLO	Unforeseen Condition			\$65,000	Included in Contract Modification No. 04. Field work is ongoing.	4
								Included in Contract Modification No. 04.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00016	3/10/14	CTS-FACO #11 Relocate AWSS Fire Hyd	CLO	Owner Directed CIP			\$25,000	Field work is ongoing.	4
00017	3/10/14	CTS-FACO #13 Remove a Water-Filled	CLO	Private Utilities			\$1,000	Included in Contract Modification No. 04. Field work completed. TPC to submit FACO Summary.	4
00018	3/10/14	STS FACO #16 Mitigate Subsurface	OPN	Unforeseen Condition			\$15,000	Included in Contract Modification No. 04. Found pre-existing voids underneath roadway that caused streetbase to settle and collapse after saw-cutting operation. Cost to be paid under contract allowance.	
00019	3/10/14	STS FACO #17 R/D Subsurface Layers	OPN	Unforeseen Condition			\$20,000	Contractor found existing sub-surface layers of concrete about 12" below ground surface during potholing on 4th Street between Bryant and King. Cost to be paid under contract allowance.	
00020	3/17/14	YBM FACO #12 Buried concrete wall	OPN	Unforeseen Condition			\$20,000	Presented to CMB 3/12/14 NTE \$15,000 - Agreed. Increased NTE from \$15,000 to \$20,000 at CMB 4/9/14 - Agreed. Work complete 5/2/14 for guidewall construction. Wall will be encountered again when station excavation begins. Tutor has yet to submit bill. Will be paid under Allowance Item 13.	
00021	3/17/14	YBM FACO #14 Abandoned sewer not	OPN	Unforeseen Condition			\$10,000	Presented to CMB 3/12/14 NTE \$10,000 - Agreed. Work completed on 3/6/14. Tutor has yet to submit bill. Will be paid under Allowance Item 13.	
00022	3/31/14	UMS-FACO#19 Street Light at Stockto	OPN	Unforeseen Condition			\$4,000	Letter 134 formally transmitted FACO #19 directing the Contractor to remove the conduit and feeder to the combination street signal and light pole at the southwest corner of Stockton and O'Farrell. The Contractor has stated that the combination street light at the southwest corner of Stockton and O'Farrell streets was not shown on the street light drawings. SFMTA clarified that regardless of what appurtenances were on the pole, the pole was shown to be removed on drawings (pavement demo) PD-105 and (electrical) ET-104. The Contractor was correct that the conduit and feeder supplying the street light are not shown on any drawings. PG&E, SFPUC, and Sustainable Streets have not claimed ownership of the conduit and its feeder.	
00023	4/2/14	STS-FACO #20 Add'l Soil Testing Req	OPN	Owner Directed CIP			\$5,000	Contract Specifications 02 81 00.56 required the project to comply with the San Francisco Public Health Code Article 22A (Maher Ordinance). However, pesticides and chromium +6, which were required by the Landfill Facilities such as Baylands and Potrero Hills, were not included in the Maher Ordinance testing requirements. Cost shown is RE's best guesstimate.	
00024	10/24/13	UMS Grade A913 Gr 70 W Shapes	CLO	Other		2	\$626,780	See COR 002, Change Management issue "Grade 50 Steel inLieu ofA913 Grad70" for relevant information.	
00025	4/18/14	CTS-COR1 Utility Confl at WD Tie-In	CLO	Unforeseen Condition		1	\$15,662	COR #1, Negotiation between SFMTA/TPC. TPC to update the amount.	
00026	4/17/14	CTS COR 6 Sewer Line Demo at Washin	OPN	Errors and Omissions		6	\$43,616	MTA agreed to meet to discuss original \$ amount. In IRL process.	
00027	4/17/14	CTS COR4 Insp of Sewer Culverts on	CLO	Errors and Omissions		4	\$0	MTA directed TPC not to perform.	
00028	4/17/14	CTS-Deletion of Ductbank on Stockto	CLO	Other		1	(\$84,018)	Contractor provided a credit proposal in the amount of -\$84,018.00.	
00029	4/18/14	YBM FACO #18 Add analytical tests	OPN	Other			\$5,000	Test for SVOCs, organic pesticides and hexavalent chromium in 3 remaining soil profile borings. Tutor has not submitted bill. Will have to be paid through Change Order.	
00030	4/18/14	YBM FACO #21 Buried timber piles	OPN	Unforeseen Condition			\$15,000	Merit presented to CMB 4/16/14 - Agreed. Pile extraction completed on 5-5-14. Tutor has not submitted bill. Will be paid by Allowance Item 13.	
00031	4/18/14	Concrete obstructions AWSS work	OPN	Other			\$0	Investigation work performed 5/6/14. Obstruction was discovered to be a thick (18-20") street section. SFMTA believes this issue is without merit. However, Tutor has not closed this issue.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00032	4/18/14	YBM FACO #22 potential contam soil	OPN	Other			\$15,000	Issue presented to CMB 4/16/14 - Agreed. Work completed but will resume when begin headhouse excavation. If merit determined will be paid by Allowance Item 4.	
00033	4/18/14	CTS-DSCBrick Requiring Hand Work	DENI	Unforeseen Condition			\$0	MTA denied	
00034	4/18/14	CTS-DSC Unanticipated Vault Obstruc	DENI	Unforeseen Condition			\$0	MTA directed to not expend resources.	
00035	4/18/14	CTS-DSC Unkown Conduits on Washingt	OPN	Unforeseen Condition			\$30,000	Drafting FACO.	
00036	4/18/14	CTS-DSC ContamSoil COR#7	OPN	Unforeseen Condition		7	\$3,743,672	MTA requested backup for S&S Trucking costs.	
00037	4/18/14	CTS-Panel 45 DSC Obnoxious Odors	OPN	Unforeseen Condition			\$0	TPC put MTA on notice.	
00038	4/22/14	UMS BART Entry Hazmat Abate FACO 29	OPN	Unforeseen Condition		8	\$86,189	Tutor maintains that the existing hazmat were not disclosed at bid and that they are a differing site condition and extra work. They present their hazmat survey to substantiate their position. Letter 176 cites the spec references to the environmental reports and provides copies of the environmental reports findings, which are consistent with the Contractor's hazmat findings. Allowance Item No. 5 states that payment will not be made for work identified as containing hazardous materials in the specifications. The letter also points out that the Contractor waited until 7 months after their hazmat survey was completed before submitting their NDSC (which is required 24 hours after they were aware of the supposed problem.) NDSC and COR were denied via Letter 176. TPC responded via letter 166 that it never agreed to provide its internal bid documents. Letter 226 was issued on June 18 to TPC restating TPC's commitment to providing the documents, and also requested the activity durations so that SFMTA could develop its engineer's estimate. At the PM/CM meeting on 7/7/14, verbal direction was given to issue a FACO to TPC to proceed with the abatement at Ellis Street. FACO #29 was issued on 7/8/14, and work can be paid out under Allowance No. 5. To date, TPC has not provided the requested backup to SFMTA (including the activity durations).	
00039	4/23/14	CTS-DSC Harder Rock	NEW	Unforeseen Condition			\$0	Layne, the slurrywall subcontractor has put SFMTA on notice of a DSC for four panels, Northwall P- 43, Westwall P- 37,P-35 and Southwall P- 23. The DSC for Panel-43 claimed that the green rock encountered was harder than could have been expected. The claim was denied. When hard green rock was encountered in the subsequent panels, Layne again submitted NDSC for each of the panels. We requested that they provide documentation that the rock was harder than could have been expected and to track the potential delays via FO.	
00040	4/23/14	CTS PCC #10 230KV Casing@Bryant/4th	CLO	Private Utilities		10	\$138,000	Potential additional cost to date TBD. PG&E wants Central Subway to install steel casing next to existing 230kV at 4th/Bryant. -PCC #10 issued to TPC on 4/23/14. Cost shown is rough order of magnitude.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00041	4/24/14	UMS NDSC Macys Mens Canopies	OPN	Unforeseen Condition			\$25,000	<p>Tutor maintains that they could not have known the extent of the work involved with the canopy removals. They did not properly evaluate the canopies at bid time, and did not review the as-built drawings to determine the scope of work.</p> <p>Issue remains open as the canopy submittals (and the work involved) have not been approved and the full extent of the work has not been fleshed out. This will affect the work to install the Type J piles at the emergency egress stairs near Macy's Mens.</p> <p>NDSC was denied on Letter 69.</p>	
00042	4/24/14	UMS NDSC Struc Concrete Beams Pile	DENI	Unforeseen Condition			\$50,000	<p>ROM added per CMB review of 8/5/14 (see JZ email of 8/6/14). This is an guesstimate since it is nearly impossible to evaluate the full cost of this risk.</p> <p>Tutor encountered the structural basement roof left over from Contract 1251, and claim that it is not shown on the drawings. The pavement demo indicate notes "B&9" that structural concrete and steel were to be demolished. The 1251 reference drawings show the extent of the work.</p> <p>NDSC was denied on Letter 71. However, the cost could potentially be submitted as a claim.</p>	
00043	4/24/14	UMS ND Becho Pile Concrete Mix	DENI	Other			\$0	<p>Tutor/Becho did not provide any evidence or logic to substantiate the basis for the delay. The CPM baseline schedule was not consistent with Becho's claim that the denial of their concrete mix design (due to permeability not meeting spec requirements).</p>	
00044	4/24/14	UMS ND Ellis Street Access	DENI	Other			\$0	<p>ND was denied on Letter 116.</p> <p>TPC claiming a delay to their schedule for BIH's late departure from Ellis St. TPC did not coordinate with BIH. TPC did not formally request access to Ellis St and did not formally notify SFMTA of potential delay.</p>	
00045	4/24/14	UMS NDSC #1 Becho Unknown Obstruct	DENI	Unforeseen Condition			\$3,500	<p>ND was denied on Letter 101.</p> <p>Tutor/Becho failed to prove that the sub-basement walls and footings they encountered were unexpected or unforeseen.</p> <p>NDSC was denied on Letter 90. Tutor resubmitted. NDSC denied a second time via Letter 99.</p>	
00046	4/24/14	YBM 20" water conflict east wall	CLO	Other			\$0	<p>Received RFI 530 on 4/23/14 of potential issue. Water line shown correctly in contract dwgs. SFWD will perform early shutdown of water line. It is anticipated there is no extra costs as this work was within scope with SFWD.</p>	
00047	4/24/14	UMS NDSC #2 Becho BasemntWall Obst	DENI	Unforeseen Condition			\$3,500	<p>Tutor/Becho failed to prove that the sub-basement walls they encountered were unexpected or unforeseen. They are shown on the ES drawings, which also require that the existing bldg components be removed prior to pile wall installation.</p> <p>NDSC was denied on Letter 91. Tutor resubmitted. NDSC denied a second time via Letter 100.</p>	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00048	4/24/14	UMS ND Muni OCS Pole at Market	OPN	Other			\$23,000	<p>The phasing for the OCS pole shown in the OCS drawings is intended by the designer to aid in the roof beam installation. It is believed that the Contractor wishes to reconfigure the OCS before pile installation begins. The Contractor's phasing results in conflicts between several Type E Piles and the TEMP OCS pole and associate guy wires. We believe that if the Contractor installs most of the Type E Piles, then stops pile installation activity to reconfigure and install the TEMP OCS pole and cabling, that the Contractor will not have all of the problems that they claim.</p> <p>SFMTA has responded on Letter 110 that TPC needs to provide its sequence for construction and installation of piles at Market & Ellis St. TPC verbally stated that they will consult with their sub-contractor, Becho, about alternative drill rig positions to facilitate the pile installation. The Contractor also stated that they will be pot holing to investigate whether another location for the temporary pole is possible to meet the Contractor's desired sequencing. Letter 110 goes on to state that when the above information is provided to SFTMA another meeting will be held to discuss and hopefully resolve this issue.</p> <p>Potholing revealed additional utilities and conduits conflicting at the original (design) location for the TEMP OCS pole. Additional meeting held on 6/25/14, and it was agreed that another location would be investigated for potholing. The RE agreed to pay for the additional potholing on Force Account.</p> <p>Verbal direction provided during the PM/CM Monday morning meeting on 7/7/14 to authorize CSDG to proceed with foundation design for the alternative TEMP OCS pole location. Verbal direction also stated that when foundation design was provided to TPC, that the letter would clearly state that SFMTA CSP would reserve its right to back charge TPC for the design costs of the TEMP OCS pole foundation.</p> <p>MUNI OCS was provided the Phase 1 and Phase 2 configurations by 1300 CM Team. OCS provided loadings for OCS cable supports. Loading design was forwarded to CSDG on 7/15/14.</p>	
00049	4/24/14	UMS NDSC #3 Becho C Pile Obstruct	DENI	Unforeseen Condition			\$3,500	<p>Originally, the ROM cost for this issue was only for the cost to suspend then remobilize the pile subcontractor while the work to perform the temporary OCS installation is completed. It is contemplated that the costs could be higher due to the need for a deeper foundation. FACO #25 was issued to cover potholing. Tutor/Becho failed to prove that the abandoned utilities they encountered were unexpected or unforeseen. Becho (subcontractor) states that it had been agreed that all utilities would be relocated before start of work. SFTMA had made no such representation in the 1300 contract.</p>	
00050	4/24/14	UMS NDSC #4 Becho Obstruct C Pile	DENI	Unforeseen Condition			\$3,500	<p>NDSC was denied on Letter 127. Tutor/Becho failed to prove that the abandoned utilities they encountered were unexpected or unforeseen. Becho (subcontractor) states that it had been agreed that all utilities would be relocated before start of work. SFTMA had made no such representation in the 1300 contract.</p>	
00051	4/24/14	UMS NDSC #5 Becho Obstruct C Pile	DENI	Unforeseen Condition			\$3,500	<p>NDSC was denied on Letter 128. Tutor/Becho failed to prove that the abandoned utilities and concrete they encountered were unexpected or unforeseen. Also failed to study the Geotech report which stated that the wood, brick and concrete objects found in this strata were to be expected when performing subsurface work, or the contract drawings which show the concrete walls.</p>	
								NDSC was denied on Letter 131.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00052	4/24/14	UMS NDSC (e) Waterline Depth	DENI	Unforeseen Condition			\$2,500	Tutor/Valverde used a saw cut to cut deeper than the 8" thick street (= 2" A/C wear surface + 6" Concrete Base). The saw cut blade cut through the water line, causing water leak out. It is improper to use a sawcut thicker than the depth of the street.	
00053	4/24/14	UMS NDSC #6 Becho Obstruct C Pile	DENI	Unforeseen Condition			\$3,500	NDSC was denied on Letter 139. Tutor/Becho failed to prove that the abandoned utilities they encountered were unexpected or unforeseen. It was indicated in the specifications that they were expected to encounter abandoned utilities.	
00054	4/24/14	UMS NDSC Imprope TrafficSignal Line	DENI	Unforeseen Condition			\$3,500	NDSC was denied on Letter 141. Tutor resubmitted with supplemental information. NDSC denied a second time via Letter 145. Tutor/Valverde ran their sawcut blade too deep and hit/cut a traffic signal conduit and feeder that was about 8" to 12" below the underside of the slab. The traffic signals were knocked out of service, and crews had to wait until the signal shop was on site to perform the repairs. Claiming for compensation to repair and restore the signals due to their non-code compliant depth	
00055	4/24/14	UMS ND & COR 3 AWSS Hydrant	DENI	Unforeseen Condition		3	\$8,353	NDSC was denied on Letter 168. Traffic Signal Restoration Protocol provided via Letter 168. Tutor maintains that the AWSS drawings only show the AWSS lateral and not the hydrant to be removed. They maintain that the lack of note for removal of the AWSS hydrant means that it is extra. The PD drawings show the AWSS Hydrant to be removed. ND was denied on Letter 103 for CO for the Work to remove the AWSS hydrant at the Northwest corner of Stockton & O'Farrell. Tutor/Valverde resubmitted request. It was denied a second time via Letter 126. An issue "resolution ladder" meeting was held between the RE and Valverde. The RE ONLY agreed to recommend payment for just rigging, hoisting, and trucking the hydrant and associated riser. The draft letter formally offering this recommendation is being circulated for review.	
00056	4/24/14	UMS NDSC #7 Becho Obstruct C Pile	DENI	Unforeseen Condition			\$3,500	Tutor/Becho have not presented findings with regard to the metal or steel obstructions being encountered being inconsistent with the language in contract that they are responsible for abandoned utility facilities.	
00057	4/24/14	UMS NDSC Inadequate CDF FACO 30	DENI	Unforeseen Condition			\$50,000	NDSC was denied on Letter 160. Tutor has assumed CDF was placed under the utility relocation contract as a self-supporting back fill which would not require shoring for later work (UMS). Tutor claims that the CDF not being used 100% in several locations requires them to install shoring. They had gone from the as-builts which showed CDF 100% supporting the existing sidewalk. Shoring is in fact shown on the ES drawings as being necessary. NDSC was denied on Letter 163. TPC submitted additional analysis TPC Letter 179 on June 18, 2014. CSDG reviewed TPC's letter. CSDG concluded that the CDF could self support in areas that had building basements, i.e. no lateral loads. Per PM/CM meeting on 7/7/14, verbal authorization was granted to issue FACO for TPC to proceed with CDF repairs. FACO #30 was issued on 7/9/14 via Letter 242R.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00058	4/24/14	UMS ND TCP at O'Farrell Pile Macys	DENI	Other			\$10,000	<p>Tutor maintains that they are not required to provide 6' sidewalk access anywhere in the vicinity of Macy's Mens Store, since the north edge of the pile line is about 1'-6" from the (south) face of Macy's Mens building. The sidewalk access is a requirement of the traffic drawings. The Traffic Engineer laid out dimensioning showing that it would be possible to place a 6' walkway along the south side of the construction laydown area (within the traffic lane). Tutor denies that this is possible because this reduces the width of their fencing, constricting their laydown area's width, and will not be wide enough to fit their equipment.</p> <p>SFMTA also noted that the Macy's Canopy Removal and Storage submittal had not been approved yet. The piles cannot be installed until the canopy is removed. Non-approval of the canopy precludes Tutor from beginning work in this area.</p>	
00059	4/25/14	UMS NDSC #8 Becho Obstruct C Pile	DENI	Unforeseen Condition			\$11,000	<p>NDSC was denied on Letter 166.</p> <p>Tutor/Becho failed to prove that the steel pipe/casing they encountered was to be unexpected or unforeseen. Becho (subcontractor) states that it had been agreed that all utilities would be relocated before start of work by the 1252 Contractor. SFTMA had made no such representation in the 1300 contract.</p>	
00060	4/28/14	UMS W Shape Wale Supports	DENI	Other			\$100,000	<p>NDSC was denied via Letter 170.</p> <p>Tutor maintains that the Response to Bidder's questions: "W Shape is only a temporary support for the wale installation, and is to be designed by the Contractor to suit their means and methods" was contractual direction to design a small (and impermanent) W Shape. They contend that during the design meeting "9/17/13" the designer's clarification that the W Shape was the only means of vertical permanent vertical support is a change to the Contract. The Contractor maintains that their engineering done so far for the permanent W Shape reveals a cost that is greater than what would be required for temporary W Shapes.</p> <p>SFTMA cited spec sections and drawing notes which require the Contractor to design the connections. Since the W Shape wale support is a part of the connection, and since the connections are the Contractor's sole responsibility, sizing the W Shape (whether temporary or permanent) is a part of the Contractor's scope of work.</p> <p>Advanced notice of COR was denied thru (SFMTA) Letter 171. TPC submitted (TPC) Letter 94 as advanced notification of pending COR for the increase in Shape of the W sections.</p>	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00061	4/30/14	UMS Tangent Pile Work Delays	OPN	Other			\$150,000	<p>Contractor has submitted two RFI's contending a defective design with respect to tolerances. Tutor shows in their RFI's what they believe are conflicts with the battered pile tips and tunnel's structural shell. They believe that the battered pile tips, in many locations, will penetrate the tunnel shell. SFMTA's continued response has been to install that there is no conflict between the battered pile tips and the tunnel and that the Contractor is to proceed with pile installation per the design documents.</p> <p>SFMTA issued Letter 132, bringing supposed Tangent Pile issue to head. TPC responded via TPC Letter 103, which SFMTA countered with Letter 155.</p> <p>The estimated value is listed only as a place holder since this work is not on the critical path, it is difficult to estimate a cost impact.</p> <p>TPC issued Letter 121, asserting that there is a 'potential' for the piles to conflict with the tunnel and expressing entitlement to a change order.</p> <p>SFMTA responded via Letter 208, rejecting the Contractor's position and directing to install the piles per contract. It should be noted that the tangent pile work began on 4/29 with no (apparent) issues as had been asserted by the Contractor.</p>	
00062	4/30/14	UMS Compensation Grout	OPN	Other			\$100,000	<p>Tutor has not submitted their Compensation Grouting plan, but their schedule and their direction to backfill the existing grout shaft @ Ellis St, is evidence that Tutor will not follow the compensation grout plan design.</p> <p>SFTMA has stipulated in Letters 94 and 106 that it has not received detailed compensation grouting plans for review and approval. Letter 94 describes the issues that must be addressed in the grouting plan.C</p> <p>CSP Procedure requires a cost be entered. It is not possible to quantify the cost at this time. Since Tutor has not submitted a costs, and since the exposure is unknown, the cost entered for this Trend is merely a ROM.</p>	
00063	4/30/14	UMS NDSC Hydrant N. of Geary	DENI	Unforeseen Condition			\$25,000	<p>Tutor's argues that the plans were not clear that the hydrant (& its associated lateral) had to be coordinated with the Type E Pile installation. This arguement is unfounded. The drawings clearly show the hydrant lateral running over the southern portion of Pile E85, and the UD drawings note that the lateral must remain in service and must be phased/coordinated with pile installation.</p> <p>NDSC was denied via Letter 174.</p>	
00064	5/23/14	GEN-PCC9 TP Cable & Conduit Downsiz	CLO	Owner Directed CIP	9		(\$907,000)	<p>Reduce traction power cables from 2.4kV to 2.0kV and reduce traction power conduit from 5" GRSC/Phenolic to 4" Phenolic. (Programwide). Initially presented to CMB on 9/3/13. CMB approved PCC to TPC on 5/22/14. Potential cost savings of \$907,000.</p>	
00065	5/2/14	STS-PG&E 6" gas re-alignment	OPN	Private Utilities			\$10,000	<p>PG&E gas as shown in sidewalk per contract does not meet PG&E requirement. RE to issue a PCC. Cost shown is RE's best guesstimate.</p>	
00066	5/7/14	STS-Subsurface structural wall at S	NEW	Unforeseen Condition			\$50,000	<p>Subsurface structural wall at SW 4th/Brannan was discovered during potholing. Expected to become DSC during permanent installation. Issue to be addressed when more information becomes available during permanent installation. Cost shown is a placeholder.</p>	
00067	5/8/14	YBM AWSS conflict with PGE vault	CLO	Errors and Omissions		10	\$41,073	<p>Any costs will be forwarded to PGE. See letter to PGE dated 4/18/14. PGE responded in email on 4/21/14 discussing liability. Received ROM from Tutor on June 11, 2014. COR 010 submitted on 7/1/14.</p>	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00068	5/29/14	CTS-DSC Hard Rock at Slurry Wall	NEW	Unforeseen Condition			\$0	Layne, the slurrywall subcontractor has put SFMTA on notice of a DSC for four panels, Northwall P- 43, Westwall P- 37,P-35 and Southwall P- 23. The DSC for Panel-43 claimed that the green rock encountered was harder than could have been expected. The claim was denied. When hard green rock was encountered in the subsequent panels, Layne again submitted NDSC for each of the panels. We requested that they provide documentation that the rock was harder than could have been expected and to track the potential delays via FO.	
00069	5/29/14	CTS-PCC12 AWSS Wk PGE reloctn sched	CLO	Unforeseen Condition	12		\$68,550	Potential additional cost to date TBD Scope meeting held. TPC to provide quote.	
00070	5/29/14	CTS-PG&E Scope Change at Exit Hatch	NEW	Private Utilities			\$0	Drafting PCC to present to CMB	
00071	6/3/14	UMS NDSC AT&T Conduits @ Geary St	DENI	Private Utilities			\$50,000	Contractor has submitted Notice of Differing Site Condition regarding AT&T conduits at Geary Street (Geary/Stockton intersection). The Contractor contends that the existing duct bank is a nested, unorganized array of custom sweeps, installed in violation of the City and Contract Specifications. Tutor alleges that this disorganized mass of conduits crossing the pile line cannot be shifted, as necessary, to allow the piles to be installed. SFMTA forwarded TPC's letter on 5/21/14 to AT&T (Huan Hyunh). SFTMA issued Misc Letter 32 (6/02/14) to AT&T requesting their attention to this issue and a field meeting with Tutor to review issue. So as not to delay response while waiting for AT&T, SFMTA issued Letter 213 (6/9/14) to TPC. The NDSC was denied due to the fact that the utility drawings are schematic and not meant to depict all bends, sweeps, or joings in conduit. TPC forwarded an additional NDSC (TPC Letter 170) from their Subcontractor (Becho) on 6/5/14 regarding the delays in AT&T conduit coordination. SFMTA responded via Letter 215, denying Becho's claim of delay. TPC appears to have internal coordination issues which need to be resolved.	
00072	6/9/14	UMS NDSC #9 Becho Obstruct E Pile	DENI	Unforeseen Condition			\$8,000	The value inputted in the lump sum is a rough place holder. Tutor/Becho failed to prove that the reinfoced concrete they encountered was unexpected or unforeseen. Becho (subcontractor) states that neither the geotechnical baseline nor the contract drawings show the reinfoced concrete. SFTMA drawing ES-102 shows soldier beams and a bulkhead were to be demolished and removed.	
00073	6/9/14	UMS NDSC #10 Becho Obstruct E Pile	DENI	Unforeseen Condition			\$9,000	NDSC was denied via Letter 211. Tutor/Becho failed to prove that the reinfoced concrete they encountered was unexpected or unforeseen. Becho (subcontractor) states that neither the geotechnical baseline nor the contract drawings show the reinfoced concrete. SFTMA drawing ES-102 shows soldier beams and a bulkhead were to be demolished and removed. NDSC was denied via Letter 212.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00074	6/11/14	UMS Powell St. Elevator Site Hazmat	DENI	Unforeseen Condition			\$15,900	<p>CMOD #1 Initiated the design for the elevator at the west end of Powell St. Station. Several cut sheets have been submitted to SFMTA, but none even approach the minimum threshold of what would be considered as a conceptual design as defined in the Specifications.</p> <p>This cost proposal was rejected via Letter No. 219. The proposal could not be evaluated since the conceptual design had not been submitted therefore it was impossible to contemplate the scope of the work and the full extent of the required abatement activities.</p> <p>Ultimately, this will have to be negotiated when the final conceptual design is approved and the scope of work established. None of the existing building materials were sampled or tested before the contract went out to bid.</p> <p>Tutor has issued a letter No. 177 (in response No. 219) stating that their conceptual design for the elevator is forthcoming.</p>	
00075	6/13/14	YBM FACO #24 Conflict new culvert	OPN	Errors and Omissions			\$5,000	Merit presented to CMB on 6/18/14 - Agreed for pothole only. Work completed on 6/24/14. Tutor has yet to submit bill. Change Order will be required.	
00076	6/13/14	STS - Additn manholes for 78" sewer	NEW	Private Utilities			\$0	SFPUC requested 11 additional manholes to be included with the 78" sewer design. Per Manfred Wong's 6/12/14 email, SFPUC will pay for the additional manholes. ROM: \$5k/manhole for 11 manholes = \$55,000. Eng. estimate forthcoming.	
00077	6/13/14	STS Relocation of Comm&Elec Cabinet	NEW	Errors and Omissions			\$0	Original location on Freelon, east of 4th Street does not meet DPW-BSM sidewalk space requirement. New location is Brannan, east of 4th Street. This was present to CMB on Sept. 4, 2013. Engineer estimated for \$6607.	
00078	7/8/14	YBM-FACO #28 concrete obst 20" cut	NEW	Unforeseen Condition			\$10,000	Merit presented to CMB on 7/9/14 - Agreed. Work to be tracked on Force Account and paid through Allowance Item 13. Work completed on 7/10/14. Tutor yet to submit bill.	
00079	7/8/14	YBM concrete overpour at end stop	NEW	Other			\$25,000	DSC issued on 6/25/14. Issue discussed with John on 7/7/14. SFMTA requested Tutor submit a COR on 7/8/14.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00080	7/18/14	UMS COR 12 Fire Hydrant @ OFarrell	CLO	Errors and Omissions		12	\$92,978	<p>January 27, 2014, RFI #269 was submitted and requested direction regarding the NE Corner of O'Farrell & Stockton, DWG PD-104 states to maintain and protect in place. They pointed out this in the middle of the exit #3 and #4 excavation, and appears to possibly conflict with the roof structure (drawing ST-355). Recommended this is removed and restored when the stairs are completed. CSDG Response: Fire hydrant and structural areaway do not appear to conflict with roof structure; refer to A/ST-522 and B/ST-522 for elevation of roof structure at this location. If necessary, pile location(s) may be adjusted to clear the 6" water line feeding the hydrant. Contractor may remove and replace the fire hydrant and structural areaway as an alternative to protect in place, provided that the Contractor obtains written approval of the SFFD. All work related to removal and replacement of the fire hydrant and structural areaway shall be at no additional cost to SFMTA.</p> <p>RE coordinated between SFFD and TPC regarding relocating the hydrant. SFMTA has maintained stance that hydrant relocation is a choice of the Contractor, that drawings state that it is to be maintained in-place.</p> <p>SFFD (B. Gunn) obtained SFFD approval for hydrant relocation to east end of O'Farrell on June 6, 2014. (Notification Via Email)</p> <p>TPC submitted Letter 195 on July 11, 2014 with COR #12. COR maintains that PD drawings are only applicable to pavement demolition work, and NOT to the excavation work. TPC asserts that SFMTA's designers did not coordinate the necessary fire hydrant relocation scope for the stair #3/#4 excavation and construction, as was done with the other work impacted fire hydrants shown on drawing UD-305 (notes 3 and 4 were not called out). Provided two prices. Relocate hydrant down street (part 1) and return hydrant back to original location at end of project (part 2).</p> <p>CM & CSDG are reviewing for merit.</p>	
00081	7/18/14	UMS FACO #25 OCS Pole@ Market/Ellis	NEW	Other			\$2,000	FACO #25 was issued to cover potholing to confirm alternate location. See other trend for additional background information.	
00082	7/18/14	UMS NDSC Conflict w/ Pipe @ OFarrel	DENI	Unforeseen Condition			\$7,500	<p>Contractor submitted letter 196 which makes reference to Valverde's (TPC's underground sub) attached letter. Valverde submits a Notice of DSC stating that during potholing investigation, two existing CI pipes 30" and 32" from finished surface were encountered in conflict with the alignment of the pile line. One line is encased in concrete. The Piles for the proposed station cannot be installed with the pipes in their current position. One pipe is encased in concrete. The request is to issue a FACO to confirm lines are inactive, break out concrete, cut and remove conflicting 6" CI pipes.</p> <p>Letter 258 was issued to tutor on 7/22/14. It denied the NDSC on the basis that the pipes in question were abandoned and abandoned utilities are not compensable.</p> <p>Cost listed is an estimated exposure.</p>	
00083	7/21/14	STS-COR #9 Re Haz Debris 78" Sewer	CLO	Unforeseen Condition		9	\$60,879	Debris in the 78" sewer along 4th between Brannan and King. Contractor unsuccessfully jet cleaned debris. Contractor considered this as unforeseen condition. Contractor provided COR #9 for amount of \$60,879.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00084	7/21/14	UMS Modification to Roof Composite	CLO	Other	002		(\$10,836)	<p>Description of PCC: At UMS roof, replace 3" high, 16 gauge composite deck with 2" high, 18 gauge composite deck; overall slab thickness remains 6 inches. Alternatively, at UMS roof, replace 7/8" x 3 1/2" high studs with 7/8" x 5" high studs; overall slab thickness remains 6 inches. Contractor to price both options. SFMTA will issue CMod based on the most cost-effective option.</p> <p>Location/Station: UMS Station Roof Level; from CTL Sta 128+91.11 to CTL Sta 135+77.825 and from ELL Sta 135+77.825 to ELL Sta 138+59.934.</p> <p>Cost proposal received on 6/4/14 from TPC via TPC Letter 163. Costs exceeded the engineer's estimate, and proposal was sent to CSP estimator for review.</p> <p>Costs were not reconciled ast of 6/18/14 (despite TPC having PCC for 6 months), and TPC expressed urgency that direction was needed. SFTMA issued letter 225 directing TPC to proceed with Option 'B', and that costs would be negotiated.</p> <p>Negotiation between RE and TPC ongoing.</p>	
00085	7/22/14	YBM Delete Bid Item BI-4 and BI-31	CLO	Other	11		(\$1,910,000)	Delete comp grout at YBM.	
00086	7/24/14	UMS NDSC 8" Water Main Connection	NEW	Unforeseen Condition			\$45,000	<p>Contractor maintains that they incurred additional potholing to find end cap for 8" main shown on WD-308. Also request delta cost to cover installing the (approx) 78'-0" of additional 8" pipe line.</p> <p>Under review. Costs are place holder based on previous waterline estimates submitted by Valverde.</p>	
00087	7/30/14	CTS-Ptrap and Air Vent for Sewer La	CLO	Owner Directed CIP	4		\$0	PCC#4 was voided. Work not performed.	
00088	7/30/14	CTS-Chinatown TOC-Construction Esti	CLO	Owner Directed CIP	5		\$75,000	Status?	
00089	7/30/14	GEN-COR#5 Change in AT&T Conduit	NEW	Private Utilities		5	\$22,290	MTA to draft FACO.	
00090	7/30/14	UMS PCC13 TS Cabinet Relocation	CLO	Owner Directed CIP	13		\$22,808	<p>Reason: Relocation of cabinet is required to comply with requirement for DPW Surface Mounted Facilities Permit.</p> <p>The scope of work includes installation of additional PVC & GRSC conduits and wires associated with the relocation of the traffic controller cabinet from the northeast corner of Geary & Stockton Streets to the Northwest corner of Geary & Stockton Streets. The first concrete duct bank is 30 feet long & contains two 2" PVC SCH 80 conduits & one 3" PVC SCH 80 conduit encased in 3,000 psi red concrete. The second concrete duct bank is 30 feet long & contains one 3" Rigid Galvanized Steel Conduit encased in 3,000 psi red concrete.</p> <p>PCC approved by CMB on 7/23/2014. Issued to TPC as PCC No. 13 on 7/30/2014.</p>	
00091	8/1/14	CMod #1 BART Elevator Option 1 @ Po	CLO	Other			\$90,000	Moving forward for BART option. Paid under CMod #1.	1
00092	7/31/14	CTS-FACO#27 AWSS vs PG&E Vault #728	NEW	Unforeseen Condition			\$30,000	Drafting FACO.	
00093	7/31/14	FACO26 Fire Hydrant NE 4th&Bryant	NEW	Unforeseen Condition			\$20,000	Additional work related fire hydrant and gate valve installation. FACO 26 has been issued to TPC. Work in progress.	
00094	8/1/14	GEN-CMod # 2 Errata Final	CLO	Errors and Omissions			\$0	Rescinded CMod #2.	2
00095	8/1/14	GEN - Change of date to receive art	CLO	Other	3		\$0	Issued PCC #3.	
00096	8/1/14	GEN - Tunnel Lowering Near BART	CLO	Other	8		\$100,000	Issued PCC #8, waiting for TPC response.	
00097	5/15/14	CTS Work Safely Around Power Pole	CLO	Unforeseen Condition			\$25,956	CMod #3.	3
00098	8/5/14	YBM - 2nd Hold Point Koden check	NEW	Other			\$35,000	6/18/14 - Tutor requested PCC be submitted for 2nd hold point Koden check. SFMTA responded 8/4/14 requesting COR be submitted. Issue not presented to CMB until COR is received.	

Trend	Date	Title	Status	Reason	PCC	COR	Value	Remark	CMod No.
00099	8/5/14	YBM - Brick Wall at A Line	NEW	Other			\$15,000	Tutor issued DSC on 8/1/14. SFMTA responded denying DSC on 8/4/14. Tutor objects to response and will respond accordingly.	
00100	8/5/14	UMS NDSC Power Conduit to Dior Bldg	NEW	Private Utilities			\$5,000	Contractor asserts that drawing UD-302 and RFI 157.1 as-built show the power line outside the pile line. The photo attached to the NDSC shows that the power line appears to pass through the centerline of the piles. NDSC is currently being reviewed. Cost is a ROM.	
Total:							\$4,312,590		

CENTRAL SUBWAY PROJECT
Project Trend/Change Control Log

rent Cost Estimate and Allocated Contingencies									
Item #		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
					Approval Action	Approval Date	Actual/Forecast		
Contract 1250 - Utilities Relocation #1 (Portal & MOS)									
1250-0001	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.] COMPLETE, NO FURTHER ACTION; CMOD #1	CMOD #1 Approved
1250-0002	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.] No reimbursement from SFPUC Sewer. COR #2-\$34,135; COR #5-\$73,039 COMPLETE, NO FURTHER ACTION; CMOD #2	CMOD #2 Approved
1250-0003	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.] COMPLETE, NO FURTHER ACTION; CMOD #3	CMOD #3 Approved
1250-0004	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.] COR #3-RFI #76 COMPLETE, NO FURTHER ACTION; CMOD #4	CMOD #4 Approved
1250-0005	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.] No reimbursement from SFPUC AWSS. PCC #2: RFI #s 34, 49 & 51 COMPLETE, NO FURTHER ACTION; CMOD #5	CMOD #5 Approved
1250-0006	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. Refer to RFIs #85R1, 88.1, 100, 101, 102 COMPLETE, NO FURTHER ACTION; CMOD #6	CMOD #6 Approved
1250-0007	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. No reimbursement from SFPUC Sewer. COMPLETE, NO FURTHER ACTION; CMOD #9	CMOD #9 Approved

- 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

Item #	Change Description	Change Type	CMB No.	Change Status		e Control Log		Contract Modification Number	
				Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		Comments
1250-0008	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. Refer to RFI #62 (\$19,500) Expected Reimbursement from TPC. RE has provided documentation of notification to TPC, July-August '10. See final 1250 Form B actual costs COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved
1250-0009	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. No reimbursement from SFPUC Sewer. RFI #91 COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved
1250-0010	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. COMPLETE, NO FURTHER ACTION; CMOD #10	CMOD #10 Approved
1250-0011	081-0011	Remove existing piles and shoring at 801 Howard	2				-0-	This change order has been incorporated in CMOD #16 (Trend #30) COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved
1250-0012	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 COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved
1250-0013	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 COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved
1250-0014	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) COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved
1250-0015	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 COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20
1250-0016	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 COMPLETE, NO FURTHER ACTION; CMOD #12	CMOD #12 Approved

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CENTRAL SUBWAY PROJECT

Item #	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
				Approval Action	Approval Date	Actual/Forecast		
1250-0017	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. Work was not performed and will need to be addressed in a future contract.	
1250-0018	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. Work was not performed and will need to be addressed in a future contract.	
1250-0019	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. This trend has been superseded by Trend #37. COMPLETE, NO FURTHER ACTION	
1250-0020	081-0020	Sewer modification under I-80 freeway at 2 locations	3				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. COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved
1250-0021	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. Trend No. 21 is combined with Trend No. 22.	
1250-0022	081-0022	Install additional 30 feet of DIP and new AWSS at 4th/Harrison	2	CMB-0026	Agree	01/12/11	AWSS Point of connection on 4th Street was found to be cast iron instead of ductile iron as shown in DPW 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. No reimbursement from SFPUC AWSS. COMPLETE, NO FURTHER ACTION; CMOD #15	CMOD #15 Approved
1250-0023	081-0023	Steel plates and shoring standby for 2 months due to PG&E delay at Clementina	3				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. COMPLETE, NO FURTHER ACTION; CMOD #13	CMOD #13 Approved
1250-0024	081-0024	Utility support and work around for AT&T facilities	6	CMB-0048	Agree	08/24/11	Contract specs specified AT&T to compensate contractor directly for workaround & support. AT&T refused to pay Synergy. Synergy considers AT&T's refusal as a changed condition to CN 1250 contract. (\$95,311) Reimbursement from AT&T. See Final 1250 Form B actual costs. COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved
1250-0025	081-0025	Utility support and work around for PG&E facilities	6				Contract specs specified PG&E to compensate contractor directly for workaround & support. PG&E negotiated \$100,000 directly with Synergy and will pay synergy directly as well.	

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CENTRAL SUBWAY PROJECT

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				Approval Action	Approval Date	Actual/Forecast			
1250-0026	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 workaround. 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. No reimbursement from SFWD. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #20 Approved
1250-0027	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. Additional charges are expected which will be tracked as Trend No. 28. COMPLETE, NO FURTHER ACTION	CMOD #20 Approved
1250-0028	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. COMPLETE, NO FURTHER ACTION	CMOD #14 Approved
1250-0029	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. COMPLETE, NO FURTHER ACTION; CMOD #17	CMOD #17 Approved
1250-0030	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. COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved
1250-0031	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. Credit amount included in Trend #43	
1250-0032	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. Credit amount included in Trend #43	
1250-0033	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. Credit amount included in Trend #43	
1250-0034	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. COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved

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CENTRAL SUBWAY PROJECT

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				Approval Action	Approval Date	Actual/Forecast		
1250-0035	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. COR Not submitted by Contractor CLOSED COMPLETE, NO FURTHER ACTION	
1250-0036	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. 2/15: Rental/Maintenance Costs for Support (Part 2 of 4); Addl Work as Result of Archeological Shutdown (3 of 4). 07/25: 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. 09/12: RE to Prepare Modification 10/29: 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. COMPLETE, NO FURTHER ACTION	CMOD #20 Approved
1250-0037	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. COMPLETE, NO FURTHER ACTION	
1250-0038	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. This will be carried in the Potential Claim Log.	
1250-0039	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. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A
1250-0040	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. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A
1250-0041	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. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A

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CENTRAL SUBWAY PROJECT

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				Approval Action	Approval Date	Actual/Forecast			
1250-0042	081-0042	Delete GE-6 (Hazmat) from Contract	4				Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$100,000. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A	
1250-9001	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	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%. COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
Contract 1250 Totals						+2,694,211	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. 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. 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		
Contract 1251 - Utilities Relocation #2 (UMS)									
1251-0001	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				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 COMPLETE, NO FURTHER ACTION; CMOD #4	CMOD #4 Approved	
1251-0002	082-0002	Installation of reinforced concrete slab underneath Joint Trench along Stockton at O'Farrell (East Side). CTL 133+66.37 (27.08 LEFT) to CTL 134+00.87 (27.08 LEFT)	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 COMPLETE, NO FURTHER ACTION; CMOD #2	CMOD #2 Approved
1251-0003	082-0003	Adjust placement of 3EA manholes along Geary Street and O'Farrell Street. The modified manhole locations require the installation of approximately 265LF of additional HDPE pipe inside the existing 3'x5' brick sewer.	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 COMPLETE, NO FURTHER ACTION; CMOD #1	CMOD #1 Approved
1251-0004	082-0004	Changes to Neiman Marcus secondary enclosure wall due to various differing site conditions.	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 COMPLETE, NO FURTHER ACTION; CMOD #3	CMOD #3 Approved

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CENTRAL SUBWAY PROJECT

Item #	Change Description	Change Type	CMB No.	Change Status		Project Control Log	Comments	Contract Modification Number
				Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)		
1251-0005	082-0005 Existing PG&E conduits were found on top and parallel to existing AWSS on Geary Blvd. at 2 locations (east and west of Stockton)	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 COMPLETE, NO FURTHER ACTION	CMOD #24 Approved
1251-0006	082-0006 Design changes to utilities on Stockton street between Post and Geary	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 COMPLETE, NO FURTHER ACTION; CMOD #5	CMOD #5 Approved
1251-0007	082-0007 Design changes to utilities on Ellis Street	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 COMPLETE, NO FURTHER ACTION; CMOD #5	CMOD #5 Approved
1251-0008	082-0008 Elimination of underpinning at 150 Stockton	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. CLOSED, NO FURTHER ACTION	
1251-0009	082-0009 Additional cost for police officers and/or Parking Control Officers for traffic control.	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. COMPLETE, NO FURTHER ACTION; CMOD #4	CMOD #4 Approved
1251-0010	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 COMPLETE, NO FURTHER ACTION; CMOD #3	CMOD #3 Approved
1251-0011	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 CLOSED, NO FURTHER ACTION: Per direction from CMB on January 18, 2012, this request is denied.	
1251-0012	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 COMPLETE, NO FURTHER ACTION; CMOD #6	CMOD #6 Approved

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CENTRAL SUBWAY PROJECT

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1251-0013	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) COMPLETE, NO FURTHER ACTION; CMOD #3 (No Cost Change)	CMOD #3 Approved
1251-0014	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. 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. COMPLETE, NO FURTHER ACTION; CMOD #9	CMOD #9 Approved
1251-0015	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 COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved
1251-0016	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 COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved
1251-0017	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. AT&T agreed to reimburse SFMTA (\$25,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved
1251-0018	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. AT&T agreed to reimburse SFMTA (\$31,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved
1251-0019	082-0019 Extend joint trench and modify existing AT&T Manhole 403 on Ellis Street.	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 COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved
1251-0020	082-0020 Change PG&E conduit material from PVC to GRS on west side of Stockton between Geary and Post	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. COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved

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CENTRAL SUBWAY PROJECT

Item #	Change Description	Change Type	CMB No.	Change Status		e Control Log		Comments	Contract Modification Number
				Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		
1251-0021	082-0021	Revise PG&E service points and layout of primary lines at various locations, and delete Muni Vault 1850 A at Stockton/Ellis.	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 is captured in Trend #31 or CMod #12. CLOSED; NO FURTHER ACTION. Cost for this trend is captured in Trend #31/CMod #12	
1251-0022	082-0022	Change OCS supports at SF Hilton Hotel on Mason Street from embedded eyebolts to poles w/foundations.	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. CLOSED; NO FURTHER ACTION. Applicable bid items to be adjusted accordingly, See Trend #60.	
1251-0023	082-0023	4th Street & Folsom Trolley Bypass	1	CMB-0065	Agree	1/25/2012, 2/29/12	+405,440	SFMTA Operations has requested a bypass be installed at 4th Street and Folsom Street. \$242,619 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) COMPLETE, NO FURTHER ACTION; CMOD #12	CMOD #12 Approved
1251-0024	082-0024	Install a 5" slurry wall between the gas line and wet utilities if the separation is less than 3 feet	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 COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved
1251-0025	082-0025	Additional PG&E conduit crossings at Geary and O'Farrell to minimize service interruption during future UMS Station construction	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. CLOSED; NO FURTHER ACTION. Item is captured under applicable JT Bid Item, See Trend 60.	
1251-0026	082-0026	Install cantilever footing in lieu of regular OCS foundation at 2 locations on Mason Street between Geary and O'Farrell	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. CLOSED; NO FURTHER ACTION. Item is captured under applicable OCS Bid Item, See Trend 60.	
1251-0027	082-0027	Accelerate installation of AT&T facilities in order for AT&T to start cut-over sooner	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 COMPLETE, NO FURTHER ACTION; CMOD #10	CMOD #10 Approved
1251-0028	082-0028	Furnish and install AT&T Manholes 5828 (Stockton), 5831 (Geary), 5832 (O'Farrell) and 113 (O'Farrell)	6	CMB-0057	Agree	10/26/11	+157,000	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. AT&T agreed to reimburse SFMTA (\$157,000) through the Form B process. COR #43 COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved

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CENTRAL SUBWAY PROJECT

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1251-0029	082-0029	Rebuild existing AT&T vault 133 at Post/Stockton and demolish existing AT&T vaults 403 (Ellis) and 113 (O'Farrell)	6					Vault 133 rebuild is superseded by Trend 40. Demolition of existing vaults 403 and 113 is superseded by Trend 43 CLOSED; NO FURTHER ACTION. Demo of exiting vaults 403 and 113 are superseded by Trend 43. (See CMOD #23)	
1251-0030	082-0030	Enlarge existing PG&E vault 873 at SW Geary/Stockton	6	CMB-0058	Agree	11/02/11	+46,366	PG&E asked SFMTA to enlarge vault 873. PG&E agreed to reimburse SFMTA (\$46,366) through the Form B process. CMB approved a NTE amount of \$40K COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved
1251-0031	082-0031	Additional PG&E conduits crossing O'Farrell on east side of Stockton (Task Order #32)	6	CMB-0058	Agree	11/02/11	+17,193	PG&E asked SFMTA to install additional conduits. PG&E agreed to reimburse SFMTA (\$17,193) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved
1251-0032	082-0032	Excavation and restoration cost for PG&E gas tie-in and kill holes.	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. PG&E agreed to reimburse SFMTA (\$92,292) through the Form B process. 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. COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved
1251-0033	082-0033	Install secondary enclosure wall at One Stockton (Apple Store)	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 COMPLETE, NO FURTHER ACTION; CMOD #13 (formally CMOD #14)	CMOD #13 Approved
1251-0034	082-0034	Install temporary support as required to protect existing live utilities that are encroaching into the City right-of-way in front of 17-25 Stockton Street.	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 COMPLETE, NO FURTHER ACTION; CMOD #17	CMOD #17 Approved
1251-0035	082-0035	Potholing on Stockton between Post and Geary for UMS Station design	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 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.	
1251-0036	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 CLOSED; NO FURTHER ACTION. Based on field meeting with BIH on 1/17/12; this work will be completed under CN 1252 as planned.	

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CENTRAL SUBWAY PROJECT

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1251-0037	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) COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved
1251-0038	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. COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved
1251-0039	082-0039 Furnish and install 2ea benches along 5th Street	1				+4,752	Requested by Muni Operation. COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved
1251-0040	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. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved
1251-0041	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. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved
1251-0042	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. AT&T agreed to reimburse SFMTA (\$31,525) through the Form B process. COR #62 COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved
1251-0043	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) COMPLETE, NO FURTHER ACTION; CMOD #23	CMOD #23 Approved
1251-0044	082-0044 Install new sewer lateral from Macys West on O'Farrell including plumbing modification inside Macy's building.	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. COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved

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CENTRAL SUBWAY PROJECT

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1251-0045	082-0045	Install new 2 each sewer laterals on Stockton between Post and Geary	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) COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved
1251-0046	082-0046	Additional cost for enlarging PG&E vault 584 on O'Farrell east of Stockton	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. PG&E agreed to reimburse SFMTA (\$80,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved
1251-0047	082-0047	Enlarge Muni Vault 900A on Stockton between Post and Geary	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) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved
1251-0048	082-0048	Additional cost and time for stuck auger during micropile drilling	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 RE Denied COR (City Letter 26); however Contractor will most likely send rebuttal. CLOSED; NO FURTHER ACTION.	
1251-0049	082-0049	Additional cost and time for added rebar and coordination with 17-19 Stockton Owner's contractor	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) COMPLETE, NO FURTHER ACTION	CMOD #27 Approved
1251-0050	082-0050	Additional cost to install a Type 770 pole foundation at a different location, install 2 each DPT mast arms and demo existing wall in conflict with OCS footing	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) COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved
1251-0051	082-0051	Intercept existing PG&E duct bank and terminate into vault 5464 at Market/Ellis	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 PG&E agreed to reimburse SFMTA (\$23,633) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved
1251-0052	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. COMPLETE, NO FURTHER ACTION; CMOD #28	CMOD #28 Approved

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CENTRAL SUBWAY PROJECT

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1251-0053	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) COMPLETE, NO FURTHER ACTION; CMOD #27	CMOD #27 Approved
1251-0054	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 COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved
1251-0055	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. COMPLETE, NO FURTHER ACTION;	
1251-0056	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. COMPLETE, NO FURTHER ACTION; CMOD #15	CMOD #15 Approved
1251-0057	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. COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved
1251-0058	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) COMPLETE, NO FURTHER ACTION; CMOD #25	CMOD #25 Approved
1251-0059	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) COMPLETE, NO FURTHER ACTION; CMOD #27	CMOD #27 Approved
1251-0060	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	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. COMPLETE, NO FURTHER ACTION; CMOD #24	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 COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved
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. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved

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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) COMPLETE, NO FURTHER ACTION; CMod #27	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. COMPLETE, NO FURTHER ACTION; CMOD #28	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. COMPLETE, NO FURTHER ACTION; CMOD #24	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) COMPLETE, NO FURTHER ACTION; CMOD #20	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. COMPLETE, NO FURTHER ACTION; CMOD #24	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. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved

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CENTRAL SUBWAY PROJECT

Item #	Change Description	Change Type	CMB No.	Change Status		e Control Log		Comments	Contract Modification Number
				Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		
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 sub-sidewalk 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) COMPLETE, NO FURTHER ACTION; CMOD #28	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. CLOSED; NO FURTHER ACTION.	
1251-0072	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. AT&T agreed to reimburse SFMTA (\$23,993) through the Form B process. RE Tracking work on FAR 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) COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved
1251-0073	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. COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved
1251-0074	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. RE Tracking work on FAR (CMB 0074 approval - see Trend CN1251 #'s 50, 67, & 75 also). COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved
1251-0075	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. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved
1251-0076	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. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved

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CENTRAL SUBWAY PROJECT

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1251-0077	082-0077	Additional work related to Qwest, TCG and UCCO facilities	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. Private Utilities companies agreed to reimburse SFMTA (\$37,181) through the Form B process. RE Tracking work on FAR CMB agreement contingent upon CMod package to include evidence from all utilities that cost are reimbursable to SFMTA through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #25	CMOD #25 Approved	
1251-0078	082-0078	Unforeseen conditions encountered during excavation and installation of OCS poles along Mason and 5th Streets.	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 Street. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251 #'s 47, 58 & 76) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved	
1251-0079	082-0079	Additional work related to installation of PG&E Vaults 467, 571, 573, 586 and 594 including joint trench leading to these vaults	2				+44,530	Unforeseen conditions were encountered during installation of select PG&E vaults including joint trenches leading to these vaults. PG&E agreed to reimburse SFMTA (\$44,530) through the Form B process. RE Tracking work on FAR COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	
1251-0080	082-0080	Additional work related to installation of AT&T Vaults 5828, 5829, 5830, 5831, 5832 and 5833 including joint trench leading to these vaults	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. AT&T agreed to reimburse SFMTA (\$56,805) 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 43 & 72) COMPLETE, NO FURTHER ACTION; CMOD #23	CMOD #23 Approved	
1251-0081	082-0081	PG&E concrete cover versus CDF on electrical duct bank	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. PG&E agreed to reimburse SFMTA (\$43,881) through the Form B process. 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. COMPLETE, NO FURTHER ACTION	CMOD #24 Approved	
Contract 1251 Totals							+3,962,032	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. Changes that will be Utility Reimbursement credits through the Form B process in the amount of \$1,224,828 will increase the UNDERRUN. 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		
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

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1252-0001a	1	AWSS Conflict w/ Low Pressure Water	6	CMB-0091	Agree to Merit Agree to Cost	10/10/12 01/16/13	+13,990		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 COMPLETE; NO FURTHER ACTION: CMOD #29	CMOD #29 Executed
1252-0001b	1	AWSS Conflict w/ Low Pressure Water					+2,914		CMOD #32 Executed	CMOD #32 Executed
1252-0002a	2	AWSS Add. Tie-Rods 4th-Harrison	6	CMB-0086	Agree to Merit Agree to Cost	10/10/12 12/19/12	+45,792		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 COMPLETE; NO FURTHER ACTION: CMOD #29	CMOD #29 Executed
1252-002b		AWSS Add. Tie-Rods 4th-Harrison					+9,337		CMOD #32 Executed	CMOD #32 Executed
1252-0003a	3	AT&T Vault Conflict-4th & Harrison	6	CMB-0092	Agree to Merit Agree to Cost	10/10/12 01/16/13	+13,263		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. COMPLETE; NO FURTHER ACTION: CMOD #29	CMOD #29 Executed
1252-0003b	3	AT&T Vault Conflict-4th & Harrison					+2,749		CMOD #32 Executed	CMOD #32 Executed
1252-0004	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 Executed
1252-0005	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 Executed
1252-0006	8	TIA - Associated w/ COR 001, COR 002, and COR 003	6		Agree to Merit	10/10/12	+153,000		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 COMPLETE: NO FURTHER ACTION: CMOD #32	CMOD #32 Executed

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		Comments
1252-0007	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0008	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 Executed
1252-0009	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 COMPLETE; NO FURTHER ACTION: CMOD #27	CMOD #27 Executed
1252-0010	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 Executed
1252-0011	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	15	LB - Pre-Excavation for Slurry Walls	2	CMB-0087	Agree to Merit Agree to Cost	11/28/12 12/19/12		+125,000	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 COMPLETE; NO FURTHER ACTION: COMOD #33	CMOD #33 Executed

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CENTRAL SUBWAY PROJECT

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1252-0013	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 COMPLETE; NO FURTHER ACTION: CMOD #27	CMOD #27 Executed
1252-0014	19	UMS - Grant street 2 way conversion (e- & striping)	7					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	
1252-0015	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. -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	
1252-0016	21	UMS - Reduced Duration	5	CMB-0073	Agree Cost (Conditionally)	08/01/12	-0	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 Executed
1252-0017	22	MOS - Asbestos Pipe at north headwall	2	CMB-0090	Agree to Merit Agree to Cost	12/12/12 01/09/13	+5,707	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 Executed
1252-0018	23	MOS - Brick Wall #2 discovered @ north headwall	2				+15,784	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	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 Executed
1252-0020	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 Executed

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1252-0021	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 Executed
1252-0022	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		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	
1252-0024	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	5	CDF Encasement on 42" RCP	2				+95,000	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	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		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		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	

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Item #		Change Description	Change Type	CMB No.	Change Status		e Control Log		Contract Modification Number
					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast	
1252-0029	18	MOS - South Headwall re-design	1	CMB-0158	Agree to Cost	05/21/14	+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. 05/21/14 - RON for (COR 18) presented to the CMB to approve the process of issuing the CMod for a NTE of \$140K. COMPLETE; NO FURTHER ACTION; CMOD #30	CMOD #30 Executed
1252-0030	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0031		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	28	Ellis asbestos abatement	2		Agree to Merit	12/06/12	-0-	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	CMB-0159	Agree to Cost	05/21/14	+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. 05/21/14 - RON for (COR 30, 54 & 75) presented to the CMB to approve the process of issuing the CMod for a NTE of \$400K.	
1252-0034a	70	LB - Jet Grout Quantity Overrun	4	CMB-0115	Agree to Merit Agree to Cost	03/20/13 04/03/13	+599,900	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.	
1252-0034b	70	LB - Jet Grout Quantity Overrun	0	CMB-0163	Agree to Cost	7/2/14	+168,700	07/02/14 - Claim #4 presented for approval of negotiated cost NTE for for grout overrun quantities CMB agree to \$168,700K.	
1252-0035	unsubmitted	Utility Removal UD-304 and UD-503	6				-0-	CLOSED; NO FURTHER ACTION	

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CENTRAL SUBWAY PROJECT

Item #		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number
					Approval Action	Approval Date	Actual/Forecast		
1252-0036	35	Additional Road Base on Fourth Street	2					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	unsubmitted	DPW permitting potential impacts	7					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	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 Executed
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		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 Executed
1252-0041		PCC No. 2 - Revisions to UMS Headwall Concrete and Reinforcement Limits	1					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. CLOSED; NO FURTHER ACTION	
1252-0042	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 Executed

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast	
1252-0043a	32	LB - Panel W29 Wood Pile	2	CMB-0136	Agree to Merit Agree to Cost	11/28/2012 11/06/13	+41,961	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. 02/19/14 - Direct cost for COR will be paid as agreed by both parties. Time and Delay claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0043b	32	LB - Panel W29 Wood Pile					+69,173	In SFMTA/BIH "Issue Resolution Ladder" process for Time Impacts. Resolution not met. Direct Costs of \$41,961 (with Markups & Bonds and Insurance) related to COR 32 have been negotiated separately and processed as Contract Modification #31.	
1252-0044	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	
1252-0045a	34	LB - Panel W28 Wood Pile	2	CMB-0137	Agree to Cost	11/06/13	+43,294	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. 02/19/14 - Direct cost for COR's will be paid as agreed by both parties. Time and Delay as claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0045b	34	LB - Panel W28 Wood Pile					+69,173		
1252-0046	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	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0048	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 Executed

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- 7 - Other

CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Actual/Forecast		
1252-0049	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	
1252-0050	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 Executed
1252-0051	executed	Contract Amendment No. 2	1				(3,040,713)	COMPLETE; NO FURTHER ACTION: CMOD #02	CMOD #2 Executed
1252-0052a	42	LB - Panel W25 Wood Pile	2	CMB-0138	Agree to Merit Agree to Cost	11/28/12 11/16/13	+42,893	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. 02/19/14 - Direct Cost for COR's will be paid as agreed by both parties. Time and Delay claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0052b							+69,173	In SFMTA/BIH "Issue Resolution Ladder" process for Time Impacts. Resolution not met. Amount shown is for potential costs associated with time impacts. Amount is calculated = \$484,210 / 7 (7ea. CORs 32,34, 42, 43, 62, 65, 67)	
1252-0053a	43	LB - Panel W30 Wood Pile	2	CMB-0139	Agree to Merit Agree to Cost	11/28/12 11/06/13	+14,197	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. 02/19/14 - Direct cost for COR's will be paid as agreed to by both parties. Time and Delay claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0053b	43	LB - Panel W30 Wood Pile	0				+69,173		
1252-0054	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 Executed

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		Comments
1252-0055	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. COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0056	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 Executed
1252-0057	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 Executed
1252-0058	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 Executed
1252-0059	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. CLOSED; NO FURTHER ACTION	
1252-0060	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 Executed
1252-0061	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. COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0062	53	Chinatown - Night drilling for instrumentation	7					-0-	Closed.	

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Actual/Forecast		
1252-0063	54	LB Class 2 Hazardous Material Haul Off (Phase 2)	2	CMB-0159	Agree to Cost	05/21/14		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. -0- Claim #2 has been negotiated cost to include COR's 030, 054 & 075. 05/21/14 - RON for (COR 30, 54 & 75) presented to the CMB to approve the process of issuing the CMod for a NTE of \$400K.	
1252-0064		PCC No. 4 - Ret shaft sewer pipe material change	1					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, ½-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		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		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	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 Executed
1252-0068	56	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	

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CENTRAL SUBWAY PROJECT

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1252-0069	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. 06/05: 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 Executed
1252-0070	CORs 32, 34, 42, 43, 62, 65, 67	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	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0072a	62	LB – Panel P-9 Buried Obstruction	2	CMB-0140	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+41,587	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. 02/19/14 - Direct Cost for COR's will be paid as agreed to by both parties. Delay or Time claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0072b	62	LB – Panel P-9 Buried Obstruction					+69,173	In SFMTA/BIH "Issue Resolution Ladder" process for Time Impacts. Resolution not met. Amount shown is for potential costs associated with time impacts. Amount is calculated = \$484,210 / 7 (7ea. CORs 32,34, 42, 43, 62, 65, 67)	
1252-0073	63	UMS - 48" Steel Pipe @ southwest headwall	2		Agree to Merit	1/23/13	-0-	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. 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 COR has been changed to PCC09. CLOSED; NO FURTHER ACTION	

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- 2 - Unforeseen Conditions
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- 4 - Quantity Variation
- 5 - Value Engineering
- 6 - Private Utilities
- 7 - Other

CENTRAL SUBWAY PROJECT

Item #		Change Description	Change Type	CMB No.	Change Status		e Control Log		Contract Modification Number
					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast	
1252-0074a	65	LB – Panel P-12 Buried Obstruction	2	CMB-0141	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+40,522	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. 02/19/14 - Direct cost for COR's will be paid as agreed to by both parties. Delay or Time claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0074b	65	LB – Panel P-12 Buried Obstruction					+69,173	In SFMTA/BIH "Issue Resolution Ladder" process for Time Impacts. Resolution not met. Amount shown is for potential costs associated with time impacts. Amount is calculated = \$484,210 / 7 (7ea. CORs 32,34, 42, 43, 62, 65, 67)	
1252-0075	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 Executed
1252-0076a	67	LB - Panel P-10 Buried Obstruction	2	CMB-0145	Agree to Merit Agree to Cost	1/23/2013 11/06/13	+9,984	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 process. 02/19/14 - Direct cost for COR's will be paid as agreed to by both parties. Delay or Time claimed by the Contractor will be denied. COMPLETE; NO FURTHER ACTION: CMOD #31	CMOD #31 Executed
1252-0076b	67	LB - Panel P-10 Buried Obstruction					+69,173	In SFMTA/BIH "Issue Resolution Ladder" process for Time Impacts. Resolution not met. Amount shown is for potential costs associated with time impacts. Amount is calculated = \$484,210 / 7 (7ea. CORs 32,34, 42, 43, 62, 65, 67)	
1252-0077		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 Executed
1252-0078		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 Executed

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CENTRAL SUBWAY PROJECT

Item #	Change Description		Change Type	CMB No.	Change Status		e Control Log		Contract Modification Number	
					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		Comments
1252-0079	PCC 10 FA CO 3	PCC No. 10 - Relocation of TBM Retrieval Shaft Excludes Button Up Costs	1					+5,150,000	<p>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)</p> <p>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.</p> <p>02/20/13 - COST IS NOT REFLECTED HERE - SCOPE IS FUNDED BY OTHER CPT 690 \$\$\$\$</p> <p>03/06/13 - Cost proposal received from BIH. SFMTA will develop a detail estimate of what is believed to be the scope of work.</p> <p>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 FUTHER ACTION CMOD #20 (separate funding source used - CPT 690).</p>	CMOD #20 Executed
1252-0080		Segment Measuring Frequency	7					-0-	<p>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.</p> <p>12/11/13 - The CMB took exception to the deletion of the (\$1.3M) from the log without the consent of the Board.</p> <p>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.</p> <p>CLOSED; NO FUTHER ACTION</p>	
1252-0081		F21 and Old Navy Instrumentation Proposal	7					TBD	<p>Wang Technology is proposing instrumentation changes to the Liquid Level Sensors and Tilt Beams in the basements of Old Navy and Forever 21.</p>	
1252-0082	68	UMS – AT&T Vault Walkway @ N Headwall	2		Agree to Merit	01/16/13		+2,000	<p>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.</p> <p>01/16/13 - CMB recommendation Contractor/Sub-contractor proceed on Force Account with a "Not to Exceed Amount" \$2K.</p> <p>04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.</p> <p>COMPLETE; NO FURTHER ACTION: CMOD #16 - Final Cost \$2,000.00</p>	CMOD #16 Executed
1252-0083	69	UMS - Shoring Impacts due to 48" ATT Pipe at SW Headwall	2	CMB-0153	Agree to Cost	4/23/14		+29,463	<p>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.</p> <p>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.</p> <p>02/05/14 - CM TEAM NOTES: In IRL process</p> <p>04/23/14 - EE brought to CMB for Cost Not to Exceed \$30K - Agreed. Change will be negotiated as a lump sum.</p>	

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Actual/Forecast		
1252-0084		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 Executed
1252-0085	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. COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0086	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	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 Executed
1252-0088		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	75	Hazardous Waste Disposal Denial - Spoils Containment Cost Impacts	7	CMB-0159	Agree to Cost	05/21/14	-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 included COR 30, 54 and 75. 05/21/14 - RON for (COR 30, 54 & 75) presented to the CMB to approve the process of issuing the CMod for a NTE of \$400K.	
1252-0090	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 Executed

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CENTRAL SUBWAY PROJECT

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					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)		
1252-0091	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 COMPLETE; NO FURTHER ACTION: CMOD #26 - Final Cost \$1,116.00	CMOD #26 Executed
1252-0092	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.	
1252-0093	79	FA CO 4 Comp Grout - Old Navy	2	CMB-0116 CMB-0142	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 - Addl 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 - Addl 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	CMOD #23 Executed
1252-0094	80	MOS – Asbestos Wrapped 20" water line @ Headwalls	2		Agree to Merit	04/03/13	-0-	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	81	12" Waterline Tee Connection Location (MOS South)	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 Executed

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CENTRAL SUBWAY PROJECT

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1252-0096	82	MOS 20" Conflict with 16" AWSS @ South Headwall	2	CMB-0160	Agree to Merit Agree to Cost	04/30/14 05/21/14	+40,152	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. 04/30/14 - Merit info presented to CMB - Agreed. RE will negotiate a credit for amount no less than \$25K. 05/21/14 - Updated info presented to the Board. Further negotiation revealed a extra 25ft was not accounted for. CMB approved a change Not to exceed \$12K to cover the difference and contractor's claim of standby cost	
1252-0097	83	Ellis Shaft Concrete Obstruction	2	CMB-0127	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0098	84	Crate & Barrel Water Intrusion	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	
1252-0099a		PCC 12, FA CO 6 PCC No. 12 - Modifications to Tunnel Alignment at Market Street - Adv. Materials Purchase	1	CMB-131	Agree to Merit Agree to Cost (Conditionally)	08/14/13 08/14/13	+45,637	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 COMPLETE; NO FURTHER ACTION: CMOD #28 - FA CO 6 (\$45,637). Actual costs to be determined. MTA may be due minor credit +/- 3k.	CMOD #28 Executed
1252-0099b		PCC 12 PCC No. 12 - Modifications to Tunnel Alignment at Market Street - Initial Design Costs					+39,930	Contractors proposal for PCC 12 is \$1,668,434. Amount shown represents Cmod 34 executed for Initial Design Costs (\$39,930).	CMOD #34 Executed
1252-0099c		PCC 12 PCC No. 12 - Modifications to Tunnel Alignment at Market Street - Construction Costs					+1,582,868	Contractors proposal for PCC 12 is \$1,668,434. Amount shown (1,582,868) represents Construction Costs proposed by Contractor. Amount under negotiations.	

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					Approval Action	Approval Date	Actual/Forecast		
1252-0100	85	SFWD Impacts at MOS North	2	CMB-162	Agree to Cost	07/02/14	+71,633	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. 07/02/14 - Claim #3 presented for approval of negotiated cost NTE for for grout overrun quantities CMB agree to \$71,633K	
1252-0101	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	CMod #25 Executed
1252-0102		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	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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- 7 - Other

CENTRAL SUBWAY PROJECT

Item #	Change Description		Change Type	CMB No.	Change Status		e Control Log		Comments	Contract Modification Number
					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		
1252-0104	PCC 13, FA CO 5	PCC 13 - SFWD Excavation, Support and Backfilling	1	CMB-0122 CMB-0128	Agree to Cost Agree to Addl Cost	06/19/13 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 cutover 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 issued for remaining cost.	CMOD #18 & 24 Executed	
1252-0105	90	Abandoned Well at MOS Panel N-4	2				-0-	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 in the IRL process CLOSED; NO FURTHER ACTION		
1252-0106	0	PCC No. 9 and 11 - Remaining Budget	0				(71,885)			
1252-0107	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	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	93	Credit - 65 feet of water pipe not installed at MOS	7				-0-	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. CLOSED; NO FURHTER ACTION		
1252-0110	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	Green St Shaft – Design Cost Impacts for Jet Grout	7					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	Micropiles @ UMS Tangent Pile SRB-H	2	CMB-0155	Agree to Merit Agree to Cost	7/31/2013 05/07/14	+48,810	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 Microplie Obstruction to CN1252 and possible CN1300 work was sent to CN1251 Contractor. COR was rescinded. CLOSED; NO FURTHER ACTION	
1252-0113	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 Executed
1252-0114	Ellis Shaft – TAM ES2-01 and ES2-17	2		Agree to Merit	08/28/13		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 COR Rescinded CLOSED; NO FURTHER ACTION	
1252-0115	Ellis Shaft – TAM ES2-16	2		Agree to Merit	08/28/13		BIHJV's subcontractor, CJA-NCC, discovered gravel material within Ellis Shaft TAM installations, TAM ES2-16 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 COR Rescinded CLOSED; NO FURTHER ACTION	

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					Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)		
1252-0116	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 COMPLETE; NO FURTHER ACTION: CMOD #26	CMOD #26 Executed
1252-0117	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	
1252-0118	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. CLOSED; NO FURTHER ACTION	
1252-0119	102	UMS Jet Grout Column 18 DSC Headwall	2	CMB-0156	Agree to Merit Agree to Cost	05/07/14	+12,060	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	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	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	

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1252-0122	89	UMS - Suspended Remobilization of Jet Grout Rig	7					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	104	Retrieval Shaft - Additional Sewer Slip Lining 16" HDPE Pipe	4					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. CLOSED; NO FURTHER ACTION	
1252-0124		PCC 17 Green Street Sewer Changes	2		Agree to Merit	9/25/2013		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. CLOSED; NO FURTHER ACTION	
1252-0125		PCC 14 Modifications to AWSS Facilities at 4th and Bryant Streets	1					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. 04/16/14 - CMB authorize the RE to negotiate with the Contractor for a amount up to \$35K. +35,925	
1252-0126	108	Ellis shaft and Old Navy Grouting	2					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. CLOSED; NOT FURTHER ACTION	
1252-0127a		FA CO 8 Remove and replace material at Retrieval Shaft CSM wall	1					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. COMPLETE; NO FURTHER ACTION: CMOD #28 +22,300	CMOD #28 Executed

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1252-0127b		FA CO 8	Remove and replace material at Retrieval Shaft CSM wall					(6,339)	Remaining balance of Executed CMod associated with FA CO 8. SFMTA current reconciled FA costs are \$15,961. Final CMod required to reconcile balance. See Trend 127a.	
1252-0128a		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. COMPLETE; NO FURTHER ACTION: CMOD #28	CMOD #28 Executed
1252-0128b		FA CO 7	Acceleration of Work Activities at Retrieval Shaft					(4,356)		
1252-0129		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. CLOSED; NO FURTHER ACTION	
1252-0130	0	PCC 16	Ret Shaft Sewer Changes	2				-0-	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. CLOSED; NO FURTHER ACTION	
1252-0131a	0	FA CO 9	Obstruction hit at CSM panel W6	2	CMB-0146	Agree to Merit Agree to Cost	12/11/13	+9,000	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 COMPLETE; NO FURTHER ACTION: CMOD #28	CMOD #28 Executed
1252-0131b		FA CO 9	Obstruction hit at CSM panel W6	0				(2,073)	1/0/1900	
1252-0132	COR 111	0	Material Hardness at Retrieval Shaft	2				+259,486	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.	

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1252-0133	0	PCC 15	Deleted AWSS Work at Union St and Columbus Ave	1				(187,181)	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. 02/19/14 - Cost revised based on Eng Est. and scoping meeting w/Contractor. COMPLETE; NO FURTHER ACTION: COMOD #35	CMOD #35 Executed
1252-0134	0	PCC 18	Retrieval Shaft Site Supervision	1				-0-	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. CLOSED; NO FURTHER ACTION	
1252-0135	0		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. CLOSED; NO FURTHER ACTION	
1252-0136	0		Installation of Piping, Conduit and Casing at Fourth Street Portal	1				TBD	PCC 19 issued to provide standpipe piping, telephone and train signal conduits, and casing at Fourth Street Portal. 02/26/14 CMB agreed on Jan. 29, 2014 with forwarding the PCC to the Contractor for pricing.	
1252-0137	0		North Beach Sewer Work	1	CMB-0152	Agree to Cost	03/12/14	-0-	Contractor directed to proceed with work on a Force Account basis for 'Sewer Work on Columbus and Powell St (North Beach)' in accordance with Force Account Change Order No. 010 03/12/14 CMB authorized a NTE amount of \$10,000 to start negotiations with the Contractor on the forthcoming PCC 20 for the price of the plates. Contractor's written cost for standby required to complete negotiations.	
1252-0138			Curb Ramp Work at NE Corner of 4th and Harrison Streets	1				+5,023	Contractor directed to proceed with work on a Force Account basis to install modified curb ramps and additional sidewalk flags in accordance with Force Account Change Order No. 011. 03/26/14 - CMB authorized a FACO NTE amount of \$4500., which will be reimbursed by PG&E through the form B process. COMPLETE; NO FURTHER ACTION: CMOD #36	CMOD #36 Executed
1252-0139	115		BART - Additional Load Cells		CMB-0157	Agree to Merit Agree to Cost	05/07/14	+1,066	BIHJV: "In accordance with the SFMTA's direction, BIH is providing two new fully functional load cells (the same model as currently installed in the BART tunnels) as well as two new DTI Squirters (the same model as currently installed in the BART Tunnels). It is BIHJV understanding that the SFMTA may decide to replace load cells #M1-75A and #M2-75A currently installed in the BART existing tunnels with the instruments hereby provided by BIH-JV and that the replacement operation will occur without BIHJV technical support."	
1252-0140a			Installation of Sewer, Street and Sidewalk Restorations in North Beach					+694,651	PCC 20 includes: • Furnish and install water piping for the San Francisco Water Department (SFWD) • Furnish and install sewer catch pits, manholes, and piping for the San Francisco Public Utilities Commission (SFPUC) • Furnish and install additional sidewalk pavement (widening and bulb-outs), crosswalk ramps, curb, gutter, reinforced bus-pads, street base and pavement for the San Francisco Municipal Transportation Agency, Sustainable Streets Division (SFMTA) 05/14/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. - CMod 36 will be issued for \$328,860K for install of water pipe.	

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1252-0140b	Installation of Water Main in North Beach					+328,860	Amount shown represents negotiated amount. Cmod pending. DSC mitigation to be processed separately. Amount to be reimbursed by SFWD.	
1252-0141	SB Tunnel Material Conditions					-0-	BIHJV claims to have encountered soil conditions different from those described in the GBR and Contract Documents on April 15, 2014, while excavating the Southbound (SB) tunnel. 05/14/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. CLOSED; NO FURTHER ACTION	
1252-0142	Contract Milestone Changes					-0-	Contract Modification to modify the sequencing of tunnel construction and cross passage construction. 05/14/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log.	
1252-0143	Columbus Ave. Waterline - DSC					+5,000	BIHJV claims their subcontractor Synergy encountered an unmarked waterline on Columbus Avenue while excavating to install the new 24" waterline for PCC 20 (Trend #140b). 06/04/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log.	
1252-0144	Installation of Geophones in NB and SB Tunnels					+5,000	FA CO 13 Includes: • Installation of 1 geophone at STN 130+92 in the SB tunnel • Installation of 1 geophone at STN 130+92 in the NB tunnel • Allow the geo phones to read for an approximate 24hr period during active tunneling operations in each tunnel. • Provide data gathered by geophones to SFMTA for review 06/04/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log.	
1252-0145	Excavation of Cross Passage No. 03					+50,000	BIHJV claims their subcontractor, Drill Tech, encountered material conditions which differ from the conditions described in the Geotechnical Baseline Report (GBR) and the Contract Documents during the excavation of Cross Passage 3. 06/25/14 - Item reviewed at CMB mtg. during review of weekly Trend/Change log. \$50K represents a CM Team "guesstimate".	
1252-0146	Cross Passage No. 01					+50,000	BIHJV claims they encountered material conditions which may differ from the conditions described in the Geotechnical Baseline Report (GBR) and the Contract Documents during the dewatering operations of Cross Passage 1. \$50K represents a CM Team "guesstimate".	
1252-0147	North Beach OCS Pole Foundations					+50,000	BIHJV to install new and remove existing OCS installations at N. Beach. \$50K represents a CM Team "guesstimate".	
1252-0148	North Beach Street Lighting					+50,000	BIHJV to install new street lighting at N. Beach. \$50K represents a CM Team "guesstimate".	
Contract 1252 Totals						9,154,773	Total Changes and Potential Change (trends) to the contract are currently \$9,154,773 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	

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CONSTRUCTION TRENDS (Based on #1252 Trending Log and CMod) - SUBTOTALS:							9,154,773	The \$9,154,773 represents an UNDERRUN of allocated contingency. Current Balance = (23,658,463 - 9,154,773 = \$14,503,691 This does not include potential reimbursements from utilities.	
DESIGN TRENDS									
FD-001	084-0001	Narrowing of Platform at UMS	1	CMB-0006	Agree	08/04/10	(800,000)	[In "Current Forecast" - Sep2010 Cost Report.]	
FD-002	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	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.]	
FD-002	086-0001	Redux of Station Emergency Ventilation Fans (MOS)	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.]	
FD-003	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	084-0003	UMS Structural Configuration	1	CMB-0007	Agree	08/18/10	(8,000,000)	[In "Current Forecast" - Sep2010 Cost Report.]	
FD-005	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	084-0005	Station Headwalls - UMS	1	CMB-0008	Agree	08/18/10	-0-		
FD-006	086-0002	Station Headwalls - MOS	1	CMB-0008	Agree	08/18/10	-0-		
FD-007		Cross-passages	1	CMB-0018	Agree	09/15/10	-0-		
FD-008		Trolley Re-route @ Columbus & Powell	1	CMB-0017	Agree	09/15/10	+2,000,000		
FD-009	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	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	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	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	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	082-0008	Include OCS system for rerouting trolley buses to Fifth Street	1	CMB-0024	Agree	12/15/10	+3,100,000		
FD-015	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	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	085-0004	CTS Ground Improvement	1	CMB-0012	over taken by FD-021	01/19/11	+10,300,000	Additional Information Pending.	

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CENTRAL SUBWAY PROJECT

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FD-018	084-0006	UMS Apple Store Entrance	1	CMB-0013	Disagree	11/10/10	-0-	Additional Information Pending.	
FD-019	086-0003	MOS TOD Configuration	1	CMB-0014	Agree	11/10/10	TBD		
FD-020	084-0007	UMS Emergency Stair #4 Relocation	1	CMB-0015	Agree	11/10/10	TBD		
FD-021	085-0005	CTS Lowering and Stations Reconfiguration	1	CMB-0027	Agree	01/19/11	(18,000,000.00)	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	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	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	087-0002	Diamond crossover on surface segment to a tandem (universal) crossover.	1	CMB-0033	Agree	08/24/11	(350,000)		
FD-025	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	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.	
FD-027	082-0010	1 Stockton street (Apple Store) Secondary Closure Wall		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	086-0004	MOS Revisions to Emergency Ventilation Requirements		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. Project Controls estimated \$321,645.	
FD-029	085-0006	CTS Revisions to Emergency Ventilation Requirements		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. Project Controls estimated \$411,895.	
FD-030	084-0009	UMS Revisions to Emergency Ventilation Requirements		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. Project Controls estimated 733,420.	
FD-031		Accessibility Improvements at the SE corner of Union Square (UMS)							
FD-032		Union Square Entrance Reconfiguration (UMS)							
FD-033		Additional Compensation Grouting due to Tunnel Settlement Alert and Trigger Levels (All Stations)					+21,040,000	ECP dated 11/17/11. ECP being routed for approval.	
FD-034		Operational Performance and Safety Enhancement at 4th and King		CMB-0062	Agree	12/14/11	+450,000	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. 3/14/12: "Buy America" issue no longer applicable. Revised ECP element - remove H&K switch machines and replace with hydraulic/120V switch machines such as Nortrak or equal.	

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CENTRAL SUBWAY PROJECT

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FD-035	Tunnel Air Replenishment System		CMB-0071	Agree	07/11/12	+1,215,000	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	Surface Segment Sewers - 4th St.		CMB-0072	Agree	07/18/12	+2,200,000	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	Platform Display System Signs		CMB-0077	Agree (Conditionally)	08/29/12	+500,000	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. 08/29/12 - CMB agreement condition upon follow up action to evaluate procurement by CN1260		
FD-038	Elongated Sidewalk Bulb-out at Chinatown Station		CMB-0121	Agree	06/05/13	+36,000	CTS Sidewalk Bulb out (Southwest corner Stockton/Washington To bring the Central Subway Project - Chinatown Station in closer conformance with 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. 06/05/13 - CSDG designer estimate cost is not a CS expense. Addl funding source will need to be established by San Francisco Planning to support the investigation study 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		
FINAL DESIGN TRENDS (Based on All ECPs) - SUBTOTALS						+4,902,000	Incorporated budget increases have been absorbed by allocated and unallocated funds and the program budget to date remains \$1,578,300,000.		
OTHER TRENDS									
X51-001	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	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	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	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	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	

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					Approval Action	Approval Date	Actual/Forecast		
X53-002		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	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 YOE dollars and require use of unallocated contingency.	
X53-004	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	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		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		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		Revisions to CTS Construction Schedule		CMB-0060	Agree	12/28/11			
X54-006	085-0002	CS 155-2 (DP2) CBP4 - Construction Budget Adjustment - allowed	7						
X55-001	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		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		Change MOS Advertise Date to May 23rd, 2012						Change MOS Advertise Date from June 25, 2012 to May 23, 2012 (-22 working days)	
X55-004		Change MOS Advertise Date to Aug 20, 2012						Change MOS to August 20, 2012	
X56-001		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		STS Construction Schedule Revision for Equipment Procurement							
X56-003		Change STS Advertise Date to October 1, 2012						Change STS Advertise Date to October 1, 2012	
X40-001	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	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	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	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	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	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	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	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

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X80-009	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	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	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	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		For combining the stations and track and systems into Contract 1300 (SSTS)	7					Combined all the Station ad Track and Systems into one Contract. Removed the buffer float activities from the satin to track and systems and overlapped work that can now be done concurrent.	
X80-015		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		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.	
OTHER TRENDS (Based on Various Trends)							+59,662,439	Current Forecast reflects a net +3,537,933 unfavorable impact for all Other Trends.	
GRAND TOTALS							+73,719,212	Current Forecast reflects an estimated net +73,619,212 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.	

PROFESSIONAL SERVICES TRENDS: 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.

Contract CS-155-1										
1551-0001	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	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 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0003	071-0003	Additional Construction Support for CP-1	7							
1551-0004	071-0004	Redesign Required by Barney's and PUC for CP-2	7							
1551-0005	071-0005	Archeological Monitoring 16.20.C1 (total)	7		Authorized	07/29/11		+197,173	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0006	071-0006	Eyebolts	7		Authorized	07/29/11		+50,000	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	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 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved

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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. COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0009	071-0009	CTS Lowering	1		Authorized	12/08/11	+165,000	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #3	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 COMPLETE, NO FURTHER ACTION; Amendment #4	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 COMPLETE, NO FURTHER ACTION; Amendment #4	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 COMPLETE, NO FURTHER ACTION; Amendment #4	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 COMPLETE, NO FURTHER ACTION; Amendment #4	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 COMPLETE, NO FURTHER ACTION; Amendment #4	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.	
Contract CS-155-1 Total							+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.	
Contract CS-155-2									
1552-0001	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	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. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0003	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. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0004	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 - On Hold.	
1552-0005	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. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0006	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. See 1552-0006 Rev. 1 for most current estimate	
1552-0007	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.	

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CENTRAL SUBWAY PROJECT

Item #	CMB No.	Change Description	Change Type	Change Status		e Control Log		Comments	Contract Modification Number
				Approval Action	Approval Date	Projected Cost Impact +Exposure/(Benefit)	Actual/Forecast		
1552-0008	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	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	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	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	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	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	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. 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.	Option
Contract CS-155-2 Total						+1,896,708		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.	
Contract CS-155-3									
1553-0001	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. COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0002	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. COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0003	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. COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0004	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. COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0005	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. COMPLETE, NO FURTHER ACTION ; Amendment 2	Amendment 2 Approved
1553-0006	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	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. NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE. PMCM has responded to clarify scope in stations and Tunnel Design. Awaiting resubmittal of request by DP3	
1553-0008	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. NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE. 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.	

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CENTRAL SUBWAY PROJECT

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1553-0009	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. COMPLETE, NO FURTHER ACTION; OPTION	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. COMPLETE, NO FURTHER ACTION; OPTION	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. COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0012	073-0012	CTS - Alternate 5	7	Authorized	01/18/12	+88,855	Contract Modification No. 1 authorized by ED/CEO on 1/18/12 COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1553-0013	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 COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1553-0014	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0015	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. Amendment #4 PENDING	Option
1553-0016	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	073-0017	Extension of PC Support Technician	1	Authorized	05/04/12	+34,483	Signed by Director of Transportation 5/14/12 COMPLETE, NO FURTHER ACTION; Amendment #3	Amendment 3 Approved
1553-0018	073-0018	Extension of CSP Quality Manager	1	Authorized	05/04/12	+61,043	Signed by Director of Transportation 5/14/12 COMPLETE, NO FURTHER ACTION; Amendment #3	Amendment 3 Approved
1553-0019	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0020	073-0020	Authorization to commence optional task 12.12 civil and structural support for traction power duct banks	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0021	073-0021	Authorization to commence optional task 12.11 design of the tunnel based Air Replenishment System including fill panels, feeder pipes, gauges, valves, fire proofing, anchors, supports, low level alarms, wiring, signage, connections to SCADA and monitoring devices, equipment placement, and impact protection	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0022	073-0022	Increased authorization for optional task 12.12.e CAD production support	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0023	073-0023	Authorization to commence option task 12.11 structural design support for Fire Protection and Plumbing designs	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 COMPLETE, NO FURTHER ACTION; OPTION	Option

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CENTRAL SUBWAY PROJECT

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1553-0024	073-0024	Authorization to commence optional task 12.12 structural design support for Traction Power and Power/Lighting designs	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0025	073-0025	Authorization to commence optional task 12.13 structural design support for Telephone and CCTV designs	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
1553-0026	073-0026	Authorization to commence optional task 9.20 Technical Specifications for structural design support for above designs	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 COMPLETE, NO FURTHER ACTION; OPTION	Option
Contract CS-155-3 Total						7,814,010.46	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.	

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