

Memorandum

CS Memorandum No. 1262

To:

Distribution

From:

Susan MacKenzie, Document Control Managery

Date:

October 24, 2012

Reference: Project No. M544.1, Contract No. CS-149

Task No. 1-8.02, Change Control

Subject:

Configuration Management Board Meeting No. 94

Attached please find minutes for Configuration Management Board Meeting No. 94 held on September 12, 2012.

Attachments: CMB Meeting No. 94 Rev. 0 Minutes with attachments

Cc:

David Kuehn, STV (w/attachments) david.kuehn@stvinc.com

Shahnam Farhangi, SFMTA (w/attachments) Roger Nguyen, SFMTA (w/attachments) Jane Wang, SFMTA (w/attachments) Carlos Campillo, CSP (w/attachments)

Quon Chin, CSP (w/attachments)

Chuck Morganson, HNTB/B&C (w/attachments)

Aileen Read, CSDG (w/attachments)

CS File No. M544.1.5.0890

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Arthur Wong, SFMTA

Ross Edwards, CSP

Mark Latch, CSP

Mark Benson, CSP

Eric Stassevitch, CSP

Beverly Ward, CSP

Charles Dombrowski, CSP

Ken Barnhart, CSP

Michael Acosta, DPW





CMB Meeting Minutes #94

DATE: September 17, 2012

MEETING DATE: September 12, 2012

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:00 PM

ATTENDEES: J Funghi (JF), A. Wong (AW), A. Hoe (AH), J. Park (JP), R. Edwards (RE),

M. Latch (ML), M. Benson (MB), E. Stassevitch (ES), B. Ward (BW), C. Dombrowski (CD),

K. Barnhart (KB), M. Acosta (MA), L. Zurinaga (LZ), M. Lee (ML), B. Lebovitz (BL),

COPIES TO: Attendees: S. Farhangi (SF), R. Nguyen (RN), Q. Chin (QC), J. Wang (JW),

C. Campillo (CC), C. Morganson (CM), A. Read (AR), D. Kuehn (DK),

File No. M544.1.5.0890

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

Final Design

SUBJECT: Configuration Management Board Meeting # 94 – Rev. No. 0

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

ITEM #	DISCUSSION				
1- 06/06/12	The Configuration Manager presented the Programs Configuration Management Procedures, Rev 1 for review to identify the current Configuration Board Members or their designees; as listed in the Procedures and their current standing or relation to the Central Subway Project. A notification letter or email will be sent to SFMTA's Operations, Maintenance, Safety, and Security Managers of their responsibility as a Configuration Management Board Member. In addition the CMB Procedures will be revise to reflect the current SFMTA personnel who holds the position. 09/12 Status: Due to time limitations the follow up action item was not discussed but will be addressed at the next CMB meeting.	ES 09/19/12			
4- 06/13/12	The CMB requested the PCC team provide an Interface Schedule for Construction Milestones for review. This item will be brought back to the next CMB meeting. 06/20: A Milestone Interface Points schedule analysis was shown for information of the Tunnels and STS and their interface with UMS and CTS. MOS is still in review because it isn't working with STS current schedule, it will be put on hold until the STS schedule can be further developed. The CMB recommend the analysis be revised stripping out buffer float and then run analysis. In addition the CMB requested that there be a monthly review update of the milestone interface points. Also the request was made to see the dates of the track schedule even if it doesn't work to see what can be done to resolve it. This item will be brought back to a future CMB meeting. 07/11: The PCC team presented for review the Important Interface Points analysis for the contract packages. The analysis showed the drivers in the schedule being the headwall activities, which is an unestablished milestone in the contract but are work activities that has to be completed before follow-on contract work can begin in earnest. Dates shown are valid and are reflecting the new bid schedule (see attached). Actual text still needs to be written in the	ES 09/19/12			





ITEM#	DISCUSSION	ACTION BY
		DUE DATE
	Div1 specs for MOS and STS. The PCC will come back to the CMB next week validating the analysis actual construction days from NTP for headwalls to be completed is 219 days. In addition the CMB requested validation from the design lead that the language in the Div 1 specs precludes where the tunnel contractor can work during the 219 days the UMS contractor is performing the headwall work. 07/18: Review of the interface analysis between the key points of the UMS, Tunnel, STS contracts was presented. Early completion of UMS headwalls on 6/20/13 is a constraint that needs to be incorporated into the UMS Station contract, this new date would go into the next addendum. Completion of cross passages of 3 & 4 in Tunnel contract allowing break in to the Tunnel by the UMS station contract is another key interface between the Tunnel and UMS contract. Interfaces between UMS and STS contract gaining access through UMS work area to allow STS contractor to start passing through the UMS area, will also be included in the addendum. R. Edwards will confirm UMS new dates are put into the addenda; confirm effects on CTS, i.e. what impact this has on additional float and review early start dates; write STS Division 1 in accord to the analysis currently presented. 09/12 Status: Due to time limitations the follow up action item to confirm the 219 days the UMS contractor may perform the headwall work was not discussed but will be addressed at the next CMB meeting	
1 – 07/18/12	1252 – The Construction Manager and Resident Engineer presented a proposal from BIH for a no cost change to perform the Grant Avenue Conversion between Post Street and Geary Street from One-way to Two-way Street and modify the traffic signal at Grant Avenue and Geary Street intersection. A cost proposal was also received from Department of Traffic which includes; at their request adding an additional block to the scope of work and making the conversion between Geary and Sutter. Cost proposal received from DPT was relatively close to proposal received from BIH. DPT believes they can have this work done by 7/30, which includes performing pavement marking and redo the signalization. CMB agreed DPT will do the work with a "not to exceed" value of \$39K. In addition the CMB requested a side by side consolidated view of the cost and the recommendation be submitted to the CMB. Also that a scope of work quote be outline to properly implement a detour using Grant St, between Geary and Sutter. The Construction Manager will put together a complete proposal package for CMB approval. 09/12 Status: This item was not discussed at this week's meeting.	MB 09/19/12
1- 07/25/12	1250 – M. Benson presented CMod #20 (parts 1, 2 and 3 of 3) Unilateral Change for consideration of additional costs associated with Time for Archeological Discoveries. The first two parts have been presented to the CMB already. Part 3 is a new item for additional Overhead/Indirect Cost during the Archeological Delay. The Contractor concurs with the completion date however; the start date of the delay remains to be in disagreement. The Resident Engineering preformed a schedule analysis. Additionally time related overhead cost compensation to the Contractor for 47 calendar days based on the original contract option baseline and review of all the IDR's shows what the as built schedule is. The CMB recommend the CMod be revised to add some cost for Equipment Standby which the Contractor is entitled to. Also to write and overview of modification history in the supplemental analysis. The RE will need to do an evaluation of what he believes the equipment cost value is. This item will be brought back to the CMB for review of contents to be presented to the SFMTA Board of Directors for approval. 08/08: A revised CMod #20 was presented to include the Contractor's Mobilization and Equipment Standby Costs (part 3 of 4). The RE presented an equipment standby cost summary analysis demonstrating that during a 3 month period the Contractor had two pieces of equipment on standby indicating an equipment usage slowdown of 65 work days due to the Archeological discovery. The CMB took exception to two line items in the summary requesting that the cost for the standby time for the "Foreman and Service Truck" equipment be eliminated from the cost summary. In addition the cost for the Additional Extended Overhead Costs (part 4 of 4) will be finalized after the RE meets with	

CMB Meeting – No. 94



ITEM#	DISCUSSION	ACTION BY DUE DATE
	the Contractor next week. This item will be brought back to the next CMB for approval. 08/29: This item was included on this week's agenda; however was not reviewed due to backup documentation for the final extended overhead cost not being received. This item will be brought back to next week's meeting. 09/12 Status: The revised CMod for (Parts 1, 2, 3 and 4) Unilateral Change was presented to the CMB showing removal of the "service truck" from the equipment standby cost. In addition the RE presented the Contractor's agreed overhead costs during the archaeological delay period. AGREE – CMB 0041	МВ
3- 07/25/12		
1- 08/08/12	1253 – R. Edwards and A. Ayres presented CCOP X53-004 - UMS Procurement Duration Change. This revision shortens the duration from Award to NTP from 40 days to 24 days. Activities requiring procurement are approve/execute/certify the UMS Contract. A revised CCOP will be brought back to the CMB for approval which further changes the schedule durations in addendum number six - 1) Changing the bid opening date to August 23rd, 2) shortening the restriction of when the Contractor can start interface on Stockton St. from 820 to 806 days; 3) increasing the quantity of when the Contractor can have access through tunnels interface from 1123 to 1167 days; and 4) duration of when the Contractor must provide the invert to the STS Contractor from 1199 to 1248 days. The CMB requested the Advertise Date Study be updated to reflect the changes made to the UMS Procurement Duration. 09/12 Status: Due to time limitations the follow up action item to was not discussed at this week's meeting.	RE 09/19/12
2- 08/08/12	1255 – R. Edwards and Alexis Ayres presented CCOP X55-004 – MOS Advertise Date to August 20, 2012 which changes the bid review time from 20 to 30 days to account for the holiday, and to avoid administration conflicts with issuing two stations (CTS and MOS) close to the same dates. The Advertise Date Study will be update to reflect the changes made to the MOS Advertise Date. 09/12 Status: This item was not discussed at this week's meeting.	RE 09/19/12
3- 08/08/12	1256 – R. Edwards and Alexis Ayres presented CCOP X56-003 – STS Advertise Date to October 1, 2012, allowing more time to complete design changes to the sewer work and to received more feedback on the Advanced Train Control System (ATCS) scope. The Advertise Date Study will be update to reflect the changes made to the STS Advertise Date. 09/12 Status: This item was not discussed at this week's meeting.	RE 09/19/12
4- 08/08/12	1252 – R. Edwards presented a PCC for Tunnels Revisions to North Headwall Elevation (Top) raising the North headwall elevation at MOS approximately 3'- 6". (See attached PCC - 01). The discussion focused on the reason for the change and the estimated cost. This item will be brought to the CMB for signature approval next week. 08/15: Agenda item was viewed however; cost estimate was not available to review. The CMB requested a complete package be brought back to next week's meeting for review and signature approval. 08/22: A complete PCC package which included the cost estimate was reviewed, however Proposed Contract Change concurrence was not given by the Contract Administrator's representative due to lack of authority to sign contract changes.	ES 09/19/12



ITEM#	DISCUSSION	ACTION BY DUE DATE
	The Construction Manager will forward the complete package to Joon Park for a more thorough review followed by a recommendation to Shahnam Farhangi, SFMTA Contractor Administrator. This item will be brought to the next CMB meeting. In addition a recommendation by the Board was given to update the Proposed Contract Change (PCC) Issuance and Processing procedures "Concur In Principle" section (Form 1102-1) delegating signature approval to a voting member of the Configuration Management Board. 08/29 Status: The PCC approval concurrence was giving by the SFMTA Contractor Administrator on 08/23. A copy of the signed documentation needs to be presented to the CMB for final board approval. 09/12 Status: This item was not discussed at this week's meeting.	
5- 08/08/12	1252 – R. Edwards presented a PCC for Tunnels - Reduction of UMS Headwall Concrete and Reinforcement Limits for approval of change. (See attached PCC-02). This change would reduce the cost of the headwall construction as well as facilitate the future station demolition of the headwalls. The CMB was in agreement this change needs to be done but wanted to review detailed estimate. This item will be brought to the CMB for signature approval next week. 08/15: Agenda item was viewed however; cost estimate was not available to review. The CMB requested a complete package be brought back to next week's meeting for review and signature approval. 08/22: A complete PCC package which included the cost estimate was reviewed, however Proposed Contract Change concurrence was not given by the Contract Administrator's representative due to lack of authority to sign contract changes. The Construction Manager will forward the complete package to Joon Park for a more thorough review followed by a recommendation to Shahnam Farhangi, SFMTA Contractor Administrator. This item will be brought to the next CMB meeting. In addition a recommendation by the Board was given to update the Proposed Contract Change (PCC) Issuance and Processing procedures "Concur In Principle" section (Form 1102-1) delegating signature approval to a voting member of the Configuration Management Board. 08/29: The PCC approval concurrence was giving by the SFMTA Contractor Administrator on 08/23. A copy of the signed documentation needs to be presented to the CMB for final board approval. 09/12 Status: This item was not discussed at the meeting and is on hold pending the outcome of the meeting with the contractor regarding their response to PCC 1252-002 UMS Headwalls.	ES 09/19/12
1-	1251 - M. Benson presented for consideration Trend #37, 44 and 45 - Sewer Installation change for the Gucci Store, Macy's West and Union Square Garage. Existing sewer laterals depicted on the contract drawings for the Gucci store and Union Square Garage were found to be connected to a downstream end of the existing main which required installation of new laterals. In additional the 8" sewer lateral for Macy's West is too big to be connected directly to the 14" main requiring a new lateral be installed at a higher elevation (see photos attached). AGREE – CMB 0077. The CMB recommended that this issue be pursued as a potential E&O from the designer.	
2-	R. Edwards presented for discussion a review of the draft matrix proposal for the potential bid depicting an A+B+C+ D and/or Combined Bid Contract Strategy for discussion. A meeting will be set up next week to present a draft mock-up the proposal CSP/SFMTA Program Management.	
3-	Due to time limitations the 100% Estimates - Escalation for contracts 1255 (MOS) and 1256 (STS) was not discussed but will included on next week's agenda for review.	



ACTION ITEMS

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
1	06/06/12	06/06/12	Configuration Management Procedures – update CMB voting members	E. Stassevitch	09/19/12	Open
4	06/13/12	07/11/12	1253 – Verification Interface Schedule Headwall Completed (219 CD from NTP)	E. Stassevitch	09/9/12	Open
3	07/25/12	07/25/12	1252 – MOS Traffic Signal – 1.5% Payroll tax	K. Barnhart	09/19/12	Open
1	07/25/12	08/08/12	1250 – Revised CMod #20 – Standby Time – Overhead Costs	M. Benson	09/12/12	Closed
1	08/08/12	08/08/12	Advertise Date Study - Revisions	A Ayres	09/19/12	Open

Meeting adjourned at 5:10pm

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

Signed: Date: Date: Date review completed]

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Meeting Agenda

Project No. M544.1, Contract No. CS-149
Program/Construction Management
Configuration Management Board (CMB) Meeting No. 94
September 12, 2012
3:00pm - 5:00pm
Central Subway Project Office
821 Howard St. 2nd Floor
Main Conference Room

Attendees:

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

- 1. 1250 CMB-0041 CMod #20 Unilateral CMod for Archeological Delays Revised for approval
- 2. 1251 Macys, Gucci, and Union Square Garage Sewer Lateral (Trend No. 37, 44 and 45) For approval
- 3. 1252 Nothing to Report
- 4. **1253 (UMS)** Nothing to Report
- 5. 1254 (CTS) Nothing to Report
- 6. 1255 (MOS) Estimate Review 100% Escalation
- 7. 1256 (STS) Estimate Review 100% Escalation
- 8. Trend/Change Log -

MTC

9. Other Business – Action Items Follow up:

ACTION DATE	<u>DESCRIPTION</u>	BIC
06/06/12	Configuration Management Procedures – Notification SFMTA voting members	E. Stassevitch
07/11/12	1253 – Verification Interface Schedule Headwall Completed (219 CD from NTP)	E. Stassevitch
07/25/12	1252 – MOS Traffic Signal – 1.5% Payroll tax	K. Barnhart
08/08/12	1250 - Revised CMod #20 - Standby Time - Overhead Costs	M. Benson
08/08/12	Advertise Date Study - Revisions	A Ayres







Meeting Attendance Sheet

Project No. M544.1, Contract No. 149
Program/Construction Management
Configuration Management Board Meeting No. 94
September 12, 2012
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 nam		ter initials if your nar	ne is listed below. il address if your name is not listed b	pelow.
Benson, Mark	CSP	(415) 701-4295	Mark.Benson@sfmta.com	MCB
Dombrowski, Charles	Hill/PCC	(415) 701-5272	Charles.Dombrowski@sfmta.com	CFD
Edwards, Ross	CSP	(415) 581-5165	Ross.Edwards@sfmta.com	The
Farhangi, Shahnam	SFMTA	(415) 554-0721	Shahnam.Farhangi@sfmta.com	
Funghi, John	SFMTA	(415) 701-4299	John.Funghi@sfmta.com	(I
Haley, John	SFMTA		John.Haley@sfmta.com	
Hoe, Albert	SFMTA	(415) 581-5164	Albert.Hoe@sfmta.com	100
Kelly, Jim	SFMTA		Jim.Kelly@sfmta.com	
Kuehn, David	STV/PMOC	(510) 464-8053	David.kuehn@stvinc.com	
Latch, Mark	CSP	(415) 701-5294	Mark.Latch@sfmta.com	MOL
Lebovitz, Brad	STV/PMOC	(510) 464-8052	Bradley.lebovitz@stvinc.com	BL
Lee, Matt	SFCTA	(415) 522-4813	matt@sfcta.org	M





NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Nguyen, Roger	SFMTA	(415) 701-4312	Roger.Nguyen@sfmta.com	
Park, Joon	SFMTA	(415) 701-4742	Joon.Park@sfmta.com	9
Stassevitch, Eric	CSP	(415) 701-4426	Eric.Stassevitch@sfmta.com	4
Ward, Beverly	CSP	(415) 701-5291	Beverly.Ward@sfmta.com	(B)
Wong, Arthur	SFMTA	(415) 701-4305	Arthur.Wong@sfmta.com	
Zurinaga, Luis	SFCTA	(415) 716-6956	Luis.zurinaga@sfcta.org	Son
Mike Arosta	CSP	701-5282		B
Mike Arosta Ken Barnhart	15P	(48)701-5274	Kenneth. Barnhart @ Sforta	
_		_		
	-			



CMB Change No.: ___CMB - 0041

Initial Implementing Change Control Procedure No.:_1250 - CMod #20

Part 1 of 4, Part 2 of 4, Part 3 of 4, Part 4 of 4

GENERAL						
Proposed Change Sponsor:	^	M. Acost	а	R	eceived by CMB:	09/12/2012
Affected Disciplines:	Traff	Traffic Specifications				(Date)
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	(Part 3) f	Mobilizatio	n and Equ	ipment	Standby Costs	
		Additional Delay Peri		Indirec	t Costs During Archaeo	logical
Contract(s) Directly Affe	ected by th	nis Propo	osed Cha	inge:		
1250 1251 1252	1253	1254	1255	1256	6	
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Deputy Program	Ū	1	7			9/12/12
PM Project	Services:	_/M	MA			12 Sep 12
PM Project Developmen	t/Delivery:	1/4	TE li	7		9/12/2012
SFMTA O & M	Manager:		/ <u> </u>			
SFMTA Safety an	d Security					
SF	СТА РМО	X	M	/		125ept 2012
			commen	ts		
This revised CMod#20 address 05/30/12. (See attached copy o			from the o	rigina) r	modification presented	at CMB mtg. #81 -
12. (See attached copy o	Olviou#20)	4				



CONTRACT MODIFICATION NO. 20 (UNILATERAL)

Costs Associated with Archeological Discoveries and Contract Time Extension

SFMTA Contract No. 1250 MOSCONE STATION AND PORTAL UTILITIES RELOCATION Contractor: Synergy Project Management Inc.

150 Executive Park Blvd., Suite 4750

San Francisco, Ca 94134

SUPPLEMENTAL ANALYSIS (FOR CMB PRESENTATION)

BACKGROUND INFORMATION:

This Unilateral Contract Modification is being executed in order to compensate the Contractor for all additional costs resulting from the discovery of archeological findings at multiple sites within the project limits. The compensation costs contained herein are comprised of both direct costs and additional indirect costs as shown below:

PART 1 of 4: Rental/Maintenance Costs for Support of Archeological Trenches

(as previously presented to CMB on February 29, 2012)

PART 2 of 4: Additional Work as a Result of Archeological Shutdown Including Support Work

(as previously presented to CMB on February 29, 2012)

PART 3 of 4: Mobilization and Equipment Standby Costs

PART 4 of 4: Additional Overhead/Indirect Costs During Archeological Delay Period

The following subsections analyze each of these four components with an initial narrative of the scope of the work required, followed by a justification of why such work was required and a concluding breakdown of the resulting additional costs

SCOPE OF WORK:

RENTAL/MAINTENANCE COSTS FOR PROTECTION OF ARCHEOLOGICAL TRENCHES (PART 1)

Compensate Contractor for rental of steel plates, hydraulic shoring, and Triton barriers as required to protect trenches containing archeological findings during investigation and mitigation period. In addition to rental costs, compensation also includes trench protection maintenance costs including, but not limited to, re-shoring and re-welding of plates as required to ensure continued trench protection.

SUPPORT WORK DURING ARCHEOLOGISTS' MI FIGATION EFFORTS (PART 2)

Compensate Contractor for directly supporting archeologists' mitigation activities. Support work includes, but is not limited to the following activities:

- Training crew how to recognize and properly respond to discovery of archeological findings
- Shutting down of work areas upon discoveries
- Hand removal of excavated soils and transportation to yard for intermediate processing
- Transportation of soils and equipment to and from Sonoma State University for final processing

Refer to the attached Force Account Report (FAR) table for a complete list of support work activities included as part of this Contract Modification.





MOBILIZATION AND EQUIPMENT STANDBY COSTS (PART 3)

Compensate Contractor for equipment standby costs for two crews at 65 working days each (from 8/16/2010 to 11/15/2010). Types of equipment included are as follows:

- Backhoes with pavement breakers
- Compact Hydraulic Excavators

- Hydraulic Excavators
- Vibratory Pile Driving Equipment

This Contract Modification also compensates the Contractor for costs relating to additional demobilization/remobilization operations. Scope of work for these mobilization operations includes the installation/removal of steel plates, Triton barriers, and other traffic/pedestrian control devices, as well as the moving of equipment to and from the Contractor's vard.

ADDITIONAL OVERHEAD/INDIRECT COSTS DURING ARCHEOLOGICAL DELAY PERIOD (PART 4)

This Contract Modification unilaterally extends the Contract substantial completion date from April 6, 2011 to May 23, 2011. This extended duration, as determined by the SFMTA Resident Engineer, encompasses all delays related to the subject archeological findings and additional delays related to unforeseen additional work on PG&E facilities. In addition to extending the Contract duration, this Contract Modification also compensates the Contractor for additional time related overhead (TRO) costs resulting from the 47EA calendar day extension contained herein.

REASON FOR CHANGE:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES (PART 1)

During the mitigation process approval period and subsequent mitigation work, the Contractor was required to protect the trenches and excavated areas containing archeological findings. This trench protection necessitated the use of the additional steel plates, hydraulic shoring, and triton barriers compensated under this Contract Modification.

In addition to direct trench protection equipment rental costs, there are additional cost related to the maintenance of the Contractor's trench protection infrastructure. This maintenance work was required to ensure continued safe hydraulic jacking pressure and sufficient welding of steel plates on the road surface.

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS (PART 2)

Upon initial discovery of archeological findings, the Contractor's entire crew was required to complete an archeological indoctrination program. In these meetings the Contractor's crew was taught how to properly identify and respond to archeological findings. Completion of these training programs ensured that the execution of CN 1250 work did not cause irreversible damage to or loss of historic archeological materials.

During mitigation efforts, the SFMTA requested that the Contractor's crew assist in the removal of archeological findings soils from the Project limits as required to conduct analysis. This support work, as directed and supervised by the Sonoma State University archeologists, ensured archeological findings were promptly moved offsite as required to complete mitigation as needed to resume Contract work in the affected areas.

MOBILIZATION AND EQUIPMENT STANDBY COSTS (PART 3)

Due to the archeological discoveries within the project limits on 4th Street between Howard and Folsom Streets, the Contractor was forced to put two crews' worth of equipment on standby while a mitigation plan was established. The inability to proceed with work in a timely manner was due to the lack of a previously established archeological discovery mitigation plan. Upon initial discovery, the SFMTA consulted with the Federal Transit Administration to develop a mitigation plan. Once developed, this plan was then forwarded to the State Historic Preservation Office (SHPO) and local Native American tribal representatives for approval. Once the plan was approved, a local Native American monitor was hired to oversee the mitigation activities. A significant delay resulted due to the amount of agencies and reviews required prior to implementation of the mitigation program. The complexity of the mitigation plan approval process made it difficult for the SFMTA to provide an accurate start date estimate for mitigation activities. This





CMod No. 20 (Unilateral) Narrative Page 3 of 4

uncertainty resulted in dissuading the Resident Engineer from requesting that the Contractor to demobilize his equipment. As a result, the Contractor kept the subject equipment on site during the mitigation plan approval process in order to allow for a quick return to Contract work after mitigation work was complete.

The demobilization/remobilization scope of work is included in this Contract Modification because of the combined effect of the equipment standby period (discussed above) and the holiday moratorium shutdown period. Had it not been for the discovery of the archeological findings, the Contractor would have been able to complete work prior to the moratorium thereby not requiring a post-moratorium remobilization back to the area where the findings occurred.

ADDITIONAL OVERHEAD/INDIRECT COSTS DURING ARCHEOLOGICAL DELAY PERIOD (PART 4)

The aforementioned archeological discoveries and subsequent mitigation efforts necessitated an extension of the Contract substantial completion date.

In addition to time extension due to the archeological findings, the following issues related to PG&E facilities necessitated additional time extensions:

- An electrical transformer malfunction prevented PG&E from completing cutover of electrical service to Olivet University (4th Street at Clementina).
- A vault which was to be demolished under CN 1250 was found to contain a live PG&E primary cable. It was
 not possible to push the vault demolition work to a future contract as it was in the alignment of a Joint Trench.

TOTAL MODIFICATION VALUE:

	\$255,840.49	Plates and Barriers (Rental/Maintenance) (Part 1 of 4)
+	\$199,741.54	Archeologist Support Work (Part 2 of 4)
	\$455,582.03	Force Account Total
	\$50,000.00	Existing GE-5 Allowance for Arch. Discoveries
	\$405,582.03	Total Direct Costs Included in Contract Modification
	\$67,728.3 7	Mobilization and Equipment Standby Costs (Part 3 of 4)
+	\$124,186.65	Additional Overhead/Indirect Costs (Part 4 of 4)
	\$597,497.05	TOTAL MODIFICATION VALUE
	φυσι,491.00	TOTAL MODIFICATION VALUE

COST ANALYSIS:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES (PART 1)

All rental/maintenance costs contained herein are based on 24EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeological related trench protection equipment and maintenance costs as incurred during the completion of CN 1250 Contract work. (Note that the lowest of three submitted monthly rental rates was used in order to determine steel plate compensation amount contained herein.)

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS (PART 2)

All support work costs contained herein are based on 58EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeologist support work as performed during the completion of CN 1250 (May 2010 to January 2011).





CMod No. 20 (Unilateral) Narrative Page 4 of 4

MOBILIZATION AND EQUIPMENT STANDBY COSTS (PART 3)

The SFMTA Resident Engineer reviewed field inspector's notes to determine durations during which the Contractor's equipment was prevented from being in active operation due to the subject archeological discoveries. It was determined that two crews' worth of equipment were each impacted for 3 months each (8/16/2010 to 11/15/2010). All archeological discoveries were fully moved offsite November 17, 2010, at which point all delayed equipment was able to return to work.

Once the durations were determined, the appropriate compensation value was determined using Caltrans rates with specified standby modifier factors. Pursuant to Caltrans Right of Way guidelines, as referenced to in CN 1250 General Provisions, standby compensation is "limited to eight hours per day or forty per week maximum" (Caltrans Labor Surcharge and Equipment Rental Rates Part D "Right of Way Delay"). Following the Caltrans guidelines, it was determined that the Contractor was entitled to \$47,696.80 in equipment standby costs (before contractual markups). Refer to the attached table provides a breakdown of this total equipment cost.

In addition to above equipment delay costs, the Contractor is also compensated in this Contract Modification for additional costs related to the mobilization operations discussed on the previous page. It was agreed that demobilizing and remobilizing operations took approximately 8 hours and 4 hours, respectively. The total cost for the additional mobilizations was determined to be \$9,960.12, consisting of \$5,004.00 in labor and \$4,956.12 in equipment costs (before contractual markups). For detailed breakdown of crew and equipment costs associated with mobilization operations, refer to attached table.

Based on the above analysis, the total cost associated with COR No. 52 is \$67,728.37. This total consists of \$5,754.60 in labor, \$60,550.85 in equipment costs, and \$1,422.92 of bonds/insurance markups. It should be noted that this compensation value was not reviewed and/or approved by the Contractor. Instead, this value represents the SFMTA Resident Engineer's estimate of a fair and reasonable compensation amount.

ADDITIONAL OVERHEAD/INDIRECT COSTS DURING ARCHEOLOGICAL DELAY PERIOD (PART 4)

In order to determine a fair and reasonable compensation value for the additional overhead contained herein the SFMTA Resident Engineer used the previously agreed costs as contained in CN 1251 Contract Modification Number 13. In order to unilaterally determine a compensation value, the SFMTA Resident Engineer analyzed each of the previously approved overhead costs contained in the aforementioned CN 1251 Modification and modified the "percentage involvement factors" to account for CN 1250 involvement during the extended period. After applying these factors, the Resident Engineer's estimated overhead daily cost for the extended period was determined to be \$2,586.76. This daily overhead, when extended over the 47EA calendar day Contract extension contained herein, equates to \$124,186.65 in total extended overhead (with 2.146% Bonds and Insurance markup).

It should be noted that the rates used to determine this compensation value were reviewed and approved by the Contractor. However, the 47EA calendar extension was determined by the SFMTA Resident Engineer (see Schedule Analysis below) and has not been accepted by the Contractor.

SCHEDULE ANALYSIS:

After a review of the Contract baseline schedule, schedule updates and inspection of SFMTA Construction Inspectors' Daily Reports of actual work completed, the SFMTA Resident Engineer concluded that the additional work contained herein resulted in a 47EA calendar day Contract extension. The previous substantial completion date of 04/06/2011 will be extended to 05/23/2011 after execution of this Contract Modification (see attached as-built schedule as prepared by SFMTA Resident Engineer).



FORCE ACCOUNT REPORT COST SUMMARY TABLES (PARTS 1 AND 2)

(FMTA Central Subway Ok 1250) (Moscore Station and Portal Utilities Relocation Approved Archeological Fonce Account, Work

PART 1: PLATES AND BARRIERS [RENTAL AND MAINTENANCE]

-	And Almond	Day National			-
			TOTAL OF ALL FARS	21	200,045.05
1	1020 :	06/11/10	Az ATST. Vault, additional aidd: re-share, W-share and an Husbare	X.	LANGE
1	1015	06/17/10	Addressed worth to skicure all oring and planer at the Mannerella.	+	¥ (#10
14	381.10	01/33/10	Rental and maximum of anhumbaguar can @ PAR work from 1/17/50 1/11/10 114 daws. North and makenings of anhumological size & NAP from 1/10/38 12/10/38 12/10/38	1	213000
4	1088	07/25/10	Additional Age to personal brates or diff. Name of		811.9
1	1088	lone	Hernal of plates, packs, shows, but was \$71720 - \$7071270 at any warring on increasing but assessed by Street/Howard to 500 Street/Fostow (county) in front of Managine Africances.	1	36,963
4:	3007;	Today	Reciptor proton, parts, stock, per vice 7/3/10 - 7/3/10 for all an exercising at the contract to the same stock of the same of		21,791,7
1	1115	01/10/10	Rental of places, change and barrier; at the Moscophe Drawings for the manifold sugar from the state of sugar from the state of sugar from the state of the state	,	10,004
1	11/4	18/01/10	Hernet of places, choice, and benfore \$1,235 - \$19 L/30 for all emissions of facilities for Pillion and Life work between Affiliation to Reliable accept to that, of filliations of facilities of the filliance of	,	21.781.5
	1127	09/01/10	Revise of places at the Water Spipe, name in All Expenses from the soil Figure for the month of August,		5,000.0
301	1196	64/30/10	Rental of press, shalling and barriers of the Managers Distribus for the reports of Jeann-Sec. 2010.		10,126.6
-11	1101	58/19/10 · ·	Demail of Jesses his the woner bags have so all personne ensered any Foreign	1	1,331.0
88	2118	09/90/10	Service of process physics, and haviness MILPLE - 5/50/10 for all or discovering the formation for the Miller Control of the American MILPLE - 5/50/10 for all of the formation	į.	35,794,7
11	2009	97/00/10	Additional work to re-weld cuttons for AT&T MAYA and AFET SGA.	1	794.0
14	1100	36/1710 3 16/17/00	Bental displace, wholey and harries as the Manager's Displace from the manager's Displace 1932	1	93394
10	1361	10/3/20-30/23/20	Rental of profes for this Water (separt men) Livis on 4th bankers "situs" and house of the the licenth of Opposes 2010:	1	1,795
40	1191	10/1/20 - 10/19/20	danted of Private, Letter, Private and Services 10/2/2006 (19/2/2006) and Architecturg and Consenting of the Private Services (19/2/2006) and Market Services (19/2/2006) (19/2/2006).	1	25,761.7
75	2343	myz/16 - hythytti	Additional Tribus Barriers for Archaeological Enlawment for ATEX, FUES and CRY for the recent of Distribus	8	3800
25 .	3088	f/(\$12010)	Fortid of places, shoring and barriers as the Monoton Dissense 5/20720 - 3/90/20	5	3,186.4
28	1141	9/9/2010	ATRY marries and LPRIFA1: Alternate Inspet and Inspetting plant place over actioning and habit, on fair. Street between miniority and Persons.	>	335-3
26	100	A/9/3000		1	4515.6
:10	1100	8/16/201E	Mit/Falustr-Haward. Additional point to specifie to this hors and in well arthrosping a house.	¥	87.4
-81		9/36/2018	Attiving transfer and Child Cook werk on he weld plates on emberological ficies:	1	76.0
18.	110	4/34/3010	MILITERIAN AND AND EAST WAY 10 IN WEST SHARE OF A TEXT THE R		1,782.7
1.0	1100	8/31/2009	IT DIRECT PRODUCT PROMET East 1 work to discrept this arise to made a time.	1	12010

SEMTA Central Sobway CN 1250 Moscone Station and Portal Utilities Relocation Approved Armeological Force Account Work

PART 2: AUDITIONAL WORK AS A RESULT OF ARCHEOLOGICAL SHUTDOWN INCLUDING SUPPORT WORK

H-14 (Date furtisment	Dimension of the same		100
\neg			TOTAL OF ALL FARS	5	139,341.54
1	\$65	06/02/30	Build pedestrian bridge over PGSE vault 1483 kpie locatee in the pidewwik ama.	5.:	5,233:09
(2)	33910	116/13/10	Shutdown of PGSS you'd installation at 9th and Howard as a result of and accloqual finding. With a revoluce shows and plating toda and demotification for the day.	E.	3,792.24
3	51916:B	QS/19/10	Shutdown of MRY vanit installation at 4th and Haward as a result of a Canadignal feet. West results shoring plating and demobilization for the stay.	1	4,339.13
3	1076	07/15/10	4th/Houseld work stapped for 2 hour due to a street/og call from at \$7.7% in front of \$1.7 Min set, on our and sletted hole.	9.	662.21
1	DomoverCCL	4/23/2020	Arches/logical Biscovery pengenativey messing with Synergy and MICHE may	1	890.47
4	1085	07/22/38	Work stopped for 2 hours due to archaeological find at Moscone Dimension, should and planed hole.	£.	1,00631
1	שנישנ	10/07/10	Mobilization of Forkith to Spoonta State University for Authoritings of Research of Self that was removed from lobotic	\$	690.64
3	10711	10/07/10	Pedestrian and traffic control velue for Archaeológical militariosis.	\$	3,040 9
.9	1071.1	10/07/18	Archeepiogical mitigation support work (fest may) belos 1 & 4 or 4th between Howard and Damentins	5	5,480.81
10	00910	36/08/26	Commission and production of the party of th	ý.	13412
ti.	W1160.1	10/17/30	Continue inclusioning and patient report with at his 3 on 40% it between Alleand and Communic	1	5,256.49
31	terrio i	phenicali	Cumman and deployed religious papers such at him 3 in 300 between recent and Committee	1	6,004.40
15	101110-3	70/17/10	Continue archaeological mergation support work at hote 3 on 401 St. between Howard and Clementine	5	6,338.40
34	105410-3	10/14/10	Continue instructions at recognition compact with all habe 5 on 401 to be seen increased and the series of	1	(6226.6)
19	101300.1	10/13/18	Andreadopcial mitigation impages work at tileshon 2 on hast kille of 400 St. (New yould Albana).	k	5235.4
35	301835.5	50/18/10	Archaeological mitigation puggipit work at location is on east side of am 85, (Misscolin Scheriery)	1	5,745.25
17	101900-1	10/19/10	Continue archaeological widgetion august work at location 5 an earl aide of 4th St. (Moscare Discussion).	17	4,00.0
129	103000 3	10/20/10	Continue archaeological indigation support minit of Ascentish 5 archaeological ARA St. (Moscowa Onservato)	E.	3,865.21
19	tteest.	10/20/20	Archaeological infrigorition support works, rootstee skill steering Surrema State University in preparation for off haut of other sket.	1	167.13
25.	362583	7053710	Continued archaeological mitigation imprort work at location 5 on mail side of 4th St. (Missource Browness)	1	3,318.96
ш	1202301.3	10/93/30	Continued archaeological mergation support work at occation 3 on name side of 4th St. Orlincons. Research:	1	6219 7
38	102330.9	180/25/69	Continued archaeological net gettin rupport work at occation 3 on size use of Art 9. (Montinue Distribution)	9.1	5,259.79

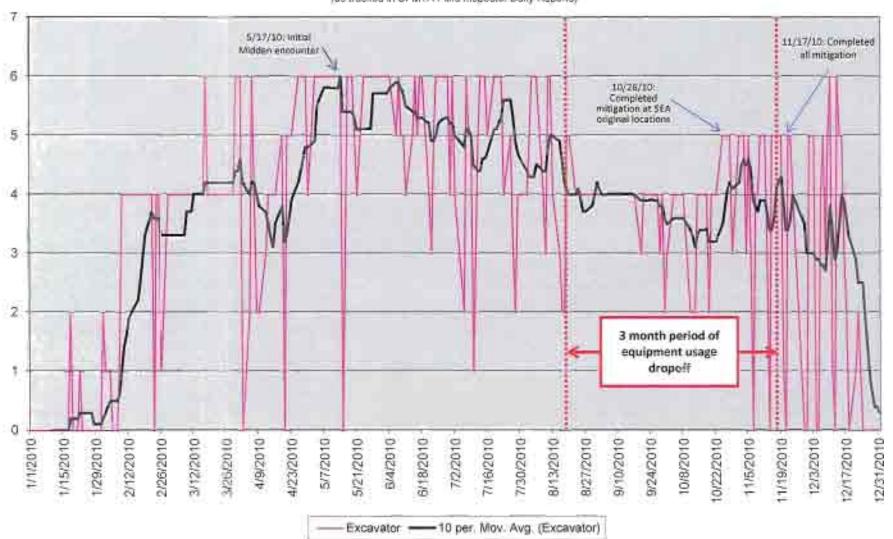
		7-11-1		tima
13.	153930.3	H10:1 10/26/10 Continued driftweelington militagent in support work or recetting 5 on sent side of 4th 5t. (Massage)		5 Kim71
34	133700.3	15/3/930	An harmograph mitigation outcome work around formed to Springer State convenience on all band out-	5 1,778.10
75	131000.3	13/20/20	Accessed agreed minigation support work at listation if on one sale of 4th 3t courts of Moscope Driveways.	F: 1,674.29
26	139001	33/19/10	Contract and and proving call and gamen reported such as bostoms & on earl time of \$100 to \$10	\$: \$257.70
37	139062	13/13/00	Authoritigasi Atigatian Lugoon work, qualiti rock at Sorums State and weigh 4th Sheet year.	\$ 4,315.25
28	125003	193899	Antheological hidigation support work at one past olds of Art 31 jpps (554-30 at scott) of Mossane Dissertable	5.8821
.29	1350ex	13/15/11	Continued anti-sensigical mitigation support work at an east size of 400 Stippe 154+25 at pourh of Myssicine Directors.	5 5,262.01
10:	335000	13/34/33	Contribute at home god integration appoint work at the part stage of 400 School 154-20 Amount of Missions School 25	5 405638
111	1259/03/1973	myst/mx	Architectings of Higgston support work or 200 4th St. for PESE result 1465	5 3,172.25
82	125000 HIVS	01/38/11	Cardin and archaeological computers request with at 120 feet fit FCA1 wast 1400	\$ 0,170.25
11	11506188V1	TU19/11	inchesiograp has garren support with as 225 401 St. (ATE 1 and PGES traveleys Vault).	1 3,172,29
34	7/5652 66/7	8179011	Command as the enlagest marginism regions with at 125-8th for the PCEE world 1895	5 2,411.44
88	51214	5/13/1010	Actioning of colors withing of of Spergy's formers, fallowing, operators and signe-interments to be some to density potential articles or the original forms.	5 6,001.01
36	1881	8/35/9010	Anythermogram compared communication of Street, the Consumption of Artifact, an Artifact, and Artifa	6 AFFERS
32	20723	997/2008	inchesingus integrior cappin suis prélit lines.	1 1,198,0
38	125000	11/11/2029	Archaeological entraction appoint work - describition for a page and from Langua fitte linearity to	4 855.55
16.	38627	13,04/3818	Remaining and 12" HOPE back to fit & Forcom 50 cmu is a conceignment result of a chaestogical foccompy to an explicit parameters for the manifest property to communing contract work).	S: 100.4
e	325094	MARIE	for any provided the country to the first behavior of the and the country. The all the country to the country of the country to the country t	t Care
(49.5	121101	1/4/0211	Communities consists of ATA1 mouth or dimits, removed times of the Committee. This is a consequential result of a stress topical documents in a strainful and Aliaday Moralism in coefficientation. No continuous contend	\$ 4382.56
id:	129804	1/9/10/11	Code after all TPC must be communicated discovery by the Tall behavior incommand Communication (This is a consequential result of a schedulogical discovery by the employal pre-Morkey Monatanium condition prior the continuous contract works.)	1 1,355 05
aj	125579	14/801	Escavebas for XTET breaking on Australia of XE St. Innovers Howard and Connective (This is a connective report of an investigical counters to releasely pre-Submy Marshamum condition provints continues comment work).	\$ 678839
861	425000	79/5031	Grow of form of gas than 6" comb of much youth on with 50, earn plan agreemen recovery (Clampenina (This is a convenient self-record of much enough) of plants and record of plants and develop of discovery to be entitled and form of the plants and combook provide providing providing providing and within	\$ 1,061.51
.45	325001	1/3/2011	See cut & received for 2" whips service at 195 4th St. for the other to be into exacting complete or to be looked to (This is a comprehensive result of a chase legical facilities by to be establish one models. Management condition once to continuous sections with 1.	3 1.82.4
Ay.	12503	1/7/7971	Principle's more was shapped by folio Imped performing most 200 cm in the respection.	\$ 75.0
47 :	125011	1/7/2011	Easyment conditional to experient activity by Mile Stoyka in the gut mench	1 2983

from t	Foony Account #	Date Permuned	Draw mattern of Vesels		hand
(48)	125036	Excevation of PGE electrical trench at 350 ath St. back to the condition it was prior to helicity of 1/10/2021 (This is a consequence) result of architeological discovery to re-establish pre-Holiday Morecons condition prior to continuing contract works		5.	604.17
43	125037	3/10/2011	Excavation of gas service connection at 4th St. back to condition prior to holiday shutdown (Thu is a consequential result of archaeological discovery to re-establish pre-Holiday Moratonum condition prior to continuing contest work).	\$	1,023.18
50	125043	1/12/2011	Archaeological mitigation support at south side of ATT valut on 4th St. from Howard to Clarmontine.	\$-:	2,839.27
34.	125045	1/13/2011	Archeological mitigation support at 320 4th St. south side of AT&T vault	5	3,476.75
52	125047	1/14/2011	Continued archaeological mitigation support at 220 fth-St	2	3,476.75
55	125035	1/10/2011	Excavation for 2" water service at 250 4th St. (This is a consequential result of archaeological discovery so re-establish pre-Holiday Moratorium condition prior to continuing contract work)	5	473.84
54	125053	2/1/2011	Fill in order with sturry where archaeological excavation of Midden layer occurred. Area excavated could not be compacted due to tight space, hence necessitating sturry fill. Pulled forms between new duct assurbuses and estating.	5	2,594,36
55	125054	2/2/2011	Excause TPC trench to existing condition exist to holiday restoration. Backfill and plate trench (This is a consequential result of archaeological discovery to re-establish pre-Holiday Misraturum condition propriae continuing contract world.	\$	1986.03
\$e	125055	2/3/2011	Escaveling WKV trench to existing condition prior to hubitary restoration. Secidill and plate trench (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract world.	į.	5,062,03
57	1059.2	97/03/10	Unpaid items from FAR 1056.1. Some items were omnitted for payment due to lack of documentation. Required documentation has since been submitted.	\$	64.81
58	2099.1	117/22/10	Impaid them; from FAR 1089-1. Foreman was not on Certified Payroll at the time of review of original FAR, it has since been corrected.	\$	221.64

MOBILIZATION AND EQUIPMENT STANDBY COST SUMMARY (PART 3)

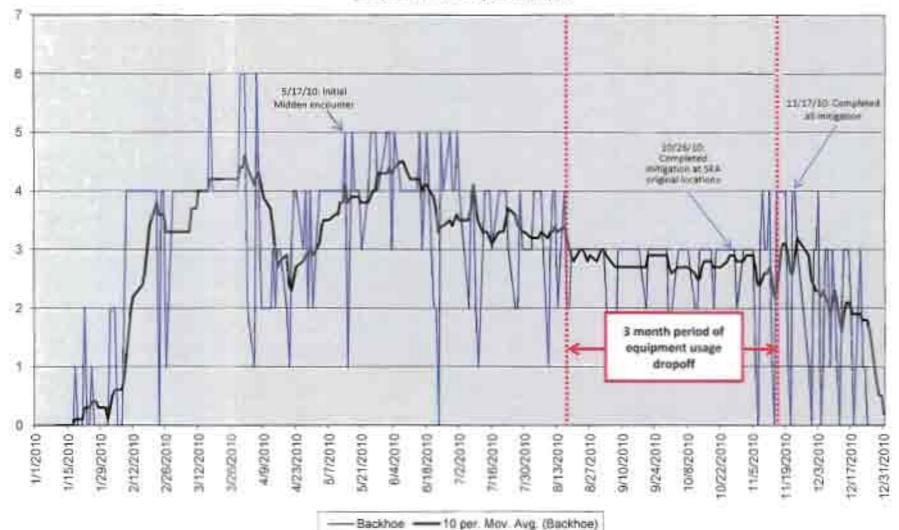
SFMTA Central Subway CN 1250 Archeological Cletay Equipment Standby Costs

Excavator Usage (as tracked in SFMTA Field Inspector Daily Reports)



SFMTA Central Subway CN 1750 Archeological Delay Equipment Standby Costs Backhoe Usage

ins wached to SPMTA Field Inspector Dally Reports



SFMTA Central Subwell CN 1250 Archeological Delay Equipment Standby Costs						ĺ	Hourly Rate.	\$ 10.76	\$ 55.00	\$ 54.74	8 02.03	\$ 30.00	1 51.25	1 an 10	\$ 90.14	\$ 52.53	
(3 MONTH DURATION WITHOUT S-AXEL TRUCK)						- 1	Cattrans Delay Factor	87.0	8	17	50	M D	0.2	0.3	61 0	220	
	Hourny Rates:	\$ 03.00	\$ 77.60	3 02:00	\$ 62.00	\$ 91.00	Standby Rate:	\$ 3.26	8 65.00	\$ 19.40	8 734	\$ 7.96	1 123	\$ 18.42	\$ 17.85	\$ 13.75 0	
CTIMITY	DAYS	Formula	Operations	Laborers	Pleggen	Drivers	LABOR TOTALS	Service Truck	Traffic Contico	S-root Frack	Backhoe	Brestoer Chity	May Exchange	New Hoffsmit	200 Excession	Pile Driver	EQUIPMENT TOTALS
New 1 Equipment Blandby (8/16/10 - 11/16/10 = 85 work (Init)	- 65						1				Ē1	1	1		Т	0.07	B: (27.558.7
new 2 Equipment Standby (MNWID - 11/19/10 + 65 work (198)	65						5				. 5	+	1	1			8 20.88C
							\$ I				STÁNI	BYE	SUP.	WHT !	SUR FI	oth.	\$ AT mile.
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		SUBTOTAL	111	(W MARKUP)
LABOR	:3	5,884.00	8.	5,754.60
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EQUIPMENT	1.	52,852.92	8	60,550,85
BID-ITEM	1		9	-
SUB	1	1-1	3	12
B&I (2.146%)			\$	1,422.92
TOTAL			\$	67,728.37

ADDITIONAL OVERHEAD/INDIRECT COSTS W/ SUPPORTING SCHEDULE (PART 4)

SPATA DI 1250 Misseria Station and Portal Unities Resourcion SPM Overheadthulltant Costs

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				CN 3269 Overhead Cost
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ELD PERSONNEL				
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9/12/12

CN 1250 SCHEDULE ANALYSIS FOR ARCHAEOLOGICAL DISCOVERY AND PG&E ISSUES Dec Jan Feb Mer Apr May Jun Jul Aug Sep Oct Nex Dec Jan Feb Mer Apr May W. Task Name Base Contract Plus Option Work 328 days7 Mon 1/4/10 Vced-4/6/1 **CN 1250 NTP** 1 day? Mon 1/4/10 Mon tetrito Q 1/4 Milestone #1 (186 Days from NTP) Tillay. En. 7/9/10: Fit 7/9/10 O 779 47 Calendar Days Milestone #2 (3 Days from Milestone #1) 1 day Mon 7712/10. Man //12/10 0 7/12 Mon 11/22/10 0 11/22 Mileston #3 (320 Days from NTP) 1 day? Mon # 1/22/10 & 1/12 State work unbetantial completion West 1/12/11 550nd 171271 1.1059 Option \$2 work (All Sevent to start 340 stays from NTP). 85 days Thu. 12/5/10 World 4/6/15 8 4//3 Base . Option Substantial completion Wed-4/5/11 Wed 4/6/T 1 little 4th St bet Felsom & Howard (As-built by RE Based in IDRs) Mon 8(23/11 341 days? Mon 2/1/10 10 Mars 271/10 Q 2/1 Starf construction work (actual) f.day? Mon 251/10. 11 198 Continue joint french work Tea.2/2/10. 50on \$217710 /5 days? m 12 Oblighed DBI permit for 801 Howard Tue 3/2/10 Tue 3/2/10 O MZ 1 day? 13 The 3/18/10 The S/16/10: → 3/10. Licease Agreement provided to Synergy for access to 801 Howard 1 day? Install underpinning at 801 Howard IT days? Thu 479100 Fiti-4/23/100 15 1511 Archaeological Discovery (5 Midden Locations) Miles SETZZLO Thu 1/22/10 4% days? 16 133 Tue \$718/10 Vied 11/12/100 Continue joint trench work. 132 days? 17 133 4 10/26 Complete milities militarion of 5 locations. Tue 10/20/10: Tue 10/20/10: 100 Continue to discover modern (informations) 5 days 7 Wed 1 U10/15 Wed 1 L/17/10 18 5 19 Complete mitigation of all microen found Wed Firstitle Wed Firstito d- 11/17 12.46 70 Costinue joint trench work The 11/18/10 Wed 12/22/10 25 Gys7: 123 21 Demobilize for Holicay moralismum (actual) Thu 12/23/10 8 cays 7 22 || Resume work after holiday movatorium Mon:1/3/11 Fo M2 WT 15 days 7. PG&E transformer blowest 23. More 1/24/51 1/24 Mon 1/24/11 1 day? 24 003 Continue joint trench work Mon 3/24/11 Par Meart 30 days? 25 Mon 3/7/11 YV1520/51 No construction activities during this period teacept pas tie-inst-45 days? 26 Hr The S3V11 PG&E switchown to Olivet University (Transformer fixed) 5 day? Day 3/31/11 4 301 27 65 PGRE discovered primary cable running through yault 1493 3.day? The 3/31/11 Thu 3/33/11 28 1111 PG&E removed cubin from valid 1493. Time \$2571.1 Thu 5/5/14 1.day? 29 (04 Denni PG & fi vault 1493 Mon 5/9/11 Two 5/12/11 distays. 30 Confidure sullapon of joint literach work FH 5233015 No. SQUAR T days. 823 21 Man M23/11 Substantisfly Complete contract work Lasy? Moon 5/23/11 3 Studilye Tank 3 Dumpton-only Finish-cely Totals: Project Summary Stactive Milestone Manual Statement Rolling 5301 Progress External Tasks continue to continue (Project: Archaeological Delay TIA north Date: Tue 7/24/12 C) Manual Scientisty 8 Miletippe External Milestone Inactive Summary Deathne Inactive Task Mismust Task 3 Start-outs C Summary Page 1



CMB Change No.: CMB - 0041

Initial Implementing Change Control Procedure No.: 1250 - CMod #20

Part 2 of 4 Part 3 of 4

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2/29/12 - RE to develop a detail analysis & Backup docum allabor to support statements of NO Schedule Impact due to this change. 3/1/12-RE to revise analysis to show critical path octorial revise analysis to show critical path octorial revise archelosical delay. 5/20/12-This item will be handled thru iclaims ancless



CONTRACT MODIFICATION NO. 20

Costs Associated with Archeological Discoveries

Part 1 of 4: Equipment Standby

Part 2 of 4: Rental/Maintenance Costs for Support of Archeological Trenches

Part 3 of 4: Additional Work as a Result of Archeological Shutdown Including Support

Synergy Project Management Inc.

Worl

Part 4 of 4: Additional Overhead/Indirect Coets During Archaelegical Delay Period

SFMTA Contract No. 1250 Contractor:

MOSCONE STATION AND PORTAL 150 Executive Park Blvd., Suite 4750

UTILITIES RELOCATION San Francisco, Ca 94134

SUPPLEMENTAL ANALYSIS (For CMB Presentation)

SCOPE OF WORK:

RENTAL/MAINTENANCE COSTS FOR PROTECTION OF ARCHEOLOGICAL TRENCHES

Compensate Contractor for rental of steel plates, hydraulic shoring, and Triton barriers as required to protect trenches containing archeological findings during investigation and mitigation period. In addition to rental costs, compensation also includes trench protection maintenance costs including, but not limited to, re-shoring and re-welding of plates as required to ensure continued trench protection.

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Compensate Contractor for directly supporting archeologists' mitigation activities. Support work includes, but is not limited to the following activities:

- Training crew how to recognize and properly respond to discovery of archeological findings
- Shutting down of work areas upon discoveries.
- Hand removal of excavated soils and transportation to yard for intermediate processing
- Transportation of soils and equipment to and from Sonoma State University for final processing

Refer to the attached Force Account Report (FAR) table for a complete list of support work activities included as part of this Contract Modification.

REASON FOR CHANGE:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES

During the mitigation process approval period and subsequent mitigation work, the Contractor was required to protect the trenches and excavated areas containing archeological findings. This trench protection necessitated the use of the additional steel plates, hydraulic shoring, and triton barriers compensated under this Contract Modification.

In addition to direct trench protection equipment rental costs, there are additional cost related to the maintenance of the Contractor's trench protection infrastructure. This maintenance work was required to ensure continued safe hydraulic jacking pressure and sufficient welding of steel plates on the road surface.





Modification Change Analysis Contract No. 1250

CMod No. 20 Narrative for CMB



SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Upon initial discovery of archeological findings, the Contractor's entire crew was required to complete an archeological indoctrination program. In these meeting the Contractor's crew was taught how to properly identify and respond to archeological findings. Completion of these training programs ensured that the execution of CN 1250 work did not cause irreversible damage to or loss or historic archeological materials.

During mitigation efforts, the SFMTA requested that the Contractor's crew assist in the removal of archeological findings soils from the Project limits as required to conduct analysis. This support work, as directed and supervised by the Sonoma State University archeologists, ensured archeological findings were promptly moved offsite as required to complete mitigation as needed to resume Contract work in the affected areas.

TOTAL MODIFICATION VALUE:

	\$199,741.54	Archeologist Support Work	SFMTA Approved Force Account Reports
+	\$255,840.49	Plates and Barriers (Rental/Maintenance)	SFMTA Approved Force Account Reports
	\$455,582.03	Force Account Total	
	\$50,000.00	Existing GE-5 Allowance for Arch. Discoveries	
	\$405,582.03	Total Modification Value	<i>t</i>

COST ANALYSIS:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES

All rental/maintenance costs contained herein are based on 24EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeological related trench protection equipment and maintenance costs as incurred during the completion of CN 1250 Contract work. (Note that the lowest of three submitted monthly rental rates was used in order to determine steel plate compensation amount contained herein.)

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

All support work costs contained herein are based on 58EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeologist support work as performed during the completion of CN 1250 (May 2010 to January 2011).

SCHEDULE ANALYSIS:

There is no time impact associated with Contract Modification No. 20.





SFMTA Central Subway CN 1250 Moscone Station and Portal Utilities Relocation Approved Archeological Force Account Work

PLATES AND BARRIERS (RENTAL AND MAINTENANCE)

Item #	Force Account#	Date Performed	Description of Work		Total
			TOTAL OF ALL FARS	\$	255,840.49
1	1026	06/15/10	At AT&T Vault, additional work re-shore, re-plate and demobilize.	\$	5,458.00
2	1033	06/17/10	Additional work to secure shoring and plates at the Muni vault.	\$	3,192.00
3	53110	05/31/10	Rental and maintenance of archaeological site @ PGE vault from 5/17/10-5/31/10 (14 days). Rental and maintenance of archaeological site @ MRY from 5/19/10-5/31/10 (12 days).	\$	21,884.1
4	1084	07/23/10	Additional work to re-weld plates at 4th/Howard.	\$	453.98
5	1086	June	Rental of plates, jacks, shore, barriers 6/1/10 - 6/30/10 for all archaeological discoveries between 4th Street/Howard to 4th Street/Folsom (except in front of Moscone driveway).	\$	21,761.7
6	1087	July	Rental of plates, jacks, shore, barriers 7/1/10 - 7/31/10 for all archaeological discoveries between 4th Street/Howard to 4th Street/Folsom (except in front of Moscone driveway).	\$	21,761.7
7	1125	08/01/10	Rental of plates, shoring and barriers at the Moscone Driveway for the month of August (from northend of Moscone driveway to NE corner of 4th/Folsom).	\$	31,326.6
8	1126	08/01/10	Rental of plates, shores, and barriers 8/1/10 - 8/31/10 for all archaeological discoveries for PG&E, ATT, MRY work between 4th/Howard to Folsom except in front of Moscone driveway and Water Dept.	\$-	21,761.7
9	1127	08/01/10	Rental of plates at the Water Dept. holes on 4th between Howard and Folsom for the month of August.	\$	1,339.5
10	1151	09/30/10	Rental of plates, shoring and barriers at the Moscone Driveway for the month of September, 2010	\$	31,326.6
11	1152	09/30/10	Rental of plates for the Water Dept. hole on 4th between Howard and Folsom	\$	1,339.5
12	1153	09/30/10	Rental of plates, shores, and barriers 9/1/10 - 9/30/10 for all archaeological discoveries for PG&E, ATT, MRY work between 4th/Howard to Folsom except in front of Moscone driveway and Water Dept.	\$	21,761.7
13	1059	. 07/02/10	Additional work to re-weld cutback for AT&T MH'A and MRY 554A	\$	784.3
14	1200	10/1/10 - 10/31/10	Rental of plates, shoring and barriers at the Moscone Driveway for the month of October, 2010	\$	31,326.6
15	1201	. 10/1/10 - 10/31/10	Rental of plates for the Water Department Hole on 4th between Folsom and Howard for the month of October, 2010.	\$	1,339.5
16	1202	10/1/10 - 10/31/10	Rental of Plates, Jacks, Shores and Barriers 10/1/10 to 10/31/10 for all Archaeological Discoveries between 4th/Howard to 4th/Folsom (except in front of Moscone Driveway and Water Department).	\$	21,761.7
17	1203	10/1/10 - 10/31/10	Additional Triton Barriers for Archaeological Excavation for AT&T, PG&E and MRY for the month of October	\$	2,642.8
18	1088	7/22/2010	Rental of plates, shoring and barriers at the Moscone Driveway 7/22/10 - 7/31/10	\$	3,386.4
19	1142	9/3/2010	AT&T manhole and LPFH #1: Maintain (re-set and re-weld) steel plates over archaeological holes on 4th Street between Howard and Folsom.	\$	550.5
20	1102	8/9/2010	4th/Folsom-Howard: Additional work to re-shore, jack and re-weld archaeological holes.	\$	4,537.4
21	1108	8/10/2010	4th/Folsom-Howard: Additional work to continue to re-shore and re-weld archaeological holes.	\$. 887.4
22	1116	8/16/2010	4th/Folsom-Howard: Additional work to re-weld plates on archaeological holes.	\$	781.5
23	1137	8/26/2010	4th/Folsom-Howard Additional work to re-weld plates on AT&T MH A	\$	1,282.7
24	1139	8/31/2010	JT trench Folsom - Howard East - work to maintain site and re-weld plates	\$	3,191.6

Item#	tem# Force Account# Date Performed Descrip		Description of Work	Total
49	125037	1/10/2011	Excavation of gas service connection at 4th St. back to condition prior to holiday shutdown (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 1,023.18
50	125043	1/12/2011	Archaeological mitigation support at south side of ATT vault on 4th St. from Howard to Clementina	\$ 2;839.27
51 .	125045	1/13/2011	Archaeological mitigation support at 220 4th St. south side of AT&T vault	\$ 3,476.75
52	125047	1/14/2011	Continued archaeological mitigation support at 220 4th 5t.	\$ 3,476.75
53	125035	1/10/2011	Excavation for 2" water service at 250 4th 5t. (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 473.84
54	125053	2/1/2011	Fill in area with slurry where archaeological excavation of Midden layer occurred. Area excavated could not be compacted due to tight space, hence necessitating slurry fill. Pulled forms between new duct structures and existing.	\$ 2,594.38
55	. 125054	2/2/2011	Excavate TPC trench to existing condition prior to holiday restoration. Backfill and plate trench (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 5,986.09
56	125055	2/3/2011	Excavating MRY trench to existing condition prior to holiday restoration. Backfill and plate trench (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	5,082.03
57	1059.2	07/01/10	Unpaid Items from FAR 1059.1. Some items were ommitted for payment due to lack of documentation. Required documentation has since been submitted.	\$ 64.31
58	1089.1	07/22/10	Unpaid Items from FAR 1089.1. Foreman was not on Certified Payroll at the time of review of original FAR; it has since been corrected.	\$ 221.44





Item#	Force Account #	Date Performed	Description of Work	Total
23 ·	102610.1	10/26/10	Continued archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$ 6,039.77
24	111010.1	11/10/10	Archaeological mitigation support work: moved forklift to Sonoma State University to offload dirt	\$ 1,778.10
25	111010.2	11/10/10	Archaeological mitigation support work at location 6 on east side of 4th St (north of Moscone Driveway).	\$ 1,674.29
26	125001	11/11/10	Continued archaeological mitigation support work at location 6 on east side of 4th St (north of Moscone Driveway).	\$ 5,057.70
27	125002	11/12/10	Archaeological mitigation support work, spread rock at 5onoma State and watch 4th Street yard	\$ 4,315.22
28	125003	11/13/10	Archaeological mitigation support work at on east side of 4th St (sta 154+20 at south of Moscone Driveway).	\$ 5,888.22
29	125004	11/15/11	Continued archaeological mitigation support work at on east side of 4th St (sta 154+20 at south of Moscone Driveway).	\$ 5,282.65
30	125006	11/16/11	Continued archaeological mitigation support work at on east side of 4th St (sta 154+20 at south of Moscone Driveway).	\$ 4,016.18
31	125049 REV1	01/17/01	Archaeological mitigation support work at 220 4th St. for PG&E vault 1495	\$. 3,172.29
32	125050 REV1	01/18/11	Continued archaeological mitigation support work at 220 4th St. for PG&E vault 1495	\$ 3,172.29
33	125051 REV1	01/19/11	Archaeological mitigation support work at 220 4th St. (AT& T and PG&E Intercept Vault).	\$ 3,172,29
34	125052 REV2	01/20/11	Continued archaeological mitigation support work at 220 4th St. for PG&E vault 1495	\$ 2,417.4
35	51210	5/12/2010	Archeological training involving all of Synergy's foremen, laborers, operators and superintendents to be able to identify potential archaeological items.	\$ 6,021.0
36	1131	8/23/2010	Archaeological mitigation support work at Moscone Driveway. Also re-weld plates at AT&T MH A.	\$ 1,671.05
. 37	10713	10/7/2010	Archaeological mitigation support work on 4th Street	\$ 1,338.8
38	125009	11/17/2010	Archaeological mitigation support work - demobilization of equipment from Sonoma State University to 4th Street yard	\$ 810.55
39	125017	11/24/2010	Remobilization of 14" HDPE back to 4th & Folsom St (this is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work).	\$ 924.4
40	125024	. 1/3/2011	Excavation of AT&T trench on 4th St. between Howard and Clementina. (this is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work).	\$ 5,780.9
41	125025	1/4/2011	Continued excavation of AT&T trench on 4th St. between Howard and Clementina. (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work	\$ 4,382.5
42	125026	1/3/2011	Excavation of TPC vault to continue quad ducts on 4th St. between Howard and Clementina. (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 2,359.0
43	125029	1/6/2011	Excavation for AT&T crossing on east side of 4th St. between Howard and Clementina (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 3,789.5
44	125030	1/6/2011	Excavation of gas line 6" north of muni vault on 4th St. east side between Howard/Clementina (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 1,462.3
45	125031	, 1/7/2011	Saw cut & excavate for 2" water service at 250 4th 5t. for trench to be into existing condition prior to Holidays (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 1,332.2
46	125032	1/7/2011	Francisco's crew was stopped by Mike Stoyka (archaeologist) at 220 4th St. for inspection.	\$ 76.2
47	125033	1/7/2011	Equipment standby due to inspection activity by Mike Stoyka in the gas trench	\$ 218.9
48	125036	1/10/2011	Excavation of PGE electrical trench at 250 4th St. back to the condition it was prior to holiday shutdown. (This is a consequential result of archaeological discovery to re-establish pre-Holiday Moratorium condition prior to continuing contract work)	\$ 604.1

SFMTA Central Subway CN 1250

Moscone Station and Portal Utilities Relocation

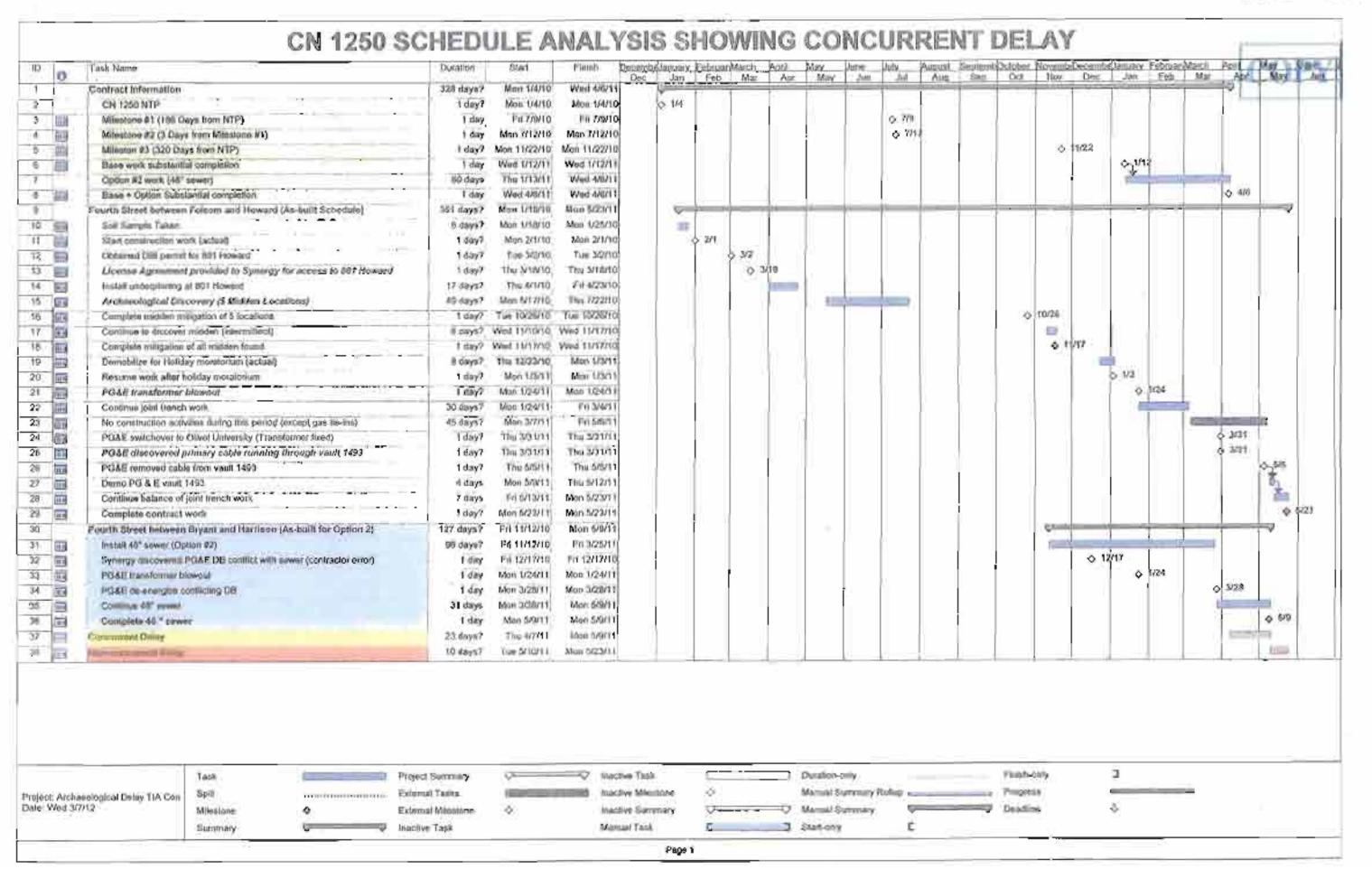
ADDITIONAL WORK AS A RESULT OF ARCHEOLOGICAL SHUTDOWN INCLUDING SUPPORT WORK

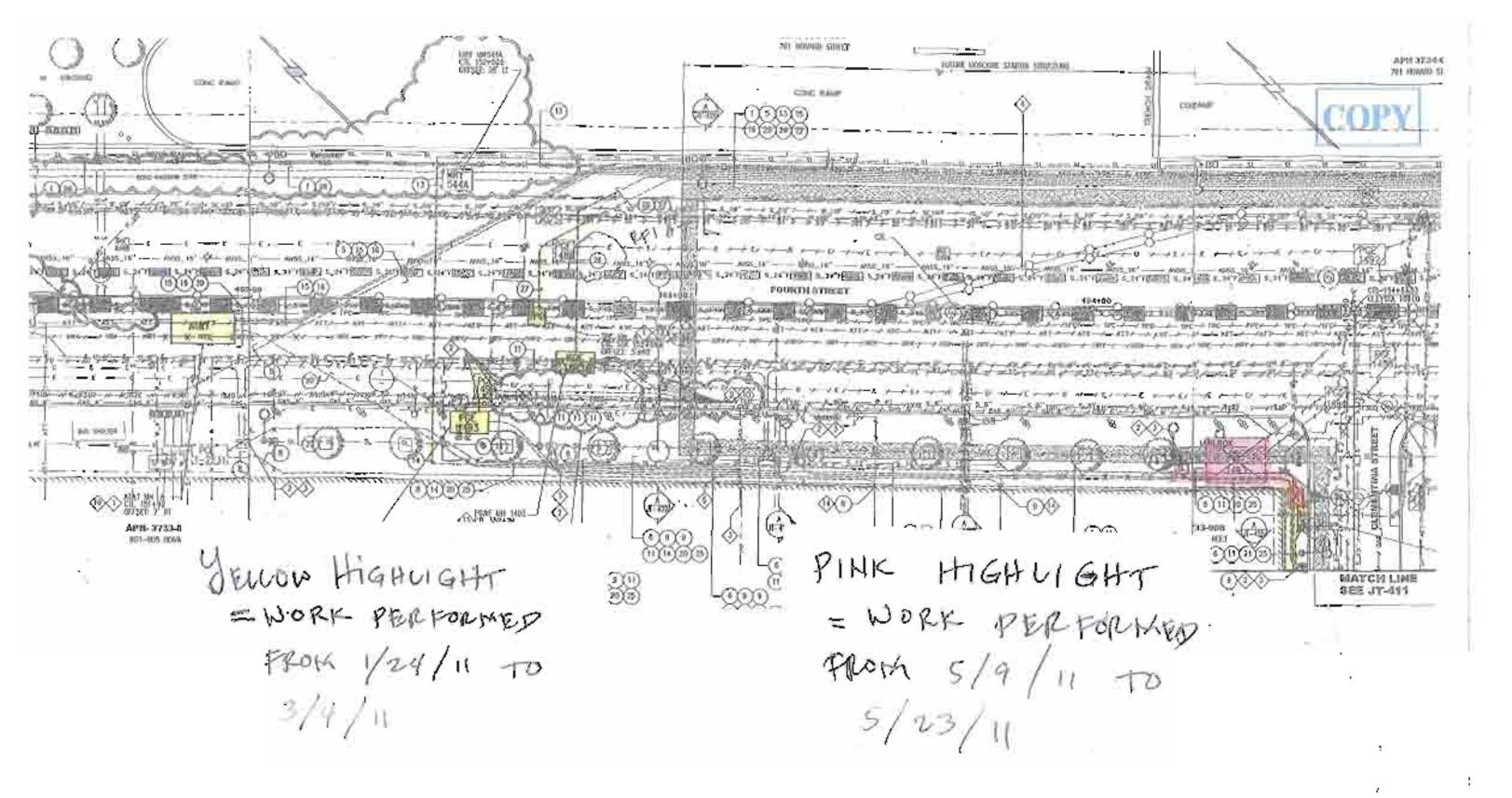
Item#	Force Account #	Date Performed	Description of Work		Total
			TOTAL OF ALL FARS	\$	199,741.54
1	166	06/02/10	Build pedestrian bridge over PG&E vault 1493 hole located in the sidewalk area.	\$	1,212.00
2	51910	05/17/10	Shutdown of PG&E vault installation at 4th and Howard as a result of archaeological finding. Work involves shoring and plating hole and demobilization for the day.	\$	5,930.24
. 3	51910.B	05/19/10	Shutdown of MRY vault installation at 4th and Howard as a result of archaeological find. Work involve shoring, plating and demobilization for the day.	\$	6,238.11
4	1076	07/15/10	4th/Howard: work stopped for 1 hour due to archaeological find at LP-FH in front of A-Z Market, shored and plated hole.	\$	442.22
5	Donovan001	4/23/2010	Archeological Discovery preparatory meeting with Synergy and MUNI rep	\$	832.17
6	1089	07/22/10	Work stopped for 2 hours due to archaeological find at Moscone Driveway, shored and plated hole.	\$	1,486.31
7	10710	10/07/10	Mobilization of Forklift to Sonoma State University for Archaeological Research of Soil that was removed from jobsite.	\$	690.64
8	10711	10/07/10	Pedestrian and traffic control setup for Archaeological mitigation work.	\$	1,048.93
9	10712	10/07/10	Archaeological mitigation support work (first day) holes 1 & 4 on 4th between Howard and Clementina	\$	6,480.81
10	10810	10/08/10	Continue archaeological mitigation support work for holes 1 & 4 on 4th between Howard and Clementina.	\$	5,544.13
11	101110.1	10/11/10	Continue archaeological mitigation support work at hole 3 on 4th St between Howard and Clementina.	\$	6,354.49
12	101210.1	10/12/10	Continue archaeological mitigation support work at hole 3 on 4th between Howard and Clementina.	\$	6,354.49
13	101310.1	10/13/10	Continue archaeological mitigation support work at hole 3 on 4th St between Howard and Clementina.	\$	6,228.43
14	101410.1	10/14/10	Continue archaeological mitigation support work at hole 3 on 4th St between Howard and Clementina.	\$.	6,228.43
15	101510.1	10/15/10	Archaeological mitigation support work at location 2 on east side of 4th St. (Mry vault #544A).	\$	6,228.43
. 16	101810.1	10/18/10	Archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	5,745.23
17	101910.1	10/19/10	Continue archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	6,131.01
18	102010.1	10/20/10	Continue archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	5,841.23
19	102010.2	10/20/10	Archaeological mitigation support work; mobilize skid steer to Sonoma State University in preparation for off haul of sifted dirt.	\$	760.61
20	102110.1	10/21/10	Continued archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	5,558.96
21	102210.1	10/22/10	Continued archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	6,039.77
22	102510.1	10/25/10	Continued archaeological mitigation support work at location 5 on east side of 4th St. (Moscone Driveway).	\$	6,368.78



CN 1250 SCHEDULE ANALYSIS FOR ARCHAEOLOGICAL DISCOVERY AND PG&E IMPACTS Finish ID: Task Name Duration Start O. Mon 1/4/10 Wed 4/6/11 1 328 days? Contract Information 2 Mon 1/4/10 Mon 1/4/10 0 1/4 CN 1250 NTP 1 day? O 7/9 Fri 7/9/10 3 Milestone #1 (186 Days from NTP) 1 day Fri 7/9/10 4 أروا Milestone #2 (3 Days from Milestone #1) Mon 7/12/10 Mon 7/12/10 ◇ 7/12. 1 day 0 11/22 Mon 11/22/10 Mon 11/22/10 5 e i Mileston #3 (320 Days from NTP) 1 day? **₹**1/1 Wed 1/12/11 Wed 1/12/11, G Base work substantial completion 191 1 day 7 Option #2 work (48" sewer) 60 days Thu 1/13/11 Wed 4/6/1 ♦ 4/6 Base + Option Substantial completion Wed 4/6/11: Wed 4/6/1 8 1 day ourth Street between Folsom and Howard (As-built Schedule) Mon 1/18/10 Mon 5/23/11 9 351 days?, Mon 1/25/10 Soil Sample Taken Mon 1/18/10 10 6 days? 400 11 Mon 2/1/10 Mon 2/1/10 0 2/1 141 Start construction work (actual) 1 day? 3/2 Obtained DBI permit for 801 Howard 1 day? Tue 3/2/10 Tue 3/2/10 12 95 Thu 3/18/10 ♦ 3/18 13 Thu 3/18/10 License Agreement provided to Synergy for access to 801 Howard 1 day? 17 days? 14 | 141 Install underpinning at 801 Howard Thu 4/1/10 Frt 4/23/10 49 days? Thu 7/22/10 Mon 5/17/10 15 Archaeological Discovery (5 Midden Locations) ♦ 10/26 16 Tue 10/26/10 Tue 10/26/10 Complete midden minigation of 5 localions [0] 1 day? 6 days? Wed 11/10/10, Wed 11/17/10 17 part. Continue to discover midden (intermittent) ♦ 11/17 1 day?, Wed 11/17/10 18 Complete mitigation of all midden found Wed 11/17/10 Thu 12/23/10 Mon 1/3/1 19 Demobilize for Holiday moratorium (actual) 8 days? 31 Mon 1/3/11 Mon 1/3/1 0 1/3 20 Resume work after hollday moratorium 1 day? 0 1/24 21 (4) PG&E transformer blowout 1 day? Mon 1/24/11 Mon 1/24/1 22 Fr1 3/4/11 Confinue Joint Trench work 30 days? Mon 1/24/11 23 No construction activities during this period (except gas ile-ins) 45 days? Mon 3/7/11 Fri 5/6/1 Å 3/31 Thu 3/31/11 24 100 PG&E switchover to Olivet University (Transformer fixed) 1 day? Thu 3/31/11 3/31 25 1 day? Thu 3/31/11 PG&E discovered primary cable running through vault 1493 Thu 3/31/11 100 ♦ 5/5 26 PG&E removed cable from vault 1493 Thu 5/5/11 Thu 5/5/11 1 day? Mon 5/9/11 Thu 5/12/11 27 .512 Demo PG & E vault 1493 4 days Fri 5/13/11 Mon 5/23/11 28 Conlinue balance of joint trench work 7 days 1916 ♦ 5/23 29 Mon 5/23/11 Mon 5/23/11 Complete contract work 1 day? Mon 1/24/11 30 What Would Schedule Look Like Without The 2 PG&E Delays? 41 days? Mon 3/21/11 31 1115 Continue joint trench work Mon 1/24/11 Fri 3/4/11 30 days? Date PG&E switchover was initially scheduled (prior to PG&E finding out that Tue 2/22/11 32 Tue 2/22/11 fii. 1 day? transformer blowout affected Olivet University Circuit) 33 Demo PG&E vault 1493 (early completion scenario) 4 days Wed 2/23/11 Mon 2/28/11 Wed 3/9/1 34 Tue 3/1/11 Continue balance of joint trench work (early completion scenario) 7 days i day? 35 Wed 3/9/11 Wed 3/9/11 Earliest Date Contract Work Would Have Been Completed 36 Demo PG & E vault 1493 (late completion scenario) 4 days Mon 3/7/11 Thu 3/10/11 37 Continue to successful from translation for the contribution for many 7 days 3/11/11 Strin 3/21/1 3/21 30 Mon 3/21/11 Mon 3/21/11 Latest Date Contract Work Would Have Been Completed 1 day?

Finish-only] Task Duration-only **Project Summary** inactive Task ় Manual Summary Rollup Progress Split Inactive Milestone External Tasks Project: Archaeological Delay TIA nort Date: Wed 3/7/12 Deadline External Milestone \Diamond Inactive Summary ()-Manual Summary Milestone 0 Summary Inactive Task Manual Trisk Start-only Page 1









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Form PCP 01 -1 Rev 1

CMB Change No.:

:MB - 0041

Initial Implementing Change Control Procedure No.:_1250 - CMod #20

Part 2 of 4 Part 3 of 4

	GENERAL		
Proposed Change Sponsor;	M. Acosta	Received by CMB:	02/15/2012 (Date)
Affected Disciplines: <u>Traf</u>	fic Specifications		
Utili	•		
_ Civi	,	,	
shor cont	pensate Contractor for ing, and Triton barriers aining archeological fin ation period	as required to protect	trenches
Contract(s) Directly Affected b	y this Proposed Chang	<u>e:</u>	
1250 1251 1252 125	3 1254 1255	256	
1 2 2 3 4	AND THE PROPERTY OF THE PARTY O	,	
(CP01) (CP02) (CP03) (CP0		P07)	
CONFIGURA	TION MANAGEMENT	•	S
	Agree with the	natures Disagree with the	Date .
	Change	Change	Date.
Senior Program Mana	- : - 		
Deputy Program Manag	ger: Wh	-	2/15/2012
PM Project Service	P6.		1.01
PM Project Development/Delive	1.11		2/15/2012
SFMTA O & M Manag	er:		80
SFMTA Safety and Secu	rity	(2	
SECTA PI	MO		
	Comments		
This CMod #20 revision addresse			
presented at CMB meeting #42 -			
2/15/12-Agree Contingent	upon corrections	s to Dackup a	scumentation.
2/29/12- RE to develop to support states	a détail an	alusis & back	cun docum a lat
to survert state	lents of No 5	schedule Ima	act due to



Connecting people. Connecting communities:



CONTRACT MODIFICATION NO. 20

Costs Associated with Archeological Discoveries

Part 1-of 4:

Equipment Standby

Part 2 of 4:

Rental/Maintenance Costs for Support of Archeological Trenches

Part 3 of 4:

Additional Work as a Result of Archeological Shutdown Including Support

Work

Part 4-054:

Additional Overhead/Indivect Coeta During Archaelegical Delay Period

SFWTA Contract No. 1250

MOSCONE STATION AND PORTAL

UTILITIES RELOCATION

Contractor:

Synergy Project Management Inc. 150 Executive Park Blvd., Suite 4750

San Francisco, Ca 94134

SUPPLEMENTAL ANALYSIS (For CMB Presentation)

SCOPE OF WORK:

RENTAL/MAINTENANCE COSTS FOR PROTECTION OF ARCHEOLOGICAL TRENCHES

Compensate Contractor for rental of steel plates, hydraulic shoring, and Triton barriers as required to protect trenches containing archeological findings during investigation and mitigation period. In addition to rental costs, compensation also includes trench protection maintenance costs including, but not limited to, re-shoring and re-welding of plates as required to ensure continued trench protection.

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Compensate Contractor for directly supporting archeologists' mitigation activities. Support work includes, but is not limited to the following activities:

- Training crew how to recognize and properly respond to discovery of archeological findings
- Shutting down of work areas upon discoveries
- Hand removal of excavated soils and transportation to yard for intermediate processing
- Transportation of soils and equipment to and from Sonoma State University for final processing

Refer to the attached Force Account Report (FAR) table for a complete list of support work activities included as part of this Contract Modification.

REASON FOR CHANGE:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES

During the mitigation process approval period and subsequent mitigation work, the Contractor was required to protect the trenches and excavated areas containing archeological findings. This trench protection necessitated the use of the additional steel plates, hydraulic shoring, and triton barriers compensated under this Contract Modification.

In addition to direct trench protection equipment rental costs, there are additional cost related to the maintenance of the Contractor's trench protection infrastructure. This maintenance work was required to ensure continued safe hydraulic jacking pressure and sufficient welding of steel plates on the road surface.





Modification Change Analysis Contract No. 1250



SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Upon initial discovery of archeological findings, the Contractor's entire crew was required to complete an archeological indoctrination program. In these meeting the Contractor's crew was taught how to properly identify and respond to archeological findings. Completion of these training programs ensured that the execution of CN 1250 work did not cause irreversible damage to or loss or historic archeological materials.

During mitigation efforts, the SFMTA requested that the Contractor's crew assist in the removal of archeological findings soils from the Project limits as required to conduct analysis. This support work, as directed and supervised by the Sonoma State University archeologists, ensured archeological findings were promptly moved offsite as required to complete mitigation as needed to resume Contract work in the affected areas.

TOTAL MODIFICATION VALUE:

	\$199,741.54	Archeologist Support Work	SFMTA Approved Force Account Reports
+	\$255,840.49	Plates and Barriers (Rental/Maintenance)	SFMTA Approved Force Account Reports
	\$455,582.03	Force Account Total	
~	\$50,000.00	Existing GÉ-5 Allowance for Arch. Discoveries	
		Total Modification Value	

COST ANALYSIS:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES

All rental/maintenance costs contained herein are based on 24EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeological related trench protection equipment and maintenance costs as incurred during the completion of CN 1250 Contract work. (Note that the lowest of three submitted monthly rental rates was used in order to determine steel plate compensation amount contained herein.)

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

All support work costs contained herein are based on 58EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeologist support work as performed during the completion of CN 1250 (May 2010 to January 2011).

SCHEDULE ANALYSIS:

There is no time impact associated with Contract Modification No. 20.



SFBITA Central Supway CR 3250 Mounter Station and Portal Utilities Relocation

ADDITIONAL WORK AS A RESULT OF ARCHEOLOGICAL SHUTDOWN INCLUDING SUPPORT WORK

	Print Security Securi			Telefi (
			TOTAL OF ALL FARM	\$	199,743.54
1	186	768070	NUM personan in tige over PS&E wait 1415 has mored in the observa area.		12010
2	\$1950	85/17/18	Sundown of PGET years installation of 4th and Howard or a result of architectogical finding, work inspires thering and picting hole and demobilization for the day.	6.	8.003
3	\$1935.4	05/19/15	Stratidoom of 6007 seart installation of fift and Howard to a moult of distremining set finit. Work Implies aftering, alerted and democratication for the Sec.	ġ.	4.2903
4	1076	87/75/UF	ATM/Nomenti work stapped for I have due to enthorning set find at UP TH in tripic of A-7 Market, thereof and placed halo	è .	140.2
8	haravarion;	4/23/2010	Archemisphal Discoursy proparation meeting with foreign and broth mp		912.3
(0)	30#8	07/72/10	Work stopped for 2 hours due to enthusing its find at Moscone Drivewes, streed and plated fisie.	4	0,6863
Di.	10716	30/07/10	McCaration of Portrill to Sonome State University for Archaeological Revision of Gall Was was removed from position	0	610.4
. 8	30733	16/07/20	Padastrian and traffic continuous serial for Archaning traff mingration with		1,048.1
4	10712	20/01/10	Anhaological nitigation support work (first day) hales 1.5.5 or 81% between moves and Consensus	1	6,000.0
10	10810	16/05/10	Continue archaeological critigation support work for notes I. 8, 4 on 818 (61)whith Hawwell and Certification	ý,	N.544.1
11.	torito 1	10/11/10	Continue ambacological midigation support work at force 3 on 4th 5t between Howard and Connection	1	9,314.1
18	5014101	10/12/10	Committee and manufactor mediganess suggested work at home 8 on 8th between Howeld and Clementine.	1	8,314.6
13	2015161	10/12/10	Continue architectugical mitigation support work At how 3 on 6th fit behaves Howard and Committee	1	6,276
34	101410.1	10/1A/10	Continue archeeological margation appoint work at now, 3 on rith 5t between research and Committee	F	6,778.4
#	101510-1	10/15/10	Archaeological intigation support wile Cat location 2 on east value of 6th St. (Mry vavil 3546A).	1	0.339.
18:	101817.1	10/18/20	Accepted integration insent work at legation 3 on start sale of entries (Moscone Divewes).	8.1	3,746.0
347)	1019101	10/19/10	Continue instalentiagetic minigation appropriate and at the committee on past olds of statut. Ministerior providence.	1	A3001
1.83	1.010001	38/20/10	Continue on headings at many more support more at location 5 on east sale of 4th to Propagate Or many to	1	3,5+1.1
19	1000002	10/10/10	And beautiques on teacher import mink, making and sheet to become their importance in presentant. The off hast of officer dist.	1.	360.0
28	perries	10/33/18	Commond archaeological entiqueum sequent with let mountain 8 on east side of bith 14. (honoxime Schemitel	à.	5,5563
21	(man)	10/22/16	Community and resimples investigation recognitive and an investigation is not easy side of oth fig. (1994).	1	E.039
33	983591	1825/18	Comprosed any fine coupling the largest on except the wark and incompany is an easy of the St. (Microsome Districted).	F	4,388.



Olem W	Protection of the Park	Approximately 1	The second secon		bee
'ai	(00E10.1	10/26/18	Communed as framelogies immigration support work at increase 5 for each case of 4th St. December 19 towns of	2	6,438.71
14	3110001	13/19/30	Archanograf migeton copper work mosel facility is brooms their University to officed six	£	1,779.18
.21	maki.	19000	Actificacitigs of mitigation support work at total on 5 or east and of 4th St Cronts of Mozeum.	1	1,674 31
28	225/01	14/14/16	Earninged archeeological mengation enganit work at location 6 on east side of Ath It (parch of alessons).	1	5,087.16
17	\$15802	31/31/99	Accommongenia metagonica ausquert existe, summert cock et Samunio Stanz and waters 4th Strant yand	1	4,115.23
2	\$2901	11/11/10	ANNABORING OF THE STREET AND	3	3,386.11
2	.129004	10/3/13	Continued probability and getten support work as on east side of 4th \$6 tota 164430 at south of	1.	5,282.03
=	EXECUTE	8/993	Continued and second of the gallest appoint work as on east side of Ath 31 Jata 154+30 in south of beautypes Orionavaid.	\$-	4,016.11
31.	225049 M113	36/17/00	Anchestagical intigration support years at 210 4th Nr. For PGSE years 1489	2	3,172.2
32	125090 9613	annens.	plantinged embedding tel integration report work at \$10 Ath 51 for Kiddl court \$495.	3	\$172.2
33	120001.96%	31/9NH	Acchaeological mitigation insperie work at \$18 4th St. (ATE T and PGEA Interrupt Verift)	1	3.172.2
34	120003 8815	21/00/10	Summand Arthresings of militation required hours of \$20 exc. 25, for #252 vault \$445	1	2,417,4
38	1000	Nations	Archaeological traceing booking all of Springers for second, between the electric and superinterments to it. The electric to dentally performed archaeological laters.	\$	5,021.0
36	1330	WWW	Assemble of the mention of the second of the second between the control place of ATST MHA	E:	1,671.00
37	38757	SWW met	Arthropor Pfatter (plant exists of Smit	5	1,118.6
38	13508	10/17/2000	fortune degree or agent work i demonstration of discovered from language processes and descripted and	6	\$10.0
29	stober	MARKET	hybriditization of 34° AUPE has be 40° & Patient It (this is a compression result of armaging but discovery to the authority pro-moleky blackmann constitutes pro- to continuing contract work).	I	80
30	32804	1/9/2011	Secretary of ATEP has about 50 feb for his result of and Committee (the high acceptance) which is an included a secretary to be extended as a minimal who should be considered as an including the control of an included as a secretary to the control of a secretary to the control of the contro	W.	3,790.6
.113	225016	3/4/2012	Continues your patient of APET transfer on 495 to between Provinces and Chimerotes. (This is a Consequences much of a infraeming and discovery to be recolled to re-existing from recolled Marieson and Continues.	1	4,382.5
42	225036	\$74/URLE	Because of The course and an appet parts as with to sur-ear recording Surrection. (The 2.4 series and an appet parts as with the surrection and an appet parts as a surrection and an appet parts and appet parts as a surrection and appet parts as a surrection and appet parts and appet parts.	1	23163
45	125029	3/6/2613	Topical for SVSF process on and also of the fit formand housest and Commerce Process of the formation of the fit of the f	1	1,705.5
**	123000	1/4/2013	Industrian of gas him IP control of input shall be 400 M, and was between research Streams of the a a consequenced resolt of any handlegical discovery of a soundful year restrict. Observation and the prior to protecting protect parties.	3	1401
45	129583	1/7/2011	The gift A expects for T' water service at 150 40. In the case is to complex coming construct point to trade on Chin a 4 companyon much of any entire point developing to the expect of any entire point of the companyon of the company of the compan	¥.	1.60
46	125032	177/2001	Monthson's claim was described by Miles Stories services and \$1.00 km, by the resources.	1	16.7
47	125011	1/7/2012	Signiferment estanding due to magnetises activity by halfve (trayles at the gas respect	4.5	210
at	125036	1/10/2011	Expension of MST electricar senses of 250 446 to hand to the common if you provide national distributions. (This is a surresponsible most of professing all processings of common your electrical pre-coming Monatorium provides are to partitioned contract world.)	5	804.3



ment f	fore-frames	this formand	Service (Co.)	Total	
30.7	LINE	Madma	Bid warren of per service connection or 4th bit back to condition prior to feliday shaddown (That is a miner, and a intent of an improving call factoring to re-establish pre-Holiday Norstotium condition lating to communing committee work)	\$	1,021
56	122045	6/12/2023	Art handing a Billingson in aggreet at court unia of ATT want on 4th fs. from Peacett to Clarentine	u_	1,896.2
- 81	221045	2/14/1011	Annium drug and Hotigoriton support or 220 4th St booth side of ATET value.	\$	3,476.3
12	.128047	I/IA/IIIL	Continued archeeological mitigation support at 220 4th St.	\$	1,479.7
:0	223035	\$/\$5/202x	Execution for I' were remine at 250 atm St. (This is a consequent of result of immeesting-of interesting of the second of the se	ě.	479.8
36	223623	avanti	All is used with durry where enhancing our ascension of Stocken layer occurred. Area excented the United Stocker due to Signification, here a rescaling story file. Pulled forms between new asset property and entities.	i.	2,984.0
36	19304	to-test	Excession TPC branch to excessing powerhain group to injury restandance. Spoking and prote trends (This is a tensor processor result of an injurious intercovery to re-establish pre-Holiday Migrosofium condition grow to perfect or a perfect work).	5	1,394.0
96	230016	3/9/mt	I according USF transit to extend complete provincial field by restoration. But \$10 parts travels \$17 parts travels of archive condition or restoration pre-littley (we attorium surdicion area to province or complete province province).	-	1,082.0
59	354	87/89/28	Organial harms from FAM 2005 1. Spring library wave connecting for payment due to 1604 of 1604	ì	44.3
16	5000.6	4732/W	Ungood harty from 194 2002 Z. Forecarr was not in Cartified Reynal at the time of review of original 1946 in that there been consisted.	3	221.8



SPATTA Central Subway CN 1250 Mossone Station and Pertal Utilines Relocation Approved Archeological Force Account Work

PLATES AND BARRIERS (HENTAL AND MAINTENANCE)

444	NAME OF TAXABLE PARTY.	tin himmed	"PENNET PRINT"		Total
			TOTAL OF ALL FARS	1	£15,546.0
1	159	200002	ALAST VALUE WHITE PARTY WHITE TO ARROW A PROBLEM AND SECURITIES.	1	3,103.01
2	1813.	39/17/98	Additions — 6 to easily a phoning and phones at the lifters voyal.	5	3,192.0
1	FELLO	31/55/20	Record and manners of embeddings one (FPEE wash from \$117/10-5/31/10 (14 days), herball and nanomenous of enforcings of the (BMY hom \$115/10-5/31/10 (12 days))	ś	21,884.1
4	204	47/03/18	Additional work to re-well places as MIL/Forward.	3	453.8
1	3285	Sartel	harter of plakes, politic artisms, teamers 6/U/10 - 6/50/10 for all accordingly all discounting Settlement 494. Scounting and 50-400 Security Security Security of Security of Massacra delegates.	5	E1,761.2
(6)	3007	34y	Amend of places, puts, prices, business 7% CB - 7/30/36 for all authorological discrement between 4th 2000s house of to 40% for any Yestom invested in front of frequency diversary.	8	23,761.7
NES.	118	06/61/10	Sample of plakes, showing and lawrent at the Mossoure Discovery for the month of August Street, such and of Mossoure difference to MR compress 6 475/7000m1.	3	33,3284
۲.	1134	10/10/00	Second of practice, who may seen that them BELLIGHT ACTUALS for all accordance proof discovering, for POSES, ACTS, Moltin works between ACTS formers this Position according from all fellowing and according to formers and according to the second a	1	11,781.7
911	107	18/81/18	Name of pieces of the West Doph holes so 4th between Hardest and Solgan for the mooth of Property.	3	Limi
10	1101	19/30/14:	found of planes, thorough and is miser at the frication \$ the entry for the fronts of Suprember, 2003	2.	85.895.0
11	1152	39/20/18	Thermal of princes for the White Dept. Note an Arth Settinger Hower It and Schools	1	1,179.7
'tt	1133	09/30/30	Harris of Julian, where, and service \$75721 - \$75772 for all antiseological discoveries for PG\$1, 617, MAI work ballware 65,70 word to follow except in front of Riccover Store by and William Learn.	5	21,761.7
39	3839	97/02/18	Additional section to re-contribution for ATAY sales a per sone \$5544	\$	384,5
201	1200	10/3/30 - 30/93/10	Rental of plants, storing and the rise cal the Houseau Orbitical for the mount of Orosine, 2018	9	EL2064
(19	1,901	80/1/10 - 10/81/10	Record of plates to the Water Department have an PA become Partners and through to the month of Clember, 2016.	8	(39)3
16	1300	20/1/18 - 20/2/19	inertial of Makes, Jacks, thorse and Burners 15/1/10 to 50/31/10 for all Audisepagnal Discoveries between Ally/Novard to Arty/objint least pt in front of Moscove Overseg and Water Dispartment).	8	80,781.5
if	1101	30/5/30 - 30/85/30	Additional Tillian Surviers for Archreological Summaries, Spr. 87 E.C. P.C.(E. p. of 1687 for the rosetts of Century	i	2,642.1
12	1000	7/22/2010	Rental of places, shering and berriers at the Moscone Brivoway 7/22/10- 1/25/10	5	3,3884
16	5342	9/0/7010	AT&T marrisole and LPMLES. Malmain (re-set and re-well) steel planes ower another singles increases. Ath Street technique Howard and Solven.	1	3003
20	1100	8/9/2010	4th/Falletin-Howard: Adultional work to re-shore, acts and re-west archaeological holes.	5	4.007.0
21	1.100	8/38/2010	MINITALisan-Heisenit. Additional earls to continue to te shore and re-well anti-realisation.	F.:	981.6
10	2116	9/18/2010	4H/Helamy reward: Additional work to re-well states on annappingical holes.	5	791.5
11	3147	8/36/2010	#ID/Felaton hinesers! Audithinal work to re-wald places on ATET Mot A	\$	1,280.7
- 24	7110	4/21/2020	JT (renult Felloon - Howard East - work to munition site and re-weld plates	3 .	3.181.5







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CMB Change No.: _

Initial Implementing Change Control Procedure No.: 1250 = CMod #20

Part 2 of 4 Part 3 of 4

		(GENERA	۱L		
Proposed Change Sponsor:		M. Acos	sta	F	Received by CMB:	. 02/15/2012
A CC t - of This a to fine a co					-	(Date)
Affected Disciplines:	Utility	specifica	itions		•	
	Civil	•		•		· ·
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Impacts of Change	shoring,	and Tri	ton barrie eologičal	erš as	ntal of steel plates, la required to protect lgs during investigat	trenches
Contract(s) Directly Affect	cted by th	is Propo	osed Cha	ange:		
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1 🛭 2 🗎 3 🗎	4 🗆	5 🗍	6 🗍	7 [
(CP01) (CP02) (CP03)	(CP04)	(CP05)	(CP06)	(CP0	7)	
CONFIG	URATIO	NAN			OARD APPROVALS	3
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		_	ee with th Change	ne	Disagree with the Change	Date
Senior Program N	Manager:		,		01141.90	
Deputy Program N	//anager:		Wh_		20 L	2/15/2012
PM Project S	_	· (.~			E	4.01
PM Project Development/		1-1/10	11	,		2/15/2012
SFMTAO&M N	•		2000		_	3. 16
SFMTA Safety and	Security		• -			
SFC	TA PMO		÷		• • • • • • • • • • • • • • • • • • • •	
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This CMod #20 revision add	Iresses P		4 and Pa	rt 3 o		
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presented at CMB meeting: 2/15/12 Parke Contina						, , , , , , , , , , , , , , , , , , ,



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CONTRACT MODIFICATION NO. 20

Costs Associated with Archeological Discoveries

Part-1-of-4: Equipment-Standby

Part 2 of 4: Rental/Maintenance Costs for Support of Archeological Trenches

Part 3 of 4: Additional Work as a Result of Archeological Shutdown including Support

Work

Part-4-ef-4: Additional-Overhead/Indirect-Costs-During-Archeological-Delay-Period

SFMTA Contract No. 1250

MOSCONE STATION AND PORTAL

UTILITIES RELOCATION

Contractor:

Synergy Project Management Inc. 150 Executive Park Blvd., Sulle 4750

San Francisco, Ca 94134

SUPPLEMENTAL ANALYSIS (For CMB Presentation)

SCOPE OF WORK:

RENTAL/MAINTENANCE COSTS FOR PROTECTION OF ARCHEOLOGICAL TRENCHES

Compensate Contractor for rental of steel plates, hydraulic shoring, and Triton barriers as required to protect trenches containing archeological findings during investigation and mitigation period. In addition to rental costs, compensation also includes trench protection maintenance costs including, but not limited to, re-shoring and re-welding of plates as required to ensure continued trench protection.

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Compensate Contractor for directly supporting archeologists' mitigation activities. Support work includes, but is not limited to the following activities:

- Training crew how to recognize and properly respond to discovery of archeological findings
- Shutting down of work areas upon discoveries
- · Hand removal of excavated soils and transportation to yard for intermediate processing
- Transportation of soils and equipment to and from Sonoma State University for final processing

Refer to the attached Force Account Report (FAR) table for a complete list of support work activities included as part of this Contract Modification.

REASON FOR CHANGE:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLÓGICAL TRENCHES

During the mitigation process approval period and subsequent mitigation work, the Contractor was required to protect the trenches and excavated areas containing archeological findings. This trench protection necessitated the use of the additional steel plates, hydraulic shoring, and triton barriers compensated under this Contract Modification.

In addition to direct trench protection equipment rental costs, there are additional cost related to the maintenance of the Contractor's trench protection infrastructure. This maintenance work was required to ensure continued safe hydraulic jacking pressure and sufficient welding of steel plates on the road surface.





Modification Change Analysis Contract No. 1250



SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

Upon initial discovery of archeological findings, the Contractor's entire crew was required to complete an archeological indoctrination program. In these meeting the Contractor's crew was taught how to properly identify and respond to archeological findings. Completion of these training programs ensured that the execution of CN 1250 work did not cause irreversible damage to or loss or historic archeological materials.

During miligation efforts, the SFMTA requested that the Contractor's crew assist in the removal of archeological findings soils from the Project limits as required to conduct analysis. This support work, as directed and supervised by the Sonoma State University archeologists, ensured archeological findings were promptly moved offsite as required to complete mitigation as needed to resume Contract work in the affected areas.

TOTAL MODIFICATION VALUE:

	\$199,741.54	Archeologist Support Work	SFMTA Approved Force Account Reports
+	\$281,519.04	Plates and Barriers (Rental/Maintenance)	SFMTA Approved Force Account Reports
	\$481,260.58	Force Account Total	
	\$50,000.00	Existing GE-5 Allowance for Arch. Discoveries	
	\$431,260.58		

COST ANALYSIS:

RENTAL/MAINTENANCE COSTS FOR SUPPORT OF ARCHEOLOGICAL TRENCHES

All rental/maintenance costs contained herein are based on 25EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeological related trench protection equipment and maintenance costs as incurred during the completion of CN 1250 Contract work. (Note that the lowest of three submitted monthly rental rates was used in order to determine steel plate compensation amount contained herein.)

SUPPORT WORK DURING ARCHEOLOGISTS' MITIGATION EFFORTS

All support work costs contained herein are based on 58EA SFMTA approved Force Account Reports (FARs) as listed on attached FAR spreadsheet. These costs represent a complete and final compensation value for all archeologist support work as performed during the completion of CN 1250 (May 2010 to January 2011).

SCHEDULE ANALYSIS:

This Contract Modification does not address the schedule impact, if any, associated with the discovery of archeological findings during the completion of CN 1250 Contract work.

Due to failure to meeting Contractual requirements the SFMTA has rejected the Contractor's Change Order Request (COR) related to additional indirect costs resulting from the archeological discoveries discussed herein.



SPMTA Central Subway CN 1250

Moscone Station and Portal Utilities Relocation

ADDITIONAL WORK AS A RESULT OF ARCHEOLOGICAL SHUTDOWN INCLUDING SUPPORT WORK

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- L	11917	(0)/17/16	Shirtsteen of PGS3 vanil least factor at 4th and except as a count of principlings at history. Here	8	5,810.31
7	\$555518	80908	Discipline of MRT rack imposance, in till and revent aca result of activating car find. Were revold who beginning and account further the day.	4	6,278.13
*:	1076	(D)/TS/DB	ATT/Howers work stopped for 3 knur that to professings of find at UF for in finite of A-2 Market. whereof sustainable living.	8	++7.13
6	1009	07/33/16	Work stopped for 2 borns due to estructional of final of Naturapse Driveness, shocket and plated now	1	1,444.31
3	19718	10/07/34	Analytication of Fortiff, as become little University for Archaeological Research of Sail Out was removed from schools.	3	390.61
- 1	10711	30/117/86	Perfectings and melfic contemporary for inchanging our registron work.	1	1,048.91
	10711	16/07/14	Ang baselings on the street of	1	8,480,83
10	1000	10/08/25	Continue exchanginal magetion support work has boths 1 & 4 po 4th tempore Howard and titlementing.	3	5,544.33
-11-	202238-)	XW33/36	Continue authentiquel mitigation appoint mork at hale 3 on 465 to between Howard and Characters.	\$	6,354.45
11	202130.2	\$0/\$3/\$6	Continue professorqueal congressor, compant more, as how it and this test were introvered that Comments as	ï	10.354.AI
11	102730.1	10/33/20	Continue archaeological rithigation associat work at home 8 on 6th 56 between Howard and Committee	6	8,328.4
34	101419.1	20/14/50	Continue entrembigine wittgeren support work at hole if on 8th 55 between Howard and Chemistra	1	6,226.4
33	101510.1	10715/10	Archemicatical margation support work at recastion 2 on east side of 40° St. (My vault #544A).	ā	8,228.43
16	101830.1	30/18/10:	Archeeological magazine aupport work at Source 5 on east side of Rh St. (Moscone Orlineway).	4	5,745.23
23	101910-1	10/19/10	Carterist entrangual religious asports with at lection 8 on soit side of 4th 5t. (Missione Chronicy).	s	6,131.0
311	1000001	10/20/16	Carriero a service emigrare menganice acquaint work at inciding \$ (a) and side of 4th \$1 (Moscome Sheemers).	\$	5.841.7
- U	TRESORT	10/10/18	Activating at mitigation except work, mobilize skip area to Severa Base Orliverally in preparation for off took of effect date.	3	790.6
111	102363	\$0/25/3#	Concerned archaeological entigeness support wors at location 5 an exist size of 4th bit. (Muscone Brisannes).	3	5338.9
31	102210-4	19/2/10	Controval archeological mitigation support were to familion 5 or east side of 4th to this cone. Disposal.	1	8.000.7
- 72	882510.1	59/75/18	Community and an interesting their magazines support, work at location 5 on eart side of 4th St. (Moscone Directors).	4	6,368.7





Starwa -	Resolution 1	Date Performed			Table 1
16	129034	2/30/2013	An average of PIDE assetting program at 200 kill by that he the purphess is very poor to harday, that down of this is a consequently result of an hearing at anoperery to re-establish pre-Hollogy. Advantages confidence prior to continuing contrast world.	1)	664.51
65	125037	7/10/2013	Escaption of gas service connection at 4th to, heat to condition prior to be toler shallows (The is a consequential result of prohessings of discovery to se-establish as a highlity Merosprion condition prior to communia commits within		tan a
10	125048	3/32/2013	Action riggs in milgerium rupp of at ability big of ATT rates on with \$1, from research in Committee	4	2,039,23
31	125045	3/53/2013	Archespings at mingston coppert at 120 cm to startle side of A761 week		5,479.77
150	225047	3/54/2011	Continued archaeological deligation coggists at 200 480 Nr.	1	3,476.71
92	12505)	1/ymu	Fill in was with during where archaeological passweeps of Michigo Green opported. Also excluded court not be computated that is light upday. Names has excluding blurry fill. Fulled forms have seen man- dust any pures and exercise.	6	239430
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10	15858	45901	Suggesting MEV track to colling condition provide humbles recommen, backet and place interest. This is a consequential result of exclusiving of decisions you re-establish pre-Yestoba Monatorium condition according to the Manager Society.		1.001.01
181	10883	97/05/59	Simple Server Train CAS (1995). Server more were assessment the payment that to have of a decommendation. Assessment disconnectation had send below submitted.	1	663
II.	1981	6772200	Disputed them from \$100 \$100 \$1. Foreman was not on Certified Payroll or the time of names of angings. India is her place have up-record.	2	273.40
62	118	\$7350mi	Annual and Annual and Annual and Annual Statement, Add to word place of \$157 Mar A.		5,871.01



SFMTA Central Subway CN 1250 Moscone Station and Portal Utilities Resonation

Approved Archeological Force Account Work

PLATES AND BARRIERS (RENTAL AND MAINTENANCE)

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1	1019	:06/35/30	AT AT AT YOUR, ISOSTORIAL SHOP IN HOPE, IN LITTLE AND MINISTRALE.	1	5,406.00
12	3255	96/X2/30:	Additional ware to secure shoring and places or the Municipals.	1.	8,191.00
9:	NACTO.	693478	Remail and maintenance of archaeological site & PSE vacA York I/LT/20-5/32/30 (24-sect). Remail one maintenance of archaeological site & AMY from 5/35/30-5/31/30 ILE sect.	1.	71,544.0
4	3084	97/21/10	Additional work to re-webs status at 4th/Physics	1500	40130
9	5200	Site	Rental of plates, ports, thank, beiners 4/3/10 i 4/30/10 for all archaeological discoverior between 400 through his world to 400 through Political (axional in from of Moscorie disvewey).	1	71.91.70
8	1917	Tien	Remark of plants, lacks, there, burriers 1/1/10 - 7/13/10 for all archaeological discoveries between 4th through some by 4m (traps/fedom passage in from all Massage triveway)		TL HE R
SA.	3/80	7/33,00to	As that of plates, sharing and portions of the Magnone Devidualy 7/23/18 - 7/51/19	8	(.66.4)
2	1223	(80/03/20)	Newsol of plates, storing and harners at the Moscone Divisions for the month of August (Tront or Medical of Moscone divisions to NE comprat http://occami.	E	(1),000
8:	3136	86/01/18	Wanter of places, change, and bemans 8/3/10 - 8/43/10 for all anchaeological discovering for PEEE, ATT, 1089 with histories 4th/hiomand to hallow except in front of block one differency and Water Dates.	1	31,741,71
9	1107	18655/38	Service of primary at time these Steps, horse on 4th Senseson reviews and Follows for the month of Seguest.	1	13315
20	1981	99/50/20	Name of police, altering and barriers at the Mozzone Discovers for the month of September, 2010.	£	31,326.8
11.	3333	28(9)/11	Named of places for the Hotel Dept. helia on the between House of Ind Felton.	1	1,338.3
w.	300	19/30/20	Normal of printing shoring, and humans \$13/20 - \$750/50 for all and workwarding floorway and PASE, at TL, 1995 work between \$50/9 week of to floorer design in from of Mouseur of increasy and Water Dags.	100	21,761,7
36	1300	DESCRIPTION OF THE PERSONS ASSESSMENT	harted of process, phonographs have been the trianspare December his the month of October, 2010	1	33,835.6
44.	1300	MAZON-MOTOL	have a values for the Vision Department Rule of 4th behavior folium and flowers for the month of	\$	1,338.50
16	300	MAZE WYSTE	Sector of Plane. (sets. Stores and Review 10/21/10 to 15/20/10 for all Archaeptopical Discounter names to the Sector Sector (sector Department).	4	21,761.76
150	hime	10/3/10-30/91/19	Address of Time Berner's for Andrewscopped Cocaration by #157, PigSt and Myr for the month of forester	\$	2,642.8
10	THU	123630	Footal of pititing, always and harriest 15/25 to 52/5/10 thursey Thyritigaring).	1	35,679.53
	2209	87/00/20	Additional month to the marin coding high ATRY Month and metric \$569.	9	794:00
211	100	9/9/1800	emit countries on a harmonial wish in the stury, purposed or having pay holes.	5	4,397,48
.23	1916	A/30/2000	After the control of	\$	387.42
- 15	1118	Arreston	Attitude to the American and the reset to providing and being	5	781.50
71	200	1/9/7000	ACCUPATION CONNECT AND STORY AND TO THE HEAD AND A STATE AND A	5	1,281.7
38	3119	\$000,7500	(1) reports feature - Prominit East , must be maintain the und to word plate.	\$	2,197.00



Hum #	Form Account 6	Date Personnel	Description of Work	Total	
25	1142	9/3/2010	AT&T manhole and .PFH #1: Maintain (re-set and re-weld) steel plates over archaeological holes on [4th Street between Howard and Folsom.	\$ 550	0.55







CMB Change No.: CMB - 0041

Initial Implementing Change Control Procedure No.:_1250 - CMod #20

		G	ENERAL	•)					
Proposed Change Sponsor:			M. Acosta	Re	ceived by CMB: _	07/13/2011			
Affected Disciplines:	Traffic S	necificat	lione	(Date)					
Affected Disciplines.	Utility	pecifical	incations						
	Civil	_/							
Impacts of Change	Comper	sate Co	ntractor fo	or equi	pment standby co	sts for one crew			
	at 116 w	orking d	ays and a	a secor	nd crew at 94 work	king days.			
Contract(s) Directly Affe	cted by th	is Propo	sed Char	MA.					
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Deputy Program	Manager:			7	70				
PM Project	Services:		27						
PM Project Development	/Delivery:	_							
SFMTA O & M	Manager:								
SFMTA Safety and	I Security								
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Connecting people: Connecting communities



CONTRACT MODIFICATION NO. 20

(Costs Associated with Archeological Delay)

Part 1 of 4: Equipment Standby Costs

Part 2 of 4: Rental Costs for Steel Plates and Barriers

Part 3 of 4: Contractor's Costs for Supporting Archaelogists Mitigation Activities

Part 4 of 4: Contractor's Time Related Overhead During Delay Period

SFMTA Contract No. 1250

MOSCONE STATION AND PORTAL

UTILITIES RELOCATION

Contractor:

Synergy Project Management Inc. 150 Executive Park Blvd., Suite 4750

San Francisco, Ca 94134

SUPPLEMENTAL ANALYSIS (For CMB Presentation)

SCOPE OF WORK:

Compensate Contractor for equipment standby costs for one crew at 116 working days and a second crew at 94 working days. Types of equipment included are as follows:

- Service Trucks
- Dump Trucks (3-axle)
- Backhoes with pavement breakers

- Compact Hydraulic Excavators
- Hydraulic Excavators
- · Vibratory Pile Driving Equipment

This Contract Modification also, compensates the Contractor for costs relating to additional demobilization/remobilization operations. Scope of work for these mobilization operations includes the installation/removal of steel plates, Triton barriers, and other traffic/pedestrian control devices, as well as the moving of equipment to and from the Contractor's yard.

REASON FOR CHANGE:

Due to the archeological discoveries within the project limits on 4th Street between Howard and Folsom Streets, the Contractor was forced to put two crews' worth of equipment on standby while a mitigation plan was established. The inability to proceed with work in a timely manner was due to the lack of a previously established archeological discovery mitigation plan. Upon initial discovery, the SFMTA consulted with the Federal Transit Administration to develop a mitigation plan. Once developed, this plan was then forwarded to the State Historic Preservation Office (SHPO) and local Native American tribal representatives for approval. Once the plan was approved, a local Native American monitor was hired to oversee the mitigation activities. A significant delay resulted due to the amount of agencies and reviews required prior to implementation of the mitigation program. The complexity of the mitigation plan approval process made it difficult for the SFMTA to provide an accurate start date estimate for mitigation activities. This uncertainty resulted in dissuading the Resident Engineer from requesting that the Contractor to demobilize his equipment. As a result, the Contractor kept the subject equipment on site during the mitigation plan approval process. This approval process took approximately four months to complete.

The demobilization/remobilization scope of work is included in this Contract Modification because of the combined effect of the delay (discussed above) and the holiday moratorium shutdown period. Had it not been for the discovery of the archeological findings, the Contractor would have been able to complete work prior to the moratorium thereby not requiring a post-moratorium remobilization back to the area where the findings occurred.





Modification Change Analysis Contract No. 1250

CMod No. 20 Narrative for CMB Page 2 of 2

CONTRACTOR'S COST PROPOSAL

\$218,534.39

As Contained in Change Order Request No. 52, received by the SFMTA on May 17,

2011

NEGOTIATED TOTAL COST

\$131,213.50

As negotiated during Change Order meetings on June 15, 2011/June 22, 2011/July 07,

2011

COST ANALYSIS:

To establish fair equipment standby compensation costs the Resident Engineer reviewed SFMTA field inspector's notes and determined that the first crew's archeological delay began on May 17, 2010. It was also determined that the second crew's archeological delay began a month later on June 17, 2010. All archeological discoveries were fully moved offsite by October 26, 2010, at which point all delayed equipment was able to return to work. The two delay periods associated with this COR (May 17, 2010 – October 26, 2010) equate to 210 working days of delay (116 for the first crew and 94 for the second crew).

Once the durations were determined, the appropriate compensation value was determined using Caltrans rates with specified standby modifier factors. Pursuant to Caltrans Delay Specifications, standby compensation is limited to 8 hours a day with a 40 hour per week maximum limit. Following the Caltrans guidelines, it was determined that the Contractor was entitled to \$101,741.46 in equipment standby costs (before contractual markups). Note that the attached table provides a breakdown of this total equipment cost.

In addition to above equipment delay costs, the Contractor is also compensated in this Contract Modification for additional costs related to the mobilization operations discussed on the previous page. It was agreed that demobilizing and remobilizing operations took approximately 8 hours and 4 hours, respectively. The total cost for the additional mobilizations was determined to be \$9,960.12, consisting of \$5,004.00 in labor and \$4,956.12 in equipment costs (before contractual markups). For detailed breakdown of crew and equipment costs associated with mobilization operations, refer to attached table.

With the above agreements, the total negotiated cost associated with COR No. 52 is \$131,213.50. This total consists of \$5,754.60 in labor, \$122,702.22 in equipment costs, and \$2,756.68 of bonds and insurance markup.

SCHEDULE ANALYSIS:

No firme extension is requested for Part 1 of Contract Modification No. 21.



SYNERGY PROJECT MANAGEMENT, INC^{7/2011}

30 GRANT AVE., SUITE 300 I SAN FRANCISCO, CALIFORNIA 1941 08 415.467.3000 [Fax 415.467.3001



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Date:

July 7, 2011

COR Title:

Archological Equipment Standby (5 months x2 crews)

Change Order Request No.

52

Cost Summary	Direct Cost Subtotal	Overhead	& Profit	Total
Labor	\$5,004.00	15%	\$750.60	\$5,754.60
Material	\$0.00	15%	\$0.00	\$0.00
Equipment	\$106,697.58	15%	\$16,004.64	\$122,702.22
Unit priced items	\$0.00	15%	\$0.00	\$0.00
Subs, Permits & Fees	\$0.00	5%	\$0.00	\$0.00
Subtotal	\$111,701.58			\$128,456.82
Bonds & Insurance	\$128,456.82	2.146%	\$2,756.68	\$2,756.68
Total				\$131,213.50
Time Extension Reque	sted (in working days):			TBD

 Spec. Reference: GP. Drawing Reference: All Standby for Equipment during Archological Delay. This equipment was sitting while What (Description): Synergy waited for the owner to get approval to mitigate the archological material. Synergy asked if the owner wanted to demobilize and was told for several months that work was going to restart in 1 to 2 weeks time after time and to be ready with a full crew and equipment when work did restart. 4th Street between Howard and Folsom 4. Where (Location): July 2, 1905 5. When (Date): 6. How (Rec'd Action): Per direction from RE

Prepared by Donovan

Subject to July 7, 2011

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7/7/2011

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CMB Change No.: ____CMB - 0078

Initial Implementing Change Control Procedure No.:_1251 – CMod Trend #37, 44 and 45

			GENERA	\L		
Proposed Change Sponsor:		M. Acos	ta	F	Received by CMB:	09/12/2012
Affected Disciplines:	Utilities					(Date)
A moded Bloodpinios.	Traffic					
Impacts of Change	1. Tr	rend #37 -	– Gucci St	ore Se	ewer Installation	
	2. Tr	rend #44 -	– Macy's V	Vest S	Sewer Installation	
	3. Tr	rend #45 -	– Union Sc	uare ر	Garage Sewer Installatio	n
Contract(s) Directly Affect	cted by th	is Propo	sed Cha	inge:		
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			hange		Change	2
Senior Program I	Manager:					9-12-12
Deputy Program I	Manager:	10	8h		-	9/12/12
PM Project	Services:					
PM Project Development/	Delivery:	1/2	09 1	2		4/12/2012
SFMTA O & M N	Mana ger:					
SFMTA Safety and	Security		20			
SFC	TA PMO	A	8/2/			12 Sept 12
			Comment	ts		



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CN 1251 TREND NUMBERS 37, 44 AND 45

SFMTA Contract No. 1251 UNION SQUARE/MARKET STREET STATION

UTILITIES RELOCATION

Contractor: Synergy Project Management Inc.

30 Grant Street, Suite 300 San Francisco, CA 94108

SUPPLEMENTAL ANALYSIS (For CMB Presentation)

SCOPE OF WORK:

Compensate the contractor for additional work due to differing conditions encountered during the installation of sewer infrastructure adjacent to Macy's, Union Square Garage and Gucci Store properties. This Modification is limited to the work contained in 22 Force Account Reports (herein referred to as 'FARs') which the Contractor has provided to SFMTA. A summary table of these reports is attached for reference. The general scope of work includes, but is not limited to, installation of sewer mains, modifications to interior plumbing and additional connection to new sewer mains.

REASON FOR CHANGE:

REASON FOR CHANGES TO MACY'S WEST SEWER INSTALLATION: Contract plan page SW-4 shows an existing sewer lateral at the subject property which is to be connected to a newly installed main. However, the existing 8" lateral is too big to be connected directly to the new 14" main thus necessitating a new direct connection between the lateral and a nearby manhole. Numerous existing utilities within the lateral alignment necessitated that the new lateral be installed at a higher elevation (see photos 1 and 2). Due to the raised lateral invert, plumbing modifications within the subject property were also required.

REASON FOR CHANGES TO UNION SQUARE GARAGE SEWER INSTALLATION: Contract plan page SW-3 shows 2EA existing laterals from the Union Square Garage to be connected to the new main at STA 128+55± (see red lines on photos 3 through 5). However, the laterals were found to be connected to the downstream end of the existing main (towards Geary Street). This portion of the main is to be abandoned in 1251 to make room for the future station. In order to maintain continued sewer service after abandonment of this section of the main, installation of new laterals was required.

REASON FOR CHANGES TO GUCCI STORE SEWER INSTALLATION: Contract plans indicated that the sewer lateral at 234 Stockton Street could connect directly to the 3'x5' sewer main on Maiden Lane (see blue lines on photo 3). However, the laterals were found to be connected to the downstream end of the existing main (towards Geary Street). This portion of the main is to be abandoned in 1251 to make room for the future station. In order to maintain continued sewer service after abandonment of this section of the main, installation of new laterals was required.







Modification Change Analysis Contract No. 1251

COST SUMMARY TABLE:

Trend Number:	Sewer Work Location:	Trended Amount:	Contractor's Cost Proposal	Agreed Cost:
44	Macy's West	\$30,000.00	\$23,649.36	\$20,014.23
45	Union Square Garage	\$48,995.53	\$32,055.96	\$25,145.36
37	Gucci Store	\$40,000.00	\$32,219.94	\$25,926.79
	TOTAL	\$118,995.53	\$87,925.26	\$71,086.38

COST ANALYSIS:

Each of the 22 FARs submitted by the Contractor were thoroughly reviewed by SFMTA. Numerous discrepancies were noted by the RE and discussed with the Contractor. After extensive discussions, the Resident Engineer and the Contractor agreed to a total amount of \$71,086.38 to be a fair and reasonable compensation for the extra work performed.

Execution of this Modification will allow SFMTA to compensate the Contactor for differing site condition work encountered during the installation of sewer infrastructure adjacent to Macy's, Union Square Garage and Gucci properties.

SCHEDULE ANALYSIS:

This work does not impact the Substantial Completion Date. There is no time adjustment associated with this Contract Modification.

SUMMARY TABLE FOR CONTRACT MODIFICATION NO. 18
Differing Conditions Encoutered During the Installation of Sewer Infrastructure at Macy's and UMS Garage

TA Approved Amount	rgy Request Amount	Description	Date Performed	Force Account Report Number	ltem Number
2,098.9	\$ 2,159.03	\$ O'Farrel West - Sewer tie in at Macy's	1/20/2012	3066	1
371.1	\$ 375.74	\$ O'Farrel West - Dig for new sewer tie-in at Macy's. Sewer not dipicted correctly on plans.	1/25/2012	3073	2
3,488.4	\$ 4,540.96	\$ O'Farrel West - Sewer repair at Macy's	1/26/2012	3077	3
2,629.0	\$ 4,666.98	\$ O'Farrel West - Macy's sewer lateral installation	1/27/2012	3081	4
3,017.7	\$ 3,261.62	\$ O'Farrel West - Macy's Sewer repair	1/30/2012	3087	5
909.2	\$ 1,145.34	\$ O'Farrel West - AT&T line (repair) at Macy's sewer location	1/30/2012	3089	6
7,499.6	\$ 7,499.69	\$ SFMTA Estimate for Pipe Infill at Macy's	N/A	Pipe Infill	7 .
20,014.2	\$ 23,649.36	\$ Macy's West Subtotal	4-7-11	W TANK	
4,952.7	\$ 6,355.48	\$ Excavation for sewer incorrectly depicted on Contract documents at Stockton West between Maiden Land and Post	4/20/2012	3273	8
5,224.7	\$ 6,985.95	\$ Dig for sewer lateral from parking garage on Stockton. Sewer lateral not per Contract drawings.	4/23/2012	3276	9
4,805.7	\$ 4,265.86	\$ Dig for sewer lateral from parking garage on Stockton. Sewer lateral not per Contract drawings.	4/24/2012	3280	10
5,136.8	\$ 9,423.37	\$ Dig for sewer lateral from parking garage on Stockton. Sewer lateral not per Contract drawings.	4/25/2012	3283	11
5,025.3	\$ 5,025.30	\$ SFMTA Estimate for Misc Plumbing in Union Square Garage	N/A	Misc Plumbing	12
25,145.3	\$ 32,055.96	\$ Union Square Garage Subtotal			
7,598.2	\$ 7,598.24	\$ Misc. plumbing work inside 234 Stockton Street basement as required to reroute sewer connection	7/11/2012	Works Plumbing	13
3,739.7	\$ 4,7'35.57	\$ Dig sewer lateral at 234 Stockton. Change in condition.	7/9/2012	3429	14
3,008.2	\$ 5,000.35	\$ Dig sewer lateral at 234 Stockton. Change in condition.	7/10/2012	3431	15
2,838.5	\$ 4,375.31	\$ Dig sewer lateral for 234 Stockton. Change in plans.	7/11/2012	3434	16
736.9	\$ 931.41	\$ Dig for sewer connection 234 Stockton. Change from drawings.	7/17/2012	3437	17
1,267.1	\$ 426.04	\$ Core into existing building at 234 Stockton for new sewer connection (change in plans).	7/18/2012	3441	18
2,071.2	\$ 2,546.92	\$ Verify and install 8" VCP for sewer connection at Gucci.	7/12/2012	3444	19
1,225.1	\$ 1,843.\$2	\$ Backfill sewer at 240 Stockton (Maiden Lane).	7/30/2012	3458	20
2,398.7	\$ 3,635.10	\$ Backfill sewer at 240 Stockton (Maiden Lane).	7/31/2012	3461	21
1,042.7	\$ 1,127.68	\$ Installation of sewer at 240 Stockton.	8/6/2012	3477	22
25,926.79	\$ 32,219.94	\$ Gucci Store Subtotal			
71,086.3	\$ 87,925.26	\$ TOTAL			





