# central **T**subway

# Laying the Slab at YBM

Work on the mezzanine level floor slab is nearing completion, and excavation of the platform level will soon begin.





May 2016









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<u>Cover photo:</u> Rebar is cut to fit in specific spaces inside the Yerba Buena/ Moscone station box. One man uses a cutting torch to make precise cuts, while another holds the bars to prevent movement. The last section of rebar cage assembly for the mezzanine level is almost complete, and once concrete is poured and forms removed, the mezzanine's floor slab will be complete. More photos can be found starting on page 34.

<u>Above photos</u>: Workers re-fit a bucket on a mini excavator inside the north access shaft, where excavation has recently resumed. Once fully excavated and built out, this shaft will serve as an emergency exit, located at the north end of the Chinatown Station platform.

See the Appendix E final page for CS websites hyperlinks and public outreach on line resources. The Project main web site is at: <u>http://www.centralsubwaysf.com/</u>



A backhoe fitted with a large jackhammer pulverizes large pieces of concrete removed from the north headwall.

# **Executive Summary**

Continue excavation at YBM, UMS and CTS Stations for the future stations.

**Chinatown Station -** Headhouse: excavated to Temp level 4.0 Struts; install Walers and Struts Level 4. Crosscut Cavern: Begin tunneling under Stockton Street. Incidental street work, monitoring, surveying. North Emergency Egress Shaft - excavation continued late-May.

**Union Square/Market Street Station** - North Concourse: Completed compensation grout pipe installation. Platform Station: Began excavating and chipping piles for roof deck 10-5B. Drilled and installed compensation grout pipes and commenced preconditioning compensation grout pipes. South Concourse: Excavate/grade for concourse invert slab, fine grade/install base and slab drain pipes, form and pour mud slab. Install waterproofing. Ellis Annex: Remove and replace seismic joint, water test seismic joint, install waterproofing, grout protection course and lightweight concrete. UMS Garage: Continue demolition on the level 4 slab. Completed micropile installation on the Geary Street.

**Yerba Buena/Moscone Station -** Concourse level concrete pour 3 of 3 completed. Continue excavation and temporary bracing installation in headhouse below the Concourse level to allow excavation to Invert level (bottom of station). Break through and remove tunnel liner to allow excavation to Invert level within station box. Continue utility installation on 4th Street north of the north headwall. Place shotcrete for interior walls in Mezzanine.

**Surface, Track and Systems**– Continue Muni ductbank installation. Continue 78" sewer rehabilitation. Continue 36" sewer force main. Continue Auxiliary Water Supply System (AWSS) installation. Continue water line work. Continue OCS pole foundation installation. Continue tunnel drainage system installation. Continue tunnel invert slab work.

Tunnel - Contract administrative closeout is ongoing.

Total project costs to date are \$941.29 million, an increase of \$11.35 million over last month. The total cost to date equals 59.64% of the total project budget of \$1.578 billion. The Master Project Schedule forecast the Revenue Service Date of June 2019.

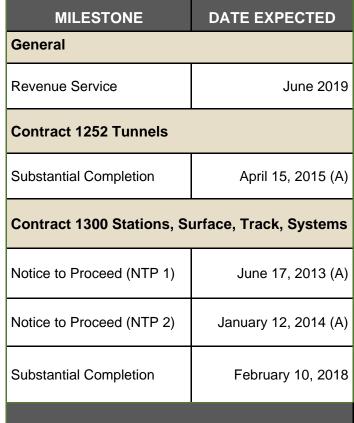
The Stations Contractors' Safety Reports show no recordable accidents took place this month and the rates of work site accident incidents by the man hours worked continue to be below industry standards - see tables on page 29.

# **Key Milestones**

#### Preparing Station walls for drilling and grouting work



**1** Workers saw-cut to a specified depth along the pile walls





2 Crews jackhammer away material below saw cut lines to flatten wall surface



**3** Drill rigs are set up, and soil grouting work begins

# **Costs and Schedule**

#### Costs (See Appendix A for Details)

The Current Cost Estimate (CCE) for the Central Subway Project is **\$1.578 billion** in year of expenditure dollars (\$YOE). This total project cost is shown at the top of Report 7.1, Program Project Budget. This capital cost projection incorporates allocated and unallocated contingencies to cover the risks associated with the project completion.

Total net incurred costs for the project are \$941.29 million, a \$11.35 million increase over last month. The cost to date figure reflects expenditures through FAMIS 786 Report (\$902.93 million) plus the utilities joint trench Form B Reimbursement payment (\$10.52 million), invoices currently being processed (\$20.07 million) and estimates of outstanding pay requests (\$7.77 million). This incurred amount equals 59.64% of the total project budget of \$1.578 billion.

The current funding level to date is \$1,179.79 million. This represents 75% of the total project budget.

#### Earned Value Analysis

In May 2016 Report, the Preliminary Earned Value Analysis reports is based on the SFMTA May Schedule Update. The Planned Value, Earned Value, Actual Cost, Percent Complete and resulting indexes as follows:

#### **Preliminary May Earned Value**

Overall Budgeted Cost:	\$1,578,300,000
Planned Value:	\$1,212,596,433
Earned Value:	\$947,153,898
Actual Cost:	\$941,290,172
Schedule Performance Index (SPI):	0.78
Cost Performance Index (CPI):	1.01
Percent Complete:	60%

#### Schedule Highlights - Continued

The Master Project Schedule (MPS) below includes progress through May 2016. The May 2016 Schedule Update submittal from Contract 1300 Contractor is rejected due to incorrect schedule logic. The Contract 1300 schedule represented in this report is based on the SFMTA May 2016 Schedule Update.

The MPS shows a forecast Revenue Service Date of June 2019.

The controlling critical (longest) path of the MPS runs through CTS Excavation succeeded by STS Startup & Testing, Commissioning and Pre-Revenue Activities to the Baseline Finish and Revenue Service Date. See Appendix B – Longest Path. The latest schedule shows the longest path running through the Chinatown Station (CTS). Contractor is required to implement a Recovery Schedule to put the Project back on schedule.

Schedule Contingency is fully utilized on the critical path of the MPS, which is below the Minimum Schedule Contingency level of 6 months. A schedule re-evaluation will be performed, utilizing the updated Contract 1300 Schedule. Recovery options are being implemented in key areas as work proceeds. SFMTA continues to meet with Contractor to discuss all schedule concerns and comments. The Contractor, Tutor Perini Corporation's (TPC) at CTS commenced a new schedule activity, SEM Mining during the month of May. TPC experienced initial lower production rates during this mining activity that resulted in a lost 14 calendar days in month of May. TPC has since improved its production rate by completing one SEM side drift advance per shift. It is not unusual for SEM production rates to initially fall behind at activity startup. TPC has identified mitigation measures, working weekends and re-sequencing critical path activities to recover lost time. Contract 1300 Schedule delay in May results in the forecast Revenue Service Date slipping to June 14, 2019.

Contract 1300 Contractor submitted eighteen (18) Schedule Updates from December 2014 to May 2016. SFMTA rejected nine (9) Schedule Updates from September 2015 to May 2016. Contractor has been directed to develop a Recovery Schedule as required by Contract and correct out-of-sequence and Retained Logic driving many of the forecast dates. Review of schedule updates as well as identifying recovery options is ongoing.

#### Contract 1300 Stations, Surface, Track and Systems

The Contractor, Tutor Perini Corporation's (TPC) baseline schedule is incorporated into the master program. The preliminary SFMTA Contract 1300 May 2016 schedule is used within the May Report. The SFM-TA Contract 1300 May 2016 schedule is based on the approved baseline schedule logic with adjustments made for fixing retained logic and lags. SFMTA met with TPC on 6/2/16 to review the draft May 2016 monthly schedule update and emphasized to TPC that they should not submit revised schedule logic within this monthly update. The SFMTA will continue to use their Contract 1300 schedule update as a forecasting tool going forward until the Contract 1300 Contractor submits an acceptable schedule that addresses all of



As new sections of sewer pipe are installed in this trench on the east side of 4th, completed sections are backfilled and soil is compacted.

## Schedule Highlights - Continued

SFMTA scheduling concerns.

#### Work Package P-1254R (CTS) has performed the following work this month:

- Head house- excavated to Temp Level 4.0 Struts; install Walers and Struts Level 4
- Cross Cut Cavern: Begin tunneling under Stockton Street
- Incidental street work, monitoring, surveying
- North Emergency Egress Shaft excavation continued late-May

#### Work Package P-1253 (UMS) has performed the following work this month:

- Stockton Street closure between Geary and Ellis and there is no Southbound lane on Stockton between Post and Geary; Ellis Street one lane
- North Concourse: Chipped vertical drain slots and chipped piles for shotcrete leveling course. Installing horizontal drain pies and welded wire fabric. Installed 10 compensation grout pipes
- Platform Station: Began excavating and chipping piles for roof deck 10-5B. Continued excavation under roof deck. Drilled and installed compensation grout pipes and commenced preconditioning.
- South Concourse: Excavate/grade for concourse invert slab, chip/prep piles for stub beams and vertical drain slot, fine grade/install base and slab drain pipes, form and pour mud slab. Install waterproofing.
- Ellis Annex: Remove and replace seismic joint, water test seismic joint, install waterproofing, grout protection course and lightweight concrete.
- UMS Garage: Continue demolition of 17-Line wall between USG and North Concourse. Continue micropile installation on the Geary Street Wall. Continue FRP B-line wall

#### Work Package P-1255 (YBM) has performed the following work this month:

- Concourse level concrete pour 3 of 3 completed
- Continue excavation and temporary bracing installation in head house below the Concourse level to allow excavation to Invert level (bottom of station)
- Break through and remove tunnel liner to allow excavation to Invert level within station box
- Continue utility installation on 4th Street north of the north headwall
- Place shotcrete for interior walls in Mezzanine

#### Work Package P-1256 (STS) has performed the following work this month:

- Continue Muni ductbank installation
- Continue 78" sewer rehabilitation
- Continue 36" sewer force main
- Continue Auxiliary Water Supply System (AWSS) installation
- Continue water line work
- Continue OCS pole foundation installation
- Continue tunnel drainage system installation
- Continue tunnel invert slab work

# Master Project Schedule - (December Update)

	Acounty name	Original	2016				2017				2018			2019	19		3	2020	
		Duration	02	8	04	e E	02 0	Q3 Q4	4 Q1	60	8	8	<u>1</u>	62	63	04	5	62	8
CENTRAL	CENTRAL SUBWAY PROJECT	4325												Ĩ	CENTRAL	CENTRAL SUBWAY PROJECT	COLECT		
Program Le	Program Level Milestones	4182	1	1	┢	<b> </b>			┞		<b> </b>	<b> </b>		Ĩ	Program Lie	Program Level Milestones	88 U 88		
PJD1000	Central subway Project start	•																	
M\$0004A	Tunnel Excavation Complete - Project Milestone #4A	•																	
MS0019	Baseline Finish Date: 12-26-2018	•												٠	Baseline Fil	Baseline Finish Date: 12-26-2018	12-26-2018		
6000SW	CSP Revenue Service Date	•								L	ļ			٠	CSP Reven	<ul> <li>CSP Revenue Service Date</li> </ul>	Date	<b></b>	
Preliminary	Preliminary Engineering Phase	2661																	
Final Design	-	1811																	
Light Rail Vehicles	ehicles	2035			┢	1			┞		<b> </b>	Ī	Light Rall Vehicles	clea					
Real Estate		3130	2	Real Estate															
Construction Phase	on Phase	2606												ľ	<ul> <li>Construction Phase</li> </ul>	on Phase			
Constructio	Construction Support and Costs	2697		1	┢	1	-		┞		<b> </b>			Ĭ	onstruction	Construction Support and Costs	nd Costa		
Constructio	Construction Utility Contract #1- MOS & Portal CN-1250	202																	
Constructio	Construction Utility Contract #2 - UMS CN-1251	643																	
Constructio	Construction Tunnels CN-1252	1470	Š	etruction .	Construction Tunnels CN-1252	1-1252													
Construction CN-1300	n CN-1300	1706												Constru	Construction CN-1300	300			
CN-1300 Milestone	lestone	1512		1	ľ	<b> </b>			╞			<b> </b>		CN-130	CN-1300 Milestone				
Constructio	Construction UMS Station P-1253	1706		-			-	-					Constr	Construction UM\$ station P-1253	Station Pi-1	1253			
Constructio	Construction CTS Station P-1254R	1525											Constru	Construction CTs Station P-1254R	Station P-1	1254R			
Constructio	Construction YBM Station P-1255	1642				-					<b>.</b>		Constru	Construction YBM station P 1255	Station P-1	1255			
Constructio	Construction \$TS P-1256	1527												Construct	Construction \$1\$ P-1256	1256		<b> </b>	
Project Start Up	t Up	18													Project Start Up	đ			
Unallocated	Unallocated Contingency	115													Unallocated	Unallocated Contingency	lcy		
C01.700	Cost Activity Unallocated Contingency (LOE) - 1.7.500.99.090.00 - Continuance	115													Cost Activit	ty Unalloca	Cost Activity Unallocated Confingency (EOE) - 1.7.	ancy (¢OE	17.1-C



A worker looks down onto shotcrete operations from a platform where shotcrete mixing and pumping equipment is located.

# **Contracts & Construction**

#### **Construction Contracts In Progress**

#### Contract 1300: Combined Work Packages 1253, 1254, 1255, 1256

- Contractor:
- Tutor Perini Corporation
- Amount: \$842.94 million
- Contract Status: 46.15% complete construction

#### **Contracts Completed**

**Contract 1250: Moscone Station and Portal Utilities Relocation** 

Contract 1251: Union Square/Market Street Station Utility Relocation

Contract 1277: Pagoda Theater Site Demolition (Funded separately from the CS Project budget)

Contract 1252: Central Subway Tunneling

Contract SBE Participation (Updated Quarterly) See Appendix E

#### See Appendix D

# **Stations, Surface, Track and Systems**

Contract 1300 Contractor: Tutor-Perini Corporation

#### **Description of Work**

The Contract 1300 scope is to construct the Central Subway's three subway stations, one surface station, construct the 2,000 feet of surface track, and install track and operating systems throughout the new alignment. The separate station and systems work packages are presented in the following pages.

Work includes station finishes, AC and DC substations, elevators, escalators, lighting, emergency ventilation fans, HVAC fire alarm/ suppression/ protection, Cutter Soil Mixing, secant pile bottom up and Sequential Excavation Method construction, settlement monitoring, building protection, connecting to and modifying the BART Powell Street Station, PA, CCTV, signage, installation of fare collection equipment and station start-up and commissioning.

Contract I	Details	Budget/Expe	nditures⊾
Contract Awarded:	May 21, 2013	Current Budget	\$859,601,400
Notice to Proceed:	June 17, 2013		
Substantial Completion:	February 10, 2018	7, 2013         Expenditures to Date         \$380,879,76           676,400         259,676	\$380,879,767
Contract Award Value:	\$839,676,400		
Modifications to Date:	\$3,259,676		
Current Contract Value :	\$842,936,076		

#### 1300 Summary Schedule

				20	14			201	15		2	016			20	17			20	10			201	9
	2 Q3	Q4	Q1	Q2	Q3 (	24	Q1	Q2	Q3 Q	4 Q	1 Q2	Q3	Q4	Q1	Q2	Q3 (	Q4	Q1	Q2	Q3	Q4	Q1	Q2 (	23 Q4
CENTRAL SUBWAY PROJECT	-																							
Construction Phase																								
Construction CN-1300		-																						
CN- 1300 Milestone	<b>(</b>								٠		ł										4			
Construction UMS Station P-1253				1					ļ	K			        					1	ו י י י					
Construction CTS Station P-1254R		י ו						T					.     .			····			••••• •					
Construction YBM Station P-1255											Ļ					1								
Construction STS P-1256				H.								.i	;   			,								

# **Chinatown Station**

#### Contract 1300 - Work Package 1254R



#### **Current Work Status**

- Head house- excavated to Temp Level 4.0
   Struts; install Walers and Struts Level 4
- Cross Cut Cavern: Begin tunneling under Stockton Street
- Incidental street work, monitoring, surveying
- North Emergency Egress Shaft excavation continued late-May

#### Work Expected Next Month

- Crosscut Cavern: continue tunneling under Stockton Street
- Compensation grouting may take place
- Head house No work until Crosscut Cavern top headings are completed

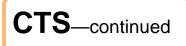
#### **Description of Work**

This Work Package is to construct one subway station. Includes station finishes, AC and DC Traction Power substations elevators, escalators, lighting, emergency ventilation fans, HVAC fire alarm/ suppression/ protection, slurry wall top-down construction, settlement monitoring, building protection, PA, CCTV, signage, installation of fare collection equipment and station start-up and commissioning.

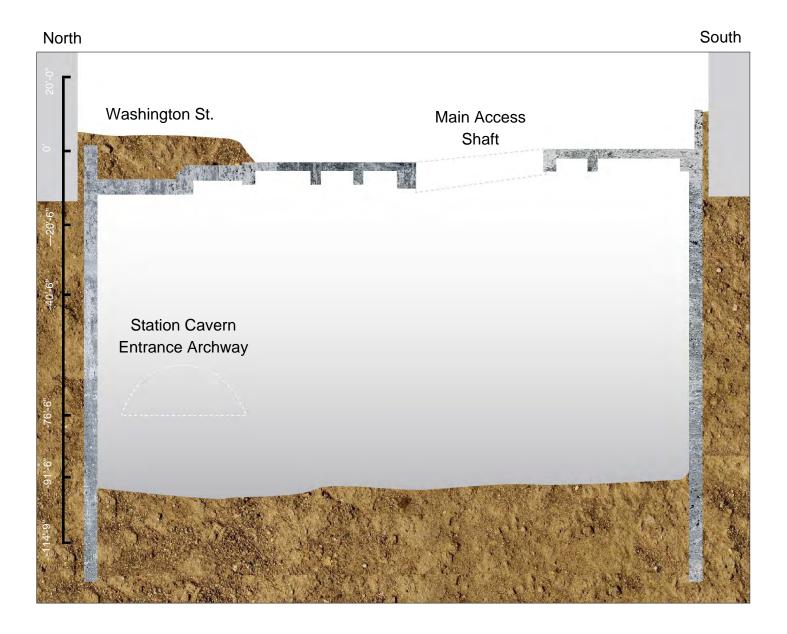


#### Three Month Look Ahead

- Head house: Construct Level 3 composite wall, complete Temp level 5.0 Struts, Complete Level 6 excavation and install Level 6 Struts
- Compensation grouting on as-needed basis
- Crosscut Cavern: Complete Cross Cut Cavern excavation and primary lining; Begin Platform Cavern excavation



#### **Station Excavation and Construction Progress Section**



Contract	Details
Contract Awarded:	May 21, 2013
Notice to Proceed:	June 17, 2013
Substantial Completion:	February 10, 2018
Contract Award Value:	\$247,567,810
Modifications to Date:	\$2,677,458
Current Contract Value:	\$250,245,268

#### Budget/Expenditures 🔊

Current Budget	\$252,492,810
Expenditures to Date	\$99,722,517

#### CTS Three Month Schedule

ivity ID	Activity Name			2	2016			
		May	Jun	Jul	Aug	Sep	Oct	I
CENTRAL SU	BWAY PROJECT							
Construction F	Phase							
Construction CN-								
Construction CTS								
CTS.31.71.355	Install Remaining Barrel Vault Piping (1-7, 49-55, s1-s12) = 26ea						1	
CTS.31.50.900	CTS_CN Install Temp Level 4.0 Struts & Wales & Preload Col. 4.0-11.0			+			+	
CTS.31.71.020	Break-In & Construct Top Sidewall & Headwall Left - Crosscut Cavern							
CTS.31.71.030	Break-In & Construct Top Sidewall & Headwall Right - Crosscut Cavern							
CTS.33.51.110	CTS_Perform: Utilities: Gas Line Washington/Stockton							
CTS.01.78.100	CTS Prep/Submit Warranties (Prior to Substantial Completion)							
CTS.31.71.040	Break-In & Construct Top Center Drift & Headwall - Crosscut Cavern			+				
CTS.31.43.140	CTS Compensation Grouting - As Required							
CTS.31.71.050	Excavate & Construct Sidewall Bench & Headwall Step 3 Left Heading - Crosscut							
CTS.31.71.060	Excavate & Construct Sidewall Bench & Headwall Step 3 Right Heading - Crosscu							
CTS.31.71.070	Excavate & Construct Step 4 Left Heading Invert & Headwall - Crosscut Cavern			i				
CTS.31.71.075	Excavate & Construct Step 4 Right Heading Invert & Headwall - Crosscut Cavern						+	
CTS.31.71.080	Excavate Step 5 Bench 1 & Construct Headwall - Crosscut Cavern							
CTS.31.71.090	Excavate Step 6 Bench 2 & Construct Headwall - Crosscut Cavern							
CTS.31.71.100	Excavate & Support Step 7 Invert - Crosscut Cavern							
CTS.31.71.390	Breakout Remaining Cross-Cut Cavern Opening							
CTS.31.71.400	Temporary Backfill Cross Cut Invert for Platform Cavern Excavation						+	
CTS.31.71.440	Barrel Vaults at South Platform Cavern Excavation							
CTS.31.71.410	Barrel Vaults for North Platform Cavern Excavation							
CTS.31.71.450	Breakin Top Benches for South Platform Cavern Excavation							
CTS.31.71.465	Excavate & Support Top Left Heading South Platform Cavern 176Lf							
CTS.31.71.460	Excavate & Support Top Right Heading South Platform Cavern 178Lf			+ 		_		
CTS.33.31.300	CTS_Backfill & Complete Permanent Sewer Work In Washington St.							
CTS.31.71.550	Excavate & Support Top Right Bench South Platform Cavern 176Lf							
CTS.31.71.560	Excavate & Support Top Left Bench South Platform Cavern 176Lf						-	
CTS.31.71.420	BreakinTop / Bench Sidewalls for North Platform Cavern Excavation							
CTS.33.11.220	CTS_Complete Water Distribution - Washington St			1			[	
CTS.31.71.580	Excavate & Support Top Left Step 3 Invert South Platform Cavern 178Lf							
CTS.31.71.570	Excavate & Support Top Right Step 3 Invert South Platform Cavern 176Lf							
CTS.32.13.270	Re-open Washington Street							

Schedule: Contract 1300 May 2016 Update

# **Union Square/Market Street Station**

#### Contract 1300 Work Package1253

#### **Description of Work**

This Work Package is to construct one subway station. Includes station finishes, AC and DC Traction Power substations elevators, escalators, lighting, emergency ventilation fans, HVAC fire alarm/ suppression/ protection, slurry wall top-down construction, settlement monitoring, building protection, PA, CCTV, signage, installation of fare collection equipment and station start-up and commissioning.

#### **Current Status This Month**

- Stockton Street closure between Geary and Ellis and there is no Southbound lane on Stockton between Post and Geary; Ellis Street one lane
- North Concourse: Chipped vertical drain slots and chipped piles for shotcrete leveling course. Installing horizontal drain pies and welded wire fabric. Installed 10 compensation grout pipes
- Platform Station: Began excavating and chipping piles for roof deck 10-5B. Continued excavation under roof deck. Drilled and installed compensation grout pipes and commenced preconditioning
- South Concourse: Excavate/grade for concourse invert slab, chip/prep piles for stub beams and vertical drain slot, fine grade/install base and slab drain pipes, form and pour mud slab. Install waterproofing
- Ellis Annex: Remove and replace seismic joint, water test seismic joint, install waterproofing, grout protection course and lightweight concrete
- UMS Garage: Continue demolition of 17-Line wall between USG and North Concourse. Continue micropile installation on the Geary Street Wall. Continue FRP B-line wall

#### Work Expected Next Month

- Restore one lane on Stockton Street between Post and Geary Streets. O'Farrell full closure has been requested
- North Concourse: Complete backfill and install paving. Below deck: continue installation of nelson studs and shotcrete leveling course. Complete installation of compensation grout pipes and continue preconditioning
- Platform Station: For roof deck 10-5B: set/weld beams, install waterproofing, install concrete. Continue installing jet grout columns. Continue excavation
- South Concourse: Move jet grout spoils handling to Roof Deck 3B. Chip/prep piles for stub beams/ vertical drain slots. Install pipe, fabric, and shotcrete

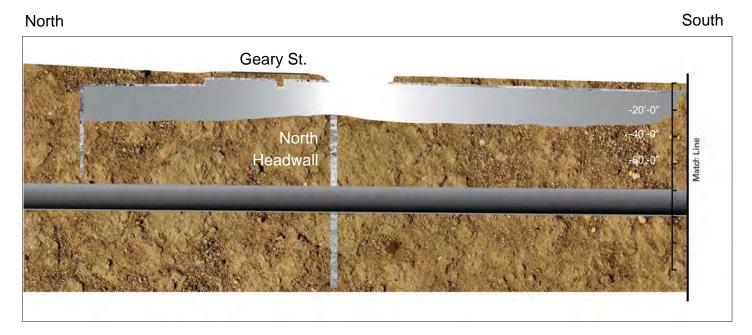


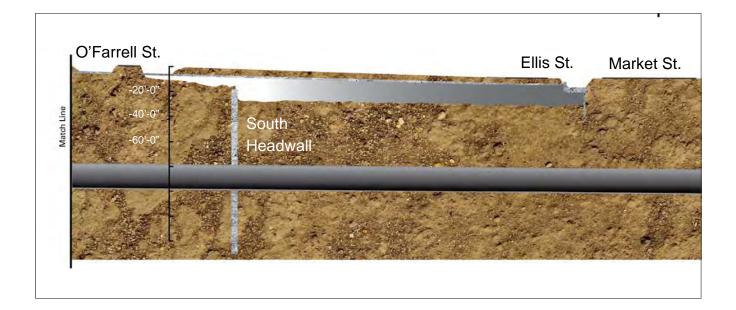
- Ellis Annex: Remove and replace seismic joint, install steel plates, water test seismic joint, install waterproofing, grout protection course and lightweight concrete
- UMS Garage: Continue demolition of 17-Line wall between USG and North Concourse. Complete demolition of garage floor slab and complete micropile installation. Complete FRP B-line wall

#### Three Month Look Ahead

- Platform Station: Continue jet grout activities; backfill, install utilities and restore street; dewatering; install permanent wales; excavate bench; install studs, mesh, drain pipe & shotcrete pile walls
- Access Shaft: break through battered piles & frame construction
- North Concourse: MRY conductor installation, continue compensation grout pipe installation and preconditioning, station power installation and gas line installation
- Ellis Street: Pave Stockton/Market/Ellis Street & intersection
- UMS Garage: Complete structural demolition; Complete underpinning and foundation work, commence fan level excavation within garage. Commence new foundations and erection of structural steel

#### **Station Excavation and Construction Progress Section**





#### Union Square Market Street Station Construction - Continued

Contract I	Details
Contract Awarded:	May 21, 2013
Notice to Proceed:	June 17, 2013
Substantial Completion:	February 10, 2018
Contract Award Value:	\$294,030,590
Modifications to Date:	\$191,294
Current Contract Value:	\$294,221,884

#### Budget/Expenditures

Current Budget	\$299,030,590
Expenditures to Date	\$155,544,204

# **UMS Three Month Schedule**

ty ID	Activity Name			2	016			
		May	Jun	Jul	Aug	Sep	Oct	
ENTRAL SUBV	VAY PROJECT							
onstruction Pha	se							
Construction CN-13	00							
Construction UMS St	ation P-1253							
Drilled Shafts								
Compensation Gro	uting			+			+	
UMS.31.43.0760	UMS_Install Compensation Grout Tubing - North of Geary - Aurthur Beren			1				
UMS.31.43.0770	UMS_Install Compensation Grout Tubing - North of Geary - Gucci							
UMS.31.43.290.2b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens							
UMS.31.43.720.3a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marcu		-					
UMS.31.43.740.3a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton Sta			+			·}	
UMS.31.43.740.2a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton Sta		-					
UMS.31.43.720.2a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marcu		-					
UMS.31.43.720.1a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marcu		-					
UMS.31.43.300.2b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome							
UMS.31.43.290.3b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens			÷				
UMS.31.43.300.3b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome		-					
UMS.31.43.300.1b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome		-					
UMS.31.43.740.1a	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton No							
UMS.31.32.0070	UMS_Jet Grout Under South Wall Footings - USG							
UMS.31.43.290.4b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens							
UMS.31.43.300.4b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome							
UMS.31.43.280.4a	UMS_ Install Compensation Grouting Tubes - South of O'Farrell St - Barney's of							
UMS.31.43.310.4a	UMS_ Install Compensation Grouting Tubes - South of O'Farrell St - Crate & Bar		-	ļ.				
UMS.31.32.0220	UMS_Jet Grout 90 Day Cure Period - USG						<b></b>	
Demolition				1			1	
UMS.31.50.0040	UMS_ Install Bracing & Shoring for Walls & Slabs							
UMS.02.41.0150	UMS_Demo South Entrance For BART Elevator Powell St Station							
UMS.02.41.430	UMS_Complete Demo South Headwall							
UMS.02.41.0440	UMS_Complete Demo North Headwall							
Roof Deck Excavati	on,Construction,Restoration							
Excavation & Supp	ort							
UMS.03.37.0665	UMS_ Install Drain Pipe & Grout Fill Void Between Piles - Roof To Concourse Lev							
UMS.05.12.0690	UMS_ Install Permanent Wales - Concourse Level Sta 132+50 to North Headwall							
UMS.31.20.0685	UMS_Excavate Platform Box Bench For Wales & Struts - Concourse Level Sta 13							
UMS.31.41.0240	UMS_Install Sheet Piles @Access Shaft #2 (O'Farrell)							
UMS.31.20.1365	UMS_Shore Tunnel and ready for break in- Sta 132+50 To North Headwall							
UMS.31.50.0250	UMS_Excavate. Lag & Support @ Access Shaft #2 (O'Farrell)							
UMS.31.20.0660	UMS_Complete Excavate South Concourse to Invert							
UMS.31.50.0560	UMS_Install Spiling @ Access Shaft #2 & Excavate to Pile Face							

Schedule: Contract 1300 May 2016 Update

# Yerba Buena/Moscone Station

#### Contract 1300 - Work Package 1255



#### **Current Status**

- Concourse level concrete pour 3 of 3 completed
- Continue excavation and temporary bracing installation in head house below the Concourse level to allow excavation to Invert level (bottom of station)
- Break through and remove tunnel liner to allow excavation to Invert level within station box
- Continue utility installation on 4th Street north of the north headwall
- Place shotcrete for interior walls in Mezzanine

#### Work Expected Next Month

- Demo and remove tunnel liner segments
   within Station Box
- Continue excavation and Temporary Strut Bracing Level 6 installation in Station Box and Head House to allow Invert level slab construction
- Continue utility installation on 4th Street north of the north headwall
- Continue placing shotcrete interior walls in Mezzanine and Concourse

#### **Description of Work**

This Work Package is to construct one subway station. Includes station finishes, AC and DC Traction Power substations elevators, escalators, lighting, emergency ventilation fans, HVAC fire alarm/ suppression/ protection, slurry wall top-down construction, settlement monitoring, building protection, PA, CCTV, signage, installation of fare collection equipment and station start-up and commissioning.



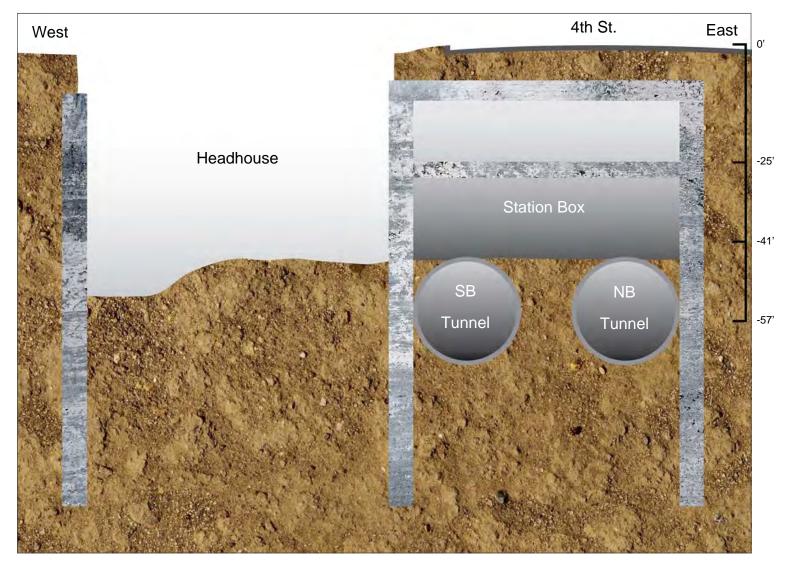
#### Three Month Look Ahead

- Install Station Level 6 Temporary Struts; Excavate station and head house to Invert
- Prepare for installation of Invert Level Slabs in Station Box and Headhouse
- Utility installation at intersection of 4th Street with Howard Street and Folsom Streets
- Continue shotcrete interior walls
- Restore roadway on 4th Street



#### **Station Excavation and Construction Progress Section**





#### Yerba Buena Moscone Station Construction - Continued

Contract Details						
Contract Awarded:	May 21, 2013					
Notice to Proceed:	June 17, 2013					
Substantial Completion:	February 10, 2018					
Contract Award Value:	\$158,089,000					
Modifications to Date:	(\$1,073,031)					
Current Contract Value:	\$157,015,969					

Budget/Expenditures 🔺					
Current Budget	\$163,089,000				

Expenditures to Date

\$86,384,227

#### **YBM Three Month Schedule**

Activity Name				2016			
	Мау	Jun	Jul	Aug	Sep	Oct	
WAY PROJECT							
nase							
300						1	
Station P-1255							
F/R/P Station Concourse Level Slab Pour 1							
F/R/P Station Concourse Level Slab Pour 2							
YBM_CN - Install In Slab Drains Concourse Sector 1							
Open all Traffic- 4th Street						1	
F/R/P Station Concourse Level Slab Pour 5						1	
F/R/P Station Concourse Level Slab Pour 6							
Install Level 6 Struts			1				
Remove Station Level 4 Struts			<b></b>				
YBM_Install: Elect: Roadway Lighting (26 56 19)							
Excavate Station to Invert Level							
YBM_IV - Under-Platform Install -12" Dia Underground Pipe Duct Sector 1							
YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 106			1				
YBM_IV 302 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry							
YBM_IV 302 - Traction Power Rm: Install - SB Traction Power Ductbank Slurry1							
YBM_PL_Install Ductbanks - NB Positive Feeder TPSS RM Penetrations to PB-0							
Waterproofing along Slurry Walls- Stations Invert Slab (Side Only)							
YBM_IV - Under-Platform Install -12" Dia Underground Pipe Duct Sector 2			1			1	
YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207							
YBM_PL_Install Ductbanks - SB Positive Feeder TPSS Rm Penetrations to PB-0							
Place 4" Aggregate Base- Station Invert Slab							
Place 4" Mud Slab- Station Invert Slab							
Waterproofing top of 4" Mud Slab- Stations Invert Slab			1			<b>—</b>	
Place 2"-3" Protective Concrete- Station Invert Slab (Over Waterproofing)							
Form/ Rebar- Station Invert Slab Col 00-02							
YBM_IV 302 - Traction Power Rm: Install -Positive Feeder Conduit To PB01 & PB(							
YBM_IV Install Trench Drains & CB's- Station Invert Slab							
Form/ Rebar - Station Invert Slab Col 02-04						-	
Place Concrete- Station Invert Slab Col 00-02						1	
Form/ Rebar - Station Invert Slab Col 04-06						1	
Place Concrete- Station Invert Slab Col 02-04						1	
Form/ Rebar - Station Invert Slab Col 06-08							
	WAY PROJECT INSE	May           WAY PROJECT           Iase           300           Station P-1255           F/R/P Station Concourse Level Slab Pour 1           F/R/P Station Concourse Level Slab Pour 2           YBM_CN - Install In Slab Drains Concourse Sector 1           Open all Traffic-4th Street           F/R/P Station Concourse Level Slab Pour 5           F/R/P Station Concourse Level Slab Pour 6           Install Level 6 Struts           Remove Station Level 4 Struts           YBM_Instal: Elect: Roadway Lighting (26 56 19)           Excavate Station to Invert Level           YBM_INT-Under-Platform Install -12" Dia Underground Pipe Duct Sector 1           YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 1           YBM_IV 2 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry 1           YBM_IV 302 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry 1           YBM_IV 2 - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 2           YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207           YBM_IV - Under-Platform Install - Stabio Invert Slab (Side Only)           YBM_VV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207           YBM_VV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207           YBM_VV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207 </td <td>May     Jun       WAY PROJECT       ase       300       Station P-1255       F/R/P Station Concourse Level Slab Pour 1       F/R/P Station Concourse Level Slab Pour 2       YBM_CN - Instal In Slab Drains Concourse Sector 1       Open all Traffic- 4th Stret       F/R/P Station Concourse Level Slab Pour 5       F/R/P Station Concourse Level Slab Pour 6       Instal Level 6 Struts       Remove Station Level 4 Struts       YBM_Instal: Elect: Roadway Lighting (28 56 10)       Excavate Station to Invert Level       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 1       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 106       YBM_IV - Under-Platform Install - Sub-Up Underground Pipe Duct to Aux 107       YBM_IV 202 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry       YBM_IV 202 - Traction Power Rm: Install - SB Traction Power Ductbank Slurry       YBM_IV 202 - Traction Power Rm: Install - SB Traction Power Ductbank Slurry       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 2       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Un</td> <td>May     Jun     Jul       WAY PROJECT     Image: State of the state o</td> <td>May     Jun     Jul     Aug       WAY PROJECT     Nase     Nase     Nase     Nase       Station P-1255     FRIP Station Concourse Level Slab Pour 1     FRIP Station Concourse Level Slab Pour 2     YBM_CN - Instal In Sibb Drains Concourse Sector 1       Open all Traffic- 4th Street     FRIP Station Concourse Level Slab Pour 5     FRIP Station Concourse Level Slab Pour 5       FRIP Station Concourse Level Slab Pour 6     Instal Level 6 Struts     Instal Level 6 Struts       Remove Station Concourse Level Slab Pour 7     FRIP Station Concourse Level Slab Pour 6       Instal Level 6 Struts     Remove Station to Invert Level       YBM_IV - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 1       YBM_VU - Under-Platform Instal - Stub-Up Underground Pipe Duct back Slurry       YBM_VI 302 - Traction Power Rm: Instal - Natcation Power Ductbank Slurry1       YBM_VU 302 - Traction Power Rm: Instal - Nate Pacific Power Ductbank Slurry1       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12'' Dia Underground Pipe Duct Sector 2</td> <td>May     Jun     Jul     Aug     Sep       WXY PROJECT     Image: Sep     Image: Sep     Image: Sep     Image: Sep     Image: Sep       Store F-1255     F/R/P Station Concourse Level Slab Pour 1     Image: Sep     Image: Sep       F/R/P Station Concourse Level Slab Pour 2     Image: Sep     Image: Sep       YBM_CN- Install In Slab Drains Concourse Sector 1     Image: Sep     Image: Sep       Open all Traffic - 4th Street     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       Instal Level 6 Struts     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       Remove Station Level 4 Struts     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       YSM_V - Under-Platform Install - 12/D ia Underground Pipe Duct 5 Active 1     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 108     Image: Sep     Image: Sep       YSM_V V 302 - Traction Power Rm: Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct Sector 2     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Du</td> <td>May     Jun     Jul     Aug     Sep     Oct       WAY PROJECT     1356     140     141     Aug     Sep     Oct       Strike F1255     FR/P Station Concourse Level Stab Pour 1     1     FR/P Station Concourse Level Stab Pour 2     1       YBM, CN - Install In Stab Draits Concourse Sector 1     0     1     0     1     1     1       Open all Traffic- 4th Street     1     <t< td=""></t<></td>	May     Jun       WAY PROJECT       ase       300       Station P-1255       F/R/P Station Concourse Level Slab Pour 1       F/R/P Station Concourse Level Slab Pour 2       YBM_CN - Instal In Slab Drains Concourse Sector 1       Open all Traffic- 4th Stret       F/R/P Station Concourse Level Slab Pour 5       F/R/P Station Concourse Level Slab Pour 6       Instal Level 6 Struts       Remove Station Level 4 Struts       YBM_Instal: Elect: Roadway Lighting (28 56 10)       Excavate Station to Invert Level       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 1       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 106       YBM_IV - Under-Platform Install - Sub-Up Underground Pipe Duct to Aux 107       YBM_IV 202 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry       YBM_IV 202 - Traction Power Rm: Install - SB Traction Power Ductbank Slurry       YBM_IV 202 - Traction Power Rm: Install - SB Traction Power Ductbank Slurry       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct Sector 2       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207       YBM_IV - Under-Platform Install - Stub-Up Un	May     Jun     Jul       WAY PROJECT     Image: State of the state o	May     Jun     Jul     Aug       WAY PROJECT     Nase     Nase     Nase     Nase       Station P-1255     FRIP Station Concourse Level Slab Pour 1     FRIP Station Concourse Level Slab Pour 2     YBM_CN - Instal In Sibb Drains Concourse Sector 1       Open all Traffic- 4th Street     FRIP Station Concourse Level Slab Pour 5     FRIP Station Concourse Level Slab Pour 5       FRIP Station Concourse Level Slab Pour 6     Instal Level 6 Struts     Instal Level 6 Struts       Remove Station Concourse Level Slab Pour 7     FRIP Station Concourse Level Slab Pour 6       Instal Level 6 Struts     Remove Station to Invert Level       YBM_IV - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 1       YBM_VU - Under-Platform Instal - Stub-Up Underground Pipe Duct back Slurry       YBM_VI 302 - Traction Power Rm: Instal - Natcation Power Ductbank Slurry1       YBM_VU 302 - Traction Power Rm: Instal - Nate Pacific Power Ductbank Slurry1       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12' Dia Underground Pipe Duct Sector 2       YBM_VU - Under-Platform Instal - 12'' Dia Underground Pipe Duct Sector 2	May     Jun     Jul     Aug     Sep       WXY PROJECT     Image: Sep     Image: Sep     Image: Sep     Image: Sep     Image: Sep       Store F-1255     F/R/P Station Concourse Level Slab Pour 1     Image: Sep     Image: Sep       F/R/P Station Concourse Level Slab Pour 2     Image: Sep     Image: Sep       YBM_CN- Install In Slab Drains Concourse Sector 1     Image: Sep     Image: Sep       Open all Traffic - 4th Street     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       Instal Level 6 Struts     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       Remove Station Level 4 Struts     F/R/P Station Concourse Level Slab Pour 6     Image: Sep       YSM_V - Under-Platform Install - 12/D ia Underground Pipe Duct 5 Active 1     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 108     Image: Sep     Image: Sep       YSM_V V 302 - Traction Power Rm: Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct Sector 2     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Duct to Aux 207     Image: Sep     Image: Sep       YSM_V V - Under-Platform Install - 12/D ia Underground Pipe Du	May     Jun     Jul     Aug     Sep     Oct       WAY PROJECT     1356     140     141     Aug     Sep     Oct       Strike F1255     FR/P Station Concourse Level Stab Pour 1     1     FR/P Station Concourse Level Stab Pour 2     1       YBM, CN - Install In Stab Draits Concourse Sector 1     0     1     0     1     1     1       Open all Traffic- 4th Street     1 <t< td=""></t<>

Schedule: Contract 1300 May 2016 Update

# Systems, Trackwork, & Surface Station

#### Contract 1300 - Work Package 1256

#### **Description of Work**

This Work Package is to construct one Surface Station. Includes light rail track and systems, track invert, track safety walkways; light rail track and systems constructed on the 2,000 foot surface for the alignment from the tunnel portal, south to the tie-in to the existing Muni T-Line at Fourth and King Streets; and the surface Fourth and Brannan Street (FBS) Station.

#### **Current Status**

- Continue Muni ductbank installation
- Continue 78" sewer rehabilitation
- Continue 36" sewer force main
- Continue <u>Auxiliary Water Supply System</u> (AWSS) installation
- Continue water line work
- Continue OCS pole foundation installation
- Continue tunnel drainage system installation
- Continue tunnel invert slab work

#### Work Expected Next Month

- Continue 78" sewer rehabilitation
- Continue MRY ductbank and vault installation
- Continue 36" sewer force main
- Continue AWSS installation
- Continue waterline installation
- Continue OCS pole foundation installation
- Continue tunnel drainage system installation
- Continue tunnel invert slab work



#### Three Month Look Ahead

- Waterline installation
- AWSS installation
- Muni ductbank installation and vault installation
- 36" sewer force main installation
- 78" sewer rehabilitation
- OCS pole foundation installation
- Tunnel drainage system installation
- Tunnel invert slab construction
- Tunnel walkway construction

#### Systems, Trackwork, & Surface Station Construction - Continued

Contract Details							
Contract Awarded:	May 21, 2013						
Notice to Proceed:	June 17, 2013						
Substantial Completion:	February 10, 2018						
Contract Award Value:	\$139,989,000						
Modifications to Date:	\$1,463,954						
Current Contract Value:	\$141,452,954						

#### Budget/Expenditures

Current Budget	
Expenditures to Date	

\$144,989,000	
\$39,228,819	

#### Systems, Track and Surface Station Three Month Schedule

ty ID	Activity Name	May		Jun	Jul	2016 Aug	Sep	Oct	
ENTRAL SUE	SWAY PROJECT	may	T	Jun		, ng	ocp	0.01	
Construction Pl									
Construction CN-1									
Construction STS									
STS.33.11.210	STS_Install: Utilities: Auxiliary Water Supply 12" Main 4th St (Through Townsend				¦ +				
STS.26.05.120	STS_Install: Utilities: 230Kv Electrical Transmission Casing - Assist PG&E - 4th								
STS.33.11.170	STS_Install: Utilities: Auxiliary Water Supply 12" Main 4th St (Through Brannan St								
STS.33.51.150	STS_Pothole: Utilities: Pothole for Gas Distribution								
STS.33.31.630	Sewer Manhole relocation at King St/ 4th Street				<b></b>				
STS.33.31.420	STS_Install New CB's Manhole, 10" & 15" Sewer Piping @ 4th St/Townsend - We			<b>—</b>					
STS.33.11.340	STS_Install: Utilities: Track Drainage- 4th St (Brannan St To Bluxome St)				Ę –				
STS.33.51.115	STS_PG&E Design Detail Period: Utilities: Gas Distribution 6" Main/Casing - 4th				!				
STS.33.11.350	STS_Install: Utilities: Track Drainage- 4th St (Bluxome St To Townsend St)								
STS.33.31.400	STS_Install New 27" Sewer PipeCasing Connecting Offset Manhole To East MH (								
STS.33.31.340	STS_Install New Sewer Laterals & Sleeves East Side 4th Street - Brannan to Blux				-				
STS.33.31.445	Install New 48" Gravity Sewer Main Manhole @ 4th/Welsh St	[			-			1	
STS.33.31.410	STS_Install New CB's, 10" & 24" Sewer Piping @ 4th St/Townsend - East Side	1							
STS.33.31.360	STS_Install New Sewer Laterals & Sleeves East Side 4th Street - Bluxome To Tow	1							
STS.33.31.450	Install New 48" Gravity Sewer Main - Bryant St To Welsh St.								
STS.33.31.470	Install New 48" Gravity Sewer Main Manhole @ 4th/Freelon St								
STS.33.11.270	STS_Install: Utilities: Sewer: Casing for 10" Force Main - 4th St Sta @ Brannan S				İ				
STS.26.05.0290	STS_Install: Tunnel Electrical - Unistrut For Conduit & Signal Supports - NB Porta								
STS.26.05.0530	STS_Install: Tunnel Electrical - Unistrut For Conduit & Signal Supports - SB Porta								
STS.33.31.260	STS_Install New 18" Sewer Lateral In Welsh St To Future 48" Manhole								
STS.33.31.390	STS_Install New Sewer Manhole @ 4th St/Townsend - East Side								
STS.33.31.430	STS_Install New Sewer Laterals & Sleeves West Side 4th Street - Townsend To K				+ 				
STS.28.20.1790	STS_Install: Tunnel Electrical - CCTV Cameras - SB Portal To Moscone								
STS.34.42.0600	STS_Install: Train Control - Train Control Signals - SB Portal to Moscone								
STS.34.42.2310	STS_Install: Train Control - Train Control Conduit - & JB's SB Portal To Moscone								
STS.26.05.0560	STS_Install: Tunnel Electrical - Telephone Conduit - & JB's SB Portal To Moscon								
STS.27.32.0610	STS_Install: Tunnel Electrical - Radiax Conduit - & JB's SB Portal To Moscone				+ 				
STS.26.05.0550	STS_Install: Tunnel Electrical - Electrical Power Conduit & JB's - SB Portal To Mo								
STS.26.05.0360	STS_Install: Tunnel Electrical - Electrical Power Conduit & JB's - NB Portal To Mo								
STS.28.20.0570	STS_Install: Tunnel Electrical - CCTV Conduit - & JB's SB Portal To Moscone								
STS.26.05.0405	STS_Install: Tunnel Electrical - Traction Power Conduit - NB Portal to Moscone							i 	
STS.26.05.0640	STS_Install: Tunel Electrical - Traction Power Conduit - SB Portal to Moscone	†			+				
STS.33.31.440	STS_Install New Sewer Laterals & Sleeves East Side 4th Street - Townsend To Ki								
STS.33.31.120	– Install New 36" Force Main Sewer @ 4th/Bryant							İ	
STS.33.31.460	Install New 48" Gravity Sewer Main - Welsh St. To Freelon St								
STS.26.05.0630	STS Install: Tunnel Electrical - Emerg Tel/SFFD Tel/Blue Lights - SB Portal To Mi								

Schedule: Contract 1300 May 2016 Update

# **Program Components**

# **Community Outreach**

#### Outreach public information, events and presentations for May 2016 include:

Preparation and dissemination of construction notices

Hosted Community Advisory Group (CAG) meeting on May 19, 2016

Provide updates to FTA quarterly

Participated in special community meeting along with Sustainable Streets to provide information and address concerns along STS portion of alignment

#### **Outreach in Support of Mitigation and Monitoring**

Team members conducted weekly progress meetings to address stakeholder concerns

Outreach and communication efforts continue in Chinatown, Union Square, and SOMA. In particular, meetings held with stakeholders in Chinatown to address mitigation of night noise

Draft Purchase Order for video camera procurement

Weekly photo documentation of project work and editing

Weekly construction update emails sent to list of approximately 700 residents and stakeholders Distributed monthly construction update to STS and CTS neighborhood; CTS flier are bi-lingual

#### Media Coverage

Central Subway Media Coverage							
Date	Title (with link to story)	Source	Reporter/Writer				
5/12/16	Muni to Start Construction on Long- Delayed T Third Loop	Biz Journal	Chris Rauber				

# Quality Assurance

Quality Assurance monthly activity of oversight, surveillance, audits, proactive feedback and QA records actively involves the Project construction management staff, the resident engineers, the prime construction contractor and their subcontractors.

# Stations and Systems Contract CN1300 Quality Assurance Monitoring – On Going/As Reported Previously

- UMS roof beam to pile WF installation Continued Inspection/acceptance/documentation by Smith Emery CWI's of all welds associated with the ongoing Installation of steel
- UMS and YBM Water Proofing Subcontractor substrate preparation and application inspection/acceptance of work performed by Waterproofing Experts by RDH continues for the remaining roof placements
- TPC QC Daily Inspection Reports posted to CM13 which includes TPC's Specialty Subcontractor's QC checklists and associated documentation and Smith Emery Inspection Reports; TPC's Subcontractor that provides laboratory and Inspection Services – including Special Inspections required for the City of San Francisco's Department of Building Inspection (DBI) for all permitted Work
- Preparatory, Initial and Additional Initial Phase Meetings continue as schedule and circumstances/issues arise
- Instrumentation/Monitoring and Construction Management Task Force (CMTF) Meetings (daily at 8:30 am) and the Sequential Excavation Method (SEM) Meetings (daily at 9:00 am)
- Bi-Weekly Quality Task Force (QTF) Meetings ongoing dialog regarding identification and mitigation of in-process potentially unsatisfactory work, generation of CNCR and other items related to TPC's QC efforts in implementing TPC's approved Quality Control Program (QCP)
- Weekly Work Package Progress Meetings for STS, YBM, UMS and CTS

#### Document comment and review:

- Contractor's submittals, e.g., review of welding, concrete and other Quality related submittals/ comments as requested to support the RE's and CM, and RFIs related to quality and welding
- QA Staff continues random/spot checks of the 1300 Contractor's Field Testing lab results; items requiring further action/investigation (missing or inconsistent data, compressive strength results that appear to have a very broad range of values and such) are brought to the attention of the Contractor

#### QA Issues:

• TPC performing work prior to receipt of approval status of required submittals with/without knowledge of TPC QC

# **Quality Assurance - Continued**

#### QA Concerns:

- TPC performing work prior to receipt of approval status of required submittals
- Assurance that geometry and position of shotcrete elements are as required
- Installation/preconditioning of compensation grouting Tube-a-manchette (TAMs) at the Arthur Berens/Dior Building (216 and 218 Stockton Street)

#### **Other Program QA Practices Implemented**

- Close-out of Corrective Action Requests: Close outs continued from Quality Assurance staff's Audits, Surveillances and PMOC Quarterly Reviews. The status is tracked in the Corrective Action Log that is provided to the project team and the FTA PMOC
- As report previously, Quality Assurance Surveillance QAS 072, Project Record Documentation (AS-Builts) was conducted, posted to CM13 and findings provided via letter to TPC for their action regarding discrepancies with the Contract Document requirements. The follow-up Surveillance was conducted and the associated report will be completed and posted to CM 13
- Quality Assurance Audit Report QAA 026, Implementation of TPC's Quality Control Program (QCP) is being completed

#### **Risk Management**

Risk Mitigation Management Meeting No. 82 was held on May 5, 2016. The Risk Assessment Committee reviewed and discussed Risks that include Construction Risks with ratings above 6; one remaining Requirement Risk, Active Construction Risks rated below 6 and, any New Risk requiring Assessment and Mitigations strategy.

# Quality Assurance - Continued



# Program Safety & Security

The San Francisco Municipal Transportation Agency is committed to the highest practical level of safety and security standards and practices in the public transit industry. The Safety and Security Management Plan (SSMP) components are reported on below as appropriate including, Safety and Security Committee, the Fire Life Safety and Security Committee the Construction Conformance Verification and Documentation and Contractor Safety and Security.

#### Project Management/Construction Management (PMCM) Team

Safety bulletin boards have subjects covering the complacency and daily job briefings.

#### Safety Summary for the 1300 Stations Systems Track Construction Package

During the month of May, safety work on the 1300 contract progressed as follows:

STS had no recordable or first aid incidents. Work on the invert has begun and is moving along. Other utilities in the street along 4<sup>th</sup> Street continues.

At YBM, no injuries or incidents occurred. The contractor has started to pour the lower level of the station. Good ventilation exists. An elevator has been installed to access the lower levels.

UMS had no injuries in May. Layne continued with jet grouting at street level and compensation grouting underground. TPC started to prepare for the installation of the struts and whalers.

CTS had one recordable. The recordable accident to a Frontier Kemper workers. He strained his back. No details are available yet. Excavation of the two drifts continues. The monthly inspection found extinguishers were discharged and not refilled.

#### Table 1300 Stations Construction Safety Record

Table 1300 below summarizes the Month to Date and Project to Date for the Stations, Systems and Track Construction contractor and subcontractors.

#### Next Month Look Ahead

#### 1300 Contract

- 1. AT CTS, Frontier-Kemper (FK) started the excavation. Ventilation clarifications are being worked on.
- 2. At UMS, work on the station roof continues. Once the struts and whalers are installed, more excavation will take place.

#### Program Safety & Security - continued

- 3. AT YBM, we will continue to watch the concrete placement on the platform level in the station. We will also be watching work on the upper levels of the station as well.
- 4. At STS, work has started in the tunnels. Invert work in the tunnels has started. TPC is trying to accelerate this work and we will be watching this closely.

Project Safety Record - Contract 1300	1300 SAFETY GOALS							
OSHA Recordable Accidents, <				.4				
Through Month End - May 2016	Lost Time Cases, <1.6							
-								
JOB TO DATE	Tutor	Subs	Total Project	Rate*				
OSHA Recordable Accidents	3	1	4	0.70				
Job Transfer or Restricted Duty Cases	0	0	0	0.00				
Lost Time Cases	0	0	0	0.00				
Total Project Incidents	3	1	4	0.70				
Man Hours Worked Through M/E May 2016	537,920	599,676	1,137,596					

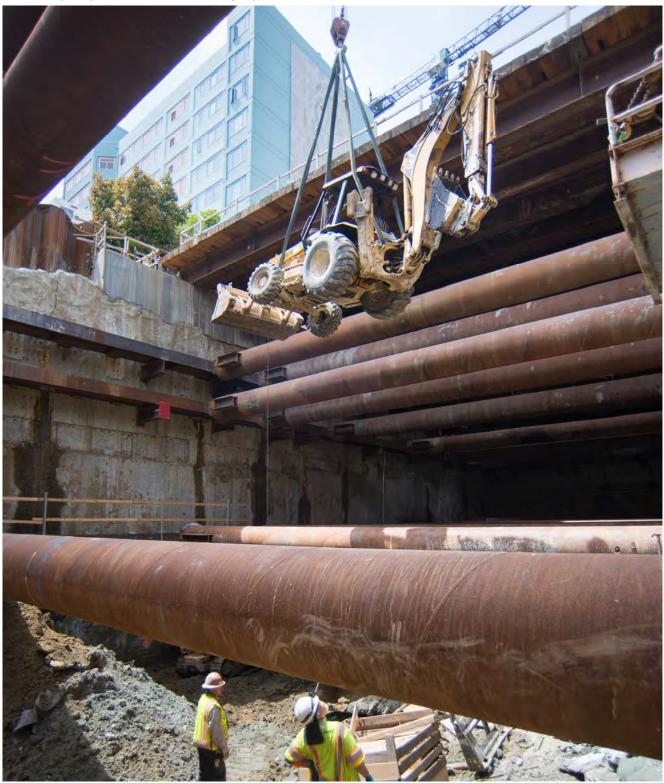
YEAR TO DATE (Month ,Day, Year to Month, Day, Year)	Tutor	Subs	Total Project	Rate*
OSHA Recordable Accidents	0	1	1	0.77
Job Transfer or Restricted Duty Cases	0	0	0	0.00
Lost Time Cases	0	0	0	0.00
Total Project Incidents	0	0	1	0.77
Man Hours Worked Through M/E May 2016	136,205	122,831	259,035	

\* Rate is calculated based on number of incidents divided by total number of man hours worked multiplied by 200,000 man hours. OSHA Recordable Accidents - 2008 Construction Industry Rate for Highway, Street, and Bridge Construction = 3.9

\*Classifications change at a later date due to additional information becoming available, thereby, changing the numbers on the chart. For example, what was once classified as an accident can become a first aid which leads it to no longer being recordable.

# **Technical Capacity**

No Project positions are currently open or unfilled.



A backhoe is slowly lowered into the YBM headhouse, with workers ready to place it below.

# Staffing

The Central Subway Staffing Table shows Planned and Actual full-time equivalent staff (FTEs) working on the Program by organizational function and responsibility.

	Mar-	2016	Apr-2	2016	May-	2016
	Planned	Actual	Planned	Actual	Planned	Actual
Project Management						
Program Management	6.60	6.00	6.60	6.00	6.60	6.00
Quality Assurance	1.80	2.30	1.80	2.30	1.80	2.30
Contract Administration	1.40	1.40	1.40	1.40	1.40	1.40
Community Outreach	5.50	5.50	5.50	5.50	5.50	4.50
Finance	2.00	2.00	2.00	2.00	2.00	2.00
Project Controls	4.80	5.80	4.80	5.80	4.80	5.80
Subtotal	22.10	23.00	22.10	23.00	22.10	22.00
Construction Management						
CM - CN 1252	1.00	1.00	1.00	1.00	1.00	1.00
CM - CN 1300	30.00	31.00	30.00	31.00	30.00	31.00
Design Support - CN 1252	0.00	0.00	0.00	0.00	0.00	0.00
Design Support - CN 1300	12.40	12.40	12.40	12.40	12.40	12.40
Subtotal	43.40	44.40	43.40	44.40	43.40	44.40
Start Up						
Start Up / Safety & Security	3.00	2.10	3.00	2.10	3.00	2.10
Subtotal	3.00	2.10	3.00	2.10	3.00	2.10
Total	68.50	69.50	68.50	69.50	68.50	68.50

# Third-Party Agreements

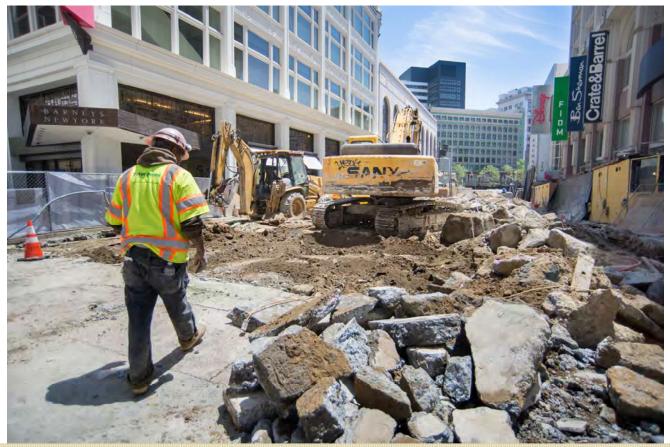
No activity in this reporting month.

#### **LRV Procurement**

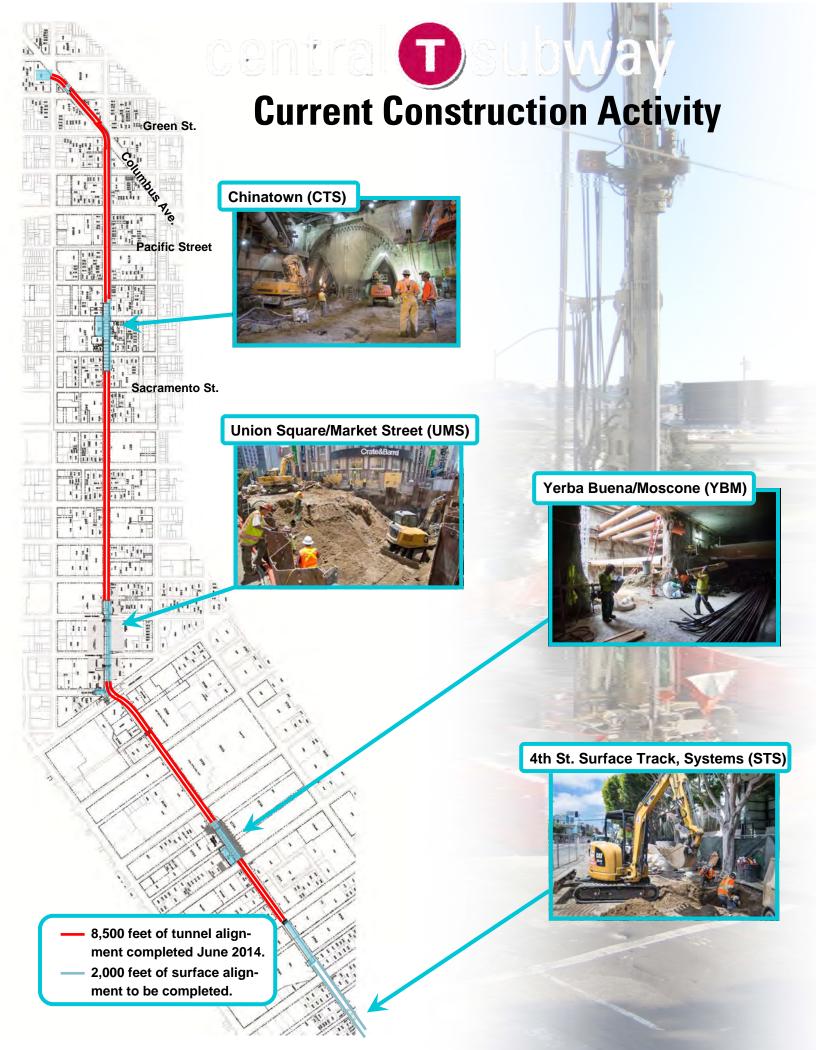
SFMTA has initiated a new light rail vehicle procurement to acquire up to 260 vehicles over the next 15 years. The scope includes the design, manufacture, delivery and testing of up to 260 light rail vehicles together with associated services, spare parts, special tools, training and documentation. This includes an initial delivery of 24 cars, scheduled for delivery in 2018 to supplement the fleet when the SFMTA's Third Street Phase 2 - Central Subway Project extension opens.

First article inspections of subsystems continue; train control and passenger information systems were recently conducted. Truck, steps and coupler are scheduled in the next month. Production of the first carbody structure is complete. Assembly continues with flooring, side cladding, and the front end mask being installed. Truck frames for the first car are approaching completion.

LRV Procurement contract working through integration challenges with parallel projects such as radio replacement project and fare box replacement project.



The south side of the intersection at O'Farrell and Stockton is being prepared for excavation and eventual station roof deck installation. Pieces of roadway are being removed and sorted prior to site excavation.



# CTS



Workers pause before installing steel mesh and spraying shotcrete to reinforce the freshly-excavated walls of the left and right side drifts.



Shotcrete spraying inside the left side drift. These smaller excavation caverns are necessary before creating larger voids, so as to prevent potential ground movement.

# CTS-continued

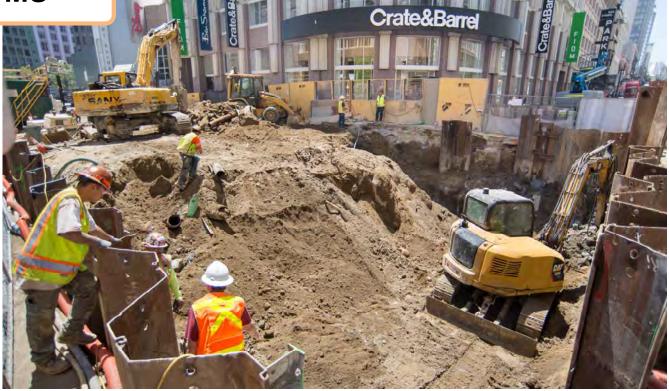


Newly-installed ventilation fans and ductwork on the east side of the Chinatown headhouse site.



New banners indicating nearby businesses have been installed along the construction fence for the north access shaft between Washington and Jackson on Stockton.

# UMS



On the south side of the Stockton and O'Farrell intersection work is being done to prepare for the installation of another station roof deck panel.



Large pieces of debris are sorted and dumped into a waiting dump truck, pulled up the block from an entrance at Ellis.

# UMS-continued

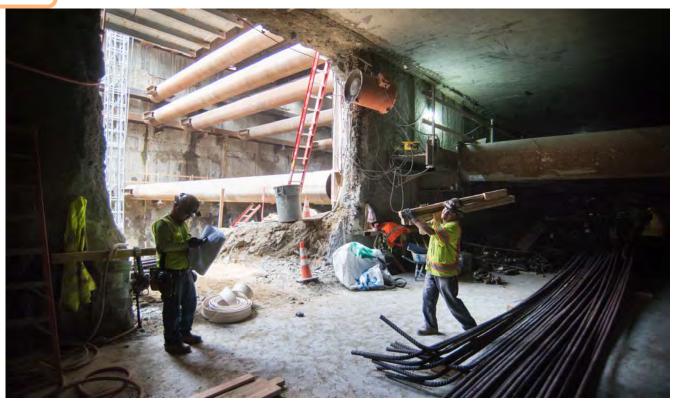


Vertical beams span the west wall inside the north concourse, where demolition work to remove a wall inside the Union Square Garage is ongoing just behind them.



A worker uses a cutting torch to cut sections of rebar away from concrete rubble inside the southeast corner of the Union Square Garage, where the future north station entrance will be located.

# YBM



A man checks plans at the access portal from the headhouse into the station box while an associate carries concrete form pieces to be installed precisely where needed.

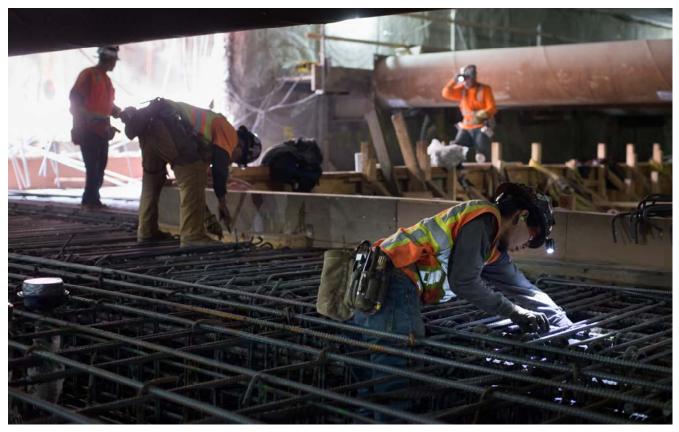


The contractor has installed an elevator to carry workers and equipment to and from the work sites underground.

## YBM - continued



Workers lay down cribbing underneath the large steel beam, as it's lowered into the headhouse for installation.

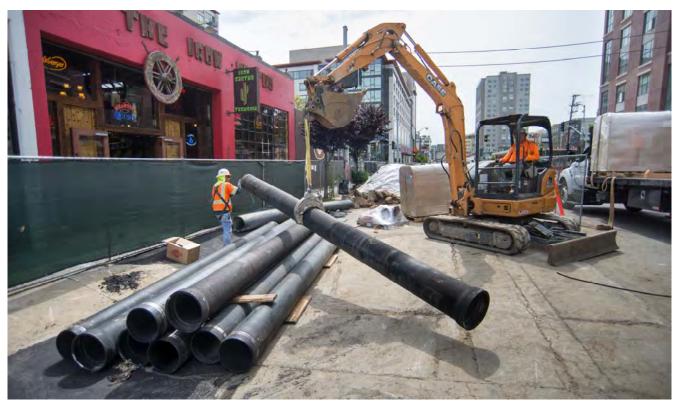


Men use headlamps to aid detailed rebar installation work for the mezzanine floor slab inside the station box.

# STS

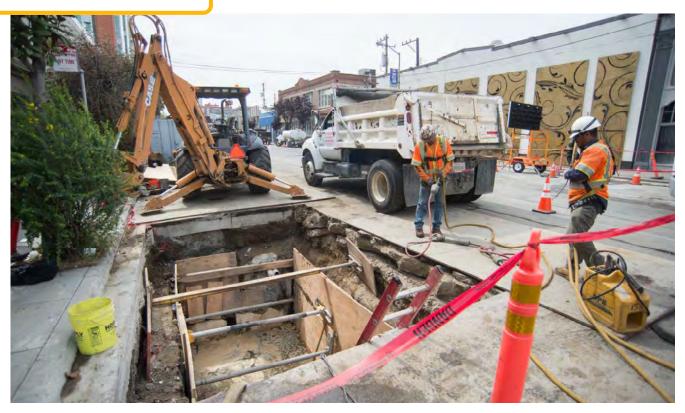


When needed, workers use shovels to carefully unearth utilities which will be upgraded and reinforced. Here, utility laterals are being unearthed following sewer upgrade work.



Sections of pipe are unloaded from a truck north of Townsend and stacked for installation.

## **STS**—Continued



Workers pump out water from an excavation at 4th and Bryant where utilities are being upgraded.



Workers donning safety harnesses prepare to do trench work north of Bluxome alley, where utility laterals are being reinforced and upgraded.



## Appendix A

## **DETAIL COST REPORTS**

#### 1. PROJECT COST

The Current Cost Estimate (CCE) for the Central Subway Project is **\$1.578 billion** in year of expenditure dollars (\$YOE). This total project cost is shown at the top of Report 7.1, Program Project Budget. This capital cost projection incorporates allocated and unallocated contingencies to cover the risks associated with the project completion.

Total net incurred costs for the project are \$941.29 million, a \$11.35 million increase over last month. The cost to date figure reflects expenditures through FAMIS 786 Report (\$902.93 million) plus the utilities joint trench Form B Reimbursement payment (\$10.52 million), invoices currently being processed (\$20.07 million) and estimates of outstanding pay requests (\$7.77 million). This incurred amount equals 59.64% of the total project budget of \$1.578 billion.

The current funding level to date is \$1,179.79 million. This represents 75% of the total project budget.

		PP PERIOD	PROG PYMT			PP PERIOD	PROG PYN
CONTRACT	PP NO	то	AMOUNT	CONTRACT	PP NO	то	AMOUNT
CS155.1	52	3/31/2014	\$ 26,671.53	CS155.2*	71	1/31/2016	\$ 172,443
CS155.1	53	4/30/2014	\$ 19,500.26	CS155.2*	72	2/29/2016	\$ 192,843
CS155.1	54	5/31/2014	\$ 29,166.76	CS155.2*	73	3/31/2016	\$ 219,279
CS155.1	55	6/30/2014	\$ 22,666.39	CS155.2*	74	4/30/2016	\$ 359,299
CS155.1	56	7/31/2014	\$ 36,602.38	CS155.2*	75	5/31/2016	\$ 359,299
CS155.1	57	8/31/2014	\$ 40,273.52	CS155.3*	66	9/30/2015	\$ 81,258
CS155.1	58	9/30/2014	\$ 37,269.95	CS155.3*	67	10/31/2015	\$ 68,106
CS155.1	59	10/31/2014	\$ 30,018.32	CS155.3*	68	11/30/2015	\$ 190,717
CS155.1	60	11/30/2014	\$ 20,183.22	CS155.3*	69	12/31/2015	\$ 87,013
CS155.1	61	12/31/2014	\$ 18,828.97	CS155.3*	70	1/31/2016	\$ 79,274
CS155.1	62	1/31/2015	\$ 19,921.99	CS155.3*	71	2/29/2016	\$ 66,208
CS155.1	63	2/28/2015	\$ 19,921.99	CS155.3*	72	3/31/2016	\$ 115,278
CS155.1	64	3/31/2015	\$ 15,554.73	CS155.3*	73	4/30/2016	\$ 75,115
CS155.1	65	4/30/2015	\$ 15,550.60	CS155.3*	74	5/31/2016	\$ 85,450
CS155.1*	66	5/31/2015	\$ 2,121.00	Contract 1252	39	4/30/2015	\$ 1,174,889
CS155.1*	67	6/30/2015	\$ 1,180.00	Contract 1252	40	5/31/2015	\$ 236,920
CS155.1*	68	7/31/2015	\$ 7,137.00	Contract 1300	28	4/30/2016	\$ 8,606,974
CS155.1*	69	8/31/2015	\$ 1,805.00	Contract 1300	29	5/31/2016	\$ 9,391,685
CS155.1*	70	9/30/2015	\$ 1,583.00	CS149*	83	12/31/2015	\$ 500,000
CS155.1*	71	10/31/2015	\$ 3,186.00	CS149*	84	1/31/2016	\$ 500,000
CS155.1*	72	11/30/2015	\$ 203.00	CS149*	85	2/29/2016	\$ 500,000
CS155.1*	73	12/31/2015	\$ 7,695.00	CS149*	86	3/31/2016	\$ 500,000
CS155.1*	74	1/31/2016	\$ 12,080.00	CS149*	87	4/30/2016	\$ 500,000
CS155.1*	75	2/29/2016	\$ 874.00	CS149*	88	5/31/2016	\$ 500,000
CS155.1*	76	3/31/2016	\$ 326.00	CS156.1*	62	1/31/2016	\$ 69,532
CS155.1*	77	4/30/2016	\$ 246.00	CS156.1*	63	2/29/2016	\$ 68,879
CS155.1*	78	5/31/2016	\$ 246.00	CS156.1*	64	3/31/2016	\$ 80,887
CS155.2	68	10/31/2015	\$ 307,824.44	CS156.1*	65	4/30/2016	\$ 75,702
CS155.2*	69	11/30/2015	\$ 205,020.00	CS156.1*	66	5/31/2016	\$ 74,732
CS155.2*	70	12/31/2015	\$ 240,756.00	other accruals*		5/31/2016	\$ 1,766,960

\* Estimated Amount

\$ 27,841,355.77

### 2. <u>CONTINGENCY ALLOCATIONS AND USAGE</u>

The current Total Project Contingency is **\$79.71 million**, which is a \$19.71 million favorable balance against the current Minimum Contingency level of \$60 million. The Contingency Drawdown Curve is shown in Report 7.3. Follows by Report 7.4 Contingency Management Trend Report with the Remaining Contingency after Approved Changes Deducted contingency items in column "i".

In this reporting period, Contract 1252 Tunnel processed two contract modifications in the amount of \$185,913. Contract 1300 Station processed three contract modifications in the

amount of \$251,675. Refer to Report 7.5 for approved contract modifications and potential changes.

#### 3. BUDGET TRANSFERS

No budget transfers in this reporting period.

#### 4. <u>FORM B</u>

The Utilities Joint Trench Form B Details is listed in the Table A2 below. Total utilities joint trench Form B Reimbursement payment to three construction contracts is \$10.52 million.

TABLE A2: UTILITIES JOINT TRENCH FORM B DETAILS	[A] Mar 2015 BUDGET	[B] EXPENDED TO DATE	Associated Cost Account
1.3.491.07.040.02 - FORM B - CN1250 UTILITY REIMBURSEMENT	(2,275,419)	2,463,325	1.3.081.07.040.02 - 1UTL:SITEWORK: UTILITIES & RELOC
1.3.491.08.040.02 - FORM B - CN1251 UTILITY REIMBURSEMENT	(7,618,412)	3,608,217	1.3.082.08.040.02 - 2UTL:SITEWORK:UTILITIES&RELOCATE
1.3.491.02.040.02 - FORM B - CN1252 UTILITY REIMBURSEMENT	(254,050)		1.3.083.02.040.02 - TUNN:Sitework:Utilities & Relocate
1.3.491.04.040.02 - FORM B - CTS: CN1300 UTILITY REIMBURSEMENT	(451,703)		
1.3.491.09.040.02 - FORM B - STS: CN1300 UTILITY REIMBURSEMENT	(1,000,000)	1	
1.3.491.03.040.02 - FORM B - UMS: CN1300 UTILITY REIMBURSEMENT	(528,370)	428,712	1.3.084.03.040.02 - UMS.1253: SITE UTILITIES, UTILITY RELOCA
1.3.491.05.040.02 - FORM B - YBM: CN1300 UTILITY REIMBURSEMENT	(100,000)	56,451	1.3.086.05.040.02 - YBM.1255: SITE UTILITIES, UTILITY RELOCA
TOTAL	(12,227,954)	10,515,363	

### 5. EARNED VALUE (EV) ANALYSIS

In May 2016 Report, the Preliminary Earned Value Analysis reports is based on the SFMTA May Schedule Update. The Planned Value, Earned Value, Actual Cost, Percent Complete and resulting indexes as follows:

### Preliminary May Earned Value

Overall Budgeted Cost:	\$1,578,300,000
Planned Value:	\$1,212,596,433
Earned Value:	\$947,153,898
Actual Cost:	\$941,290,172
Schedule Performance Index (SPI):	0.78
Cost Performance Index (CPI):	1.01
Percent Complete:	60%

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Adivity ID	Activity Name	Start	Finish	Performance % Complete	Budgeted Total Cost	Planned Value Cost (PV)	Earned Value Cost (EV) Adual Total Cost (AC)	Actual Total Cost (AC)	e.	9
CENTRAL SUBWAY PROJECT	VAY PROJECT	06/03/03 A	06/18/21	29,96%	1,578,300,000.14	1,212,596,432.72	947,153,897,80	941,290,171.36	1.01	0.78
Preliminary Engineering Phase	leering Phase	06/03/03 A	01/07/10 A	100%	46,542,061.02	46,542,061,02	46,542,061.02	46,542,061,02	100	100
Final Design		01/08/10 A	D6/17/13 A	100%	115,075,987.06	115,075,987.06	115,075,987.06	114,307,464.66	1.01	100
Light Rail Vehicles	S	D4/15/13 A	11/09/18	8.25%	26,385,653.00	2/177,131,58	2,177,131,58	2,147,952.36	1.01	1.00
Real Estate		08/01/08 A	05/26/16	80.31%	37,405,895.00	33,179,867.41	30,041,759.16	30,540,100.64	0.98	0.91
Construction Phase	83	A01/03/10 A	06/20/19	56.02%	1,328,140,481.06	1,015,621,385.65	753,316,958.98	747,752,592.68	101	0.74
Construction Support and Costs	pport and Costs	01/03/10 A	06/20/19	44.82%	199,862,849.06	93,372,561,69	89,580,573,22	99,228,696,68	06.0	0.96
Construction Util	Construction Utility Contract #1- MOS & Portal CN-12	01/04/10 A	05/23/11 A	100%	11,968,150.00	11,968,150.00	11,968,150.00	11,968,150.00	1.00	1.00
Construction Util	Construction Utility Contract #2 - UMS CN-1251	DIM2THA	10/15/12 A	100%	20,794,582.00	20,794,582.00	20,794,582,00	20,794,582,00	1.00	1.00
Construction Tunnels CN-1252	mels CN-1252	06/08/11 A	05/27/16	93,05%	235,913,500.00	251,069,545.65	233,608,894,28	234,881,397.00	0.99	0.93
Construction CN-1300	+1300	D6/03/13 A	04/02/19	46.15%	859,601,400.00	638,416,556.31	397,364,759.48	380,879,767.00	1.04	0.62
Unallocated Contingency	ingency	01/02/19	06/14/19	%0	24,749,923.00	000	000	000	000	0.00
Project Management	tent	06/14/19	06/18/21	960	00:0	0:00	0,00	000	000	000

The preliminary Contract 1300 cost shows Earned Value Cost \$16M higher than Actual Cost.

#### **Earned Value Analysis and Definitions**

**SPI** is a measure of schedule efficiency on a project. It is the ratio of earned value (EV) to planned value (PV). A SPI equal to or greater than one indicates more work was completed than planned and a value of less than one indicates less work was completed than planned. A value of less than 0.9 is unfavorable.

**CPI** is a measure of cost efficiency on a project. It is the ratio of earned value (EV) to actual cost value (AC). A CPI equal to or greater than one indicates a cost under run and a value of less than one indicates a cost overrun. A value of less than 0.9 is unfavorable.

Cost Element Group	Planned Value (Primavera)	Earned Value (Primavera)	Actual Cost (SFMTA Cost Accounting (SAP)
Prelim. Engineering	Expenditure Plan Level of Effort (LOE)	Equals to Planned Value (LOE)	Time Keeping; Vendor Accruals and Invoices
Final Design	Expenditure Plan Level of Effort (LOE)	Equals to Planned Value (LOE)	Time Keeping; Vendor Accruals and Invoices
Procurement	Planned Delivery Date	Actual Delivery Date	Time Keeping; Vendor Accruals and Invoices
Real Estate	Expenditure Plan Level of Effort (LOE)	Equals to Planned Value (LOE)	Time Keeping; Vendor/ Material Accruals and Invoices
Construction	Schedule of Work	% Complete* x Budget at Completion (BAC)	Vendor Accruals and Invoices
Sub-Total	Performance Measurement Baseline (PMB)	Total Earned Value	Total Actual Cost
Below the Line	+ Contingency		
Total	Approved Budget		

The following earning rules are established for each of the phase:

#### 6. FUNDING SUMMARY

The Funding Available Table below shows the total awarded funds to date vs. the total committed funds from the Project's seven funding sources.

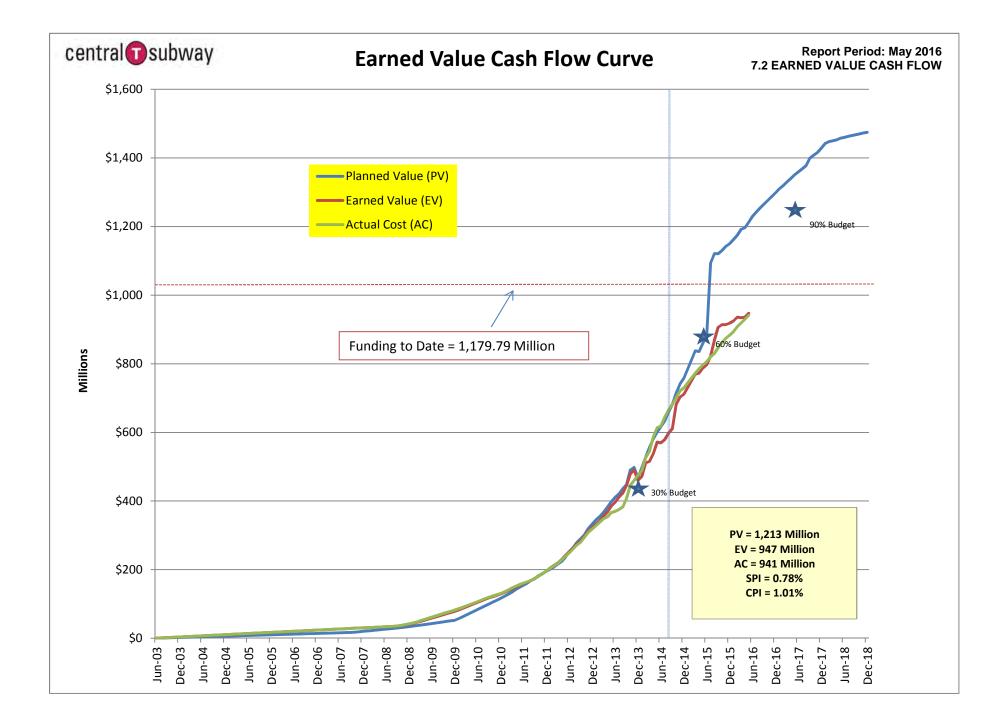
Funding Available Table		
	Fund	ding
	Committed Funding Sources	Total Awarded Funds to Date
Federal		
Sect. 5309-NS	\$942,200	\$619,196
CMAQ	\$41,025	\$41,025
Federal Subtotal	\$983,225	\$660,221
State		
TCRP	\$14,000	\$14,000
State RIP	\$88,000	\$12,498
Prop. 1B (I-Bond) PTIMSE	\$307,792	\$307,792
Prop. 1A (HSR-Bond)	\$61,308	\$61,308
State Subtotal	\$471,100	\$395,598
Local		
Prop. K	\$123,975	\$123,975
Local Subtotal	\$123,975	\$123,975
CPT 544 Total	\$1,578,300	\$1,179,794

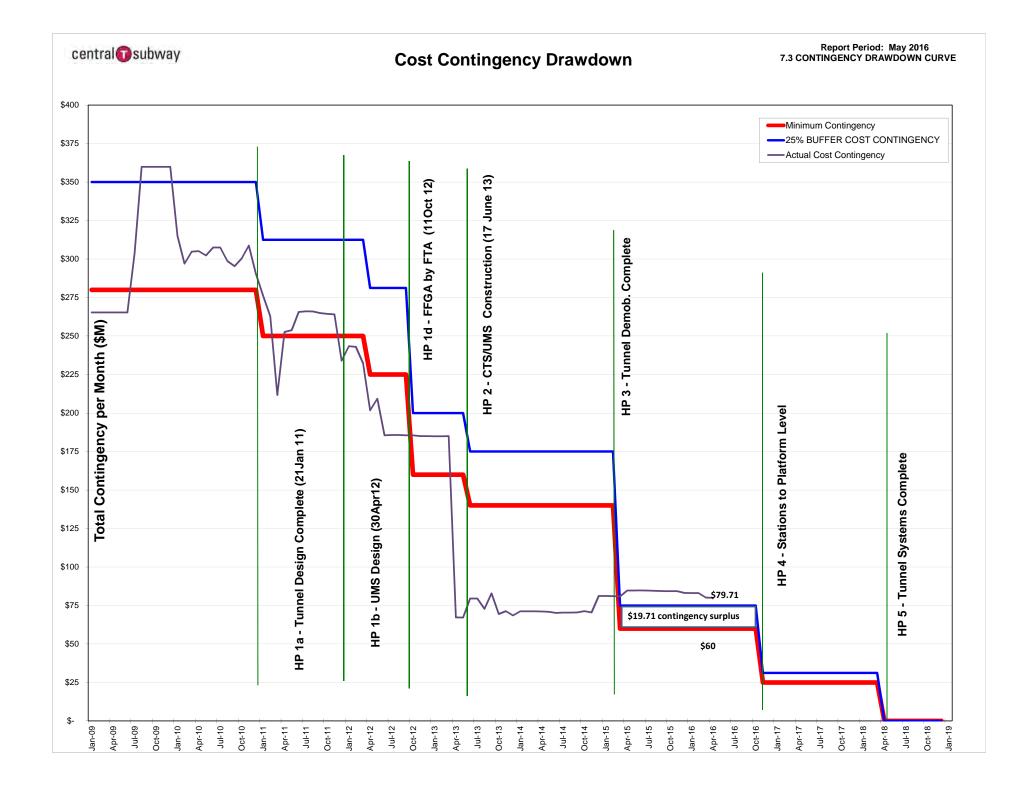
### 7. LIST OF COST REPORTS

- 7.1 Program Project Budget
- 7.2 Earned Value Cash Flow
- 7.3 Contingency Drawdown Curve
- 7.4 Summary Contingency Management Trend Report
- 7.5 Detail Contingency Usage Report
- 7.6 Budget Revisions: Report sorted by Construction Packages & Soft Costs
- 7.7 Project Budget & Expenditure Report: Sorted by SCC Summary
- 7.8 Budget & Expenditure Report: Sorted by SCC Details
- 7.9 Detail Monthly Expenditure Report: grouped by Project Phase
- 7.10 Cost Report Notes



	Project	Name	Amount	PM	Funding Source	Reporting	Cost Repo Notes
1	CPT544	Central Subway Project	\$1,578,300,000	J. Funghi	62% Fed, 30% State, 8% Local	yes	1
		Total:	\$1,578,300,000				
. R	elated SI	FMTA Capital Improvement Projects					
	Project	Name	Amount	РМ	Funding Source	Reporting	
2	CPT690	TBM Retrieval Shaft Relocation	\$9,700,000	Funghi/Magary	MTA Operating Funds	no	2
3	CPT718	Chinatown Metro Plaza	\$6,980,000	J. Funghi	Transbay Redevelopment	no	3
1	CPT665	Central Subway Project - Goodwill	\$2,367,750	K. Magary	I-Bond Interest	no	4
5	CPT705	MOH - Broadway/Sansome	\$8,000,000	K. Magary	MTA Operating Funds	no	5
C	entral Su	Total: Ibway Project - Project Offset Credits	\$27,047,750				
С	entral Su		\$27,047,750 Amount	Index	Notes	Reporting	
		ıbway Project - Project Offset Credits		Index	Notes Construction contracts	<b>Reporting</b> yes	6
	2009-2016	bway Project - Project Offset Credits From	Amount				6 7
	2009-2016 2017-2019	Ibway Project - Project Offset Credits From Utility Co Form B Reimbursement	<b>Amount</b> \$12,227,954		Construction contracts	yes	
	2009-2016 2017-2019 6/26/2013	I <b>bway Project - Project Offset Credits</b> From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement	<b>Amount</b> \$12,227,954 \$7,624,540		Construction contracts Not yet bill PG&E	yes yes	7
	2009-2016 2017-2019 6/26/2013 11/6/2013	Ibway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement B BART Elevator	<b>Amount</b> \$12,227,954 \$7,624,540 \$90,000	  68CPT544135B	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds	yes yes yes	7 8
	2009-2016 2017-2019 6/26/2013 11/6/2013 1/27/2014	bway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement B BART Elevator Tutor Perini - CAD Files	Amount \$12,227,954 \$7,624,540 \$90,000 \$2,500	 68CPT544135B 68CPT5441236	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds Deposit to Design Index	yes yes yes yes	7 8 9
	2009-2016 2017-2019 6/26/2013 11/6/2013 1/27/2014 8/27/2014	bway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement B BART Elevator 3 Tutor Perini - CAD Files 4 SFPUC - Sewer Main	Amount \$12,227,954 \$7,624,540 \$90,000 \$2,500 \$2,925,296	 68CPT544135B 68CPT5441236 68W251	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds Deposit to Design Index Certified in Contract 1300	yes yes yes yes yes	7 8 9 10
	2009-2016 2017-2019 6/26/2013 11/6/2013 1/27/2014 8/27/2014 9/27/2014	Ibway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement B BART Elevator 3 Tutor Perini - CAD Files 4 SFPUC - Sewer Main 4 SFMTA Traffic Effectiveness Project funded	Amount \$12,227,954 \$7,624,540 \$90,000 \$2,500 \$2,925,296 \$694,651	 68CPT544135B 68CPT5441236 68W251 68W324/686D42	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds Deposit to Design Index Certified in Contract 1300 Contract 1252 CMod #40	yes yes yes yes yes yes	7 8 9 10 11
	2009-2016 2017-2019 6/26/2013 11/6/2013 1/27/2014 8/27/2014 9/27/2014 2/15/2015	bway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement BART Elevator BART Elevator Tutor Perini - CAD Files SFPUC - Sewer Main SFMTA Traffic Effectiveness Project funded SFPUC - 24" Water Main	Amount \$12,227,954 \$7,624,540 \$90,000 \$2,500 \$2,925,296 \$694,651 \$328,857	 68CPT544135B 68CPT5441236 68W251 68W324/686D42 68CPT544135A	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds Deposit to Design Index Certified in Contract 1300 Contract 1252 CMod #40 Contract 1252 CMod #41	yes yes yes yes yes yes yes	7 8 9 10 11 12
<b>C</b> 1 2 3 4 5 6 7 8 9 .0	2009-2016 2017-2019 6/26/2013 11/6/2013 1/27/2014 8/27/2014 9/27/2014 2/15/2015 3/27/2015	Ibway Project - Project Offset Credits From Utility Co Form B Reimbursement PG&E - Power Feed Reimbursement B BART Elevator 3 Tutor Perini - CAD Files 4 SFPUC - Sewer Main 5 SFMTA Traffic Effectiveness Project funded 4 SFPUC - 24" Water Main 5 Chinatown Plaza Construction Estimate	Amount \$12,227,954 \$7,624,540 \$90,000 \$2,500 \$2,925,296 \$694,651 \$328,857 \$75,000	 68CPT544135B 68CPT5441236 68W251 68W324/686D42 68CPT544135A 68CPT7181341	Construction contracts Not yet bill PG&E Not yet rec'd BART Funds Deposit to Design Index Certified in Contract 1300 Contract 1252 CMod #40 Contract 1252 CMod #41 Contract 1300 CMod #6	yes yes yes yes yes yes yes yes	7 8 9 10 11 12 13





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				CONTRACT COST					CONTINGENCY			BUDGET	VARIANCE	<u> </u>
	COST ELEMENT	ORIGINAL CONTRACT VALUE / September 2013 SUPPLEMENTAL BUDGET	APPROVED CHANGES	CURRENT CONTRACT VALUE	POTENTIAL CHANGES	ESTIMATE AT COMPLETION (EAC)	ORIGINAL CONTINGENCY / Sep 2013 SUPPLE- MENTAL CONTINGENCY (Exclude CN 1250 & CN1251)	CONTINGENCY ADJUSTMENT TRANSFERS	REVISED AUTHORIZED CONTINGENCY (Exclude CN1250 & CN1251)	REMAINING CONTINGENCY AFTER APPROVED CHANGES DEDUCTED [h - b]	REMAINING CONTINGENCY AFTER POTENTIAL CHANGES DEDUCTED [i - d]	ORIGINAL CONTRACT VALUE + REVISED AUTHORIZED CONTINGENCY	BUDGET ESTIMATE AT COMPLETE	Cost Report Notes
				[a + b]		[c + d]						[a + h]	[j - e]	
		а	b	C	d	е	f	g	h	i	j	j	k	<u> </u>
SCC 10-50								= + = = = +						
1250	UTILITY RELOCATION PACKAGE #1 Contract 1250 Department of	9,273,939	2,694,211	11,968,150		11,968,150	1,953,377	740,834	2,694,211			11,968,150		15
	Technology	166,756		166,756		166,756						166,756		
1251	UTILITY RELOCATION PACKAGE #2 Contract 1251 Department of	16,832,550	3,962,032	20,794,582		20,794,582	5,367,297	(1,405,265)	3,962,032			20,794,582		16
	Contract 1251 Department of Technology	75,615		75,615		75,615						75,615		
1252	GUIDEWAY TUNNEL	233,584,015	1,829,687	235,413,702	170,654	235,584,356	23,658,464	(21,328,979)	2,329,485	499,798	329,144	235,913,500	329,144	17
1300	STATIONS	839,676,400	3,259,676	842,936,076	23,290,935	866,227,010	20,000,000		19,925,000	16,665,324	(6,625,610)	859,601,400	(6,625,610)	) 18
	1253 UNION SQUARE/MARKET ST STATION [UMS]	294,030,590	191,294	294,221,884	16,534,187	310,756,071	5,000,000		5,000,000	4,808,706	(11,725,481)	299,030,590	(11,725,481)	)
	1254 CHINA TOWN STATION [CTS]	247,567,810	2,677,458	250,245,268	3,434,940	253,680,208	5,000,000	(75,000)	4,925,000	2,247,542	(1,187,398)	252,492,810	(1,187,398)	) 19
	1255 YERBA BUENA/ MOSCONE STATION [YBM]	158,089,000	(1,073,031)	157,015,969	3,476,979	160,492,948	5,000,000		5,000,000	6,073,031	2,596,052	163,089,000	2,596,052	
	1256 SURFACE TRACKWORK & SYSTEMS ISTSI	139,989,000	1,463,954	141,452,954	(155,172)	141,297,783	5,000,000		5,000,000	3,536,046	3,691,217	144,989,000	3,691,217	
OTHER		31,233,501		31,233,501	0	31,233,501	1,160,000		1,160,000	1,160,000	1,160,000	32,393,501	1,160,000	
	SCC 10 - 50 Construction Sub-total	1,130,842,776	11,745,605	1,142,588,381	23,461,589	1,166,049,969	44,818,464	(21,403,979)	23,414,485	18,325,122	(5,136,466)	1,160,913,503	(5,136,466)	)
SCC 60-80	SOFT COSTS PACKAGES													
60	ROW, LAND, EXISTING IMPROVEMENTS	36,511,799	(4,265,478)	32,246,321		32,246,321	1,000,000	4,265,478	1,000,000	5,265,478	5,265,478	37,511,799	5,265,478	20
70	VEHICLES	24,108,712	(10,799,712)	13,309,000		13,309,000	2,276,941	10,799,712	13,076,653	13,076,653	13,076,653	26,385,653	13,076,653	21
80	PROFESSIONAL SERVICES	310,518,041		310,518,041		310,518,041	18,221,079		18,221,079	18,221,079	18,221,079	328,739,120	18,221,079	
	SCC 60 - 80 Construction Sub-total	371,138,552	(15,065,190)	356,073,362		356,073,362	21,498,020	15,065,190	32,297,732	36,563,210	36,563,210	392,636,572	36,563,210	
SCC 90	UNALLOCATED CONTINGENCY						3,845,945	21,134,447	24,980,392	24,749,924	24,749,924	24,749,924	24,749,924	22
TOTAL		1,501,981,328	(3,319,585)	1,498,661,743	23,461,589	1,522,123,332	70,162,429	14,795,658	80,692,609	79,638,256	56,176,668	1,578,299,999	56,176,668	
	Total Project Budge Estimate At Completion										1,578,300,000 1,522,123,332 56,176,668	24		

## central subway

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#### Contract Modification/Trend Log - Contract 1252 Tunnel

Awarded NTE Amount:	\$233,584,015.00	Revised NTE Amount	\$235,413,701.67
Substantial Completion:	4/15/2015	Revised Substantial Completion	4/15/2015

Contra	ct Modifications		Amount	
No.	Description	COR/PCC No.	CMod	Contract NTE
1	Amendment of Insurance Requirements	n/a	\$0.00	\$233,584,015.00
2	Amendment of General Liability Insurance Requirements	n/a	(\$3,040,713.00)	\$230,543,302.00
3	Relocation of PG&E Ductbank & Removal/Reinstall TODCO Scaffolding	CORs 10 & 29	\$6,633.37	\$230,549,935.3
4	Investigate 48" Pipe at UMS S. Headwall	PCC 9	\$75,000.00	\$230,624,935.37
5	LB/MOS Oil Filled Pipe Abatement and MOS Asbestos Pipe Abatement	CORs 7, 22 & 27	\$23,912.54	\$230,648,847.93
6	Arch. Support at MOS Station N. Headwall	COR 12	\$16,892.96	\$230,665,740.87
7	Revisions to MOS N. Headwall Elevation	PCC 1	\$20,358.23	\$230,686,099.10
8	UMS Reduced Duration	COR 21	\$0.00	\$230,686,099.10
9	48" Pipe Investigation and Removal at the UMS Headwalls	PCC 11	\$150,000.00	\$230,836,099.10
10	PG&E Impacts to Launch Box and Flagger	CORs 6 & 41	\$8,618.96	\$230,844,718.06
11	Bart Annex Wall	PCC 7	\$15,500.00	\$230,860,218.06
12	LB - Concrete Manhole and Slurry Pipe Removal	COR 38	\$3,820.84	\$230,864,038.90
13	Detrioual Shaft Ding (Dust Dank Demound	CORs 31, 47, 50,	¢0.000.04	6220 872 04C 0
13	Retrieval Shaft - Pipe/Duct Bank Removal	58, 66	\$9,908.04	\$230,873,946.94
14	MOS - 16"Pipe Removal @ N/S Headwalls	CORs 39, 44	\$4,551.99	\$230,878,498.93
15	MOS - S. Headwall Asbestos Pipe Abatement	COR 26	\$27,629.64	\$230,906,128.5
16	UMS Utility Removal/Construct Wall	CORs 46, 48, 68	\$21,150.28	\$230,927,278.8
17	MOS – 16" Steel Pipe Removal at N/S Headwalls/Enlarge Tie-In Hole	CORs 73, 76, 81	\$5,056.63	\$230,932,335.4
18	SFWD Support Work	PCC 13	\$20,000.00	\$230,952,335.48
19	Additional BART Instrumentation	PCC 6	\$307,860.75	\$231,260,196.23
20	Relocation of Retrieval Shaft	PCC 10	\$5,150,000	funded by CPT690
21	Columbus Ave. Restoration	NA	\$261,057.00	\$231,521,253.23
22	LB - Jet Grout Quantity Overrun	COR 070	\$599,900.00	\$232,121,153.23
23	Old Navy - Comp. Grout DSCs	COR 079	\$259,373.00	\$232,380,526.23
24	SFWD Excavation, Support and Backfilling	PCC 13	\$13,982.00	\$232,394,508.23
25	Cross Passage 5 - VECP	COR 087	(\$2,674.00)	\$232,391,834.23
		CORs 9, 24, 37, 45,		
26	Various CORs	51, 61, 71, 77, 83, 99	\$73,700.00	\$232,465,534.23

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27	MOS – Reroute traffic signal lines / Equipment Standby	CORs 11, 17	\$80,719.00	\$232,546,253.23
28	PCC 12 - Comp.Grout Mtls., Accel. at R. Shaft, Haz. Mtls @ R.Shaft, Obst. at CSM panel W6 (NTE Amount CMod)	FA COs 006, 007, 008, 009	\$81,937.00	\$232,628,190.23
29	AWSS Conflict with Water Line, AWSS Restraining at Launch Box, AT&T Vault Conflict with Sewer Main	COR 1, 2, 3	\$73,045.00	\$232,701,235.23
30	MOS Headwall End-stops	COR 018	\$144,000.00	\$232,845,235.23
31	Launch Box - Slurry Wall Obstructions	COR 32, 34, 42, 43, 62, 65, 67	\$234,438.00	\$233,079,673.23
32	COR 8 + Markup - Associated w/ COR 001, COR 002, and COR 003	COR 1, 2, 3, 8	\$168,000.00	\$233,247,673.23
33	LB - Pre-Excavation for Slurry Walls	COR 015	\$125,000.00	\$233,372,673.23
34	Modifications to Tunnel Alignment at Market Street - Initial Design Costs	PCC 012 Part 1	\$39,930.00	\$233,412,603.23
35	Deleted AWSS Work at Union St. and Columbus Ave.	PCC 015	(\$187,181.00)	\$233,225,422.23
36	Curb Ramp Work at NE Corner of 4th and Harrison Streets (Force Account)	FA CO 011	\$5,023.00	\$233,230,445.23
37	Staging Yard Hazardous Material	COR 30, 54, 75	\$401,933.00	\$233,632,378.23
38	Modifications to AWSS Facilities at 4th and Bryant Streets	PCC 014	\$35,925.00	\$233,668,303.23
39	MOS N. Headwall Impacts, LB – Jet Grout Overrun	COR 85, 70	\$240,333.00	\$233,908,636.23
40	Culvert, Street & Sidewalk Restoration in N.Beach (includes QC testing)	PCC 20	\$694,651.00	funded by TEP
41	Install Water Main in North Beach	PCC 20	\$328,860.00	funded by SFPUC
42	UMS - Shoring Impacts due to 48" ATT Pipe at SW Headwall	COR 069	\$29,463.00	\$233,938,099.23
43	UMS Tangent Pile SRB-H DSC, UMS Jet Grout Column No. 18 DSC	COR 096, COR 102	\$60,870.00	\$233,998,969.23
44	Subcontractor Substitution	NA	\$0.00	\$233,998,969.23
45	Modifications to Tunnel Alignment - Construction Costs	PCC 12	\$883,693.00	\$234,882,662.23
46	MOS 20" Conflict with 16" AWSS @ South Headwall	COR 082	\$28,160.00	\$234,910,822.23
47	CDF Encasement on 42" RCP	COR 005	\$95,000.00	\$235,005,822.23
48	North Beach Water Main Additional Work	PCC 20	\$112,102.20	funded by SFPUC
49	Various CORS and FACOS; FACO 13-15, 17-19; COR 116, 118-121	FACO 13-15, 17- 19; COR 116, 118- 121	\$180,010.41	\$235,185,832.64
50	Contract Milestone Changes		\$0.00	\$235,185,832.64
51	PCC 020 - Supp 1 - North Beach Restoration, OCS and Streetlighting		\$155,468.17	funded by TEP
52	PCC 19 - Piping, Conduit and Casing at 4th Street Portal		\$11,678.00	\$235,197,510.64
53	COR 117 - Retrieval Shaft Impacts		\$30,278.08	\$235,227,788.72
54	Material Hardness at the Retrieval Shaft		\$166,182.81	\$235,393,971.53
55	PCC 020 - Supp 2 - North Beach Sewer Work		\$19,730.14	\$235,413,701.67
	Sub Total:		\$1,829,686.67	

		Pending Contract Modifications	COR/PCC No.	Estimated	
		Description		Amount	Time
	Ι	Other Pending Contract Modifications	Cmod # TBD	\$170,653.95	
_		Sub Total:		\$170,653.95	

## central subway

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	стѕ	YBM	STS	COST REPORT NOTES
Potential Changes	16,534,187	3,434,940	3,476,979	(155,172)	26
Forecasted - Trends	2,827,518	1,696,580	555,112	68,840	
Negotiation					
Change of date range to receive art	(10,001)				
UMS Geoprobe Credit	(15,600)				
UMS Powell St. Elevator Site Hazmat	16,028				
STS Traffic Signal and SL Changes				298,307	
STS Comm and Elec Cabinets Relocati				67,221	
YBM Delete Instrument & Monitoring			(50,195)		
STS - OCS Pole Changes				12,706	
UMS - PCC 027 (Escalator Barricade)	(9,227)				
CTS-FACO#39- Soil Testing cmply OAB		5,478			
UMS-FACO #32 8" Waterline Conf NDSC	75,291				
UMS FACO #31 NDSC Incomplete PGE DB	165,944				
UMS-FACO #25 OCS Pole@ Market/Ellis	3,349				
UMS-FACO #19 Street Light at Stock.	2,361				
STS-FACO #48 Work Related St Lght				2,051	
UMS FACO #34 Becho Obstruct J Piles	7,435				
UMS FACO #45 Blocked Stubs PG&E	7,500				
UMS Transfer Instru BART Facilities	10,165				
CTS-PCC40 Plaza Surface Slab Pntrtn		5,525			
YBM PCC 41 Install #7 Box Clementin			38,501		
UMS Sewer Line Conflict	744,465				
UMS MRY Duct Bank-East Conflict	41,038				
STS Existing Fuel & Transite in MRY				18,342	
YBM COR 64 Buried sheet pile P-7			308		
USG COR 222 Shaft Wall Connections	170,189				
USG COR 228 Tiebacks at Level X	75,001				
USG COR 227 Plaza Lvl. Sequence	200,001				
USG COR 261 8" Wall at Grid 11B	5,632				
USG COR 263 12" Shear Walls	50,001				
USG COR 262 Maintenance Hatch Walls	339,310				
USG COR 264 Str. Steel Shop Dwgs.	5,001				
UMS COR 250 Macy's DSC	75,001				
USG COR 280 Strut Wall Grid 16 - 17	50,001				
USG COR 285 Elev.Edge of Slab Dtl.	50,001				
USG COR 286 Shear Wall GL 13/B-C	25,001				

## central subway

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	стѕ	YBM	STS	COST REPORT NOTES
USG COR 274 Shear Wall at Grid 10 USG COR 276 Escalator #1	68,945 10,001				
STS - Deletion of ARS (Revision 1)	10,001			(4,689,000)	
YBM COR 63 Buried objects in P-86			24,648	(4,009,000)	
STS COR 100 DSC Zayo PVC Conf w SW			24,040	80,082	
STS COR 210 WD pit size increase				21,988	
CTS COR 085 Addl FACO 10 Costs		13,267		21,500	
CTS PCC 001 Delete DB on Stockton		(84,018)			
STS COR #92 PG&E Vault Conf 12 AWSS		(04,010)		78,074	
STS COR #118 78" Sewer Excess Debri				54,455	
UMS - PCC #29 (Concrete Wale Suppt)	41,424			01,100	
YBM COR 086 Side SW lat util conf	,		78,296		
CTS COR 041 FACO #4 JT Unid. Cond		28,026	. 0,200		
CTS COR 040 FACO 002 Connect (E) DB		16,936			
YBM COR 49 Buried timber piles		-,	88,230		
STS 78 Sewer Existing Concrete Crow			,	1,666	
CTS-COR#201 Swr Line & Station Roof		46,046			
YBM COR 115 C1250 unencased JT			9,843		
STS-COR #84 Sewer Cleaning and Dewa				3,598	
STS COR 272 Pier AWSS Conflict				24,287	
STS COR 258 WD/PVC Conflict				87,511	
STS COR 211 SW conf AWSS 4th/Freelo				4,561	
STS COR #229 Multi E Util Conf w N				8,284	
UMS COR 232 S.Walk Hatches RFI 240	744				
STS COR #88 Modify CBs and Culverts				4,395	
STS COR 101 Cleaning for non-78" SW				58,906	
STS COR #187 DB Conf w N 12 Water				37,012	
CTS COR 231 Sidewalk Hatches		9,917			
STS COR #241 2-In WD Line w Offset				5,386	
STS COR #296 Mult E Util Confl AWSS				44,610	
UMS COR 301 Concr. Overpour and PVC	14,792				
UMS Remove Fire Hose Valve	2,016				
UMS - DCW and Hose Bibbs	29,159	40.000			
CTS PCC 061 Escalator Pit Provision		46,809		(20,405)	
STS PCC 063 Del ATT/TSIC/PGE on 4th				(36,495)	
STS COR 073 AWSS Incorrectly Shown				35,134	
STS COR 067 FACO #41 GW Lead Filter	I			22,695	

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	СТЅ	YBM	STS	COST REPORT NOTES
STS COR 037 FACO 037 30" FM Removal	ONIO	010		63,972	NOTED
STS COR 090 Subsurface Obstrc				20,452	
YBM COR 310 12" WL Conf w/ 36" FM			404,730	20,102	
STS COR 091 PG&E Vault Conf 16" Wtr			10 1,7 00	40,001	
STS COR 093 12" Water Conf 12" Tee				5,001	
STS COR 094 Unknown DB Conf 12" Wtr				20,001	
USG COR 238 Grid 17 & Vent Conn.	20,001			20,001	
USG COR 237 Elevator Sump Pits	20,001				
STS COR 074 AWSS Offset/Sewer Demo	20,001			108,384	
USG COR 315 Beam Conflict at C Line	50,001			100,001	
USG COR 281 8in Slab Conn.at B Line	25,001				
USG COR 345 8 inch Slab Support	15,001				
USG COR 343 Edge of Slab Detail	5,001				
USG COR 360 Column on Grid Line B	5,001				
USG COR 363 Grid Line B Footing	10,001				
USG COR 358 Elev. Machine Rooms	5,001				
USG COR 374 Add Built Up Columns	40,236				
STS COR 198 NDSC Out of Spec Cover	10,200			8,123	
STS COR 367 DSC Conf w/ CP and FM				36,256	
UMS Roof Deck - Schedule Recovery	78,765			00,200	
STS PCC 066 Add CS ATCS Emer Stop B	10,100			208,058	
STS COR 387 Oil Line Confl SW MH				6,124	
USG COR 386 Built up Column	75,001			0,121	
USG COR 388 Grid Line C Beam Slab	10,001				
UMS COR 391 AT&T Duct Bank Conflict	25,001				
USG COR 365 Elevator Hoist Beam	50,001				
UMS COR 389 4" Steel line asbestos	20,001				
YBM COR 390 RFI 1654 Chip Headwall	20,001		45,118		
USG COR 394 Ramp Conflict with HVAC	75,001		10,110		
USG COR 395 Rebar Detail over HVAC	5,001				
USG COR 398 Reinforcing at Columns	20,001				
YBM Sidewalk Bulb-out at Stair#1	20,001		83,937		
USG - PCC #030 (US Garage Underpin)	748,508		00,007		
USG COR 397 Duct Trench at Level 4	5,001				
USG COR 384 Slab on Grade Depressio	100,001				
USG COR 414 SOG Underneath the Ramp	100,001				
UMS COR 434 Stress of Perm. Struts	926,676				

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	стѕ	YBM	STS	COST REPORT NOTES
STS COR 416 Conc DB/wall/lines conf	50.004			81,783	
USG COR 435 Work Stoppage	50,001				
USG Hydrant Relocation on Geary St.	65,163				
USG COR 415 Glass Roof Steel Elev.	10,001				
USG COR 439 Top of Built-Up Columns	20,001				
USG COR 444 Mech. Opening in Wall	10,001				
STS PCC 077 Tunnel Sump Pump Upgrad				11,147	
UMS Preload Rqmt for Concourse	1,350,001				
USG Door Openings in Shear Walls	41,774				
UMS COR 466 Asbestos Conduit	21,344				
UMS COR 417 Redesigned Manhole	14,385				
YBM COR 485 Issues with N S Headwal			30,001		
YBM COR 95 UST Removal Folsom			196,000		
YBM COR 54 Conc obst 20" cut & cap			56,654		
YBM COR 230 Change load Bilco hatch			15,119		
YBM COR 249 Utility conflicts Folso			93,425		
UMS FACO #29 BART Hazmat Abatement	22,884				
STS COR 089 Extra Sewer Work				29,468	
USG PCC 73 Acceleration of Work	102,203				
YBM COR 50 Contam soil along H Line			39,560		
STS COR 480 Conc confl w (N) FM				886	
YBM COR 248 Transite pipe Folsom			1,501		
YBM COR 46 Add analy tests by AEW			3,655		
USG COR 532 Wall Connection	20,001				
USG COR 534 Existing Column Tie-In	5,001				
USG COR 344 Unknown Grade Beams	10,001				
USG COR 541 Plaza Level Lighting	5,001				
USG COR 544 Vent Shaft	10,001				
USG COR 546 Tiebacks at Level X	0				
USG COR 551 Addtional Waterstops	15,001				
USG COR 552 Plumbing	0				
USG COR 553 Details at Glass Roof	10,001				
UMS COR 493 Steel Shape Inside Pile	25,001				
UMS COR 516 Utilities and Slab at G	17,827				
USG COR 501 Tieback X-16	20,001				
UMS COR 510 6" VCP Side Sewer	19,696				
USG COR 514 Added Structural Dtls.	10,001				

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warded NTE Amount ubstantial Completion	\$839,676,400 2/10/2018				\$842,936,07 2/10/20
	UMS	стѕ	YBM	STS	COST REPORT NOTES
STS COR 530 Tunnel Track Machine	<b>CIIIC</b>	010		20,064	NOTED
STS PCC 084 Removal of ATT DB & Vau				282,345	
YBM PCC 88 Extend 24" WM to Howard			90,279	- ,	
YBM PCC 90 Replace Bollards on 4th			9,677		
USG COR 554 Reinforcing Design	10,001		,		
UMS Grade 50 Steel in Lieu Grade 70	572,884				
STS Tunnel Lowering	- ,			109,224	
UMS COR 565 GEN Emer Vent Design	500,001			,	
CTS COR 171 Mismarked gas line	,	14,581			
STS COR 571 Brk struc confl w/ AWSS		.,		1,648	
UMS COR 578 Elev./Escalator Monitor	25,001			.,	
UMS COR 579 Elevators 1-4 SFFD	25,001				
UMS COR 591 Escalators and Stairs	100,001				
UMS COR 600 Hydrocarbon Odor	50,001				
UMS - PCC #31 (USG HVAC Trench Mod)	186,511				
CTS PCC#25 Stairs 5, 6, 7 Mods	,-	21,672			
YBM COR 116 Archaeological Discovery		,	124,268		
YBM PCC 82 Delete Scope Due to Hote			(38,294)		
STS PCC #51 Inventor Tmp Crossover				23,420	
STS Track Switch Machine Change				389,965	
UMS COR 539 Elev.3/4 Machine Pocket	10,001			,	
YBM COR 566 WD Tie-In @ Folsom			6,302		
USG COR 649 16 line Jet Grout Clafc	500,001				
YBM PCC 76 AWSS, SSFM, WM Design			627,854		
CTS - PCC #036 (CMU Wall Bracing)		19,552	,		
UMS COR 636 Bi-Fold Door Tube Steel	24,911				
UMS PCC 100 Waterproofing and Drain	217,203				
USG COR 654 Plaza Level Tie-In	10,001				
UMS COR 652 Elev. 1 & 2 Cond. Shaft	10,001				
UMS COR 661 Card Acc & Dr alrm Pnts	10,001				
YBM COR 45 Abandoned sewer not slur			7,492		
UMS COR 673 Elation System Changes	10,001				
UMS COR 674 1.5 in Vertical Drain	10,001				
USG COR 669 Exig Leaks @ USG	10,001				
STS COR 657 Tunnel Ca Bsn Dsn Chang				10,001	
UMS COR 678 Drain Piping Size	10,001				
UMS COR 690 Fire Alram Annunciator	10,001				

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	СТЅ	YBM	STS	COST REPORT NOTES
UMS COR 696 Use 2.5 Inch Conduit	10,001	010	1011	010	110120
CTS COR 695 Mod to Gronding System	10,001	10,001			
STS COR 664 Threaded Dowels				10,001	
UMS COR 689 Pil Ovstrss at Outrigrs	10,001			10,001	
UMS COR 697 Emer Train Stp Buttns	10,001				
UMS COR 712 Utlty Undrping Moniting	10,001				
YBM COR 711 Conduit for AC Swichgea			10,001		
UMS COR 710 Alrm Sys Dsgn & Asso Mt	10,001		,		
UMS COR 709 Potbl Gen Tap Box	10,001				
CTS COR 706 Glas Canpy Trench Drain	- ,	10,001			
UMS COR 645 Notch Wales at N. HWall	90,367	,			
Proposed Contract Change (PCC)	,				
UMS - Relocation of TS Cabinet	23,275				
YBM_CTS PCC 33 Platform Gate Revisio			100,001		
CTS - Removal of Bus Bulb		15,997			
CTS Delete PGE Work at Vault 732		(50,000)			
UMS MRY Duct Bank-West	54,981				
Deletion of ARS (Part II)				(600,001)	
YBM PCC 56 OCS Pole Foundations			551		
CTS PCC 067 Wall Shift North Access		(1,097)			
USG Ramp Barriers and Handrail	47,569				
CTS PCC 050 Chinatown Plaza		0			
USG Removal of Existing Column	(101)				
UMS Jet Grout at O'Farrell	35,001				
YBM PCC 79 Install 12in WM to Howar			169,450		
YBM PCC 37 SFAC Node Sculpture			100,001		
YBM PCC 59 Pavers Basis of Design			20,001		
UMS Locate PG&E Conduits	20,001				
CTS PCC 083 Switchgear Breakers		30,001			
YBM PCC 85 Ticketing Hall Changes			100,001		
UMS PCC 86 Headwall Soffit Pile	20,001				
USG PCC 87 Tiebacks, L2, GL 14-15	40,001				
USG PCC 89 E. Light Pole Foundation	2,501				
UMS PCC 71 Rerouting of Slab Drains	0				
YBM PCC 91 Concourse Beam Revision			0		
UMS PCC 092 (GEN) TME Tracking Form	2,501				
UMS PCC 93 Ellis Deck Seismic Joint	10,001				

## central cubway

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### Contract Modification/Trend Log - Contract 1300 Stations

Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	CTS	YBM	STS	COST REPORT NOTES
UMS Repair MRY Ductbank Y Connection	0				
STS PCC 095 Frame/Grate Change				(50,001)	
YBM PCC 97 Change Concourse Opening			30,001		
YBM PCC 099 Glass Art Changes			30,000		
STS PCC 096 Rev 1 - 4th St SW Lining				50,001	
CTS PCC 98 Slurry Wall Wr Proofing		20,001			
USG PCC 101 Elev. Machine Rooms	0				
USG PCC 102 Fire Horn-Strobe	0				
UMS PCC 103 PG&E S.light at Maiden	0				
CTS PCC 104 Water Leak NE HH		20,001			
UMS PCC105 Adj to Row X and Row Y	10,001				
UMS PCC 106 Edge of Slab for 8" Con	10,001				
UMS PCC 107 Light Pole Footings	10,001				
UMS PCC 108 Con Wok chges du to DSC	10,001				
UMS PCC 109 Rein Dtls for Struc Con	10,001				
Change Order Request (COR)					
STS COR 17 Changes to Sewer Structu				247,717	
STS-FACO #47 Sewer Related Work Pt2				33,898	
UMS-FACO #30 NDSC Inadequate CDF	157,462				
STS- AT&T Conduit Changes				22,290	
STS COR 113 DSC PVC Conduit/WL Conf				11,997	
STS COR 145 DSC PVC Conduits Conf				1,276	
STS COR 164 DSC 8" AWSS Lat Conf 78				5,750	
STS COR 254 DSC 4" Confl w 36" FM				25,197	
CTS COR 255 Additional Instruments		429,777			
STS COR 270 SW AWSS Conflict				8,280	
STS COR 271 DB AWSS Conflict				891	
STS COR 290 E CB PVC Confl WD AWSS				3,329	
STS COR 297 TC for Track Work at 4t				150,001	
UMS COR 110 DSC Obst. at JG Columns	1,748,070				
USG COR 359 Escalator #1 Truss Span	89,655				
USG COR 246 Tieback Access RFI 1050	160,933				
UMS COR 300 14 HDPE at Geary	(307)				
CTS COR 305 Abandon OBW-CTS-03		1,790			
STS COR 371 Conflicts w/ 12" AWSS		0 0 10		30,001	
CTS COR 372 DSC Potholing @ N Acces		9,846		05 00 /	
STS COR 392 Util at 4th-Town SW MH	I			25,001	

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## central cubway

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warded NTE Amount ubstantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/201
	UMS	СТЅ	YBM	STS	COST REPORT NOTES
STS COR 402 3x5 SW Confl w/ VCP SW	UNIS	013		10,001	NOTES
UMS COR 403 Waterproofing at BART	63,285			10,001	
STS COR 404 Contam Soil in MRY DB	00,200			12,303	
YBM COR 267 Design for S.walk Hatch			10,848	12,000	
STS COR 014 Addtl MNHS for 78" SW			10,040	20,217	
STS COR 401 AWSS Layout 4th/King				295,269	
STS COR 406 Addtl TC at 4th/King				675,001	
STS COR 409 Conc in confl w/ (N) FM				3,722	
STS COR 411 Delay 8" WL miss serv				7,501	
CTS COR 405 Hyrdrocarbons in HH		50,001		7,001	
CTS COR 408 MSX Termination		191,291			
CTS COR 437 Unanticipated Elec @ Sh		50,001			
STS COR 443 AWSS Procurement Delay		00,001		25,001	
CTS COR 445 3x5 w/ HDPE/PVC Inside		10,001		20,001	
CTS COR 450 Switchgear Cubicles		100,001			
STS COR 451 PGE VIt WD Line Confl		100,001		30,001	
STS COR 454 Addtl Conflicts w/ 8" W				120,001	
STS COR 455 Conflicts w/ 8" WD Line				10,001	
STS COR 456 Conflicts w/ MRY Poles				20,001	
UMS COR 393 Wrap 14" Sewer Line	4,131			20,001	
STS COR 461 WD Confl w/ Mult Utilit	4,101			100,001	
STS COR 469 SW Cleaning 4th/King				1,836	
USG COR 471 Tieback Install Delays	46,250			1,000	
STS COR 475 Removal of Fiber Optic	40,200			1,101	
STS COR 476 Conc DB Conf w/ FH				25,001	
USG COR 486 Level X Test Tieback	0			20,001	
STS COR 500 Tunnel Monuments	Ū			5,001	
USG COR 512 Plaza Slab Conflict	50,001			0,001	
STS COR 519 Re-pressure test WD	00,001			2,739	
STS COR 523 AV & GV on 8" WD Main				1,601	
CTS COR 526 Connection b/t Wall & D		25,001		1,001	
CTS COR 527 Connection b/t Wall/Dec		25,001			
STS COR 531 ATT Confl w/ 36" FM		20,001		25,001	
STS COR 536 Util in Conf w 36" FM				66,287	
STS COR 557 ATCS Revisions				50,001	
STS COR 558 CB in conf w AWSS				3,001	

## central subway

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Contract Modification/Trend Log - Contract 1300 Stations

Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	стѕ	YBM	STS	COST REPORT NOTES
STS COR 561 ATCS Mitigation NCT				1	
STS COR 563 Utils conf w new AWSS				377	
STS COR 491 Util in conf w/ 10" VCP				10,001	
CTS COR 529 Rock Mass at Elev 37'		25,001			
STS COR 562 WD offsets around basin				25,534	
YBM COR 564 Concrete Encased PG&E			0		
CTS COR 568 CMOD 019 Reservations		300,001			
USG COR 569 Steel Plate Under Glass	0				
STS COR 570 Slab confl w/ AWSS				3,001	
CTS COR 574 Escalator supports		1			
UMS COR 575 Pre-Load of Perm.Struts	0				
YBM COR 581 SFFD Montor Panel			0		
STS COR 584 Debris confl w/ culvert				11,569	
YBM COR 586 Concrete Block @ Folsom			10,001		
YBM COR 597 Power Circuits for CCTV			0		
YBM COR 598 Power Circuit for CCTV			0		
YBM COR 599 Elect for HVAC VRV's			0		
STS COR 369 STS conf w/ SW @ Welsh				4,515	
STS COR 447 Added Exc for SFWD POC				18,455	
STS COR 520 Lat Conf AWSS				3,867	
STS COR 522 Thickened Str. Stan				5,217	
STS COR 533 Conc wall confl util				39,170	
STS COR 559 Temporary Trolley Pole				15,001	
STS COR 567 Loct of Plinth Breaks				10,001	
YBM COR 572 Kiosks on Platform Lvl			8,060	,	
CTS COR 582 Monitor at Agent Booth		25,001	,		
CTS COR 583 Elev 1-4 SFFD monitor		25,001			
YBM COR 589 Escalators 3, 4, and 7			0		
STS COR 601 Conc Enc in cn. w W lin				2,827	
STS COR 604 Duct Bank in conf. w se				10,001	
STS COR 606 PDS Mounting Brackets				10,001	
STS COR 609 Damaged MRY Conduit				10,001	
STS COR 613 Unknown Duct Bank				3,001	
STS COR 614 Pole ftg confl w FM				6,001	
STS COR 615 Sump Pump Pit Cover				1,044	
UMS COR 617 Material North of Geary	50,001			.,	
STS COR 618 Add Exc added 4" Gate	,			3,535	
	1			,	

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Contract Modification/Trend Log - Contract 1300 Stations

Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	CTS	YBM	STS	COST REPORT NOTES
STS COR 619 Added WD POC Excavation	01113	010	1 DIVI	5,372	NOTES
STS COR 621 Additional WD Exc. per				10,914	
STS COR 623 Unkn Con Structure				5,001	
STS COR 639 Util conf w/ 12" AWSS				10,001	
STS COR 641 SW delay due to conf ut				10,025	
UMS COR 646 Add. Floor Drain	6,504			,	
UMS COR 648 Water Proof under swalk	50,001				
STS COR 650 Asbestos conf w/ ATT DB				15,001	
UMS COR 673 Elation System Changes	0			,	
CTS COR 165 Rqst for wet Tickets		10,001			
UMS COR 278 Unnecsry Shocret Shdwn	9,120	-,			
USG COR 509 Soil Nail Shotcrete Wall	1,164,129				
YBM COR 624 CMU Wall Supports			31,320		
CTS COR 625 Added Cane Detc Rail		1,889	,		
CTS COR 626 Ad HSS & Plt @ H Beam		3,986			
CTS COR 627 Add HSS Col @ Tickt Mac		2,417			
CTS COR 629 Abrsv Nosng at Con Strs		3,494			
YBM COR 630 Add Hot Dip Glvzed Fini			11,206		
STS COR 632 Omit Unist & add Anr Bt				6,293	
STS COR 634 Forc Mn Dsn PCO 329				126,382	
CTS COR 640 East Leg swer Slplne		61,264			
STS COR 644 Wod Pier Cnf w AWSS				13,258	
UMS COR 653 Comp. Grout Hole E-5-2	10,001				
STS COR 655 Unkn Cnc St / cn w cbsn				3,000	
USG COR 656 Elev. 1&2 Add OH Hoist	14,866				
CTS COR 659 Add Grts at Sta Ag glas		1,537			
UMS COR 660 Added Grommets at Booth	1,134				
STS COR 662 Foo cnf with catch bsn				1,257	
USG COR 663 Water Flow from Roof	50,001				
STS COR 665 Ov prd Lit PI fdn in				3,001	
STS COR 666 Ukn Con Vlt/con N36"				7,501	
CTS COR 670 Kitn Sink Piping		10,001			
STS COR 675 Dct bnk & 3" Gas Line				10,001	
UMS 676 Fire Alarm System	0				
STS COR 677 Fir Supsion stnpip Mat				3,895	
CTS COR 679 GI Cutos & Add Sp hds		23,450			
STS COR 682 Shtdown #1 Rail Mods				9,432	

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Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	СТЅ	YBM	STS	COST REPORT NOTES
STS COR 683 Gas Ln & unkn Duct Bank	01113	010		5,001	NOTES
STS COR 685 DSC 8" Con unslab St Sc				13,075	
UMS COR 687 Trant Pipe at St 134+00	50,001				
STS COR 688 Ukn Piers /conct N 12"				5,001	
YBM COR 692 Rebr to bs Plt Filt Wld			13,118	-,	
UMS COR 693 Add Cryszed Glass Panel	40,823		-, -		
STS COR 694 Tr Rts in con/car pipes	-,			5,001	
STS COR 699 Dct Bnk in Cnf w 36"FM				20,001	
STS COR 702 Brk Cs Bsn cnct w N Cuv				5,001	
STS COR 703 Tunl Wakway Expn jnts				3,412	
YBM COR 704 Vetc Pickts @ Plug Risr			(827)		
YBM COR 705 Del bems & Embds/Ven sh			(17,893)		
UMS COR 707 Prc /Ins Gas by PG& E	(9,680)				
STS COR 713 Dmgd 15" Sw Ln -Con mnh				10,001	
UMS COR 714 Acc Con Alr Ponts	10,001				
CTS COR 628 Add Beams and Embeds		8,331			
Change Order - Pending					
UMS -Remove AWSS Hydrant at OFarrel	7,307				
CTS-Plaza Surface Level Struct Mods		(10,337)			
UMS FACO #53 NDSC Transite Pipe	61,055				
STS COR #236 E WD Config at Freelon				55,902	
UMS COR 235 DSC Transite Pipe	1,855				
STS COR #170 Cores in 78" RC Crown				1,666	
YBM COR 240 Headhouse Contam. Mtl.			108,181		
UMS COR 277 8" Steel line Asbestos	3,769				
YBM PCC 062 Delete SW MH FOL 10+35			(24,319)		
CTS COR 353 AWSS confl w HDPE in SW		2,883			
YBM COR 362 Temp Pavement Section			60,797		
YBM COR 373 DSC NoD Contaminated Ma			40,548		
UMS COR 407 8 inch SS Line Conflict	4,647				
CTS COR 430 Unknown Concrete		3,712			
CTS COR 429 Thickened Street Base		2,609			
CTS COR 436 WD confl with SW MH A		20,223			
CTS COR 452 ATT VIt Confl w/ SS Lat		1,742			
CTS COR 453 Steel Line Confl w/ SS	00.057	4,966			
UMS PG&E Additional Conduits	36,657				
UMS COR 079 DSC Storage Tanks	97,817				

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Contract Modification/Trend Log - Contract 1300 Stations

Awarded NTE Amount Substantial Completion	\$839,676,400 2/10/2018				\$842,936,076 2/10/2018
	UMS	стѕ	YBM	STS	COST REPORT NOTES
STS COR 468 Buried Debris in Subgra				2,027	
CTS COR 470 Steel Pipe/SW MNH Confl		2,150			
YBM COR 458 TPC site support Zayo			7,005		
YBM COR 459 AWSS / WD Conflict			75,154		
YBM COR 474 Folsom Culvert at PG&E			18,612		
CTS COR 528 AWSS in 3x5 Brk SW		20,285			
UMS COR 595 Fuel Tank S. of Geary	51,956				
CTS PCC 017 FH at Jade Galore		90,090			
YBM COR 642 Sto Dir du to Nav Mon			1,754		
YBM Delete Post-Grout of TB-2			(9,001)		
YBM COR 370 Brik Mnhl. conft.			647		
CTS COR 521 Accommodations for Chin		11,223			
Approved	191,294	2,677,458	(1,073,031)	1,463,954	
Contract Modification					
CMod #1 BART Elevator Option 1 @ Pow	90,000				
CMod #3 CTS Work Safely Ard Power Po		25,956	(4.000.000)		
CMod #5 YBM Deletion of Comp Groutin		75 000	(1,833,869)		
CMod #6 CTS Plaza Constr Supt Servi		75,000		00.470	
CMod#7 STS FACOs 016, 017 &COR 009		400.000		80,170	
CMod #4 CTS-Force Account Change Or		130,000	04.007		
Cmod #10 YBM PCC 042			64,287	005 000	
CMod#8 STS PCC 006 ATT MH, PB&Trench			400.000	225,208	
CMod #9 YBM COR 10,15,16,18,20,25	40.007		126,663		
CMod #11 UMS PCC 002 CMod #12 STS Traffic Control	12,997			1 000 000	
			<b>E0 E0C</b>	1,032,302	
CMod # 14 YBM COR 036, 078			58,526		
CMod #15 YBM COR 196 CMod #16 UMS COR 184	8,261		3,178		
CMod #10 0MS COR 184 CMod #017 CTS CORs 001 053 & 069	0,201	54,322			
CMod #017 CTS CORS 001 053 & 009 CMod #018 CTS PCC 012		60,248			
CMod #13 CTS COR 006		57,707			
CMod #19 CTS COR 007, 026		2,274,225			
CMod #19 CTS COR 007, 028 CMod #20 YBM PCC 047 and 45		2,214,220	364,562		
CMod #021 STS CORs 48/52/114/233/252			304,302	18,221	
CMod #22 UMS PCC 045, 046	16,198			10,221	
CMod #23 UMS PCC 043, 040	63,838				
CMOD 24 STS PCC 23	00,000			108,053	
	I			100,000	

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Awarded NTE Amount Substantial Completion		\$839,676,400 2/10/2018			
	UMS	стѕ	YBM	STS	COST REPORT NOTES
CMod #026 YBM COR 072			84,509		
CMod #025 YBM Various CORs			59,113		
Grand Total	16,725,481	6,112,398	2,403,948	1,308,783	

#### 7.6 BUDGET REVISIONS: REPORT SORTED BY CONSTRUCTION PACKAGES & SOFT COSTS

							Report Period: May 2016		
			Apr 2016		May 2016				
Group by Contract & SCC	CATEGORY ITEM	Apr 2016 Base	Apr 2016 Allocated Contingency	Apr 2016 Base + Allocated Contingency (YOE)	May 2016 Base	May 2016 Allocated Contingency	May 2016 Base + Allocated Contingency (YOE)	BUDGET TRANSFERS [May 2016] vs. [Apr 2016]	Cost Report Notes
10-50	CONSTRUCTION CONTRACT PACKAGES	1,142,075,793	18,837,711	1,160,913,503	1,142,513,381	18,400,122	1,160,913,503	0	
1250	UTILITY RELOCATION PACKAGE #1 Contract 1250 Form B Credit	<u>12,134,906</u> (2,275,419)		12,134,906 (2,275,419)	12,134,906 (2,275,419)		12,134,906 (2,275,419)	0	
1251	UTILITY RELOCATION PACKAGE #2 Contract 1251 Form B Credit	20,870,197		20,870,197	20,870,197 (7,618,412)		20,870,197 (7,618,412)	0	
1252	GUIDEWAY TUNNEL Contract 1252 Form B Credit	235,227,789 (254,050)	685,711	235,913,500 (254,050)	235,413,702 (254,050)	499,798	235,913,500 (254,050)	0	27
1300	CN1300 STATIONS TOTAL	842,609,400	16,992,000	859,601,400	842,861,076	16,740,324	859,601,400	0	28
1253: UMS	UNION SQUARE/MARKET STREET STATION [UMS] UMS 1253 Form B Credit	294,221,884 (528,370)	4,808,706	299,030,590 (528,370)	294,221,884 (528,370)	4,808,706	299,030,590 (528,370)	0	
1254: CTS	CHINA TOWN STATION [CTS] CTS 1254 Form B Credit	250,170,268 (451,703)	2,322,542	(528,370) 252,492,810 (451,703)	250,170,268 (451,703)	2,322,542		0	
1255: ҮВМ	YERBA BUENA/ MOSCONE STATION [YBM] YBM 1255 Form B Credit	<u>(431,703)</u> <u>156,872,347</u> (100,000)	6,216,654	163,089,001 (100,000)	(451,703) 157,015,969 (100,000)	6,073,032	163,089,001 (100,000)	0	
1256: STS	SURFACE TRACKWORK & SYSTEMS [STS] STS 1256 SFPUC SEWER MAIN CREDIT	141,344,901	3,644,098	144,988,999	141,452,954 (2,925,296)	3,536,045		0	
	STS 1256 Form B Credit	(1,000,000)		(1,000,000)	(1,000,000)		(1,000,000)	0	
OTHER	OTHER CONSTRUCTION TOTAL	46,386,751	1,160,000	47,546,751	46,386,751	1,160,000	47,546,751	0	
40.06	PUBLIC ART PROGRAM	8,175,555	1,160,000	9,335,555	8,175,555	1,160,000	9,335,555	0	
40.02	MISC. CONSTR CONTRCT WK (TRACTION POWER FOR 1251)	258,202		258,202	258,202		258,202	0	
40.01	CONTRACT 1300 SOIL PROCESS	500,000		500,000	500,000		500,000	0	29
50.01	TEMPORARY LICENSE AGREEMENT (ATCS CENTRAL CONTROL)	487,972		487,972	487,972		487,972	0	
50.06	MTA FARE COLLECTION EQUIPMENT	5,400,000		5,400,000	5,400,000		5,400,000	0	
50.06	BART FARE COLLECTION EQUIPMENT	700,000		700,000	700,000		700,000	0	

#### 7.6 BUDGET REVISIONS: REPORT SORTED BY CONSTRUCTION PACKAGES & SOFT COSTS

								Report Period: May 2016		
			Apr 2016			May 2016				
Group by Contract & SCC	CATEGORY ITEM	Apr 2016 Base	Apr 2016 Allocated Contingency	Apr 2016 Base + Allocated Contingency (YOE)	May 2016 Base	May 2016 Allocated Contingency	May 2016 Base + Allocated Contingency (YOE)	BUDGET TRANSFERS [May 2016] vs. [Apr 2016]	Cost Report Notes	
40.02	JOB ORDER CONTRACTS (JOCS) - CONSTRUCTION	117,255		117,255	117,255		117,255	(	)	
40.08	AON RISK INSURANCE	18,088,750		18,088,750	18,088,750		18,088,750	(	)	
40.02 40.08	PUBLIC AGENCIES UTILITY COORDINATION	3,713,215		3,713,215	3,713,215		3,713,215	(	)	
40.02	DEPARTMENT OF PARKING AND TRAFFIC (DPT)	1,200,000		1,200,000	1,200,000		1,200,000	(	)	
50.03	UNION SQUARE/ MARKET STREET STATION POWER FEED	2,959,826		2,959,826	2,959,826		2,959,826	(	)	
50.03	UNION SQUARE/ MARKET STREET STATIONS PERMANENT POWER	(2,350,000)		(2,350,000)	(2,350,000)		(2,350,000)	(	)	
50.03	CHINATOWN STATION POWER FEED	2,959,826		2,959,826	2,959,826		2,959,826	(	)	
50.03	CHINATOWN STATION PERMANENT POWER	(2,350,000)		(2,350,000)	(2,350,000)		(2,350,000)	(	)	
50.03	YERBA BUENA/ MOSCONE STATION [YBM] POWER FEED	3,125,222		3,125,222	3,125,222		3,125,222	(	)	
50.03	YERBA BUENA/ MOSCONE STATION [YBM] PERMANENT POWER	(2,368,540)		(2,368,540)	(2,368,540)		(2,368,540)	(	)	
50.03	SURFACE STATION POWER FEED	11,839		11,839	11,839		11,839	(	)	
50.04	COMMUNICATION CONNECTION COSTS	5,757,629		5,757,629	5,757,629		5,757,629	(	)	
60	ROW, LAND, EXISTING IMPROVEMENTS	32,246,321	5,265,478	37,511,799	32,246,321	5,265,478	37,511,799	0		
60.01	PURCHASE OR LEASE OF REAL ESTATE	30,065,810	5,265,478	35,331,288	30,065,810	5,265,478	35,331,288	(	30	
60.02	RELOCATION OF EXISTING HOUSEHOLDS	2,180,511		2,180,511	2,180,511		2,180,511	(	-	
70	VEHICLES	13,309,000	13,076,653	26,385,653	13,309,000	13,076,653	26,385,653	0		
70.01	LIGHT RAIL	13,309,000	13,076,653	26,385,653	13,309,000	13,076,653	26,385,653	(	) 31	
70.07	SPARE PARTS		40.004.000				000 700 100			
80	PROFESSIONAL SERVICES	310,518,041	18,221,079	328,739,120	310,518,041	18,221,079	328,739,120	(		
80.01	PRELIMINARY ENGINEERING	46,202,674		46,202,674	46,202,674		46,202,674	(	J	

#### 7.6 BUDGET REVISIONS: REPORT SORTED BY CONSTRUCTION PACKAGES & SOFT COSTS

			Apr 2016			May 2016		Report Pe	eriod: May 2016
Group by Contract & SCC	CATEGORY ITEM	Apr 2016 Base	Apr 2016 Allocated Contingency	Apr 2016 Base + Allocated Contingency (YOE)	May 2016 Base	May 2016 Allocated Contingency	May 2016 Base + Allocated Contingency (YOE)	BUDGET TRANSFERS [May 2016] vs. [Apr 2016]	Cost Report Notes
80.02	FINAL DESIGN	61,322,751		61,322,751	61,322,751		61,322,751	(	D
80.03	PROJECT MANAGEMENT FOR DESIGN & CONSTRUCTION	89,021,634	13,905,845	102,927,479	89,021,634	13,905,845	102,927,479	(	D
80.04	CONSTRUCTION ADMINISTRATION & MANAGEMENT	91,037,791	2,956,812	93,994,603	91,037,791	2,956,812	93,994,603	(	D
80.05	INSURANCES	6,800,000		6,800,000	6,800,000		6,800,000	(	)
80.06	LEGAL: PERMITS. REVIEW FEES BY OTHER AGENCIES	8,258,184		8,258,184	8,258,184		8,258,184	(	D
	SURVEYS, TESTING, INVESTIGATION. INSPECTION	883,100		883,100	883,100		883,100	(	D
80.08	START-UP	6,991,907	1,358,422	8,350,329	6,991,907	1,358,422	8,350,329	(	D
	ALL SCC CATEGORIES 10 TO 80	1,498,149,155	55,400,921	1,553,550,076	1,498,586,743	54,963,332	1,553,550,076	0	
90	UNALLOCATED CONTINGENCIES			24,749,927			24,749,927		32
	TOTAL PROJECT COST 10 TO 100			1,578,300,002			1,578,300,002		
	TOTAL CONTINGENCY			80,150,847			79,713,259		
				60,000,000			60,000,000		
	BELOW OR ABOVE MINIMUM			20,150,847			19,713,259		

SFMTA Municipal Transportation Agency

COST STATUS BY CATEGORY	SCC CODES	BUDGET Apr 2016	BUDGET TRANSFERS	BUDGET May 2016	May 2016 CTD	May 2016 EAC
CONSTRUCTION	SCC 010 - 050	1,160,913,504	(0)	1,160,913,504	675,513,013	1,166,049,969
REAL ESTATE	SCC 060	37,511,799	0	37,511,799	30,646,005	32,246,321
VEHICLES	SCC 070	26,385,653	0	26,385,653	2,147,952	13,309,000
PRELIM ENGINEERING	SCC 080.01	46,202,674	0	46,202,674	46,202,675	46,202,674
FINAL DESIGN	SCC 080.02	61,318,331	0	61,318,331	61,576,939	61,322,751
PM FOR DESIGN & CONSTRUCTION	SCC 080.03 - 080.04	196,922,082	0	196,922,082	112,897,395	180,059,425
OTHER PROF SRVCS	SCC 080.05 - 080.08	24,296,033	0	24,296,033	12,306,192	22,933,191
UNALLOC CONTINGENCY	SCC 090	24,749,924	0	24,749,924		
Grand Total		1,578,300,000	(0)	1,578,300,000	941,290,172	1,522,123,332



SFMTA

SCC DESCRIPTION	May 2016 BUDGET	May 2016 CTD
010 - GUIDEWAY & TRACK ELEMENTS	285,696,893	190,776,255
020 - STATIONS, STOPS, TERMINALS, INTERMODAL	573,714,346	283,946,377
040 - SITEWORK & SPECIAL CONDITIONS	206,131,166	182,666,238
050 - SYSTEMS	95,371,099	18,124,143
060 - ROW, LAND, EXISTING IMPROVEMENTS	37,511,799	30,646,005
070 - VEHICLES (number)	26,385,653	2,147,952
080 - PROFESSIONAL SERVICES (applies to Cats. 10-50)	328,739,120	232,983,202
090 - UNALLOCATED CONTINGENCY	24,749,924	
Grand Total	1,578,300,000	941,290,172



SFMTA

	May 2016	May 2016
SCC DESCRIPTION	BUDGET	CTD
010.02-Guideway: At grade semi-exclusive (allows cross-traffic)	2,860,000	145,000
010.06-Guideway: Underground cut & cover	70,833,126	61,893,296
010.07-Guideway: Underground tunnel	200,793,041	123,512,488
010.09-Track: Direct fixation	6,761,089	2,606,871
010.12-Track: Special (switches, turnouts)	4,449,637	2,618,600
020.01-At-grade station, stop, shelter, mall, terminal, platform	6,673,138	1,419,168
020.02-Aerial station, stop, shelter, mall, terminal, platform	3,536,045	0
020.03-Underground station, stop, shelter, mall, terminal, platform	541,803,326	279,184,215
020.07-Elevators, escalators	21,701,837	3,342,993
040.01-Demolition, Clearing, Earthwork	11,228,751	10,501,373
040.02-Site Utilities, Utility Relocation	56,827,937	56,357,952
040.03-Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,301,393	3,878,001
040.04-Environmental mitigation, e.g. wetlands, historic/archeologic, parks	1,020,165	589,332
040.05-Site structures including retaining walls, sound walls	2,706,431	2,706,431
040.06-Pedestrian / bike access and accommodation, landscaping	9,755,506	2,177,348
040.07-Automobile, bus, van accessways including roads, parking lots	6,967,874	2,133,265
040.08-Temporary Facilities and other indirect costs during construction	110,323,109	104,322,537
050.01-Train control and signals	28,031,423	6,080,403
050.02-Traffic signals and crossing protection	12,584,529	6,978,200
050.03-Traction power supply: substations	21,487,073	3,863,853
050.04-Traction power distribution: catenary and third rail	12,441,113	1,140,183
050.05-Communications	12,062,374	61,503
050.06-Fare collection system and equipment	6,100,000	0
050.07-Central Control	2,664,586	1
060.01-Purchase or lease of real estate	35,331,288	28,236,576
060.02-Relocation of existing households and businesses	2,180,511	2,409,430
070.01-Light Rail	26,385,653	2,147,952
080.01-Preliminary Engineering	46,202,674	46,202,675
080.02-Final Design	61,318,331	61,576,939
080.03-Project Management for Design and Construction	102,927,479	61,386,315



SFMTA

SCC DESCRIPTION	May 2016 BUDGET	May 2016 CTD
080.04-Construction Administration & Management	93,994,603	51,511,080
080.05-Professional Liability and other Non-Construction Insurance	6,800,000	6,340,196
080.06-Legal; Permits; Review Fees by other agencies, cities, etc.	8,262,604	4,573,622
080.07-Surveys, Testing, Investigation, Inspection	883,100	13,831
080.08-Start up	8,350,329	1,378,544
090.00-Unallocated Contingency	24,749,924	
Grand Total	1,578,300,000	941,290,172

	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B] May 2016 Budget (YOE)	[C] PRIOR MONTH Total	[D] PRIOR MONTH Monthly	[E] CURRENT Monthly	[F] CURRENT Total	[G] VARIANCE (B - F)	COST REPORT NOTES
TOTAL PRELIMINARY ENGINEERING	46,542,061	46,542,061	0	0	46,542,061	0	33
11 - SFMTA PROJECT MANAGEMENT	8,828,359	8,253,957	0	0	8,253,957	574,403	34
12 - SFMTA ENGINEERING SERVICES	11,425,594	11,425,594	0	0	11,425,594	0	35
16 - DEPARTMENT OF PARKING AND TRAFFIC (DPT)	935,451	802,883	0	0	802,883	132,568	
21 - ARTS COMMISSION	1,500,570	1,500,570	0	0	1,500,570	1	36
22 - FIRE DEPARTMENT	33,825	33,825	0	0	33,825	0	
23 - CITY ATTORNEY'S OFFICE	1,234,754	1,234,754	0	0	1,234,754	0	
24 - RISK MANAGEMENT	0	0	0	0	0	0	
26 - PLANNING	99,604	99,604	0	0	99,604	0	
27 - DEPARTMENT OF PUBLIC HEALTH (DPH)	4,420	4,420	0	0	4,420	0	1
29 - CITY AUDITOR	308,540	315,616	0	0	315,616	(7,076)	
32 - DPW - IDC ENGINEERING (HYDRAULIC)	3,322,887	3,714,064	0	0	3,714,064	(391,177)	
34 - DPW - IDC CONSTRUCTION (CAPTITAL)	17,462	17,462	0	0	17,462	0	
36 - DPW - BSM INFRASTRUCTURE (MAPPING)	76,549	76,549	0	0	76,549	0	
39 - DPW - PCS SITE ASSESSMENT & REMEDIATION (SAR)	13,993	13,993	0	0	13,993	0	
51 - 821 HOWARD STREET	1,005,653	1,005,653	0	0	1,005,653	0	
55 - 651 BRANNAN	2,294,910	2,294,910	0	0	2,294,910	0	37
63 - CENTRAL SUBWAY PARTNERSHIP - AECOM-EPC JV CONTRACT 149	26,793,234	26,793,234	0	0	26,793,234	0	38
66 - ANIL VERMA	395,204	395,204	0	0	395,204	0	39
67 - HILL INTERNATIONAL CONTRACT 156	6,716,294	6,716,294	0	0	6,716,294	0	
68 - ARTHUR GALLAGER & CO. CS 164	6,800,000	6,340,196	0	0	6,340,196	459,804	
71 - TUNNEL/UTILITIES - CONTRACT # CONTRACT 155-1	5,469,336	5,469,336	0	0	5,469,336	0	40
72 - STATIONS - CONTRACT # CONTRACT 155-2	26,220,609	26,220,609	0	0	26,220,609	0	41
73 - SYSTEMS/INTEGRATION - CONTRACT 155-3	11,432,312	11,432,312	0	0	11,432,312	(0)	
331 - BAY AREA RAPID TRANSIT (BART)	146,427	146,427	0	0	146,427	0	
332 - SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY (SFCTA)	0	0	0	0	0	0	
TOTAL FINAL DESIGN	115,075,987	114,307,465	0	0	114,307,465	768,523	
11 - SFMTA PROJECT MANAGEMENT	15,589,933	6,656,317	235,997	215,058	6,871,375	8,718,558	
1.3.011.01.080.03 - CM:SFMTA LABOR-PROJECT MANAGEMENT	15,589,933	6,656,317	235,997	215,058	6,871,375	8,718,558	
12 - SFMTA ENGINEERING SERVICES	905,264	2,348,864	108,176	4,259	2,353,123	(429,541)	
1.3.012.02.080.04 - CM: SFMTA LABOR-ENGINEERING CONTRACT 1252	123,582	57,648	0	0	57,648	65,934	
1.3.012.06.080.04 - CM: SFMTA LABOR-ENGINEERING CONTRACT 1300	1,800,000	2,291,216	108,176	4,259	2,295,475	(495,475)	
13 - SFMTA CONSTRUCTION MANAGEMENT	44,075,375	10,181,799	347,935	202,051	10,383,850	32,673,206	
1.3.013.01.080.04 - CM:SFMTA LABOR-CONSTR. MANAGEM	43,057,057	10,181,799	347,935	202,051	10,383,850	32,673,206	
16 - DEPARTMENT OF PARKING AND TRAFFIC (DPT)	3,588,074	1,609,355	(26,557)	13,478	1,622,832	2,075,921	1

	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F</b> ]	[G]	
	May 2016	DRIOD	PRIOR	CURRENT	CURRENT	NA DIA MOL	COST
	Budget	PRIOR MONTH Total	PRIOR MONTH	CURRENT	CURRENT	VARIANCE (B - F)	REPORT NOTES
	(YOE)	WIONIII Iotai	Monthly	Monthly	Total	(B-F)	NOTES
1.3.016.01.080.04 - DPT CONTRACT 1300 SUPPORT UMS	299,600	84,615	1,642	404	85,019	214,581	1
1.3.016.01.080.04 - DPT CONTRACT 1300 SUPPORT CTS	274,900	68,807	1,811	1,800	70,607	204,293	
1.3.016.01.080.04 - DPT CONTRACT 1300 SUPPORT YBM	238,400	107,527	4,504	5,537	113,064	125,336	
1.3.016.01.080.04 - DPT CONTRACT 1300 SUPPORT STS	876,876	171,728	4,788	5,737	177,465	699,411	
1.3.016.02.040.08 - DPT: FIELD OPS TUNNEL [B84]	0	1,464	0	0	1,464	(1,464)	)
1.3.016.02.040.08 - DPT: FIELD OPS TUNNEL [B86]	0	204,261	0	0	204,261	(204,261)	)
1.3.016.06.040.02 - DPT:DPT TRAFFIC SHOP CONTRACT 1300	1,200,000	0	0	0	0	1,200,000	
1.3.016.07.080.04 - DPT:SSD DS/CN: 1UTL	38,450	0	0	0	0	38,450	
1.3.016.08.040.08 - DPT:PCOS:2UTL [68A]	400,728	400,728	0	0	400,728	0	
1.3.016.08.040.08 - DPT:SSD CN:2UTL	0	108,020	0	0	108,020	(108,020)	)
1.3.016.08.080.04 - DPT:SSD [1326]	259,120	235,252	(39,301)	0	235,252	23,868	
1.3.016.08.080.04 - DPT:SSD [13BN]	0	23,302	0	0	23,302	(23,302)	)
1.3.016.08.080.04 - DPT:SSD [13CN]	0	963	0	0	963	(963)	)
1.3.016.08.080.04 - DPT:SSD [B85]	0	92,008	0	0	92,008	(92,008)	)
1.3.016.09.040.08 - PCOS:1300/STS [68CPT544132Z.CPT544132Z]	0	110,679	0	0	110,679	(110,679)	)
17 - MOTIVE POWER	2,195	0	0	0	0	2,195	
1.3.017.07.040.02 - PWR:SFMTA-MOTIVE POWER-UTL.REL	2,195	0	0	0	0	2,195	
18 - SFMTA OPERATIONS	400,000	39,586	0	0	39,586	286,883	
1.3.018.04.040.02 - OPS:SUPPORT TO CONTRACT 1300/CTS	100,000	26,469	0	0	26,469	73,531	
1.3.018.06.080.07 - OPS:SUPPORT TO CONTRACT 1300/UMS	300,000	13,117	0	0	13,117	286,883	
19 - OTHER SFMTA	700,000	1,505,407	0	0	1,505,407	(805,407)	)
1.3.019.01.080.07 - OTH.MTA SURVEY AND TESTING	500,000	0	0	0	0	500,000	
1.3.019.07.080.07 - OTH.MTA SFMTA-SURVEY; TSTG [6840]	0	714	0	0	714	(714)	)
1.3.019.08.040.08 - OTH.MTA 1251 MATERIALS	150,000	126,149	0	0	126,149	,	
1.3.019.08.080.08 - OTH.MTA OPERATION SUPPORT DURI	50,000	1,378,544	0	0	1,378,544	(1,328,544)	)
21 - ARTS COMMISSION	12,010,885	2,557,743	61,340	42,857	2,600,600	9,410,286	
1.3.021.01.040.06 - ARTS:CTYCO-ARTS COMMISSION CONSTRUCTION COSTS	4,772,555	0	0	0	0	4,772,555	
1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION [1227]	2,030,147	388,167	0	0	388,167	1,641,980	43
1.3.021.01.080.04 - ARTS:CTYCO-ARTS COMMISSION [PWE335MPFUNA.CPT5441227]	21,000	11,386	0	0	11,386		
1.3.021.06.080.03 - ARTS:CTYCO-ARTS COMMISSION PM [285MC.132J]	158,970	384,658	17,619	15,578	400,236	(241,266)	)
1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION [PWA335MPFUNA.CPT5441327]	0	0	0	3,324	3,324	(3,324)	)
1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION [PWE335MPFUNA.CPT5441327]	0	1,957	693	0	1,957	(1,957)	)
1.3.021.06.040.06 - ARTS:CTYCO-ARTS COMMISSION [68CPT5441327.CPT5441327]	1,500,000	1,393,660	0	0	1,393,660	106,340	
1.3.021.06.040.06 - ARTS:CTYCO-ARTS COMMISSION [285MCPFUNA.CPT5441327]	1,903,000	377,914	43,029	23,955	401,869	1,501,131	
1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION [132J]	465,213	0	0	0	0	465,213	
1.3.021.97.040.06 - ARTS:ARTS COMMISSION ALLOC CO	1,160,000	0			0	1,160,000	
23 - CITY ATTORNEY'S OFFICE	2,171,781	1,555,745	0	0	1,555,745	616,036	
1.3.023.01.080.06 - ATTY:CN LEGAL-CITY ATTORNEY OF	2,171,781	1,555,745	0	0	1,555,745	616,036	
25 - PUBLIC UTILITIES COMMISSION SEWER	(2,925,296)	0	0	0	0	(2,925,296)	1
1.3.025.09.040.02 - STS.1256: SITE UTILITIES SFPUC SEWER MAIN	(2,925,296)					(2,925,296)	/
26 - PLANNING	137,062	22,763	0	514	23,277	113,785	

	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F</b> ]	[G]	1
	May 2016						COST
	Budget	PRIOR MONTH Total	PRIOR MONTH	CURRENT	CURRENT	VARIANCE (B - F)	REPORT NOTES
	(YOE)	MONTH Total	Monthly	Monthly	Total	( <b>D</b> - <b>F</b> )	NOTES
1.3.026.01.080.06 - CM:CTYCO-PLANNING DEPARTMENT	137,062	22,763	0	514	23,277	113,785	1
28 - PUBLIC UTILITIES COMMISSION WATER	4,242,012	2,538,288	154,322	48,142	2,586,430	1,655,582	
1.3.028.02.040.02 - CM:CTYCO-PUBLIC UTIL COMM. (PUC)	0	4,745	0	0	4,745	(4,745)	Ĵ
1.3.028.02.040.08 - PUC: FIELD OPERATIONS TUNNEL	398,400	538,067	0	165	538,233	(139,833)	)
1.3.028.02.080.04 - PUC:MTA CSP CN1252 [470465]	105,000	91,587	0	0	91,587	13,413	
1.3.028.03.040.02 - PUC:CDD CONTRACT 1300/UMS SUPPORT	606,354	101,986	621	6,181	108,167	498,187	
1.3.028.03.080.04 - PUC:CMB CONTRACT 1300/UMS INSPECTION	230,000	30,363	0	0	30,363	199,637	
1.3.028.04.040.02 - PUC:CDD CONTRACT 1300/CTS SUPPORT	271,755	164,609	2,520	4,392	169,001	102,754	
1.3.028.04.080.04 - PUC:CMB CONTRACT 1300/CTS INSPECTION	115,000	6,956	0	0	6,956	108,044	
1.3.028.05.040.02 - PUC:CDD CONTRACT 1300/YBM SUPPORT	450,282	187,145	4,216	3,236	190,381	259,901	
1.3.028.05.080.04 - PUC:CMB CONTRACT 1300/YBM INSPECTION	184,000	4,008	0	1,300	5,308	178,692	
1.3.028.06.040.02 - PUC:CMB CONTRACT 1300/SFWD AWSS MATERIAL	0	145,839	131,704	0	145,839	(145,839)	)
1.3.028.07.040.02 - PUC:PUC CDD WATER CONNECTION CONTRACT 1250	248,035	291,501	0	0	291,501	(43,466)	)
1.3.028.07.080.04 - PUC:PUC CMB INSPECTION CONTRACT 1250	74,468	113,844	0	0	113,844	(39,376)	)
1.3.028.08.040.02 - PUC:PUC CDD WATER CONNECTION CONTRACT 1251 [445]	565,389	318,130	0	0	318,130	247,259	
1.3.028.08.080.04 - PUC:PUC CMB INSPECTION CONTRACT 1251	266,252	289,424	0	0	289,424	(23,172)	)
1.3.028.09.040.02 - PUC:CMB CONTRACT 1300/STS SUPPORT	520,077	179,244	9,158	26,923	206,167	313,910	
1.3.028.09.080.04 - PUC:CMB CONTRACT 1300/STS INSPECTION	207,000	70,840	6,103	5,946	76,786	130,214	
32 - DPW - IDC ENGINEERING (HYDRAULIC)	1,150,459	(217,585)	2,966	3,312	(214,272)	1,218,468	
1.3.032.01.080.04 - CM:DPW:1424J-BUREAU OF ENGINEERING (BOE) [AB12]	60,000	(285,405)	0	0	(285,405)	345,405	
1.3.032.03.080.04 - DPW IDC HYDRAULIC CN1300 UMS SUPPORT	297,938	3,307	856	3,312	6,619	291,319	
1.3.032.04.080.04 - DPW IDC HYDRAULIC CN1300 CTS SUPPORT	295,639	8,890	0	0	8,890	286,749	
1.3.032.05.080.04 - DPW IDC HYDRAULIC CN1300 YBM SUPPORT	301,882	21,887	0	0	21,887	279,995	
1.3.032.06.080.04 - DPW: BOE: 1300 DSDC	6,000	0	0	0	0	6,000	
1.3.032.08.080.04 - DPW.HYRDDPW-BOE IDC ENG SVC DC	9,000	0	0	0	0	9,000	
1.3.032.09.080.04 - DPW IDC HYDRAULIC CN1300 STS SUPPOR	180,000	33,736	2,110	0	33,736	146,264	
34 - DPW - IDC CONSTRUCTION (CAPITAL)	6,695,348	4,792,495	111,396	67,947	4,860,442	1,834,906	1
1.3.034.02.080.04 - DPW:CONSTR:1252 CM [CD12]	730,000	1,207,603	0	0	1,207,603	(477,603)	j l
1.3.034.02.080.04 - DPW:CONSTR:1252 CM [13AC12]	206,000	138,397	0	0	138,397	67,603	
1.3.034.01.080.04 - DPW:BCM LABOR [2113]	2,140,142	2,140,142	0	0	2,140,142	0	
1.3.034.06.080.04 - DPW:CONSTR:1300 CM [13CP12]	3,619,206	1,306,353	111,396	67,947	1,374,300	2,244,906	
36 - DPW - BSM INFRASTRUCTURE (MAPPING)	465,562	110,294	0	0	110,294	436,268	
1.3.036.01.080.04 - DPW:MPPG:DPW-BUREAU OF ST USE	417,129	32,680	0	0	32,680	384,449	
1.3.036.02.080.04 - DPW:MPPG:1300-DPW-BUREAU OF ST USE	0	33,084	0	0	33,084	(33,084)	)
1.3.036.02.080.06 - DPW:MPPG:DPW-BUREAU OF ST USE	90,000	44,530	0	0	44,530	45,470	
1.3.036.06.080.06 - DPW:MPPG:BSM PERMIT REVIEW	39,433	0	0	0	0	39,433	
37 - DPW - PCS MATERIAL TESTING LABORATORY	83,100	0	0	0	0	83,100	
1.3.037.01.080.07 - DPW.MTL.LABDPW-MATERIAL TESTIN	83,100	0	0	0	0	83,100	1
39 - DPW - PCS SITE ASSESSMENT & REMEDIATION (SAR)	622,474	942,284	2,297	0	942,284	(319,810)	
	,	,	_,,	-	,201	(222,010)	4
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR) [132112]	8,621	506,858	0	0	506,858	(498,237)	λ.

	BUDGET ACTUAL COSTS						
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F</b> ]	[G]	
	May 2016			~~~~~			COST
	Budget	PRIOR MONTH Total	PRIOR MONTH	CURRENT	CURRENT	VARIANCE (B - F)	REPORT NOTES
	(YOE)	MONTH Total	Monthly	Monthly	Total	( <b>B</b> - <b>F</b> )	NOTES
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR) [2250]	78,400	78,400	0	0	78,400	0	1
1.3.039.01.080.04 -DPW:SITE ASSESSMENT & REMEDIATION (SAR) [2257]	151,515	151,515	0	0	151,515	0	
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR) [2313]	24,343	24,343	0	0	24,343	0	
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION	58,757	10,109	0	0	10,109	48,648	
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR) [CE13]	31,367	31,367	0	0	31,367	0	
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR) [CH13]	100,000	8,621	0	0	8,621	91,379	
1.3.039.01.080.04 - DPW:SITE ASSESSMENT & REMEDIATION (SAR)	17,000	0	0	0	0	17,000	
1.3.039.02.080.04 - DPW: SITE ASSESSMENT & REMEDIATION (SAR) - CN1252 [13CE11]	18,632	16,880	0	0	16,880	1,753	
1.3.039.02.080.04 - DPW: SITE ASSESSMENT & REMEDIATION (SAR) - CN1300 [13CH11]	41,379	21,732	2,297	0	21,732	19,647	
46 - MACY'S WEST - SFPUC SEWER WORK	258,202	258,202	0	0	258,202	0	
1.3.046.08.040.02 - MCY.SWRC. CONTRACT: MACY'S-SEW	258,202	258,202	0	0	258,202	0	
51 - 821 HOWARD STREET	4,690,481	561,908	13,650	18,169	580,077	4,110,404	
1.3.051.01.080.03 - ODC.HWRD:ODCs - 821 HOWARD STR	4,625,481	549,145	13,650	14,048	563,192	4,062,289	
1.3.051.02.080.04 - ODC.HWRD:ODCs - TUNNEL CONTRACT 1252	10,000	1,056	0	0	1,056	8,944	
1.3.051.06.080.04 - ODC.HWRD:ODCs - STATION CONTRACT 1300	55,000	11,708	0	4,122	15,829	39,171	
55 - 651 BRANNAN	0	10,348	0	0	10,348	(10,348)	j -
1.3.055.01.080.03 - CM:ODCs - 651 BRANNAN STREET	0	10,348	0	0	10,348	(10,348)	44
63 - CENTRAL SUBWAY PARTNERSHIP - AECOM-EPC JV CONTRACT 149	42,373,401	27,666,925	937,084	500,000	28,166,925	14,206,476	
1.3.063.01.080.03 - CM:PM:AECOM.CS149 OM-EPC JV CS149-PM	9,507,939	6,017,804	200,000	200,000	6,217,804	3,290,135	45
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [3B]	5,218,630	3,469,213	300,000	300,000	3,769,213	1,449,417	
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [3E]	7,000,000	7,982,813	0	0	7,982,813	(982,813)	)
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [3F]	0	3,248,383	398,284	0	3,248,383	(3,248,383)	)
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [9B]	11,042	11,042	0	0	11,042	(0)	)
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [9D]	550,000	515,694	0	0	515,694	34,306	
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [9E]	600,000	523,943	0	0	523,943	76,057	
1.3.063.01.080.04 - CM:AECOM.CS149OM-EPC JV CS-149 [9F]	0	318,089	38,801	0	318,089	(318,089)	1
1.3.063.01.080.04 - FD:CM:EPC JV CS49-PM [123A]	5,579,945	5,579,945	0	0	5,579,945		
1.3.063.97.080.03 - AECOM.CS149 ALLOCAT CONTING	13,905,845					13,905,845	
67 - HILL INTERNATIONAL CONTRACT 156	11,000,000	1,870,443	75,702	74,733	1,945,176	9,054,824	-
1.3.067.01.080.03 - HILL.CS156:HILL INTL. CS-156 [1336]	600,000	915,032	0	0	915,032	(315,032)	(
1.3.067.01.080.03 - HILL.CS156:HILL INTL. CS-156 [1337]	9,400,000	828,150	75,702	74,733	902,883	8,497,117	
1.3.067.01.080.03 - HILL.CS156:HILL INTL. [1330]	1,000,000	127,261	0	0	127,261	872,739	
69 - BAYLAND SOIL PROCESS CONTRACT 175	500,000	121,445	0	53,429	174,874	325,126	46
1.3.069.06.040.01 - BAYLAND.CS175:BAYLAND SOIL PROCESS [133K]	500,000	121,445	0	53,429	174,874	325,126	<u> </u>
71 - TUNNEL/UTILITIES - CONTRACT # CONTRACT 155-1	1,358,950	1,906,365	246	246	1,906,611	(547,661)	-
1.3.071.01.080.04 - CM: CS155.1 DESIGN SUPPORT DURING CM [1232]	0	(87,201)	0	0	(87,201)	87,201	47
1.3.071.02.080.04 - CM: CS155.1 DESIGN SUPPORT DURING CM [1332]	1,358,950	1,993,566	246	246	1,993,812	(634,862)	(
72 - STATIONS - CONTRACT # CONTRACT 155-2	8,752,240	5,274,692	362,028	667,123	5,941,816	2,810,424	
1.3.072.01.080.04 - CM: CS155.2 DESIGN SUPPORT DURING CM [1233]	50,000	51,351	0	0	51,351	(1,351)	48
1.3.072.01.080.04 - CM: CS155.2 DESIGN SUPPORT DURING CM [1333]	8,702,240	5,223,342	362,028	667,123	5,890,465	2,811,775	

	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F]</b>	[G]	
	May 2016	PRIOR	PRIOR	CURRENT	CURRENT	VARIANCE	COST REPORT
	Budget	MONTH Total	PRIOR MONTH	CURRENT	CURRENT	(B - F)	NOTES
	(YOE)		Monthly	Monthly	Total	(= -)	
73 - SYSTEMS/INTEGRATION - CONTRACT 155-3	4,828,269	1,784,345	76,310	47,027	1,831,372	2,996,897	
1.3.073.01.080.04 - CM: CS155.3 DESIGN SUPPORT DURING CM [1236]	90,000	89,791	0	0	89,791	209	
1.3.073.01.080.04 - CM: CS155.3 DESIGN SUPPORT DURING CM [1334]	4,738,269	1,694,554	76,310	47,027	1,741,581	2,996,688	
81 - UTILITIES RELOCATION #1 (PORTAL & MOS) - CONTRACT 1250	11,968,150	11,968,150	0	0	11,968,150	0	
1.3.081.07.040.01 - UR1.CONTRACT 1250:SITEWORK: DEMOLIT	167,458	167,458	0	0	167,458	0	
1.3.081.07.040.02 - UR1.CONTRACT 1250:SITEWORK: UTILITI	10,099,341	10,099,341	0	0	10,099,341	0	
1.3.081.07.040.03 - UR1.CONTRACT 1250:SITEWORK:HAZMAT	453,321	453,321	0	0	453,321	0	
1.3.081.07.040.08 - UR1.CONTRACT 1250:SITEWORK:TEMPORAR	1,248,030	1,248,030	0	0	1,248,030	0	
82 - UTILITIES RELOCATION #2 (UMS) - CONTRACT 1251	20,794,582	20,794,582	0	0	20,794,582	0	49
1.3.082.08.040.01 - UR2.CONTRACT 1251:SITEWORK: DEMOLIT	752,240	752,240	0	0	752,240	0	
1.3.082.08.040.02 - UR2.CONTRACT 1251:SITEWORK:UTILITI	10,328,044	10,328,044	0	0	10,328,044	0	
1.3.082.08.040.03 - UR2.CONTRACT 1251:SITEWORK:HAZMAT	172,712	172,712	0	0	172,712	0	
1.3.082.08.040.05 - UR2.CONTRACT 1251:SITEWORK: STRUCTU	2,706,431	2,706,431	0	0	2,706,431	0	
1.3.082.08.040.06 - UR2.CONTRACT 1251:SITEWORK:PEDESTRA	319,317	319,317	0	0	319,317	0	
1.3.082.08.040.07 - UR2.CONTRACT 1251:SITEWORK:AUTO/BUS 1.3.082.08.040.08 - UR2.CONTRACT 1251:SITEWORK:TEMP FAC	190,362 6,325,476	190,362 6,325,476	0	0	190,362 6,325,476	0	
GUIDEWAY TUNNELS TOTAL	235,913,500	234,881,397	0	0	234.881.397	1,032,103	
83 - GUIDEWAY TUNNELS - CONTRACT # 1252 BASE	233,584,015	233,357,072	0	0	233,357,072	226,943	50
1.3.083.02.010.06 - CONTRACT 1252:GUIDEWAY:UNDERGRN'D CUT	60,446,425	61,377,878	0	0	61,377,878	(931,453)	50
1.3.083.02.010.07 - CONTRACT 1252:GUIDEWAY:UNDERGROUND	105,423,090	105,164,927	0	0	105,164,927	258,163	
1.3.083.02.020.03 - CONTRACT 1252: STATIONS: UNDERGROUND	21,685,000	21,685,000	0	0	21,685,000	250,105	
1.3.083.02.040.01 - CONTRACT 1252:SITEWORK:DEMO CLEARING	2,440,000	2,440,000	0	0	2,440,000	0	
1.3.083.02.040.02 - CONTRACT 1252:SITEWORK:UTILITIES & RE	10,895,000	10,487,676	0	0	10,487,676	407,324	
1.3.083.02.040.03 - CONTRACT 1252:SITEWORK:HAZMAT&MITIGAT	200,000	200,000	0	0	200,000	0	
1.3.083.02.040.04 - CONTRACT 1252:SITEWORK:ENVIRON. MITIG	300,000	54,292	0	0	54,292	245,708	
1.3.083.02.040.06 - CONTRACT 1252:SITEWORK:PED/BIKE ACCES	50,000	50,000	0	0	50,000	0	
1.3.083.02.040.07 - CONTRACT 1252:SITEWORK:AUTO/BUS ACCES	1,345,000	1,345,000	0	0	1,345,000	0	
1.3.083.02.040.08 - CONTRACT 1252:SITEWORK:TEMP FACILITIE	30,799,500	30,552,299	0	0	30,552,299	247,201	
83 - GUIDEWAY TUNNELS - CONTRACT # 1252 CMODs	1,829,687	1,524,325	0	0	1,524,325	305,362	51
1.3.083.83.010.06 - CONTRACT 1252: CONTRACT MOD	112,251	90,918	0	0	90,918	21,334	
1.3.083.83.010.07 - CONTRACT 1252: CONTRACT MOD	1,941,810	1,775,627	0	0	1,775,627	166,183	
1.3.083.83.020.03 - CONTRACT 1252: CONTRACT MOD	1,004,156	953,605	0	0	953,605	50,551	
1.3.083.83.040.02 - CONTRACT 1252: CONTRACT MOD	1,050,847	817,432	0	0	817,432	233,415	
1.3.083.83.040.03 - CONTRACT 1252: CONTRACT MOD	453,475	453,475	0	0	453,475	0	
1.3.083.83.040.08 - CONTRACT 1252: CONTRACT MOD	(2,732,852)	(2,566,731)	0	0	(2,566,731)	(166,121)	
1.3.083.93.010.07 - CONTRACT 1252: TUNNEL ALLOC CONTING	499,798	0	0	0	0	499,798	52
CONTRACT 1300 - STATIONS, TRACKWORK AND SYSTEMS TOTAL	859,601,400	371,488,082	8,606,974	9,391,685	380,879,767	478,721,633	53
84 - UNION SQUARE/MARKET STREET STATION (UMS) - WORK PACKAGE 1253	294,030,590	151,234,727	4,230,787	4,198,219	155,432,946	138,597,644	18
1.3.084.03.020.03 - UMS.1253: UNDERGROUD STATION	253,822,452	129,320,039	3,488,168	3,897,538	133,217,577	120,604,875	
1.3.084.03.020.07 - UMS.1253: ELEVATORS ESCALATOR	9,465,694	1,335,881	0	0	1,335,881	8,129,813	
1.3.084.03.040.01 - UMS.1253: DEMOLITION CLEARING	6,071,588	5,711,588	632,500	50,000	5,761,588	310,000	

	BUDGET ACTUAL COSTS						
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F</b> ]	[G]	
	May 2016						COST
	Budget	PRIOR MONTH Total	PRIOR MONTH	CURRENT	CURRENT	VARIANCE (B - F)	REPORT NOTES
	(YOE)	MONTH Total	Monthly	Monthly	Total	( <b>B</b> - <b>F</b> )	NOTES
1.3.084.03.040.02 - UMS.1253: SITE UTILITIES UTIL	3,971,620	2,060,209	25,858	135,000	2,195,209	1,776,411	
1.3.084.03.040.03 - UMS.1253: HAZARDOUS MATERIALS	550,000	317,888	0	0	317,888	232,112	
1.3.084.03.040.04 - UMS.1253: ENVIRONMENTAL MITIGA	244,500	145,875	0	48,625	194,500	50,000	
1.3.084.03.040.06 - UMS.1253: PEDESTRIAN/BIKE	18,969	12,501	0	0	12,501	6,468	
1.3.084.03.040.07 - UMS.1253: AUTOMOBILE BUS ACCE	1,547,185	48,001	0	0	48,001	1,499,184	
1.3.084.03.040.08 - UMS.1253: TEMPORARY FACILITIES	10,398,701	9,655,205	34,261	14,556	9,669,761	728,940	
1.3.084.03.050.02 - UMS.1253: TRAFFIC SIGNALS AND	4,773,076	2,550,000	50,000	50,000	2,600,000	2,173,076	
1.3.084.03.050.03 - UMS.1253: TRACTION POWER SUPPL	1,815,534	9,001	0	0	9,001	1,806,533	
1.3.084.03.050.04 - UMS.1253: TRACTION POWER DISTR	216,957	66,038	0	0	66,038	150,919	
1.3.084.03.050.05 - UMS.1253: COMMUNICATIONS	1,134,314	2,501	0	2,500	5,001	1,129,313	
84 - UNION SQUARE/MARKET STREET STATION (UMS) CMODs	191,294	111,258	0	0	111,258	80,036	
1.3.084.84.020.03 - CMOD:UMS.1253: UNDERGROUD STATION	37,456	21,258	0	0	21,258	16,198	1
1.3.084.84.020.07 - CMOD:UMS.1253: ELEVATORS, ESCALATORS	90,000	90,000	0	0	90,000	0	
1.3.084.84.040.02 - CMOD:UMS.1253: SITE UTILITIES UTIL	63,838	0	0	0	0	63,838	
1.3.084.94.020.03 - UMS.1253: AC: ALLOC CONTING	4,808,706	0	0	0	0	4,808,706	54
85 - CHINATOWN STATION (CTS) - WORK PACKAGE 1254	247,567,810	96,859,619	1,841,588	2,028,370	98,887,989	148,679,821	
1.3.085.04.010.07 - CTS.1254: GUIDEWAY: UNDERGROUND TUNNEL	76,417,579	13,346,245	801,000	1,891,956	15,238,201	61,179,378	
1.3.085.04.020.03 - CTS.1254: UNDERGROUND STATION	133,001,053	60,251,253	813,897	106,223	60,357,476	72,643,577	
1.3.085.04.020.07 - CTS.1254: ELEVATORS ESCALATOR	6,812,856	1,112,501	62,500	0	1,112,501	5,700,355	
1.3.085.04.040.01 - CTS.1254: DEMOLITION CLEARING	400,000	400,000	0	0	400,000	0	
1.3.085.04.040.02 - CTS.1254: SITE UTILITIES UTIL	6,001,718	4,528,086	146,500	10,000	4,538,086	1,463,632	
1.3.085.04.040.03 - CTS.1254: HAZARDOUS MATERIALS	350,000	12,500	0	0	12,500	337,500	
1.3.085.04.040.04 - CTS.1254: ENVIRONMENTAL MITIGA	325,665	206,064	0	0	206,064	119,601	
1.3.085.04.040.06 - CTS.1254: PEDESTRIAN/BIKE	15,000	0	0	0	0	15,000	
1.3.085.04.040.07 - CTS.1254: AUTOMOBILE BUS ACCE	225,677	19,500	0	0	19,500	206,177	
1.3.085.04.040.08 - CTS.1254: TEMPORARY FACILITIES	16,571,322	15,804,762	0	0	15,804,762	766,560	
1.3.085.04.050.02 - CTS.1254: TRAFFIC SIGNALS AND	1,599,593	921,207	17,691	17,691	938,898	660,695	
1.3.085.04.050.03 - CTS.1254: TRACTION POWER SUPPL	4,063,927	227,500	0	0	227,500	3,836,427	
1.3.085.04.050.04 - CTS.1254: TRACTION POWER DISTRIBUTION	124,481	30,000	0	0	30,000	94,481	
1.3.085.04.050.05 - CTS.1254: COMMUNICATIONS	1,658,938	0	0	2,500	2,500	1,656,438	
85 - CHINATOWN STATION (CTS) CMODs	2,602,458	834,528	514,039	0	834,528	1,767,930	55
1.3.085.85.040.01 - CMOD:CTS.1254: POWER POLE	155,956	148,212	0	0	148,212	7,744	
1.3.085.85.040.02 - CMOD:CTS.1254: SITE UTILITIES UTIL	114,570	114,570	0	0	114,570	0	
1.3.085.85.040.03 - CMOD:CTS.1254: HAZARDOUS MATERIALS	2,274,225	514,039	514,039	0	514,039	1,760,186	
1.3.085.85.040.08 - CMOD:CTS.1254: TEMPORARY FACILITIES	57,707	57,707	0	0	57,707	0	
1.3.085.95.020.03 - CTS.1254: AC: ALLOC CONTING	2,322,542	0	0	0	0	2,322,542	56
86 - YERBA BUENA MOSCONE STATION (YBM) - WORK PACKAGE 1255	158,089,000	83,793,455	1,202,783	1,987,843	85,781,298	72,307,702	
1.3.086.05.020.03 - YBM.1255: UNDERGROUND STATION	119,048,929	61,464,923	1,415,395	1,484,376	62,949,299	56,099,629	1
1.3.086.05.020.07 - YBM.1255: ELEVATORS ESCALATOR	5,333,287	804,611	0	0	804,611	4,528,676	
1.3.086.05.040.01 - YBM.1255: DEMOLITION CLEARING	657,000	657,000	0	0	657,000	0	
1.3.086.05.040.02 - YBM.1255: SITE UTILITIES UTIL	6,520,189	5,735,219	0	55,000	5,790,219	729,971	

	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B]	[C]	[D]	[E]	<b>[F]</b>	[G]	
	May 2016				<i></i>		COST
	Budget	PRIOR MONTH Total	PRIOR MONTH	CURRENT	CURRENT	VARIANCE (B - F)	REPORT NOTES
	(YOE)	MONTH Total	Monthly	Monthly	Total	( <b>B</b> - <b>F</b> )	NOTES
1.3.086.05.040.03 - YBM.1255: HAZARDOUS MATERIALS	2,629,439	1,392,226	(107,346)	159,995	1,552,221	1,077,218	
1.3.086.05.040.04 - YBM.1255: ENVIRONMENTAL MITIGA	100,000	84,476	25,000	0	84,476	15,524	
1.3.086.05.040.06 - YBM.1255: PEDESTRIAN/BIKE	16,665	1	0	0	1	16,664	
1.3.086.05.040.07 - YBM.1255: AUTOMOBILE BUS ACCE	1,542,725	491,401	0	0	491,401	1,051,324	
1.3.086.05.040.08 - YBM.1255: TEMPORARY FACILITIES	15,564,753	12,184,817	(147,948)	146,799	12,331,616	3,233,137	
1.3.086.05.050.02 - YBM.1255: TRAFFIC SIGNALS AND	1,726,492	916,480	17,682	141,673	1,058,153	668,339	
1.3.086.05.050.03 - YBM.1255: TRACTION POWER SUPPL	3,708,425	59,800	0	0	59,800	3,648,625	
1.3.086.05.050.05 - YBM.1255: COMMUNICATIONS	1,241,096	2,501	0	0	2,501	1,238,595	
86 - YERBA BUENA MOSCONE STATION (YBM) CMODs	(1,073,031)	602,929	350,275	0	602,929	(1,675,960)	i
1.3.086.86.040.01 - CMOD:YBM.1255: DEMOLITION CLEARING	84,509	0	0	0	0	84,509	
1.3.086.86.040.02 - CMOD:YBM.1255: SITE UTILITIES UTIL	673,151	599,751	350,275	0	599,751	73,400	
1.3.086.86.040.08 - CMOD:YBM.1255: TEMPORARY FACILITIES	(1,830,691)	3,178	0	0	3,178	(1,833,869)	)
1.3.086.96.020.03 - YBM.1255: AC: ALLOC CONTING	6,073,032	0	0	0	0	6,073,032	57
87 - SURFACE TRACKWORK AND SYSTEMS -WORK PACKAGE 1256	139,989,000	37,494,620	449,283	864,200	38,358,820	101,630,180	
1.3.087.09.010.02 - STS.1256: GUIDEWAY: AT-GRADE SEMI-EXCLUSIVE (ALLOWS CROSS TRAFFIC)	2,860,000	145,000	0	0	145,000	2,715,000	
1.3.087.09.010.06 - STS.1256: GUIDEWAY: UNDERGROUND CUT & CVR	10,274,450	412,501	0	12,000	424,501	9,849,949	
1.3.087.09.010.07 - STS.1256: GUIDEWAY: UNDERGROUN	16,510,764	1,255,733	75,000	78,000	1,333,733	15,177,031	
1.3.087.09.010.09 - STS.1256: TRACK DIRECT FIXATION	6,761,089	2,606,871	10,000	0	2,606,871	4,154,219	
1.3.087.09.010.12 - STS.1256: TRACK: SPECIAL	4,449,637	2,618,600	0	0	2,618,600	1,831,037	
1.3.087.09.020.01 - STS.1256: AT-GRADE STATION	6,673,138	1,320,815	11,781	98,353	1,419,168	5,253,970	
1.3.087.09.040.02 - STS.1256: SITE UTILITIES, UTILITY RELOCA	17,509,893	8,684,330	178,842	571,263	9,255,593	8,254,300	
1.3.087.09.040.03 - STS.1256: HAZARDOUS MATERIALS	200,000	183,626	0	0	183,626	16,374	
1.3.087.09.040.04 - STS.1256: ENVIRONMENTAL MITIGATION	50,000	50,000	0	0	50,000	0	
1.3.087.09.040.07 - STS.1256: AUTOMOBILE BUS ACCE	2,116,925	39,001	0	0	39,001	2,077,924	
1.3.087.09.040.08 - STS.1256: TEMPORARY FACILITIES	13,850,984	10,159,423	58,000	36,000	10,195,423	3,655,561	
1.3.087.09.050.01 - STS.1256: TRAIN CONTROL AND SIGNALS	27,543,451	6,011,513	19,250	18,890	6,030,403	21,513,048	
1.3.087.09.050.02 - STS.1256: TRAFFIC SIGNALS AND	4,485,368	2,341,715	84,784	39,434	2,381,149	2,104,219	
1.3.087.09.050.03 - STS.1256: TRACTION POWER SUPPL	9,911,014	810,640	0	7,000	817,640	9,093,374	
1.3.087.09.050.04 - STS.1256: TRACTION POWER DISTRIBUTION	6,099,675	803,351	4,126	3,260	806,611	5,293,064	
1.3.087.09.050.05 - STS.1256: COMMUNICATIONS	8,028,025	51,500	7,500	0	51,500	7,976,525	
1.3.087.09.050.07 - STS.1256: CENTRAL CONTROL	2,664,586	1	0	0	1	2,664,585	
87 - SURFACE TRACKWORK AND SYSTEMS (STS) CMODs	1,463,954	556,946	18,219	313,053	869,999	593,955	
1.3.087.89.040.02 - CMOD:STS.1256: SITE UTILITIES, UTILITY RELOCA	413,431	305,378	0	108,053	413,431	0	
1.3.087.89.040.03 - CMOD:STS.1256: HAZARDOUS MATERIALS	18,221	18,219	18,219	0	18,219	2	
1.3.087.89.040.08 - CMOD:STS.1256: TEMPORARY FACILITIES	1,032,302	233,349	0	205,000	438,349	593,953	
1.3.087.99.020.01 - STS.1256: AC: ALLOC CONTING	3,536,045	0	0	0	0	3,536,045	58
141 - CONSTRUCTION ADMINISTATION	2,956,812	0	0	0	0	2,956,812	
1.3.141.97.080.04 - CONSTR.ADMIN:ALLOC CONTING	2,956,812					2,956,812	
142 - LEGAL/PERMITS	2,014,204	0	0	0	0	2,014,204	
1.3.142.01.080.06 - LGL.PRMTSF:LEGAL; PERMITS	2,014,204	0	0	0	0	2,014,204	
144 - STARTUP	8,300,329	0	0	0	0	8,300,329	

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	BUDGET	BUDGET ACTUAL COSTS					
[A] Cost Account Description	[B] May 2016 Budget (YOE)	[C] PRIOR MONTH Total	[D] PRIOR MONTH	[E] CURRENT	[F] CURRENT	[G] VARIANCE (B - F)	COST REPORT NOTES
1.3.144.01.080.08 - STRT: STARTUP	6,941,907	0	Monthly 0	<u>Monthly</u> 0	<u>Total</u>	6,941,907	┣───
1.3.144.01.080.08 - STRT: STARTOP 1.3.144.97.080.08 - STRTA: AC STARTUP ALLOC CONTIN	1,358,422	U	U	U	U	1,358,422	
151 - TEMPORARY LICENSE AGREEMENT	1,558,422	0	0	0	0	1,538,422	
1.3.151.01.080.06 - TEMP.LICPORARY LICENSE AGREEME	17,000	0	0	0	0	17,000	-
170 - COMMUNICATIONS CONNECTIONS	5,757,629	0	0	0	0		
1.3.170.01.050.04 - COMM.CONNN:COMMUNICATION CONN	5,757,629	0	0	0	0	5,757,629	-
181 - AON RISK INSURANCE CS 163	18,113,750	18,798,132	0	0	18,798,132	(684,382)	
1.3.181.01.040.08 - AON.CS163 AON RISK INS.	18,088,750	18,773,132	0	0	18,773,132	(684,382)	
1.3.181.01.080.03 - AON.CS171 AON RISK INS. STUDY	25,000	25,000	0	0	25,000	(004,502)	
191 - FARE COLLECTION CONTRACTOR	5,400,000	0	0	0	0	5,400,000	
1.3.191.01.050.06 - FARE.CONSUL:FARE COLLECTION	5,400,000	0	0	0	0	5,400,000	1
192 - THALES T&S CENTRAL CONTROL	487,972	50,000	0	0	50,000	437,972	
1.3.192.01.050.01 - THALES T&S ATCS	487.972	50,000	0	0	50,000	437,972	
202 - JOC2-022.0	63.938	0	0	0	0	63,938	
1.3.202.01.040.02 - JOC2-022:15&22 POTHOLING UTIL1 LGHT FNDS	63,938	0	0	0	0	63,938	
203 - JOC2-029.0	53,317	0	0	0	0	53,317	
1.3.203.07.040.02 - JOC0292-029: RELOCATE VAULTS-S	53,317	0	0	0	0	53,317	
302 - PG&E	1,988,173	2,749,912	0	0	2,749,912	(761,739)	
1.3.302.03.050.03 - PGE PERMANENT POWER UMS	(2,350,000)	0	0	0	0	(2,350,000)	
1.3.302.03.050.03 - PGE POWER FEED UMS	2,959,826	115,690	0	0	115,690	2,844,136	
1.3.302.04.050.03 - PGE PERMANENT POWER CTS	(2,350,000)	0	0	0	0	(2,350,000)	)
1.3.302.04.050.03 - PGE POWER FEED CTS	2,959,826	0	0	0	0	2,959,826	
1.3.302.05.050.03 - PGE PERMANENT POWER YBM	(2,368,540)	0	0	0	0	(2,368,540)	)
1.3.302.05.050.03 - PGE POWER FEED YBM	3,125,222	2,634,222	0	0	2,634,222	491,000	
1.3.302.09.050.03 - PGE POWER FEED STS	11,839	0	0	0	0	11,839	
331 - BAY AREA RAPID TRANSIT (BART)	951,356	60,455	0	0	60,455	890,901	
1.3.331.01.080.04 - CM:SFMTA LABOR-ENG SVCS-IRP/BART/SF	0	33,152	0	0	33,152	(33,152)	)
1.3.331.01.080.06 - CM: BAY AREA RAPID TRANSIT (BART) [122A]	951,356	27,304	0	0	27,304	924,052	
333 - AMERICAN PUBLIC TRANSP. ASSOCIATION (APTA) CS-APTA	146,500	54,612	0	0	54,612	91,888	
1.3.333.01.080.03 - APTA:APTA - IRP [2G]	46,500	27,304	0	0	27,304	19,196	
1.3.333.01.080.03 - APTA:APTA - IRP [2C]	100,000	27,308	0	0	27,308	72,692	<u></u>
334 - BART FARE COLLECTION SYSTEM	700,000	0	0	0	0	700,000	
1.3.334.01.050.06 - BART:BART FARE COLLECTION EQP	700,000	0	0	0	0	700,000	
401 - ECONOMIC AND WORKFORCE DEVELOPMENT (EWD)	17,600	17,600	0	0	17,600	0	
1.3.401.01.080.04 - EWD: MAYORS OFFICE ECON DEV	17,600	17,600	0	0	17,600	0	L
402 - DEPARTMENT OF TECHNOLOGY	242,371	237,534	0	0	237,534	4,837	
1.3.402.07.050.04 - DT:1UTL:COMM. CONNECTIONS	166,756	166,179	0	0	166,179	577	
1.3.402.08.050.04 - DT:2UTL:COMM.CONNECTIONS	75,615	71,354	0	0	71,354	4,261	<u> </u>
404 - DEPARTMENT OF BUILDING INSPECTION (DBI)	1,204,081	1,204,081	0	0	1,204,081	0	
1.3.404.01.080.06 - DPT OF BUILDING INSPECTION	1,204,081	1,204,081	0	0	1,204,081	0	I

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	BUDGET		ACTU	AL COSTS			
[A] Cost Account Description	[B] May 2016 Budget (YOE)	[C] PRIOR MONTH Total	[D] PRIOR MONTH	[E] CURRENT	[F] CURRENT	[G] VARIANCE (B - F)	COST REPORT NOTES
	(10,007,054)	0	Monthly	Monthly	Total	(12,227,054)	
491 - FORM B - REIMBURSEMENT	(12,227,954)	0	0	0	0	(12,227,201)	
1.3.491.02.040.02 - FORMB - CONTRACT 1252 UTILITY REIMBUR	(254,050)	0			0	(254,050)	59
1.3.491.03.040.02 - FORMB - UMS:CONTRACT 1300 UTILITY REIMBURSEMENT	(528,370)	0			0	(528,370)	60
1.3.491.04.040.02 - FORMB - CTS:CONTRACT 1300 UTILITY REIMBURSEMENT	(451,703)	0			0	(451,703)	61
1.3.491.05.040.02 - FORMB - YBM:CONTRACT 1300 UTILITY REIMBURSEMENT	(100,000)	0			0	(100,000)	62
1.3.491.06.040.02 - FORMB - CONTRACT 1300 UTILITY REIMBUR	0	0			0	0	63
1.3.491.07.040.02 - FORMB - CONTRACT 1250 UTILITY REIMBUR	(2,275,419)	0			0	(2,275,419)	64
1.3.491.08.040.02 - FORMB - CONTRACT 1251 UTILITY REIMBUR 1.3.491.09.040.02 - FORMB - STS:CONTRACT 1300 UTILITY REIMBURSEMENT	(7,618,412) (1,000,000)	0			0	(7,618,412) (1,000,000)	
TOTAL CONSTRUCTION PHASE		736,402,563	11,069,867	11,350,030	747,752,593	580,359,772	66
1.4.091.01.070.01 - LRVS: LIGHT RAIL VEHICLES RFP [34B]	1,325,000	1,319,773	0	0	1.319.773		+
1.4.091.01.070.01 - LRVS: LIGHT KAIL VEHICLES PROJECT MGT [68E]	827,132	827,933	502	246	828,179	,	
1.4.091.01.070.01 - LRVS: LRV PROCUREMENT ODC	25,000	827,933	0	240	020,179	25,000	
1.4.091.01.070.01 - LRVS: LRV PROCUREMENT ODC	11,131,868	0	0	0	0	11,131,868	
1.4.091.97.070.01 - LRVA:AC: VEHICLES ALLOC CONTI	13,076,653	U	v	0	U	13,076,653	21
TOTAL VEHICLES	26,385,653	2,147,706	502	246	2,147,952	24,237,701	21
1.5.015.01.060.01 - RE: EASEMENT ACQUISIT	400,000	322,939	0	0	322,939		<u>+</u>
1.5.015.01.060.01 - RE: REAL EST SITE ACQ	16,523,400	14,307,667	0	0	14,307,667	,	
1.5.015.01.060.01 - RE: REAL ESTATE	750,000	766,272	0	0	766,272	· · ·	
1.5.015.01.060.01 - RE: REC & PARK MOU	6,987,624	6,987,624	0	0	6,987,624	N 1 1	
1.5.015.01.060.01 - RE:-DEPT OF TRANSPOR	2,686,000	2,686,000	0	0	2,686,000		
1.5.015.01.060.01 - RE:-LICENSES FEES	400,000	381,311	0	0	381,311	18,689	
1.5.015.97.060.01 - RE:A:AC: RE: REAL ESTATE ALLO	5,265,478	501,511	0	•	501,511	5,265,478	
1.5.023.01.060.01 - ATTY:REAL ES	2,212,882	2,678,858	0	0	2,678,858	· · ·	)
1.5.101.01.060.02 - RES.RELO: RELOCATION COST	1,275,200	1.289.701	0	0	1.289.701		)
1.5.102.01.060.02 - COMM.RELO-RELOC COMMERCIAL	905,311	1,119,729	0	ů 0	1,119,729	N 1 1	)
TOTAL ROW, LAND, EXISTING IMPROVEMENTS	37,405,895	30,540,101	0	0	30,540,101	6,865,794	
	· ·				· · · · · ·		i —
90 - CONTINGENCY	79,713,257					79,713,257	
1.7.500.91.090.00 - UNALLOCATED CONTINGENCY	24,749,924					24,749,924	67
TOTAL ALLOCATED CONTINGENCY	54,963,333					54,963,333	
TOTAL PROJECT COST	1,578,300,001	929,939,896	11,070,369	11,350,276	941,290,172	636,981,713	,

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7.1 F	Program Project Budget
1	The Central Subway Project (CSP) (SFMTA Capital Program CPT 544) is defined in the FTA-SFMTA October 2012 Full Funding Grant Agreement with a budget of \$1.578 billion.
2	The TBM Retrieval Shaft Relocation (SFMTA Capital Program CPT 690) is one of four capital projects that is related to CSP. These projects are reported for background information as needed outside of the main body of the Project Monthly Progress Report.
3	The Chinatown Plaza (CPT 718) is for Chinatown Station enhancement capital project. The project has funding outside of the Central Subway Project. The construction is carried out in Contract 1300 Contract Modifications.
4	CPT 665 is a Real Estate project to relocation in compliance with California regulations for business relocations but outside of the Central Subway Project as defined by the FTA FFGA.
5	CPT 705 is an SFMTA capital improvement between the Agency and community stakeholders outside of the Central Subway Project.
6	Utility company reimbursements (Form B) result in funds received for work carried out on behalf of utilities concurrent to CSP work to achieve efficiencies.
7	PG&E Power Feed reimbursement funds are the refunds from PG&E when completion of Stations construction and switch to permanent power.
8	BART Elevator funds are reimbursements for work carried out on behalf of BART to install BART Powell Street Station elevator.
9	The Tutor Perini - CAD Files funds are the result of payments by the contractor for project documentation not included in the contract.
10	SFPUC Sewer Main funds are reimbursements for work carried out on behalf of San Francisco PUC (includes 10% construction contingency).
11	Traffic Effectiveness Project funded Contract Modification #40 for Culvert, Street & Sidewalk Restoration in North Beach are reimbursements for work carried out in Contract 1252 on behalf of SFMTA SSD.
12	SFPUC 24" Water Main funds are reimbursements for work carried out in Contract 1252 Contract Modification #41 on behalf of San Francisco PUC (includes construction management cost).
13	SFPUC North Beach 24" Water Main Additional Work funds are reimbursements for work carried out in Contract 1252 Contract Modification #48 on behalf of San Francisco PUC (includes construction management cost).
14	CN1300 Contract Modification #6 is funded by Chinatown Plaza (CPT 718) project.
14a	Traffic Effectiveness Project funded Contract Modification #51 for support for North Beach Restoration, OCS and Streetlighting which are reimbursements for work carried out in Contract 1252.

#### 7.4 Contingency Management Trend Report

In Oct 2014 Report, updated Contract 1250 contract cost to segregate contract amount and contract modification amount. Note that September 2013 Supplemental Authorized Contingency "column f" did not include completed contract.

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16	In Oct 2014 Report, updated Contract 1251 contract cost to segregate contract amount and contract modification amount. Note that September 2013 Supplemental Authorized Contingency "column f" did not include completed contract.
17	Contract 1252 Original Contract Value "column a" and Original Contingency "column f" did not match September 2013 Supplemental due to Supplemental were used the revised value to reflet Contract Modifications #3-#18. Reduced Contract 1252 contingency to reflect CMod #20 for retrieval shaft relocation cost \$5.15M funded by CPT690, CMod #40 for Culvert, Street & Sidewalk Restoration cost \$694,651 funded by Traffic Effectiveness Project (TEP), and CMod #41 for install 24" Water Main in North Beach cost \$328,860 funded by SFPUC. In August 2015 report, release \$15M CN1252 Tunnel assigned contingency to program unallocated contigency. In March 2106 report, reduced Contract 1252 contingency by \$377,435 cost to reflect certification of five CMODS. CMod#49, #52 and #53 total \$221,967 are funded by CPS. CMod#51 Support for North Beach Restoration, OCS and Streetlighting cost of \$155,468 is being funded by TEP. Released \$155,468 CN1252 allocated contingency to program's unallocated contingency. In May 2016 report, reduced Contract 1252 contingency by \$185,913 cost to reflect certification of two CMODS.
18	BART Elevator scope and SFPUC Sewer Main scope is in Contract 1300; effort will be funded by BART. In January 2015 Report, corrected Station Contract value to match awarded amount.
19	In March 2016 Report, lowered Contract 1300 Stations CTS contingency by \$75,000 because Contract Modification #6 was funded by Project CPT718. The \$75,000 has been transferred to program's unallocated contingency.
20	In April 2015 report, real estate budget stated in RAMP Rev5 is \$36.7M, including \$1M contingency. The cost workbook ROW & contingency budget reflects this with \$36,511,799 and \$1,000,000 respectively. Revised costbook ROW budget & contingency to be \$37,511,799. The \$4,265,478 Caltrans lease savings is allocated to ROW allocated contingency.
21	In Dec 2014 Report, redistributed LRV budget to reflect recent firm bid cost per vehicle (\$3,327,250/unit) from vehicle procurement contract award. (SFMTA Board meeting 15JUL14, calendar item #11). Vehicle line item total budget remains unchanged, redistributed fund by reducing base amount to \$13,309,000, column "c" and increased allocated contingency column "h", by same amount.
22	In Oct 2014 Report, made two corrections: i) revised Professional Services, Original Contract Value "column a" from \$310,518,041 to \$310,618,041, ii) revised Original Congency. "column f" unallocated contingency from \$3,883,481 to \$3,845,945. In April 2015 report, used \$500K program contingency for CS-175 Bayland Soil Process contract. In August 2015 Report, added \$15M from Contract 1252. In March 2016 Report, the \$155,468 costs funded by other project offset credits and \$75K funded by CPT718 added to program's unallocated contingency.
23	The total Central Subway Project budget of \$1.578 billion, based on the October 2012 FFGA with the FTA, is the primary MPR report reference.
24	Estimate at Completion is shown at Column "e".
25	Estimate at Completion vs. Budget variance is shown at Column "k".

#### 7.5 Contract Modification/Trend Log - Contract 1300 Stations

<sup>26</sup> Reported all trend cost for Contractor Change Order Requests and Proposed Contract Change and applied probability to forecasted trends. In April 2016 Report, reviewed probability formula and adjusted cost.



7.6 Budget Revisions: Re	port Sorted by	v Construction Packages

27	In Dec 2014 Report, reduced CN1252 allocated contingency by \$28K to execute Contract Modification #46, see Report 7.5 Detail Contingency Usage Report. In August 2015 report, release \$15M CN1252 Tunnel assigned contingency to program unallocated contingency. In March 2016 report, five contract modifications certified totaling \$377,435 of which \$155,468 is using another source of funding. Released \$155,648 from CN1252 Tunnel assigned contingency to program unallocated contingency. In May 2016 Report, reduced CN1252 allocated contingency by \$186K to execute Contract Modification #54 and #55, see Report 7.5 Detail Contingency Usage Report.
28	In March 2016 Report, lowered Contract 1300 Stations CTS contingency by \$75,000 because Contract Modification #6 was funded by Project CPT718. The \$75,000 has been transferred to program's unallocated contingency. Refer to Report Note #19
29	Budget for Soil Process contract.
30	Program contingency increased by \$5,265,478. Refer to Report Note #20.
31	In Dec 2014 Report, redistributed LRV budget to reflect recent firm bid cost per vehicle (\$3,327,250/unit) from vehicle procurement contract award. (SFMTA Board meeting 15JUL14, calendar item #11). Vehicle line item total budget remains unchanged, redistributed fund by reducing base amount to \$13,309,000 and increased allocated contingency by same amount.
32	In April 2015 report, program contingency decreased by \$500,000. Refer to Reports #20. In August 2015 report, release \$15M CN1252 Tunnel assigned contingency to program unallocated contigency. In March 2016 report, released \$155,468 from Contract 1252 Tunnel assigned contingency and \$75,000 from Contract 1300 Stations assigned contingency totaling \$230,956.

7.9 Detail Monthly Expenditure Report	
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#### Phase 1 Preliminary Engineering

<sup>33</sup> Famis cost for Preliminary Engineering (PE) is \$48,210,903.71. Cost Report for Preliminary Engineering (PE) is \$46,542,060. Some Design cost reported in Famis were moved to Design Phase, refer to Notes #19 and #20.

#### Phase 2 Design Phase

34	Famis cost adjustment to transfer Project Management cost from July 2013 to Phase 3 Construction Phase.
35	Famis Phase 1 PE Index Code: 357906.CPT5441112 cost is \$10,222,939
35	\$8,949,300 is reported in Cost Report Phase 1 PE and the balance of \$1,273,639 is reported in Phase 2 Design.
	1.2.021.01.080.03 - FD:CTYCO-ARTS COMMISSION [357909ART001.CPT5441227]:
	FAMIS: \$1,425,167
36	Cost Report: \$1,425,167 cost is reported in Phase 2 Design, 1.2.021.01.080.03
	Cost Transfer: Remaining cost is reported in Phase 3 Construction, 1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION
	[357909ART001.CPT5441227]

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	1.2.055.01.080.02 - FD:ODCs - 651 BRANNAN STREET [35CPT5441241.CPT5441241]:
	FAMIS: \$2,294,910
37	Cost Report: \$2,294,910 1.2.055.01.080.02
	Cost Transfer: Future costs to be allocated to 1.3.055.01.080.02 - FD:ODCs - 651 BRANNAN STREET
	[35CPT5441241.CPT5441241]
	1.2.063.01.080.03 - AECOM.CS149 OM-EPC JV CS149-PM [68CPT544133D.CPT544133D]:
38	FAMIS: \$4,698,167
50	Cost Report: \$4,698,167 on 1.2.063.01.080.03
	Cost Transfer: Future costs to 1.3.063.01.080.03 - AECOM.CS149 OM-EPC JV CS149-PM [68CPT544133D.CPT544133D]
39	AVA Cost \$395,204 is reported in Phase 2 Final Design 1.2.066.01.080.03
	1.2.071.01.080.02 - FD:FINAL DESIGN-DP1 [35CPT5441232.CPT5441232]:
40	FAMIS: \$5,608,147
40	Cost Report: \$5,469,336
	Cost Transfer: \$138,811 to 1.3.071.01.080.04 - FD:FINAL DESIGN-DP1 [35CPT5441232.CPT5441232]
	1.2.072.01.080.02 - FD:FINAL DESIGN-DP2 [35CPT5441233.CPT5441233]:
41	FAMIS: \$26,268,511
41	COST REPORT: \$26,220,609
	COST TRANSFER: \$47,902 to 1.3.072.01.080.04 - FD:FINAL DESIGN-DP2 [35CPT5441233.CPT5441233]
	1.2.073.01.080.02 - FD:FINAL DESIGN-DP3 [35CPT5441236.CPT5441236]:
42	FAMIS: \$11,502,372
42	COST REPORT: \$11,432,312
	COST TRANSFER: \$70,060 to 1.3.073.01.080.04 - CM: DP3 [35CPT5441236.CPT5441236]
-	
Phas	e 3 CONSTRUCTION PHASE
	1.3.021.01.080.03 - ARTS:CTYCO-ARTS COMMISSION [357909ART001.CPT5441227]:
43	FAMIS: \$1,525,982
43	Cost Report: \$1,425,167 1.2.021.01.080.03
	Cost Transfer: any future costs to 1.3.021.01.080.03
	1.3.055.01.080.02 - FD:ODCs - 651 BRANNAN STREET [35CPT5441241.CPT5441241]:
44	FAMIS: \$2,294,910
44	Cost Report: \$2,294,910 1.2.055.01.080.02 - FD:ODCs - 651 BRANNAN STREET [35CPT5441241.CPT5441241]
	Cost Transfer: Future costs to be allocated to 1.3.055.01.080.02
	1.3.063.01.080.03 - AECOM.CS149 OM-EPC JV CS149-PM [68CPT544133D.CPT544133D]:
45	FAMIS: \$4,698,167
1 40	

Cost Transfer: Future costs to 1.3.063.01.080.03 - AECOM.CS149 OM-EPC JV CS149-PM [68CPT544133D.CPT544133D]

# central subway

46	Used \$500K program contingency for CS-175 Bayland Soil Process contract. Refer to Report Notes #20.
	1.3.071.01.080.04 - FD:FINAL DESIGN-DP1 [35CPT5441232.CPT5441232]:
47	FAMIS: \$5,608,147
47	Cost Report: \$5,469,336
	Cost Transfer: \$138,811 to 1.3.071.01.080.04 - FD:FINAL DESIGN-DP1 [35CPT5441232.CPT5441232]
	1.3.072.01.080.04 - FD:FINAL DESIGN-DP2 [35CPT5441233.CPT5441233]:
48	FAMIS: \$26,268,511
40	COST REPORT: \$26,220,609
	COST TRANSFER: \$47,902 to 1.3.072.01.080.04 - FD:FINAL DESIGN-DP2 [35CPT5441233.CPT5441233]
49	Contract 1251 Final cost is \$20,794,582.
50	In March 2016, contract 1252 modifications budget and actuals have been realinged and adjusted to reflect actuals costs.
51	In March 2016, contract 1252 modifications budget and actuals have been realigned and adjusted to reflect actuals costs.
	In July 2015 Report, used Contract 1300 Contractor schedule to report budget and actual cost. The Standard Cost Categories
	(SCC) allocation changed from previous reports. In August 2015 Report, adjusted some of Contract 1300 Contractor SCC
52	assignment to match most of previous SCC assignment. In March 2016, \$75,000 Cmod#6 subtracted from CN1300 Stations
	contingency (using CPT718 funding) and transferred to Program contingency; this lead to the total CN1300 Station budget being
	lowered.
53	Revised Contract 1252 allocated contingency SCC code from 040.08 to 010.07.
54	Revised Contract 1300/UMS allocated contingency SCC code from 040.08 to 020.03.
55	In March 2016 Report, reduced Contract 1252 contingency by \$377,435 cost to reflect certification of five CMODS.
56	Revised Contract 1300/CTS allocated contingency SCC code from 040.08 to 020.03.
57	Revised Contract 1300/YBM allocated contingency SCC code from 040.08 to 020.03.
58	Revised Contract 1300/STS allocated contingency SCC code from 040.08 to 020.01.
59	Revised Form B Reimbursements SCC code from 900.01 to 040.02
60	Revised Form B Reimbursements SCC code from 900.01 to 040.02
61	Revised Form B Reimbursements SCC code from 900.01 to 040.02
62	Revised Form B Reimbursements SCC code from 900.01 to 040.02
63	Revised Form B Reimbursements SCC code from 900.01 to 040.02
64	Revised Form B Reimbursements SCC code from 900.01 to 040.02
65	Revised Form B Reimbursements SCC code from 900.01 to 040.02
66	Revised Form B Reimbursements SCC code from 900.01 to 040.02
	Increase Program contingency \$1,023,508. Refer to Report Notes #11 and #12. In April 2015 report, program contingency
67	decreased by \$500,000. Refer to Report Notes #20. In August 2015 report, release \$15M CN1252 Tunnel assigned contingency to
	program unallocated contingency. In March 2016 report, program unallocated contingency increased by \$230,468.
L	1



# Appendix B

## **DETAIL SCHEDULE REPORTS**

#### **SCHEDULE HIGHLIGHTS**

The Master Project Schedule (MPS) below includes progress through May 2016. The May 2016 Schedule Update submittal from Contract 1300 Contractor is rejected due to incorrect schedule logic. The Contract 1300 schedule represented in this report is based on the SFMTA May 2016 Schedule Update.

The MPS shows a forecast Revenue Service Date of June 2019.

The controlling critical (longest) path of the MPS runs through CTS Excavation succeeded by STS Startup & Testing, Commissioning and Pre-Revenue Activities to the Baseline Finish and Revenue Service Date. See Appendix B – Longest Path. The latest schedule shows the longest path running through the Chinatown Station (CTS). Contractor is required to implement a Recovery Schedule to put the Project back on schedule.

Schedule Contingency is fully utilized on the critical path of the MPS, which is below the Minimum Schedule Contingency level of 6 months. A schedule re-evaluation will be performed, utilizing the updated Contract 1300 Schedule. Recovery options are being implemented in key areas as work proceeds. SFMTA continues to meet with Contractor to discuss all schedule concerns and comments. The Contractor, Tutor Perini Corporation's (TPC) at CTS commenced a new schedule activity, SEM Mining during the month of May. TPC experienced initial lower production rates during this mining activity that resulted in a lost 14 calendar days in month of May. TPC has since improved its production rate by completing one SEM side drift advance per shift. It is not unusual for SEM production rates to initially fall behind at activity startup. TPC has identified mitigation measures, working weekends and re-sequencing critical path activities to recover lost time. Contract 1300 Schedule delay in May results in the forecast Revenue Service Date slipping to June 14, 2019.

Contract 1300 Contractor submitted eighteen (18) Schedule Updates from December 2014 to May 2016. SFMTA rejected nine (9) Schedule Updates from September 2015 to May 2016. Contractor has been directed to develop a Recovery Schedule as required by Contract and correct out-of-sequence and Retained Logic driving many of the forecast dates. Review of schedule updates as well as identifying recovery options is ongoing.

#### Contract 1300 - WP1253 UMS / WP1254R CTS / WP1255 YBM / WP1256 STS:

The Contractor, Tutor Perini Corporation's (TPC) baseline schedule is incorporated into the master program. The preliminary SFMTA Contract 1300 May 2016 schedule is used within the May Report. The SFMTA Contract 1300 May 2016 schedule is based on the approved baseline schedule logic with adjustments made for fixing retained logic and lags. SFMTA met with TPC on 6/2/16 to review the draft May 2016 monthly schedule update and emphasized to TPC that they should not submit revised schedule logic within this monthly update. The SFMTA will continue to use their Contract 1300 schedule update as a forecasting tool going forward until the Contract 1300 Contractor submits an acceptable schedule that addresses all of SFMTA scheduling concerns.

#### Work Package P-1254R (CTS) has performed the following work this month:

- Head house- excavated to Temp Level 4.0 Struts; install Walers and Struts Level 4
- Cross Cut Cavern: Begin tunneling under Stockton Street
- Incidental street work, monitoring, surveying
- North Emergency Egress Shaft excavation continued late-May

#### Work Package P-1254R (CTS) will perform the following work next month

- Crosscut Cavern: continue tunneling under Stockton Street
- Compensation grouting may take place
- Head house No work until Crosscut Cavern top headings are completed

wky ID	Activity Name				2016		
		May	Jun	Jul	Aug	Sep	Oct
CENTRAL SUB	SWAY PROJECT			1			
Construction P	hase						
Construction CN-	1300						
Construction CTS	Station P-1254R						
CTS.31.71.355	Install Remaining Barrel Vault Piping (1-7, 49-55, s1-s12) = 26ea	_					- A
CTS.31.50.900	CTS_CN Install Temp Level 4.0 Struts & Wales & Preload Col. 4.0-11.0		-	1			
CTS.31.71.020	Break-In & Construct Top Sidewall & Headwall Left - Crossout Cavern	_					
CTS.31.71.030	Break-In & Construct Top Sidewall & Headwall Right - Crosscut Cavern	_					
CTS 33.51.110	CTS_Perform: Utilities: Gas Line Washington/Stockton						
CTS.01.78.100	CTS_Prep/Submit Warranties (Prior to Substantial Completion)						
CTS.31.71.040	Break-In & Construct Top Center Drift & Headwall - Crosscut Cavern						
CTS.31.43.140	CTS_Compensation Grouting - As Required						
CTS.31.71.050	Excavate & Construct Sidewall Bench & Headwall Step 3 Left Heading - Crosscut		-				
CTS.31.71.060	Excavate & Construct Sidewall Bench & Headwall Step 3 Right Heading - Crosscu			1			
CTS.31.71.070	Excavate & Construct Step 4 Left Heading Invert & Headwall - Crosscut Cavern	_					
CTS.31.71.075	Excavate & Construct Step 4 Right Heading Invert & Headwall - Crosscut Cavern						
CTS.31.71.080	Excavate Step 5 Bench 1 & Construct Headwall - Crossout Cavern						
CTS.31.71.090	Excavate Step 6 Bench 2 & Construct Headwall - Crosscut Cavern						
CTS.31.71.100	Excavate & Support Step 7 Invert - Crosscut Cavern						
CTS.31.71.390	Breakout Remaining Cross-Cut Cavern Opening				-		
CTS.31.71.400	Temporary Backfill Cross Cut Invert for Platform Cavern Excavation	1999 - Contra 19					
CTS.31.71.440	Barrel Vaults at South Platform Cavern Excavation						
CTS.31.71.410	Barrel Vauts for North Platform Cavern Excavation			1			
CTS.31.71.450	Breakin Top Benches for South Platform Cavern Excavation					-	
CTS.31.71.465	Excavate & Support Top Left Heading South Platform Cavern 176Lf						
CTS.31 71.460	Excavate & Support Top Right Heading South Platform Cavern 176Lf						
CTS.33.31.300	CTS_Backfill & Complete Permanent Sewer Work In Washington St.						
CTS.31.71.550	Excavate & Support Top Right Bench South Platform Cavern 176Lf						
CTS.31.71.560	Excavate & Support Top Left Bench South Platform Cavern 176Lf						
CTS.31.71.420	BreakinTop / Bench Sidewalls for North Platform Cavern Excavation			1			
CTS.33.11.220	CTS_Complete Water Distribution - Washington St	*******	***********	1		****************	
CTS 31.71 580	Excavate & Support Top Left Step 3 Invert South Platform Cavern 176Lf			1			
CTS.31.71.570	Excavate & Support Top Right Step 3 Invert South Platform Cavern 176Lf						
CTS.32.13.270	Re-open Washington Street						

#### Work Package P-1253 (UMS) has performed the following work this month:

- Stockton Street closure between Geary and Ellis and there is no Southbound lane on Stockton between Post and Geary; Ellis Street one lane
- North Concourse: Chipped vertical drain slots and chipped piles for shotcrete leveling course. Installing horizontal drain pies and welded wire fabric. Installed 10 compensation grout pipes
- Platform Station: Began excavating and chipping piles for roof deck 10-5B. Continued excavation under roof deck. Drilled and installed compensation grout pipes and commenced preconditioning.

- South Concourse: Excavate/grade for concourse invert slab, chip/prep piles for stub beams and vertical drain slot, fine grade/install base and slab drain pipes, form and pour mud slab. Install waterproofing.
- Ellis Annex: Remove and replace seismic joint, water test seismic joint, install waterproofing, grout protection course and lightweight concrete.
- UMS Garage: Continue demolition of 17-Line wall between USG and North Concourse. Continue micropile installation on the Geary Street Wall. Continue FRP B-line wall.

#### Work Package P-1253 (UMS) will perform the following work next month:

- Restore one lane on Stockton Street between Post and Geary Streets. O'Farrell full closure has been requested
- North Concourse: Complete backfill and install paving. Below deck: continue installation of nelson studs and shotcrete leveling course. Complete installation of compensation grout pipes and continue preconditioning
- Platform Station: For roof deck 10-5B: set/weld beams, install waterproofing, and install concrete. Continue installing jet grout columns. Continue excavation
- South Concourse: Move jet grout spoils handling to Roof Deck 3B. Chip/prep piles for stub beams/vertical drain slots. Install pipe, fabric, and shotcrete
- Ellis Annex: Remove and replace seismic joint, install steel plates, water test seismic joint, install waterproofing, grout protection course and lightweight concrete
- UMS Garage: UMS Garage: Continue demolition of 17-Line wall between USG and North Concourse. Complete demolition of garage floor slab and complete micropile installation. Complete FRP B-line wall

ID	ActMty Name	-			2	016			
		May		Jun	Jul	Aug	Sep	Qd	
NTRAL SUBV	VAY PROJECT								
onstruction Pha	se								
onstruction CN-130								1	
Construction UMS St	ation P-1253								
Drilled Shafts			11						
Compensation Gro	uting								
UMS.31.43.0760	UMS_Install Compensation Grout Tubing - North of Geary - Aurthur Beren				1				
UMS.31.43.0770	UMS_Install Compensation Grout Tubing - North of Geary - Gucci								
UMS.31.43.290.2b	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens								
UMS.31.43.720.3a	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marcu	_		-					
UMS.31.43.740.3a	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton Sta	-							
UMS.31.43.740.2a	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton Sta	-						1	
UMS.31.43.720.2a	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marcu	-							
UMS 31 43 720.1a	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Nieman Marci			-				1	
UMS.31.43.300.2b	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome			1				1	
UM5.31.43.290.3b	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens								
UMS.31.43.300.3b	UMS_ Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome							11	
UMS.31 43.300.1b	UMS Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome								
UMS.31.43.740.1a	UMS Install Compensation Grouting Tubes North of O'Farrell St - Luis Vitton No.			-					
UMS.31.32.0070	UMS_Jet Grout Under South Wall Footings - USG								
UMS.31.43.290.4b	UMS_Install Compensation Grouting Tubes North of O'Farrell St - Macy's Mens							- marine	e i
UMS.31.43.300.4b	UMS Install Compensation Grouting Tubes North of O'Farrell St - Macy's Wome								
UMS.31.43.280.4a	UMS_ Install Compensation Grouting Tubes - South of O'Farrell S - Barney's of								
UMS.31.43.310.4a	UMS_ Install Compensation Grouting Tubes - South of O'Farrell St - Crate & Bar				-			1	
UMS 31 32 0220	UMS_Jet Grout 90 Day Cure Period - USG								
Demolition									
UMS.31.50.0040	UMS_Install Bracing & Shoring for Walls & Slabs	_						1	
UMS.02.41.0150	UMS_Demo South Entrance For BART Elevator Powell St Station								
UMS.02.41.430	UMS_Complete Demo South Headwall								
UMS.02.41.0440	UMS_Complete Demo North Headwall		1.0					1	
Roof Deck Excavati	on,Construction,Restoration				III COMPANY	**********			-+-
Excavation & Supp									
UMS.03.37.0665	UMS_Install Drain Pipe & Grout Fill Void Between Piles - Roof To Concourse Lev								
UMS.05.12.0690	UMS_Install Permanent Wales - Concourse Level Sta 132+50 to North Headwall	-			-			1	
UMS.31.20.0685	UMS_Excavate Platform Box Bench For Wales & Struts - Concourse Level Sta 13								
UMS.31.41.0240	UMS_Install Sheet Piles @ Access Shaft #2 (O'Farrell)	1	-		U.I. Internet			In Contraction	
UMS.31.20.1365	UMS_Shore Tunnel and ready for break in- Sta 132+50 To North Headwall								
UMS.31.50.0250	UMS Excavate, Lag & Support @ Access Shaft #2 (O'Farrel)								
UMS.31.20.0660	UMS_Complete Excavate South Concourse to Invert		117						
UMS 31 50 0560	UMS_Install Spling @ Access Shaft #2 & Excavate to Pile Face								

#### Work Package P-1255 (YBM) has performed the following work this month:

- Concourse level concrete pour 3 of 3 completed
- Continue excavation and temporary bracing installation in head house below the Concourse level to allow excavation to Invert level (bottom of station)
- Break through and remove tunnel liner to allow excavation to Invert level within station box
- Continue utility installation on 4th Street north of the north headwall
- Place shotcrete for interior walls in Mezzanine

#### Work Package P-1255 (YBM) will perform the following work next month:

- Demo and remove tunnel liner segments within Station Box
- Continue excavation and Temporary Strut Bracing Level 6 installation in Station Box and Head House to allow Invert level slab construction
- Continue utility installation on 4th Street north of the north headwall
- Continue placing shotcrete interior walls in Mezzanine and Concourse

vity ID	Activity Name		2.22	2	2016			
Sec.		May	Jun	Jul	Aug	Sep	Qet	1
CENTRAL SUE	SWAY PROJECT		-				1	-
Construction Pl	hase							
Construction CN-1	300							
Construction YBM	Station P-1255							
YBM.03.30,701	F/R/P Station Concourse Level Slab Pour 1	-	_					
YBM.03.30.702	F/R/P Station Concourse Level Slab Pour 2	all a second a					91	
YBM.22.13.117	YBM_CN - Instal In Slab Drains Concourse Sector 1							
Y.1.620	Open all Traffic- 4th Street						1 1	
YBM.03.30.705	F/R/P Station Concourse Level Slab Pour 5							
YBM.03.30,706	F/R/P Station Concourse Level Slab Pour 6		-				1	
YBM.31.20,500	Install Level 6 Struts						1	
YBM.31.50.107	Remove Station Level 4 Struts						1	
YBM 26.56.190	YBM_Install: Elect: Roadway Lighting (26 56 19)						1	
YBM 31.20,470	Excavate Station to Invert Level							
YBM.23.31.271	YBM_IV - Under-Platform Install - 12" Dia Underground Pipe Duct Sector 1							
YBM 23.31.281	YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 106							
YBM.34.21,0985	YBM_IV 302 - Traction Power Rm: Install - NB Traction Power Ductbank Slurry					-		
YBM.34.21,0975	YBM_IV 302 - Traction Power Rm: Install - S8 Traction Power Ductbank Slurry							
YBM 34.05.0260	YBM_PL_Install Ductbanks - NB Positive Feeder TPSS RM Penetrations to PB-0							
YBM.07.14.475	Waterproofing along Slurry Walls- Stations Invert Slab (Side Only)					-	1	
YBM.23.31.291	YBM_IV - Under-Platform Install - 12" Dia Underground Pipe Duct Sector 2							
YBM.23.31.301	YBM_IV - Under-Platform Install - Stub-Up Underground Pipe Duct to Aux 207					-	1	
YBM.34.05,0230	YBM_PL_Install Ductbanks - SB Positive Feeder TPSS Rm Penetrations to PB-D					-		
YBM.03.30.870	Place 4"Aggregate Base- Station Invert Slab							
YBM.03.30,880	Place 4" Mud Slab- Station Invert Slab						4	
YBM.07.14,890	Waterproofing top of 4" Mud Stab- Stations Invert Stab	*********				0000000		
YBM.03.30.900	Place 2"-3" Protective Concrete- Station Invert Slab (Over Waterproofing)						1	
YBM.03.30,910	Form/ Rebar- Station Invert Slab Col 00-02							
YBM 34,21,1135	YBM_IV 302 - Traction Power Rm: Install -Positive Feeder Conduit To PB01 & PBI						-	
YBM.22.14.110	YBM_IV Install Trench Drains & CB's- Station Invert Slab							
YBM.03.30.912	Form/ Rebar - Station Invert Slab Col 02-04							
YBM.03.30.916	Place Concrete- Station Invert Slab Col 00-02						1	
YBM.03.30.913	Form/ Rebar - Station Invert Slab Col 04-06							
YBM.03.30,917	Place Concrete- Station Invert Slab Col 02-04							1
YBM.03.30.911	Form/ Rebar - Station Invert Slab Col 06-08							
YBM.03.30.918	Place Concrete- Station Invert Stab Col 06-08						3	

#### Work Package P-1256 (STS) has performed the following work this month:

- Continue Muni ductbank installation
- Continue 78" sewer rehabilitation
- Continue 36" sewer force main
- Continue Auxiliary Water Supply System (AWSS) installation
- Continue water line work
- Continue OCS pole foundation installation
- Continue tunnel drainage system installation
- Continue tunnel invert slab work

#### Work Package P-1256 (STS) will perform the following work next month:

- Continue 78" sewer rehabilitation
- Continue MRY ductbank and vault installation
- Continue 36" sewer force main
- Continue AWSS installation
- Continue waterline installation
- Continue OCS pole foundation installation
- Continue tunnel drainage system installation

#### • Continue tunnel invert slab work

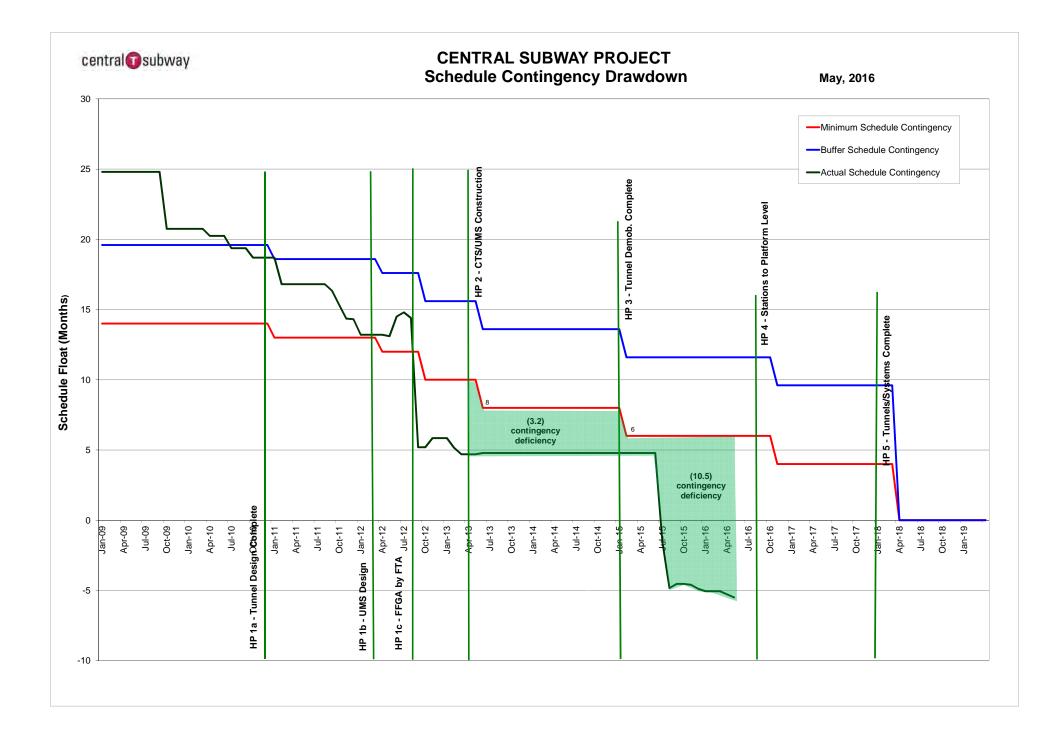
vity ID	Activity Name					2016		
		May		Jun	101	Aug	Sep	1
CENTRAL SUE	SWAY PROJECT							1
Construction P	hase							
Construction CN-1	300							
Construction STS	P-1258							
ST S.33.11.210	STS_Instal: Utilities: Auxiliary Water Supply 12" Main 4th St (Through Townsend							
ST S.26.05.120	STS_Install. Utilities: 230Kv Electrical Transmission Casing - Assist PG&E - 4th		-		111			1
STS 33.11.170	STS_Instal. Utilities: Auxiliary Water Supply 12" Main 4th St (Through Brannan St							
STS 33.51.150	STS_Pothole: Utilities: Pothole for Gas Distribution							1
STS 33.31.630	Sewer Manhole relocation at King St/ 4th Street			_				1
STS 33.31.420	STS_Install New CB's Manhole, 10" & 15" Sewer Piping @ 4th St/Townsend - We							1
ST 5 33 11.340	STS_Install Utilities: Track Drainage- 4th St (Brannan St To Bluxome St)							)
STS.33.51.115	STS PG&E Design Detail Period: Utilities: Gas Distribution 6" Main/Casing - 4th							1
ST S.33.11.350	STS_Install_Utilities: Track Drainage- 4th St (Bluxome St To Townsend St)							1
ST 5.33.31,400	STS_Instal New 27" Sewer PipeCasing Connecting Offset Manhole To East MH (				-			
STS 33.31.340	STS Install New Sewer Laterals & Sleeves East Side 4th Street - Brannan to Blux							1
ST 5.33.31.445	Install New 48" Gravity Sewer Main Manhole @ 4th/Welsh St		****					
ST 5.33.31.410	STS_Install New CB's, 10" & 24" Sewer Piping @ 4th St/Townsend - East Side							£
STS.33.31 360	STS_Install New Sewer Laterals & Sleeves East Side 4th Street - Bluxome To Tow							1
ST 5.33.31.450	Install New 48" Gravity Sewer Main - Bryant St To Welsh St.							
ST 5.33.31.470	Install New 48" Gravity Sewer Main Manhole @ 4th/Freelon St							ŧ
STS 33.11.270	STS Install Utilities: Sewer: Casing for 10" Force Main - 4th St Sta @ Brannan :				1			-
STS 26.05.0290	STS Install Tunnel Electrical - Unistrut For Conduit & Signal Supports - NB Porta							1
STS 26.05.0530	STS_Install. Tunnel Electrical - Unistrut For Conduit & Signal Supports - SB Porta							
STS 33.31 260	STS Install New 18" Sewer Lateral in Welsh St To Future 48" Manhole					-		1
ST 5.33.31.390	STS Instal New Sewer Manhole @ 4th St/Townsend - East Side					-	-	1
STS.33.31.430	STS Install New Sewer Laterals & Sleeves West Side 4th Street - Townsend To K	********						
ST S 28 20 1790	STS Install: Tunnel Electrical - CCTV Cameras - SB Portal To Moscone						C	1
STS.34.42.0600	STS Instalt Train Control - Train Control Signals - SB Portal to Moscone							Į
STS 34.42 2310	STS Install. Train Control - Train Control Conduit - & JB's SB Portal To Moscone							ł –
STS 26.05.0560	STS Instalk Tunnel Electrical - Telephone Conduit - & JB's SB Portal To Moscon	1.000	L					-
STS 27.32.0610	STS Install. Tunnel Electrical - Radiax Conduit - & JB's SB Portal To Moscone	in a			1 · · · · · · · · · · · · · · · · · · ·			1
STS 26.05.0550	STS Install Tunnel Electrical - Electrical Power Conduit & JB's - SB Portal To Mo							
ST S 26.05.0360	STS Instal: Tunnel Electrical - Electrical Power Conduit & JB's - NB Portal To Mc							
ST 5.28.20.0570	STS_Install Tunnel Electrical - CCTV Conduit - & JB's SB Portal To Moscone							
STS 26.05.0405	STS_Install: Tunnel Electrical - Traction Power Conduit - NB Portal to Moscone							
STS 26.05.0640	STS_Install. Tunel Electrical - Traction Power Conduit - SB Portal to Moscone	G31822C+++++			1			defense
STS.33.31.440	STS Install New Sewer Laterals & Sleeves East Side 4th Street - Townsend To Ki		1				-	-
STS 33 31.120	Install New 36" Force Main Sewer @ 4th/Bryant		1					
STS 33 31,460	Install New 48" Gravity Sewer Main - Weish St. To Freelon St.							
STS 26.05.0630	STS Install Tunnel Electrical - Emerg Tel/SFFD Tel/Blue Lights - SB Portal To M		1				1	1

#### **SCHEDULE REVISIONS**

The SFMTA Contract 1300 May 2016 schedule update was added this period to the Central Subway Project Master Schedule.

#### LIST OF SCHEDULE REPORTS

- 1.1. Schedule Contingency Drawdown
- 1.2. Master Summary Schedule
- 1.3. Program Critical Path Schedule
- 1.4. Construction Contract Summary Schedule
- 1.5. Detail Schedule for Remaining Work



Activity ID Activity Name		Original		Finish		2016				20	)17		2018				2019		
		Duration			Q	2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
CENTRAL SUBWAY PROJECT		4325	06/03/03 A	06/14/19							1	-							CENT
Program	Level Milestones	4182	06/03/03 A	06/14/19							1 1 1	1							Progr
PJD1000	Central Subway Project Start	0	06/03/03 A																1
MS0004A	Tunnel Excavation Complete - Project Milestone #4A	0		09/05/14 A	#4A						1 1 1 1								1
MS0019	Baseline Finish Date: 12-26-2018	0		06/14/19*														•	Baseli
MS0009	CSP Revenue Service Date	0		06/14/19*							 - -	1 1 1						•	CSP R
Prelimina	ry Engineering Phase	2661	06/03/03 A	01/07/10 A							1 1 1 1								1
Final Des	ign	1811	01/08/10 A	06/17/13 A							1								1
Light Rail	l Vehicles	2035	04/15/13 A	11/09/18							1	1				🗕 Ligh	t Rail Ve	hicles	1
Real Esta	te	3130	08/01/08 A	05/26/16		Rea	al Estat	е			1 1 1 1								J 1
Construc	tion Phase	2606	01/04/10 A	06/14/19	· · · · <del>1</del> · · · · ·							1 1							Const
Construct	ion Support and Costs	2697	01/04/10 A	05/28/19							1	1						- 0	onstru
Construct	ion Utility Contract #1- MOS & Portal CN-1250	505	01/04/10 A	05/23/11 A							1								1
Construct	ion Utility Contract #2 - UMS CN-1251	643	01/12/11 A	10/15/12 A							1								1
Construct	ion Tunnels CN-1252	1470	06/08/11 A	05/27/16					nels CN-1		1								1
Construct	ion CN-1300	1706	06/03/13 A	04/02/19		+						1 1						Const	uctior
CN- 1300	Milestone	1512	06/17/13 A	04/02/19							1 1 1							CN- 13	00 Mil
Construct	tion UMS Station P-1253	1706	06/17/13 A	01/03/19													Constru	uction l	JMS St
Construct	tion CTS Station P-1254R	1525	06/17/13 A	01/03/19													Constru	uction (	CTS St
Construct	tion YBM Station P-1255	1642	06/10/13 A	01/03/19													Constru	uction \	/BM St
Construct	tion STS P-1256	1527	06/03/13 A	03/18/19													<b></b> /	Constru	ction
Project St	art Up	163	01/02/19	06/14/19							1 1 1 1					•			Projec
Unallocat	ed Contingency	115	01/02/19	06/14/19												-			Unallo
CO1.700	Cost Activity Unallocated Contingency (LOE) - 1.7.500.99.090.00 - Contingency	115	01/02/19	06/14/19															Cost A

SFMTA Central Subway Project	
Master Project Schedule	
Summary Schedule - May 2016	

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	20	18				)19			2020	
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
						CENTRA	L SUBW	AY PROJ	ECT	
			1			Drogrom		ilactonar		
			1			Program		nestones	5	
						Baseline	- Finiah F		0040	
					•	Baseline		Jate: 12-4	20-2018	
					•	CSP Rev	enue Se	rvice Dat	е	
						1				
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			Lig	ht Rail V	ehicles	1	1			
					1	1	1		1	
					1	1				
					<u> </u>	Constru	ction Ph			
						Joonstru	Suon FN	u30		
			1			onstruct	ion Sup	oort and	Costs	
						1				
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						1				
					Const	ruction C	N-1300			
					CN- 11	00 Milest	one			
							Jue			
				Const	ruction	JMS Stat	on P-12	53		
			1		1		1			
				Const	ruction	CTS Stati	on P-125	4R		
			1	Const	ruction '	BM Stat	on P-12	5		
			1	<b>v</b> oonst			1			
					Constru	ction ST	S P-1256			
			_		1 1					
					;	Project \$	Start Up		1 I	
						Unalloca	ted Con	tingency	1 1	
					•	1				
					1	Cost Ac	tivity Una	allocated	Conting	ency (LC
			1		1	1	1		1	
				Require	ed Rever	ue Servi	ce Date:	26-Dec-1	8	
						ta Date: 0			-	
					24					

ty ID	Activity Name	Original Start	Finish	Total		2016		2017				2018				019			2020	Page 1	20
		Duration		Float	(	2 Q3 Q4 (	Q1 Q	2 Q3	B Q	4 Q´	1 C	2 Q	3 Q4	l Q1	Q2	Q3	Q4	Q1 C	Q2 Q3	Q4	Q1
ENTRAL SUB		823 04/20/16 A		-117																	
Program Level M	ilestones	115 01/02/19	06/14/19	-118																	
HIdPt5	Systems Complete	0	01/02/19	-118										Sys	1	Comp					
MS0019	Baseline Finish Date: 12-26-2018	0	06/14/19*	-118											1		line Fir	1	:	1	
MS0009	CSP Revenue Service Date	0	06/14/19*	-118											•	CSP	Revenu	e Serv	ice Date	e	
<b>Construction Pha</b>	ase	823 04/20/16 A	06/14/19	-117																	
Construction CN-13	00	770 04/20/16 A	04/02/19	-64																	
CN- 1300 Milestone		64 01/02/19	04/02/19	-64												-					
BUF1017	STS Buffer Float- (0)	0 01/02/19	01/02/19	-118										ST	S Buff	er Floa	at- (0)				
STS1500	CN 1300 Substantial Completion	0	01/02/19	0										♦ CN	1300	Substa	antial C	omplet	ion		
MS-10	Substantial Completion - 1,700 Calendar Days (SP-4.B) { 10-Feb-18 }	0	01/02/19*	-326										🔶 Sul	bstant	ial Co	mpletio	n - 1,7(	00 Calei	ndar D	ays (S
C.Punch	Closeout Punchlist/Remaining Work	90 01/03/19	04/02/19	-326											Clo	seout	Punchl	ist/Ren	naining	Work	
MS-20	Final Completion - 1,790 Calendar Days (SP-4C)	0	04/02/19*	-326											🔶 Fin	al Con	npletio	า - 1,79	0 Calen	dar Da	ıys (S
Construction CTS St	ation P-1254R	706 04/20/16 A	01/02/19	-233												-					
CTS.31.71.020	Break-In & Construct Top Sidewall & Headwall Left - Crosscut Cavern	30 04/20/16 A	06/06/16	-232		Break-In & Co	onstruc	t Top S	Sidew	vall &	Head	wall L	eft - C	rosscu	t Cave	ern					
CTS.31.71.030	Break-In & Construct Top Sidewall & Headwall Right - Crosscut Cavern	30 04/21/16 A	06/03/16	-232	-+	Break-In & Co	onstruc	t Top S	Sidew	vall &	Head	wall R	ight -	Crossc	ut Ca	vern					
CTS.31.71.040	Break-In & Construct Top Center Drift & Headwall - Crosscut Cavern	7 06/06/16	06/14/16	-232		Break-In & C	onstru	ct Top	Cente	er Drif	t& H	eadwa	II - Cro	osscut	Caver	'n					
CTS.31.71.050	Excavate & Construct Sidewall Bench & Headwall Step 3 Left Heading - Crossc	8 06/15/16	06/24/16	-232		Excavate &	Constr	uct Sid	lewal	I Bend	ch & I	Headw	all Ste	ep 3 Let	ft Hea	ding -	Crossc	ut Cave	ern		
CTS.31.71.060	Excavate & Construct Sidewall Bench & Headwall Step 3 Right Heading - Cross	8 06/17/16	06/28/16	-232		Excavate &	Constr	uct Sic	lewal	II Bend	ch & I	Headw	al Ste	ep 3 Rig	ght He	ading	- Cross	cut Ca	vern		
CTS.31.71.070	Excavate & Construct Step 4 Left Heading Invert & Headwall - Crosscut Cavern	10 06/29/16	07/13/16	-232		Excavate &	Const	ruct St	tep 4	Left H	eadir	ng Inve	ert & H	eadwa	II - C	rossci	it Cave	'n			
CTS.31.71.075	Excavate & Construct Step 4 Right Heading Invert & Headwall - Crosscut Cavern	10 07/01/16	07/15/16	-232		Excavate 8	i	i i			i i		i		-i	i i	i	i			
CTS.31.71.080	Excavate Step 5 Bench 1 & Construct Headwall - Crosscut Cavern	5 07/18/16	07/22/16	-232		Excavate S			ī	E E		1			1	1					
CTS.31.71.090	Excavate Step 6 Bench 2 & Construct Headwall - Crosscut Cavern	5 07/21/16	07/27/16	-232		Excavate		1	1		1		1		1	1					
CTS.31.71.100	Excavate & Support Step 7 Invert - Crosscut Cavern	10 07/21/16	08/03/16	-232		Excavate		1					1								
						Breakout			-					•							
CTS.31.71.390	Breakout Remaining Cross-Cut Cavern Opening	5 08/04/16	08/10/16	-232	· - <del>:</del>	Tempora								avorn	Eveau	ation					
CTS.31.71.400	Temporary Backfill Cross Cut Invert for Platform Cavern Excavation	5 08/11/16	08/17/16	-232		Barrel V		1	1		1	1	1		Lucav	auon					
CTS.31.71.440	Barrel Vaults at South Platform Cavern Excavation	10 08/18/16	08/31/16	-232		Breaki					1				ation	-					
CTS.31.71.450	Breakin Top Benches for South Platform Cavern Excavation	13 09/01/16	09/20/16	-232				1	1				1		1	476	4.4				
CTS.31.71.465	Excavate & Support Top Left Heading South Platform Cavern 176Lf	20 09/21/16	10/18/16	-232		Exca				-	- i	7			1	1					
CTS.31.71.460	Excavate & Support Top Right Heading South Platform Cavern 176Lf	20 09/21/16	10/18/16	-232		Exca	i	i	- i		i	; -	i i		i i	i i	i				
CTS.31.71.550	Excavate & Support Top Right Bench South Platform Cavern 176Lf	10 10/19/16	11/01/16	-232		Exc						1			i.	1					
CTS.31.71.560	Excavate & Support Top Left Bench South Platform Cavern 176Lf	10 10/19/16	11/01/16	-232		Exc			1	-	1	1	1		1	1					
CTS.31.71.580	Excavate & Support Top Left Step 3 Invert South Platform Cavern 176Lf	14 11/02/16	11/22/16	-232						-			1		1	1	ern 176	1			
CTS.31.71.570	Excavate & Support Top Right Step 3 Invert South Platform Cavern 176Lf	14 11/02/16	11/22/16	-232					-	-	-	-			1	1	vern 17	6Lf			
CTS.31.71.590	CTS- Install Temporary Bracing - Sidewalls (Platform Cavern)	6 11/23/16	12/02/16	-232				1	-	-				(Platfo	1	1					
CTS.31.71.600	Excavate & Support Top Center Drift Step 4 South Platform Cavern 176Lf	18 12/05/16	12/29/16	-232					10		- i -				1	1	Cavern				
CTS.31.71.610	Excavate & Support Center Bench Step 5 South Platform Cavern 176Lf	11 12/30/16	01/16/17	-232		1 1 1		1	10.0		1	1	1.1		1	1	avern 1	76Lf			
CTS.31.71.620	Excavate & Construct Invert Step 6 South Platform Cavern 176Lf	10 01/17/17	01/30/17	-232				1	1					th Platf	1	1					
CTS.31.71.630	Demo Sidewalls & Repair Headwall South Platform Cavern 176Lf	10 01/31/17	02/13/17	-232			Dem	no Side	walls	s & Re	pair	Headw	ali So	uth Pla	atform	Caver	n 176Li				
CTS.31.71.640	Stage Equipment & Construct Ramp For Crossover Breakin	5 02/14/17	02/20/17	-232			Sta	ge Equ	ipme	ent & C	Const	ruct R	amp F	or Cros	sove	Break	kin				
CTS.31.71.650	Break-in Crossover Cavern	1 02/21/17	02/21/17	-232			Bre	ak-in C	rosso	over C	averr	۱					[ -				
CTS.31.71.660	Excavate & Construct Left Sidewall & Headwall 268 Lf	55 02/22/17	05/09/17	-232			-	Exca	vate 8	& Cons	struct	Left S	idewa	III & He	adwa	II 268 I	f				
CTS.31.71.670	Excavate & Construct Right Sidewall & Headwall 268 Lf	55 02/22/17	05/09/17	-232			_	Exca	vate 8	& Cons	struct	Right	Sidev	vall & H	leadw	all 268	5 Lf				
CTS.31.71.680	Install Temporary Support Struts	10 05/10/17	05/23/17	-232			1	Insta	all Ter	mpora	rySι	pport	Struts	;							
CTS.31.71.690	Install Ramp For Center Drift	2 05/24/17	05/25/17	-232				Insta	II Ra	mp Fo	or Çei	nter Dr	ift								
CTS.31.71.700	Excavate & Support Center Drift	35 05/26/17	07/17/17	-232	-+		· <del> </del>	📫 E	xcav	ate &	Supp	ort Ce	nter D	rift							
CTS.31.71.710	Remove Crossover Excavation Ramp	2 07/18/17	07/19/17	-232				1	1		1.1	1	1	n Ram	p						
CTS.31.71.720	Excavate & Support Center Bench - Crossover	10 07/20/17	08/02/17	-232				1	1		1.1	1	1	Bench -		sover					
010.01.11.720		10 01/20/11	00/02/11	-232												1				1	<u> </u>
		Mas	A Central Subway ster Project Sche st Path - May 201	edule								Red	quired			ive Dat 05/26/1	e 26-De 6	c-18			

	Activity Name	Original Start Duration	Finish	Total	2016		2017	2018 2019 2020
				Float	Q2 Q3 Q4	Q1 Q2		Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
CTS.31.71.730	Excavate & Construct Invert - Crossover	7 08/03/17	08/11/17	-232				Sidewalls, Repair Headwall & Top Joint - Crossover
CTS.31.71.740	Demo Sidewalls, Repair Headwall & Top Joint - Crossover	10 08/14/17	08/25/17	-232				
CTS.31.71.750	Repair Invert Joint - Crossover	10 08/28/17	09/11/17	-232				air Invert Joint - Crossover
CTS.31.74.700	Place Smoothing Concrete - Final Lining invert - Crossover Cavern	15 09/12/17	09/28/17	-280				de Smoothing Concrete - Final Lining invert - Crossover Cavern
CTS.31.74.705	Install Waterproofing - Final Lining invert - Crossover Cavern	15 09/29/17	10/16/17	-280			i i	stall Waterproofing - Final Lining invert - Crossover Cavern
CTS.31.74.715	Install Rebar & Grout Piping - Final Lining invert - Crossover Cavern	20 10/17/17	11/08/17	-280				nstall Rebar & Grout Piping - Final Lining Invert - Crossover Caver
CTS.31.74.710	Place Smoothing Concrete - Final Lining Invert -Cross Cut Cavern	6 11/09/17	11/16/17	-280				Place Smoothing Concrete - Final Lining Invert -Cross Cut Cavern
CTS.31.74.725	Place Concrete - Final Lining invert - Crossover Cavern	20 11/09/17	12/05/17	-280			1 1	Place Concrete - Final Lining invert - Crossover Cavern
CTS.31.74.960	Install Waterproofing & Grout Pipes - Final Lining Invert - Cross Cut Cavern	5 11/17/17	11/22/17	-280				Install Waterproofing & Grout Pipes - Final Lining Invert +Cross Cu
CTS.31.74.970	Install Rebar - Final Lining Invert -Cross Cut Cavern	10 11/23/17	12/06/17	-280			i i	Install Rebar - Final Lining Invert -Cross Cut Cavern
CTS.31.74.980	Place Concrete - Final Lining Invert -Cross Cut Cavern	10 12/07/17	12/18/17	-280				Place Concrete - Final Lining Invert -Cross Cut Cavern
CTS.31.74.990	Install Waterproofing - Final Lining Arches - Crosscut Cavern	15 12/19/17	01/06/18	-280				Install Waterproofing - Final Lining Arches - Crosscut Cavern
CTS.31.74.1000	Install Rebar & Grout Piping - Final Lining Arches - Crosscut Cavern	15 12/26/17	01/12/18	-280				Install Rebar & Grout Piping - Final Lining Arches - Crosscut Ca
CTS.31.74.350	Shotcrete Final Lining Arches - Crosscut Cavern	20 01/06/18	01/29/18	-280				Shotcrete Final Lining Arches - Crosscut Cavern
TS.03.30.760	Shore/Rebar/Form Pour Track Slab - Crosscut Cavern	15 01/30/18	02/19/18	-233				Shore/Rebar/Form Pour Track Slab - Crosscut Cavern
TS.03.30.780	Rebar/Form/ Pour Platforms - Crosscut Cavern	20 02/13/18	03/12/18	-233				Rebar/Form/ Pour Platforms - Crosscut Cavern
TS.03.30.770	Shore/Rebar/Form Pour Concourse Level Slab - Crosscut Cavern	15 02/27/18	03/19/18	-233				Shore/Rebar/Form Pour Concourse Level Slab - Crosscut C
TS.09.83.664	CTS_PL 05 Spray - Set Up Scaffold- Platform Level	5 03/20/18	03/26/18	-233				CTS_PL 05 Spray - Set Up Scaffold- Platform Level
TS.09.83.544	CTS_PL 05 Spray - Acoustical Vermiculite Wall Plaster NB - Sector 2	6 03/27/18	04/03/18	-233				CTS_PL 05 Spray - Acoustical Vermiculite Wall Plaster NB
CTS.09.83.554	CTS_PL 05 Spray - Acoustical Vermiculite Wall Plaster SB - Sector 2	6 04/04/18	04/11/18	-233				CT\$_PL 05 Spray - Acoustical Vermiculite Wall Plaster SB
TS.34.21.122	CTS_PL Station Platform: Install - Traction Power Box PS01 @ SB Track - Sec	3 04/12/18	04/16/18	-233				CTS_PL Station Platform Install - Traction Power Box P
TS.34.05.160	CTS_PL_Install Conduit SB Positive Feeder Box PS01 to PS05 (Traction Power)	5 04/17/18	04/23/18	-233				CTS_PL_Install Conduit SB Positive Feeder Box PS01 to
CTS.34.05.170	CTS_PL_Install Conduit SB Positive Feeder Box PS01 to PS07 (Traction Power)	5 04/24/18	04/30/18	-233				I CTS_PL_Install Conduit SB Positive Feeder Box PS01 to
CTS.34.05.180	CTS_PL_Install:Conduit SB Positive Feeder Box PS02 to PS08 (Traction Power)	5 05/01/18	05/07/18	-233				CTS_PL_Install:Conduit SB Positive Feeder Box PS02 to
TS.03.46.980	CTS_PL Station Platform: Install - GFRC Perforated Wall Panel System SB - S	15 05/08/18	05/28/18	-233				CTS_PL Station Platform: Install - GFRC Perforated Water State
TS.03.46.164	CTS_PL Station Platform: Install - GFRC Perforated Ceiling Panels - Sector 2	15 05/29/18	06/18/18	-233				CTS_PL Station Platform: Install - GFRC Perforated C
CTS.14.31.265	Set Escalator Trusses 1 & 2 (Concourse to Platform) - Crosscut	2 06/19/18	06/20/18	-233				I Set Escalator Trusses 1 & 2 (Concourse to Platform) -
TS.14.31.275	CTS PL Assemble Components Escalator #1	15 06/21/18	07/11/18	-233				CTS_PL_Assemble Components Escalator #1
TS.14.31.415	CTS_PL_Assemble Components Escalator #2	15 07/12/18	08/01/18	-233				CTS_PL_Assemble Components Escalator #2
TS.09.66.616	CTS_PL Station Platform Cross-Cut Cavern: Install - Terrazzo Flooring Sector 2	5 08/02/18	08/08/18	-233				CTS_PL Station Platform Cross-Cut Cavern: Install
TS.09.66.618	CTS_PL Station Platform Cross-Cut Cavern: Install - Terrazzo Cove Base Secto	5 08/09/18	08/15/18	-233				CTS_PL Station Platform Cross-Cut Cavern: Instal
TS.09.66.620	CTS PL Station Platform Cross-Cut Cavern: Grind & Polish - Terrazzo Floorin	10 08/16/18	08/29/18	-233				CTS_PL Station Platform Cross-Cut Cavern: Grin
TS.14.24.255	CTS-PL 05: Assemble Elevator #1	15 08/30/18	09/19/18	-233				CTS-PL 05: Assemble Elevator #1
TS.14.24.265	CTS-PL 05: Assemble Elevator #2	15 09/20/18	10/10/18	-233				CTS-PL 05: Assemble Elevator #2
TS.14.24.275	CTS-PL 05: Install Elevator Power & Controls	10 10/11/18	10/24/18	-233				CTS-PL 05: Install Elevator Power & Controls
TS.08.44.265	CTS PL Install Elevators 1 & 2 Glass Enclosure - Crosscut Platform Level	10 10/11/18	10/24/18	-233				CTS PL Install Elevators 1 & 2 Glass Enclosu
TS.08.44.265	Install Elevators 1 & 2 Glass Enclosure - Crosscut Platform Level	10 10/11/18	10/24/18	-233				Install Elevators 1 & 2 Glass Enclosure - Cross
TS.14.24.285	CTS-PL 05: Startup & Test Elevators 1&2	5 10/25/18	10/24/18	-233				CTS-PL 05: Startup & Test Elevators 1&2
				i				CTS-PL 05: Inspections - Elevators 1&2
TS.14.24.295	CTS-PL 05:Inspections - Elevators 1&2	1 11/01/18	11/01/18	-233				CTS- Building Systems Start-up & Testing
CTS.01.80.00	CTS- Building Systems Start-up & Testing	44 11/02/18	01/02/19	-233				
oject Start Up	S&S Certification / Pre-Revenue Activities	163 01/02/19	06/14/19	-170				S&S Certification / Pre-Revenue
TU1010		115 01/02/19	06/14/19	-118				
UF0018	Muni Float	0 06/14/19	06/14/19	-118				, muni i loat

SFMTA Central Subway Project	Required
Master Project Schedule	
Longest Path - May 2016 Update	

#### ed Revenue Serive Date 26-Dec-18 Data Date 05/26/16

ivity Name	Original	Start	Finish			012				013				)14			_	015				2016		
	Duration			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q	2 Q3	Q4	4 Q1
CENTRAL SUBWAY PROJECT	2234	06/08/11 A	04/02/19																-		1			
Construction Phase	2234	06/08/11 A	04/02/19		-	-							-	-								-		
Construction Tunnels CN-1252	1799	06/08/11 A	05/15/15 A		- - - -									- - - -										
1252 Tunnel Contract BIH	1799	06/08/11 A	05/15/15 A		-									-										
Contract Milestones	1437	06/08/11 A	05/15/15 A	**			*						8	<b>*</b> •			**							
General Conditions	1752	08/01/11 A	05/15/15 A				•														· <del>-</del>			
4th & Bryant St TBM Launch Box Construction	686	03/30/12 A	06/02/14 A					ţ.						     										
Moscone Station Headwalls	430	05/14/12 A	09/20/13 A										     	     										
UMS Station Headwalls	425	07/24/12 A	11/22/13 A		     								     	     										
North Headwall	237	02/27/13 A	11/22/13 A		1 1 1 1									- - - -										
South Headwall	404	07/31/12 A	11/22/13 A		+ 								+								· <del> </del>			
4th St and Market Compensation Grouting	707	01/28/13 A	04/30/15 A		- - - -						💻				:									
Southbound Tunneling	451	04/27/13 A	10/13/14 A		1 1 1 1										<b>_</b>									
Ellis St Compensation Grouting	561	07/31/12 A	05/09/14 A		1 1 1 1	! <mark> </mark>						P	8	1 1 1 1										
Green St Compensation Grouting	320	08/05/13 A	06/30/14 A	_	- - - -								! 🖪											
Retrieval Shaft	1070	10/31/11 A	03/20/15 A						-!												· <del> </del>			
Cross Passage 1-5	339	03/22/14 A	04/16/15 A	_	1 1 1 1								1	1 1 1 1										
Cross Passage 1	79	06/14/14 A	09/13/14 A											<b></b>										
Cross Passage 2	105	05/10/14 A	09/09/14 A		1								<b>!   </b>	<b></b>										
Cross Passage 3	127	03/31/14 A	08/28/14 A		-								, P <b>E</b>	1										
Cross Passage 4	114	03/22/14 A	07/31/14 A	+	÷								<u>+</u>								· <del>-</del>			
Cross Passage 5	277	05/31/14 A	04/16/15 A		-																			
Portal Structure	196	09/02/14 A	04/15/15 A																					
Contract Close Out	307	03/03/14 A	05/15/15 A	_	-																			
Construction CN-1300	1706	06/03/13 A	04/02/19		-									-										
CN- 1300 Milestone	1512	06/17/13 A	04/02/19		<u>+</u>																		J	
Construction UMS Station P-1253	1706	06/17/13 A	01/03/19	_																				
Construction CTS Station P-1254R	1525	06/17/13 A	01/03/19	_	1													1 T	1 T					
Construction YBM Station P-1255	1642	06/10/13 A	01/03/19	_					Į															•
Construction STS P-1256	1527	06/03/13 A	03/18/19	_																				

SFMTA Central Subway Project	
Master Project Schedule	
Contracts Summary Schedule- May 2016 Update	



<i>i</i> ity ID	Activity Name	Original Start	Finish	Total	2	016			2	017			201	8
		Duration		Float	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3 Q4
CENTRAL SU	BWAY PROJECT	4081 12/01/08 A	06/18/21	0		-								
<b>Program Level</b>	Milestones	1752 08/31/16	06/18/21	0										
No 13-Disp		1752 08/31/16	06/18/21	0						-				
MS0005	50% through Construction Project - Milestone #5	0	08/31/16*	847		*	50% t	hrough	Const	ruction	Project	- Miles	tone #5	
HldPt4	Stations to Platform Level	0	11/18/16*	412					is to Pla					
MS0006	75% through Construction - Project Milestone #6	0	01/01/18*	359								8 75%	throug	h Construc
MS0007	90% through Construction - Project Milestone #7	0	06/01/18*	208						1			<b>\$</b> 9	0% throug
STU1030	Accept CSP Funded LRVs	0	01/02/19	-3								$\diamond$		
HldPt5	Systems Complete	0	01/02/19	-118								$\diamond$		
MS0008	Construction Complete	0	04/02/19	-97									<b></b>	
MS0019	Baseline Finish Date: 12-26-2018	0	06/14/19*	-118										
MS0009	CSP Revenue Service Date	0	06/14/19*	-118						-				
MS0010	Grant Closeout - CSP Complete	0	06/18/21	0										
Light Rail Vehi	cles	1229 06/30/15 A	11/09/18	47	_		-			1	-			
Real Estate		3130 12/01/08 A	05/26/16	952	-					-				
Construction F	Dhaco	3796 01/04/10 A	06/20/19	521										
		5314 01/04/10 A	06/20/19	729		1	1		-	-	-		<u> </u>	
Construction Sup	·	306 09/05/14 A	05/27/16	1848		;	;		;		:	<del>i </del>		÷
Construction Tun Construction CN-		1706 06/17/13 A		578										
Construction CN		1512 06/17/13 A		578			-							
Administrative		2116 06/17/13 A		-326									; -	
DUR	Construction Duration - 1,700 Calendar Days	2011 06/17/13 A		-326					-	-				
MS-10	Substantial Completion - 1,700 Calendar Days (SP-4.B) { 10-Feb-18 }	0	01/02/19*	-326									(	1
C.Punch	Closeout Punchlist/Remaining Work	90 01/03/19	01/02/19	-326						i.		♦		
MS-20	Final Completion - 1,790 Calendar Days (SP-4C)	0	04/02/19	-326										
No 13-Disp		1512 06/17/13 A		578						4			¦	
Construction UM	S Station P-1253	1706 06/24/13 A		641									$\Rightarrow$	
Administrative		895 01/14/15 A		212					-					
Preconstruction		1373 09/25/14 A		-233		: <	\$ <b>\$</b>	-	$\sim$	<u>}</u>	1	- <b></b>	<u> </u>	
Engineering & F		986 10/14/13 A		78	i		i		i					
Site Work / Utili		597 07/11/16	10/23/18	115		0					· · · · · · · · · · · · · · · · · · ·			
Drilled Shafts		327 03/14/16 A	05/29/17	-228	<u>i</u>									
Compensation	Grouting	417 02/25/16 A		-125			<b>_</b>							
Demolition		160 06/11/15 A	10/27/16	-191	<u>i</u>									
	avation,Construction,Restoration	861 01/05/15 A	01/02/18	326	<u> </u>	1					•			
Excavation & Su		319 03/16/16 A	06/05/17	-92				Ť			<b>v</b> .:			
Concrete/Shotc		525 01/27/16 A	04/25/18	-63						, T	į.			
Structural Steel		353 11/22/16	03/29/18	-196										
Masonry		432 09/27/16	05/23/18	-163			Ú.			0 🗖	i -			
Mechanical		499 09/27/16	09/11/18	-172		1								
Electrical		535 12/14/16	01/01/19	-232	-									
Electrical - Tran	sportation	342 04/20/17	08/21/18	-168					1 I I I	i i i i i i i i i i i i i i i i i i i	-			
Architectual Fin		640 05/26/16	11/07/18	-193										
Conveyances		419 01/31/17	09/07/18	-150		1	1			in 🗖			, <b>maran</b> i p	
Stairs		565 07/19/16	09/17/18	-171					· ·		i i			I
Startup & Testir	ng	66 09/25/18	12/25/18	-227								<u> </u>		
No 13-Disp		1581 06/24/13 A	01/03/19	641		, <b>in an</b> an an an an an an an an an an an an an	İ I I I					ř.	<b>0-0400</b>	<b></b>
Construction CTS	S Station P-1254R	1445 12/23/13 A	01/03/19	641										
Administrative	/ Milestones	154 09/12/17	04/13/18	-95			-		$\diamond \diamond$		<b>İ</b>			
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			TA Central Sub laster Project S	Schedule										F

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Q1	20 Q2	019 Q3	Q4	Q1	20 Q2	20 Q3	Q4	Q1	2021 Q2	Q3
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Subs	<u>.</u>	1	etion -				(SP-4	.B) { 1	0-Feb-	18 }
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vity ID	Activity Name	Origina	Start	Finish	Total	0	2016	2017		2018		201	10		2020		Page 2 2021
Vity ID		Duration			Float		Q3 Q4	Q1 Q2 Q3	Q4 Q1	Q2 Q3	Q4			Q1 (	2020 22 Q3	Q4 Q1	
Preconstruction		512	2 01/22/16 A	02/05/18	4										(2 Q()		
Site Work / Utility I	Relocation		05/26/16	10/05/18	127	<mark>-</mark> -		!									
Demolition			5 07/02/18	07/06/18	-227				000				1				
Excavation & Sup	port	564	1 03/10/16 A	05/16/18	-68			٥					1				
CTS.31.50.900	CTS CN Install Temp Level 4.0 Struts & Wales & Preload Col. 4.0-11.0		3 03/10/16 A	06/07/16	69	;	CTS CN Inst	all Temp Level 4.0 S	Strute & Wales	& Preload Co	1 / 0-11	0	1				
CTS.31.43.140	CTS Compensation Grouting - As Required		0 06/07/16	06/20/16	415	1		ensation Grouting -				.0					
CTS.31.50.310	CTS_CN Install Temp Level 5 Struts & Wales & Preload Col 4.0-11.0		3 08/14/17	08/23/17	-230		010_00mp		CTS_CN Inst	all Temp Level	5 Strut	s & Wales & Pi	reload Col 4	0-11 0			
CTS.31.20.320	Excavate to 4' Below Level 6 Struts EL 7.5' Col 4.0-11.0		08/14/17	08/24/17	-230		•		Excavate to 4		i i			.0-11.0	-		
CTS.31.50.330	Install Temp Level 6 Struts & Wales & Preload		08/17/17	08/30/17	-230				Install Temp I	1 1	1						
CTS.31.20.335	Excavate to 3' Below Level 7 Struts EL -7.5 Col 4.0-11.0		5 08/21/17	09/11/17	-230		•		Excavate to				1 0-11 0				
CTS.31.50.370	Install Temp Level 7 Struts & Wales & Preload		08/29/17	09/12/17	-230				Install Temp		1		+.0-11.0				
CTS.31.20.380	Excavate Headhouse to Invert Slab EL -18.67		2 09/13/17	09/28/17	-230	+	<b>.P</b>		Excavate H		4						
CTS.31.50.070	Remove Level 6 & 7 Struts & Wales		5 12/21/17	12/28/17	-225		•		-	nove Level 6 &	i -	i i					
CTS.31.50.110	CTS CN Remove Level 5 Struts & Wales		5 12/21/17	12/28/17	-230			0		1 1	-	Struts & Wales					
CTS.31.50.150	CTS CN Remove Level 4 Struts & Wales		5 02/09/18	02/15/18	-188			0		1 1	1	el 4 Struts & Vale	1				-
CTS.31.50.195	Remove Level 3 Struts & Wales		5 02/09/18	04/13/18	-224			0	- (	in i	i	i i	vales				
CTS.31.50.235	Remove Level 2 Struts & Wales		5 04/09/18 5 04/16/18	04/13/18	-224				- <u>-</u>		4	truts & Wales					
CTS.31.50.235	Remove Level 2 Struts & Wales		5 04/10/18 5 05/10/18	05/16/18	-214			0			i i	Struts & Wales					
								0		Remov	e Level	1 Struts & Wal	es				
Tunnel / Cavern M CTS.31.71.490	Excavate & Support North Emergency Egress Shaft		7 01/06/16 A	09/22/17	-118	}				_			1				
			0 01/06/16 A			<u>.</u>		Excavate & Su			1	i i					
CTS.31.71.355	Install Remaining Barrel Vault Piping (1-7, 49-55, s1-s12) = 26ea		5 02/25/16 A	10/24/16	-27	4		all Remaining Barr									
CTS.31.71.020	Break-In & Construct Top Sidewall & Headwall Left - Crosscut Cavern		0 04/20/16 A	06/06/16	-232		1 1	onstruct Top Sidew		1 1	1						
CTS.31.71.030	Break-In & Construct Top Sidewall & Headwall Right - Crosscut Cavern		04/21/16 A	06/03/16	-232			nstruct Top Sidewa		-	1						
CTS.31.71.040	Break-In & Construct Top Center Drift & Headwall - Crosscut Cavern		06/06/16	06/14/16	-232		-1 1	onstruct Top Cente	1	1 1	1	1 1					
CTS.31.71.050	Excavate & Construct Sidewall Bench & Headwall Step 3 Left Heading - Crosscut Cavern		3 06/15/16	06/24/16	-232			Construct Sidewall				-					
CTS.31.71.060	Excavate & Construct Sidewall Bench & Headwall Step 3 Right Heading - Crosscut Cavern		3 06/17/16	06/28/16	-232	ļ	_ <u>L</u>	Construct Sidewall			J						
CTS.31.71.070	Excavate & Construct Step 4 Left Heading Invert & Headwall - Crosscut Cavern		06/29/16	07/13/16	-232		L 1	Construct Step 4 I	1	1 1	1	1 1	1				
CTS.31.71.075	Excavate & Construct Step 4 Right Heading Invert & Headwall - Crosscut Cavern		07/01/16	07/15/16	-232			Construct Step 4	-	1 1	1		n				
CTS.31.71.080	Excavate Step 5 Bench 1 & Construct Headwall - Crosscut Cavern	5	5 07/18/16	07/22/16	-232		1 1	Step 5 Bench 1 & C		1 1	1	1 1					
CTS.31.71.090	Excavate Step 6 Bench 2 & Construct Headwall - Crosscut Cavern		5 07/21/16	07/27/16	-232			Step 6 Bench 2 & C			ut Cave	rn	1				-
CTS.31.71.100	Excavate & Support Step 7 Invert - Crosscut Cavern	10	07/21/16	08/03/16	-232		Excavate	& Support Step 7 I	nvert - Crossc	ut Cavern							
CTS.31.71.390	Breakout Remaining Cross-Cut Cavern Opening	5	5 08/04/16	08/10/16	-232		Breakou	Remaining Cross-	Cut Cavern O	pening							
CTS.31.71.400	Temporary Backfill Cross Cut Invert for Platform Cavern Excavation	5	5 08/11/16	08/17/16	-232		Tempora	ary Backfill Cross C	ut Invert for Pl	atform Caverr	Excav	ation					
CTS.31.71.440	Barrel Vaults at South Platform Cavern Excavation	10	08/18/16	08/31/16	-232		Barrel V	aults at South Plat	form Cavern E	ixcavation			1		-		
CTS.31.71.410	Barrel Vaults for North Platform Cavern Excavation	10	09/01/16	09/15/16	-31		Barrel	Vaults for North Pla	atform Cavern	Excavation							
CTS.31.71.450	Breakin Top Benches for South Platform Cavern Excavation	13	3 09/01/16	09/20/16	-232		Break	in Top Benches for	South Platforr	m Cavern Exc	avation						
CTS.31.71.465	Excavate & Support Top Left Heading South Platform Cavern 176Lf	20	09/21/16	10/18/16	-232		Exc	avate & Support To	p Left Heading	South Platfor	m Cave	rn 176Lf					
CTS.31.71.460	Excavate & Support Top Right Heading South Platform Cavern 176Lf	20	09/21/16	10/18/16	-232		📮 Exc	avate & Support To	p Right Headir	ng South Platfo	orm Cav	ern 176Lf	1				
CTS.31.71.550	Excavate & Support Top Right Bench South Platform Cavern 176Lf	10	0 10/19/16	11/01/16	-232		Ex	cavate & Support T	op Right Bencl	h South Platfo	rm Cav	ern 176Lf	1				
CTS.31.71.560	Excavate & Support Top Left Bench South Platform Cavern 176Lf	10	0 10/19/16	11/01/16	-232		· · - ·	cavate & Support T		1 1			1				
CTS.31.71.420	BreakinTop / Bench Sidewalls for North Platform Cavern Excavation	12	2 10/19/16	11/03/16	-54		· · ·	eakinTop / Bench S	1	- i - i	i i	i i					
CTS.31.71.800	TB-4 SEM Additional Flashcrete	30	0 10/24/16	12/07/16	2			TB-4 SEM Addition	al Flashcrete	· • • • • • • • • • • • • • • • • • • •			 1 1				
CTS.31.71.810	TB-5 SEM Additional Shotcrete	30	0 10/24/16	12/07/16	2			TB-5 SEM Addition	1				1				
CTS.31.71.820	TB-6 SEM Additional Lattice Girders	30	0 10/24/16	12/07/16	2			TB-6 SEM Addition		ers							
CTS.31.71.830	TB-7 SEM Additional Steel Arches	30	0 10/24/16	12/07/16	2		· · · · · · · · · · · · · · · · · · ·	TB-7 SEM Addition		1 1							
CTS.31.71.840	TB-8 SEM Additional Face Bolts	30	0 10/24/16	12/07/16	2			TB-8 SEM Addition									
CTS.31.71.850	TB-9 SEM Additional Metal Sheets	30	0 10/24/16	12/07/16	2			TB-9 SEM Addition		s;		i					
CTS.31.71.860	TB-10 SEM Additional Probe Holes		0 10/24/16	12/07/16	2			TB-10 SEM Additio		i i							
CTS.31.71.870	TB-11 SEM Additional Grout Holes		0 10/24/16	12/07/16	2			TB-11 SEM Additio		1 1							
CTS.31.71.880	TB-12 SEM Additional Permeation Grouting		0 10/24/16	12/07/16	2			TB-12 SEM Additio	1	1 I I I I I I I I I I I I I I I I I I I							
			0.000			-	1 1		1	שיוייי	1	<u> </u>	1	- <u> </u>	1	· [	
				FA Central Sub aster Project S		ect					Red	uired Revenu	e Serive Dot	e 26-Dec-1	8		
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CT 531.17.400       TB-14 SEM Additional Pocket Excavation       90       1002416       1002716       2       1 <t< th=""><th>Q3 Q4 Q1 Q2 Q3 Additional Pocket Excavation Additional Drilled Gravity Dewatering Additional Vacuum Well Points</th><th>2   Q3   Q4</th><th>Q1 Q2</th><th>04</th><th>1 03 1 0</th><th>1 02</th><th>i ioai</th><th></th><th></th><th></th><th>Duration</th><th></th><th></th></t<>	Q3 Q4 Q1 Q2 Q3 Additional Pocket Excavation Additional Drilled Gravity Dewatering Additional Vacuum Well Points	2   Q3   Q4	Q1 Q2	04	1 03 1 0	1 02	i ioai				Duration		
CT33.17.100       TP-1 52EA Additional Duried Group Downtemp Repairs Group Work Pairs       30       10.004/16       1207/16       2         CT33.17.100       TP-1 52EA Additional Groups Ope Spite       30       10.004/16       1207/16       2         CT33.17.100       TP-3 52EA Additional Groups Ope Spite       30       10.004/16       1207/16       2         CT33.17.100       TP-3 52EA Additional Flow Spite       30       10.004/16       1207/16       2         CT33.17.100       Exercised Spite       30       10.004/16       1207/16       23         CT33.17.100       Exercised Spite       30       10.004/16       1202/16       23       22	Additional Drilled Gravity Dewatering					Q2			10/0=//0	10/01/10			070 04 74 000
CT33.17.1400       TP-15 SEM Additional Vacuum Vac Ponta       90       1024/14       1207/16       2         CT33.17.176       TP-3 SEM Additional Server Vacuum Page       90       1024/14       1207/16       2         CT33.17.176       TP-3 SEM Additional Bear Value       90       1024/14       1207/16       2         CT33.17.176       TP-3 SEM Additional Bear Value       90       1024/14       1207/16       2         CT33.17.176       Execute & Support Tip Left Bio 3 Inset South Hettorn Caven 176/1       141       1102/16       220       100 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>													
CT3317770       IP> SBM Additional Ground Phes Syles       90       102/116       2         CT3317770       IP> SBM Additional Relate Soles       90       102/116       2         CT3317770       IP> SBM Additional Relate Soles       90       102/116       2         CT3317770       IP> SBM Additional Relate Soles       90       102/116       2       2         CT3317720       Exceeded & Support Top Left SpM T	Additional Vacuum Well Points		1										
CTS3171700       TP3 SEMAdditional Berrel Yould "Proce       90       1024/16       207716       2         CTS3171700       ExaceNet & Stapport Top Left Spat Dever South Hettorn Careen TreLI       14       1102716       -233         CTS3171700       ExaceNet & Stapport Top Left Spat Dever South Hettorn Careen TreLI       14       1102716       -233         CTS3171700       ExaceNet & Stapport Top Left Spat Devert South Hettorn Careen TreLI       14       1102716       -233         CTS3171700       ExaceNet & Stapport Top Ceft Spat South Hettorn Careen TreLI       11       1102116       -223716         CTS3171700       ExaceNet & Stapport Top Ceft Top Ceft Deve Top South Hettorn Careen TreLI       11       1102016       -223716       -223716         CTS3171700       ExaceNet & Stapport Top Ceft Deve Top South Hettorn Careen TreLI       11       120216       -223717       -223716       -223717       -223717       -223717       -223717       -2237177       -22371717       -223717       -223													
CTS3.17.120       TP-1 EBM Additional Ream Splate       Spl 1024/76       22       2       V       TP-15 (Spl 1025)         CTS3.17.120       Exervande & Support Top Hall Sing Jahrent South Platform Cavern 178/1       141       1102/16       1122/16       222       V       File Spl 102         CTS3.17.120       Completing 7 Brench Invent Sidewald & Hadvald Life Ste Invance Nation Covern Execution       33       1104/16       1223/16       254       Correlating 7 Brench Invent Sidewald & Hadvald Life Ste Invance Nation Covern Execution       33       1104/16       1223/16       252       CTS - Inval Timeorany Splating Science Ste Absort Platform Covern Execution       41       1227/16       223       CTS - Inval Timeorany Splating Science Ste Absort Platform Covern Execution       41       1227/16       1223/17       CTS - Inval Timeorany Splating Science Ste Absort Platform Covern Execution       41       1227/16       1228/17       CTS - Inval Timeorany Splating Science Ste Absort Platform Covern Execution       41       1021/17       1071/17       1072/17       228       CTS - Inval Timeorany Splating Science Ste Absort Platform Covern Execution       40       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       1011/17       10111/17	dditional Grouted Pipe Spiles		1										
CT33.17.580       Examate & Support Tip Lift Step 3 hourt South Platform Careen TAU       14       1102/16       1222/16       222         CT33.17.7425       Complete Tip / Brench Innet Stevalls & Headnal Lift Ste for North Platform Careen Examation       33       1106/16       1222/16       228         CT33.17.7425       Complete Tip / Brench Innet Stevalls & Headnal Lift Ste for North Platform Careen Examation       31       1106/16       1222/16       228         CT33.17.7425       Complete Tip / Brench Innet Stevalls & Headnal Right Ste for North Platform Careen TAU       16       1202/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/16       228       1       1       1207/17       1       1207/17       1       1207/17       1       1       1207/17       1       1       1207/17       1       1       1207/17       1       1       1       1       1       1       1       1       1	dditional Barrel Vault Pipes												
CT53.77.470       Example As Support Top Full Sep 3 met South Platform Cavem Example       14       1102/16       122/16       282         CT53.77.480       Complete Top 1 Bench Invert Stewals (Platform Cavem Example       35       1104/16       1222/16       -54         CT53.77.480       Complete Top 1 Bench Invert Stewals (Platform Cavem Cavem Example       61       1120/16       1222/16       -28       -26         CT53.77.480       CT5 Instal Temporary Sacong       South Platform Cavem Example       61       1223/16       -26       -26       -27       -	dditional Rebar Spiles			+		4							
CT33.17.426       ComputeTory / Beach Inver Sdewalk & Headeal (Lift Side for North Platform Cavern Excavation       33       1104416       122316       6.4         CT33.17.430       ComputeTory / Shearh horts Sdewalk & Headeal (Staf) (Staf)       1102416       122316       6.3         CT33.17.430       Excavate & Support Top Center Dorth Sing 4 Statult Nation Cavern 17241       18       123016       4.2         CT33.17.430       Excavate & Support Top Center Dorth Sing 4 Statult Nation Cavern 17241       18       123016       4.2         CT33.17.160       Excavate & Support Top Center Dorth Statult Cavern Excavation       13       0.101417       -222         CT33.17.160       Excavate & Support Top Center Dorth Statult Cavern Excavation       10       0.011417       0.2       0.2         CT33.17.1620       Excavation / Support Top Center Dorth Statult Cavern Excavation       10       0.011417       0.2	upport Top Left Step 3 Invert South	1 · · · · ·		_									
CT33.17.435       Complexing // Encoh Iners Edeoualis & Headouali Right Side for North Pattorn Cavern Escavatic       33       11.0446       1223/16       6.4         CT33.17.1600       Escavate & Support Top Conter Drift Side / A South Pattorn Cavern 172L/       6       11.22716       1220/16       2.32         CT33.17.1600       Escavate & Support Top Conter Drift Side / A South Pattorn Cavern 172L/       16       11.020/16       6.4       1.000/16       7.23       1.010/17       7.23       1.010/17       7.20       6.5       1.011/17       7.20       6.5       1.011/17       7.20       6.5       1.011/17       7.20       6.5       1.011/17       7.60       7.5       7.600       7.6       5.000       1.011/17       7.60       7.600/17 </td <td>upport Top Right Step 3 Invert South</td> <td>Support Top F</td> <td>xcavate &amp; Su</td> <td><b>•</b> ¢</td> <td></td> <td></td> <td>-232</td> <td>6</td> <td>11/22/16</td> <td>11/02/16</td> <td>14</td> <td>Excavate &amp; Support Top Right Step 3 Invert South Platform Cavern 176Lf</td> <td>CTS.31.71.570</td>	upport Top Right Step 3 Invert South	Support Top F	xcavate & Su	<b>•</b> ¢			-232	6	11/22/16	11/02/16	14	Excavate & Support Top Right Step 3 Invert South Platform Cavern 176Lf	CTS.31.71.570
CT5317.500       CT5-Instal Temporary Bracing- Solwaits Platform Cavern 7241       16       1202/16       223         CT5317.1600       Exewate & Support Top Center Drift Step A South Platform Cavern 7241       18       1202/16       223         CT5317.17.400       Exewate & Support Top Center Drift Step A South Platform Cavern 17241       11       1230/16       01/1917       -52         CT5317.1620       Exewate & Support Top Center Drift A Construct Heavatill for North Platform Cavern Exewation       10       01/1917       -52       -52         CT5317.1620       Exewate & Construct Heavatill for North Platform Cavern Exewation       10       01/1917       -52       -5	op / Bench Invert Sidewalls & Headv	Top / Bench lı	CompleteTo				-54	6	12/23/16	11/04/16	33	CompleteTop / Bench Invert Sidewalls & Headwall Left Side for North Platform Cavern Excavation	CTS.31.71.425
CT33.77.400       Execute 3 Support Top Center Drift Step 4 South Platform Cavern 176L1       141       1202016       122216       222         CT33.77.450       Execute 3 Support Conter Bench Step 5 South Platform Cavern 178L1       11       123016       01/16/17       223         CT33.77.450       Execute 3 Support Conter Bench Step 5 South Platform Cavern 178L1       11       123016       01/16/17       223         CT33.77.450       Execute 3 Support Conter Dench Step 5 South Platform Cavern Execute       10       01/17/17       01/07/17       01/07/17       01/07/17       01/07/17       01/07/17       02/07	op / Bench Invert Sidewalls & Headv	Top / Bench Ir	CompleteTo				-54	6	12/23/16	11/04/16	33	CompleteTop / Bench Invert Sidewalls & Headwall Right Side for North Platform Cavern Excavatic	CTS.31.71.435
CT33.17.465       Install Tomporary Brack Solvane Brute Platform Cavern Excavation       14       1220716       1230716       154         CT33.17.163       Excavate & Support Caver Each Marsh Solub Platform Cavern TAL       10       01/03171       7.23         CT33.17.163       Excavate & Construct Invert Stage & South Platform Cavern TAL       10       01/03171       01/03177       7.23         CT33.17.163       Excavate & Construct Invert & Construct Interedwall for North Platform Cavern Excavation       10       01/03171       02/0317       -232         CT33.17.163       Demo Sidewalls & Repair Headwall South Platform Cavern TAL       100       01/03177       02/2017       -232	Temporary Bracing - Sidewalls (Plat	II Temporary E	CTS- Install				-232	6	12/02/16	11/23/16	6	CTS- Install Temporary Bracing - Sidewalls (Platform Cavern)	CTS.31.71.590
CTS.317.4610       Excesse & Support Carter Bench Step 5 South Flatform Cavern 178.1       11       1202016       01/16/17       222         CTS.317.1455       Excaveria & Construct Headwall for North Platform Cavern Excavality       10       01/17/17       01/30/17       -222         CTS.317.1455       Excaveria & Construct Headwall for North Platform Cavern Excav       9       91/31/17       02/10/17       -228         CTS.317.1455       Excaveria & Construct Headwall for North Platform Cavern Excav       9       91/31/17       02/11/17       -228         CTS.317.1450       Excaveria & Support Control Centre Bench Invert & Construct Headwall for North Platform Cavern Excav       9       91/31/17       02/31/17       -228       Excaveria & Construct Repr       Excaveria & Co	Support Top Center Drift Step 4 S	& Support To	Excavate &				-232	6	12/29/16	12/05/16	18	Excavate & Support Top Center Drift Step 4 South Platform Cavern 176Lf	CTS.31.71.600
CT33.17.160       Excavator, Support Gordener Banch Stap & Souch Platform Caven 176L/       11       12.02/16       01/16/17       2.22       0       0       Excavator, Support Gordener Banchawalior North Platform Caven Excavation       13       01/30/17       2.24       0       Excavator, Support Gordener Banchawalior North Platform Caven Excavation       10       01/17/17       01/30/17       2.22       Excavator, Support Control Banch Invert & Construct Headwall for North Platform Caven Excav.       10       01/31/17       02/10/17       -242       Excavator, Support Control Banch Invert & Construct Headwall for North Platform Caven Excav.       10       01/31/17       02/31/17       -242       Excavator       Excavator       Excavator       Excavator       10       02/31/17       02/21/17       -232       Excavator       Excavator       Excavator       10       02/31/17       02/21/17       -232       Excavator       Excavator       Excavator       10       02/31/17       02/21/17       -232       Excavator       Excavator <t< td=""><td>porary Bracing Sidewalls for North I</td><td>mporary Brac</td><td>Install Tem</td><td>ļ</td><td></td><td></td><td>-54</td><td>3</td><td>12/30/16</td><td>12/27/16</td><td>4</td><td>Install Temporary Bracing Sidewalls for North Platform Cavern Excavation</td><td>CTS.31.71.445</td></t<>	porary Bracing Sidewalls for North I	mporary Brac	Install Tem	ļ			-54	3	12/30/16	12/27/16	4	Install Temporary Bracing Sidewalls for North Platform Cavern Excavation	CTS.31.71.445
CT3.17.455       Excavator / Support Top Center Drift & Construct Headwalf for North Platform Cavern Excavator       10       01/11/17       01/19/17       232         CT3.17.1620       Excavator / Support Center Bench Invert & Construct Headwalf for North Platform Cavern TRU       10       01/11/17       02/10/17       61         CT3.17.1630       Demo Sidewalfs & Repair Headwalf South Platform Cavern TRU       10       01/11/17       02/10/17       61         CT3.17.1630       Excavate & Support North Energinery Egress Tunnel       15       02/21/17       03/21/17       7232         CT3.17.1630       Base Equipment & Construct Ramp For Conscover Breakin       6       02/11/17       02/21/17       232       9       9       9         CT3.17.1650       Break-In Conscover Cavern       10       02/21/17       03/01/17       7232       9 <td>&amp; Support Center Bench Step 5 So</td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-232</td> <td>7</td> <td>01/16/17</td> <td>12/30/16</td> <td>11</td> <td>Excavate &amp; Support Center Bench Step 5 South Platform Cavern 176Lf</td> <td>CTS.31.71.610</td>	& Support Center Bench Step 5 So		-				-232	7	01/16/17	12/30/16	11	Excavate & Support Center Bench Step 5 South Platform Cavern 176Lf	CTS.31.71.610
CT3.17.1620       Excavation / Support Center Bench Invert & Construct Headwall for North Plattorn Cavem Flacual       10       0.101/17       0.1201/17       2.22       Image: Support Center Bench Invert & Construct Headwall for North Plattorn Cavem Flacual       10       0.101/17       0.2101/17       2.42       Image: Support Center Bench Invert & Construct Headwall for North Plattorn Cavem Flacual       10       0.101/17       0.013/17	on / Support Top Center Drift & Cons	1 1	_ '	I			-54	7	01/19/17	01/03/17	13	Excavation / Support Top Center Drift & Construct Headwall for North Platform Cavern Excavation	CTS.31.71.455
CT S 31.71.475       Excavato / Support Center Bench Invert & Construct Headwall for North Platform Cavern Excav       9       0.1/31/17       0.201/17       0.41         CT S 31.71.630       Excavato & Support North Engency Egress Turnel       16       0.0201/17       0.224/17       0.41         CT S 31.71.630       Beno Sidewall, Regar Headwall for North Platform Cavern Excavation       10       0.021/17       0.024/17       0.224/17       0.43         CT S 31.71.640       Suge Equipment & Construct Reg for Consorver Breakin       5       0.021/17       0.023/17       2.324         CT S 31.71.650       Excavate & Scanstruct Right Sidewall & Headwall 286 L1       55       0.022/17       0.030/17       0.344         CT S 31.71.670       Excavate & Scanstruct Right Sidewall & Headwall 286 L1       0.022/17       0.304/17       -61         CT S 31.71.670       Excavate & Scanstruct Right Sidewall & Medwall 286 L1       0.022/17       0.304/17       -61         CT S 31.71.670       Excavate & Support Strutt       10       0.0510/17       0.324/17       -61         CT S 31.71.680       Intel Excavate & Support Strutt       10       0.0510/17       0.324/17       -62         CT S 31.71.700       Excavate & Support Conter Drift       2       0.052/17       -732       -73         CT S 31.71.700	e & Construct Invert Step 6 South P		-				-232	7	01/30/17	01/17/17	10		CTS.31.71.620
CTS.31.71.630       Damo Sidewalls & Repair Headwall South Platform Cavem 178LI       10       01.31/17       0213/17       2-22         CTS.31.71.630       Exacavite & Support North Emergency Egress Turnel       15       020917       0301/17       14         CTS.31.71.640       Stage Equipment & Construct Ram P for Crossover Breakin       5       02/14/7       0221/17       2-232         CTS.31.71.640       Break in Crossover Cavern       1       02221/17       050917       2-232         CTS.31.71.650       Exavatio & Construct Rapt Stdewall & Headwall 288 LI       05       02221/17       050917       2-232         CTS.31.71.650       Rayai Invent Cavern Cavern       10       03001/7       2314       14         CTS.31.71.650       Rayai Invent Cavern Cavern       10       050917       2-232         CTS.31.71.650       Rayai Invent Cavern Cavern       10       0300177       031517       14         CTS.31.71.650       Instail Tempory Support Strutts       10       050217       7.734       232         CTS.31.71.650       Instail Tempory Support Strutts       10       050217       7.734       232         CTS.31.71.650       Instail Tempory Support Strutts       10       072017       632417       777117       232	tipn / Support Center Bench Invert 8												
CTS3171500       Excavete & Support North Emergency Egress Tunnel       15       0209/17       0301/17       04         CTS3171480       Beno Sidewall, Repair Headwall for North Pattform Cavern Excavation       10       021/117       0220/17       -232         CTS3171480       Bisge Equipment & Construct Ramp For Crossover Breakin       5       0221/17       0221/17       -232         CTS317160       Excavate & Construct Right Sidewall & Headwall 288 L1       55       0222/17       0509/17       -232         CTS3171760       Excavate & Construct Right Sidewall & Headwall 288 L1       55       0222/17       0509/17       -232         CTS3171760       Excavate & Construct Right Sidewall & Headwall 288 L1       65       0222/17       0509/17       -232         CTS3171780       Initial Excavation & Support - South Emergency Egress Tunnel       10       03/147       0322/17       -44         CTS3171780       Instal Ramp For Center Drift       2       052/417       042/17       -232         CTS3171780       Instal Ramp For Center Drift       2       05/24/17       042/17       -232         CTS3171720       Excavate & Support Center Drift       2       05/24/17       041/17       -232         CTS3171720       Excavate & Support Center Drift       2       05/24/17<	Sidewalls & Repair Headwall South												
CTS.31.71.485       Demo Sidewail, Regair Headwail for North Platform Cavern Escavation       10       02/21/17       0.2021/17       0.202       0.2021/17       0.202       0.2021/17       0.202       0.2021/17       0.202       0.2021/17       0.202       0.2021/17       0.202       0.202       0.2021/17       0.202       0.202       0.2021/17       0.202       0.202       0.2021/17       0.202       <	ate & Support North Emergency Eg											•	
CTS.31.71.640       Stage Equipment & Construct Ramp For Crossover Breakin       5       02/14/17       02/2017       -238       -238         CTS.31.71.660       Break-in Crossover Cavern       1       02/21/17       02/21/17       02/21         CTS.31.71.660       Break-in Crossover Cavern       1       05/91/17       02/21       05/991/17       -232         CTS.31.71.640       Exeavate & Construct Right Sidewall & Headwall 268 Lf       65       02/22/17       03/961/17       -232         CTS.31.71.640       Initial Econstito & Support - South Emergency Egress Tunnel       10       03/02/17       03/961/17       03/92/17       -66         CTS.31.71.630       Instal Temporary Support Struts       10       05/101/17       05/223/17       -232         CTS.31.71.630       Instal Temporary Support Struts       10       05/101/17       05/221/17       -232         CTS.31.71.630       Instal Temporary Support Struts       10       05/21/17       -232       05/23/17       -232         CTS.31.71.700       Exeavate & Support Center Bench - Crossover       10       07/18/17       05/221/7       -232         CTS.31.71.700       Exeavate & Construct Invert - Crossover       10       08/14/17       08/21/17       -232         CTS.31.71.700       Reavate													
CTS.31.71.650       Break-th Crossover Cavern       1       0221/17       0221/17       0221       0009/17       232         CTS.31.71.660       Excavate & Construct Left Sidewall & Headwal 268 LI       55       00221/17       0509/17       2-323         CTS.31.71.670       Expante & Construct Right Sidewall & Headwal 268 LI       56       00221/17       0308/17       641         CTS.31.71.620       Initial Excavation & Support - South Emergency Egress Tunnel       10       03002/17       03/15/17       141         CTS.31.71.520       Initial Excavation & Support - South Emergency Egress Tunnel       10       05/10/17       05/23/17       2-323         CTS.31.71.620       Install Ramp For Center Drift       2       05/24/17       07/18/17       7/232         CTS.31.71.700       Excavate & Support Center Drift       2       05/24/17       07/18/17       2/232         CTS.31.71.700       Excavate & Support Center Drift       20       07/18/17       07/19/17       2/232         CTS.31.71.700       Excavate & Support Center Drift       0       06/24/17       08/24/17       02/27/17       2/322         CTS.31.71.700       Excavate & Support Center Drift       0       06/11/17       08/24/17       02/22/17       2/232         CTS.31.71.700	Sidewall, Repair Headwall for North												
CTS 31.71.660       Excavate & Construct Left Sidewall & Headwall 268 Lf       55       022217       05/09/17       2.23         CTS 31.71.670       Excavate & Construct Right Sidewall & Headwall 268 Lf       55       002217       05/09/17       2.23         CTS 31.71.670       Excavate & Construct Right Sidewall & Headwall 268 Lf       55       0022177       03/09/17       2.33         CTS 31.71.670       Excavate & Construct Right Sidewall & Headwall 268 Lf       05       0022177       03/09/17       2.33         CTS 31.71.670       Excavate & Construct Joint Noth Platform Cavern 110Lf       03/02/17       03/01/17       03/02/17       144         CTS 31.71.670       Install Framporry Support Struts       10       05/01/17       02/21/7       7.232         CTS 31.71.780       Install Ramp For Center Drift       2       05/26/17       07/21/7       7.232         CTS 31.71.700       Excavate & Support Center Drift       35       05/26/17       07/11/7       2.232         CTS 31.71.700       Excavate & Support Center Drift       0       07/11/17       2.232       07/11/17       2.232         CTS 31.71.700       Excavate & Construct Invert - Crossover       7       08/03/17       08/01/17       -232         CTS 31.71.700       Excavate & Construct Invert - Crossover <td>Equipment &amp; Construct Ramp For C</td> <td></td>	Equipment & Construct Ramp For C												
CTS.31.71.670       Excavate & Construct Right Sidewall & Headwal 268 L1       56       02/22/17       05/09/17       -232         CTS.31.71.495       Repair Invert Joint North Platform Cavern 110L1       8       02/27/17       03/06/17       -61         CTS.31.71.495       Repair Invert Joint North Platform Cavern 110L1       8       02/27/17       03/06/17       -61         CTS.31.71.500       Complete Excavation & Support - South Emergency Egress Tunnel       5       03/16/17       03/22/17       14         CTS.31.71.500       Install Temporary Support Struts       10       05/10/17       05/02/17       -232         CTS.31.71.600       Install Temporary Support Struts       20       05/26/17       07/18/17       242         CTS.31.71.700       Excavate & Support Center Drift       23       05/26/17       07/18/17       242         CTS.31.71.700       Excavate & Support Center Drift       23       07/18/17       07/18/17       242       1       1         CTS.31.71.700       Excavate & Construct Invert - Crossover       7       08/03/17       09/01/17       -232       2       1       1         CTS.31.71.700       Excavate & Construct Invert - Crossover       7       08/03/17       09/01/17       -232       2       1       1 <td< td=""><td>in Crossover Cavern</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	in Crossover Cavern												
CTS.31.71.495       Repair Invert Joint North Platform Cavern 110L1       8       0.227/17       0.308/17       4-81         CTS.31.71.520       Initial Excavation & Support - South Emergency Egress Tunnel       10       0.302/17       0.302/17       144         CTS.31.71.630       Install Temporary Support South Emergency Egress Tunnel       5       0.316/17       0.322/17       142         CTS.31.71.630       Install Remp For Center Drift       2       0.524/17       0.522/17       -232         CTS.31.71.700       Excavate & Support Center Drift       2       0.526/17       0.717/17       -232         CTS.31.71.700       Excavate & Support Center Drift       2       0.718/17       0.719/17       -232         CTS.31.71.700       Excavate & Support Center Drift       2       0.720/17       0.802/17       -232         CTS.31.71.700       Excavate & Construct Invert - Crossover       7       0.803/17       0.911/17       -232         CTS.31.71.730       Repair Invert Joint - Crossover       10       0.812/17       0.922/17       -232         CTS.31.71.730       Repair Invert Joint - Crossover       10       0.828/17       0.911/17       -232         CTS.31.71.740       Benos Idvands, Repair Headwall & Top Joint - Crossover       10       0.822/17 <t< td=""><td>Excavate &amp; Construct Left Sidewall &amp;</td><td></td><td></td><td></td><td></td><td><u> </u></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Excavate & Construct Left Sidewall &					<u> </u>							
CTS.31.71.520       Initial Excavation & Support - South Emergency Egress Tunnel       10       03/02/17       03/15/17       14         CTS.31.71.530       Complete Excavation & Support - South Emergency Egress Tunnel       10       05/16/17       05/22/17       144         CTS.31.71.630       Instal Temporary Support Struts       10       05/24/17       05/22/17       232         CTS.31.71.630       Instal Temporary Support Struts       2       05/24/17       05/22/17       232         CTS.31.71.700       Excavate & Support Center Drift       23       05/24/17       07/17/17       232         CTS.31.71.700       Excavate & Support Center Drift       05/21/17       07/17/17       232         CTS.31.71.720       Excavate & Support Center Bench - Crossover       10       08/14/17       08/02/17       232         CTS.31.71.730       Excavate & Construct Invert - Crossover       10       08/21/17       08/02/17       232         CTS.31.71.750       Repair Invert Joint - Crossover       10       08/21/17       03/02/17       03/02         CTS.31.71.750       Excavation & Mining Complete       379       03/02/17       03/02/17       03/02         CTS.31.71.750       Excavation & Mining Complete       379       03/02/17       03/02/17       03/02/17	Excavate & Construct Right Sidewall	1 1				÷							
CTS.31.71.530       Complete Excavation & Support - South Emergency Egress Tunnel       5       0.3/16/17       0.3/22/17       1.4         CTS.31.71.680       Install Temporary Support Sruts       10       0.5/20/17       0.232         CTS.31.71.690       Install Rempore Crestore Drit       2       0.5/24/17       0.5/22/17       2.322         CTS.31.71.700       Excavate & Support Center Drit       30       0.5/26/17       0.7/20/17       2.322         CTS.31.71.700       Excavate & Support Center Drit       30       0.5/26/17       0.7/20/17       2.322         CTS.31.71.700       Excavate & Support Center Bench - Crossover       7       0.600/17       2.322         CTS.31.71.730       Excavate & Construct Invert - Crossover       7       0.601/17       2.322         CTS.31.71.730       Excavate & Construct Invert - Crossover       10       0.8/14/17       0.8/11/17       2.322         CTS.31.71.750       Repair Invert Joint - Crossover       10       0.8/14/17       0.8/22/17       -2.322         CTS.31.71.750       Repair Invert Joint - Crossover       379       0.3/01/17       0.9/21/17       -2.322         CTS.31.71.750       Repair Invert Joint - Crossover       379       0.3/30/17       0.9/11/18       -2.907         Structural Ste	ir Invert Joint North Platform Cavern											•	
CTS.31.71.680       Install Temporary Support Struts       10       05/10/17       05/23/17       -232         CTS.31.71.680       Install Ramp For Center Drift       2       05/24/17       05/25/17       -232         CTS.31.71.700       Excavate & Support Center Drift       35       05/26/17       07/17/17       -232         CTS.31.71.710       Remove Crossover Excavation Ramp       2       07/8/17       07/17/17       -232         CTS.31.71.720       Excavate & Support Center Drift       36       05/26/17       07/17/17       -232         CTS.31.71.720       Excavate & Support Center Bench - Crossover       10       07/20/17       08/02/17       -232         CTS.31.71.730       Excavate & Construct Invert - Crossover       10       08/14/17       08/21/17       -232         CTS.31.71.750       Repair Invert John - Crossover       10       08/21/17       03/22/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       0       09/22/17       -200         Concrete/Shotcrete       379       03/01/17       03/21/18       01/18       -211         Masonry       104       02/21/18       06/27/18       -119         Misc Metal       292       08/17/17       10/02/18 <t< td=""><td>Excavation &amp; Support - South Emer</td><td></td><td></td><td></td><td></td><td></td><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Excavation & Support - South Emer						14						
CTS.31.71.890       Install Ramp For Center Drift       2       05/24/17       05/25/17       -232         CTS.31.71.700       Excavate & Support Center Drift       38       05/26/17       07/11/17       -232         CTS.31.71.710       Remove Crossover Excavation Ramp       2       07/18/17       07/19/17       -232         CTS.31.71.710       Excavate & Support Center Dench - Crossover       10       07/20/17       08/02/17       -232         CTS.31.71.730       Excavate & Construct Invert - Crossover       7       08/03/17       08/11/17       -232         CTS.31.71.740       Demo Sidewalls, Repair Headwall & Top Joint - Crossover       10       08/28/17       09/21/7       -230         CTS.31.71.760       Excavation & Mining Complete       277       03/02/17       03/22/17       -230         Crs.31.71.760       Excavation & Mining Complete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -200       10       09/22/17       10/21         Masonry	plete Excavation & Support - South					0				03/16/17	5	Complete Excavation & Support - South Emergency Egress Tunnel	
CTS.31.71.700       Excavate & Support Center Drift       38       05/26/17       07/17/17       -233         CTS.31.71.710       Remove Crossover Excavation Ramp       2       07/18/17       07/19/17       -233         CTS.31.71.720       Excavate & Support Center Bench - Crossover       10       07/20/17       08/02/17       -233         CTS.31.71.730       Excavate & Construct Invert - Crossover       70       08/03/17       08/11/17       -232         CTS.31.71.730       Repair Invert Joint - Crossover       10       08/28/17       09/21/17       -232         CTS.31.71.760       Repair Invert Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       -200         Concrete/Shotcret       303/017       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -207         Meshanical	Install Temporary Support Struts	Install Temp					-232	7	05/23/17	05/10/17	10	Install Temporary Support Struts	CTS.31.71.680
CTS.31.71.710       Remove Crossover Excavation Ramp       2       07/18/17       07/19/17       -232         CTS.31.71.720       Excavate & Support Center Bench - Crossover       10       07/20/17       08/02/17       -232         CTS.31.71.730       Excavate & Construct Invert - Crossover       7       08/02/17       08/02/17       -232         CTS.31.71.740       DemoSidewalls, Repair Headwall & Top Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.750       Repair Invert Joint - Crossover       10       08/28/17       09/21/17       -200         CTS.31.71.760       Excavation & Mining Complete       0       08/28/17       03/01/17       09/11/18       -207         Concrete/Shotcrete       379       03/01/17       09/11/18       -197       -200       -201       -200 </td <td>Install Ramp For Center Drift</td> <td>Install Ram</td> <td>I</td> <td></td> <td></td> <td></td> <td>-232</td> <td>7</td> <td>05/25/17</td> <td>05/24/17</td> <td>2</td> <td>Install Ramp For Center Drift</td> <td>CTS.31.71.690</td>	Install Ramp For Center Drift	Install Ram	I				-232	7	05/25/17	05/24/17	2	Install Ramp For Center Drift	CTS.31.71.690
CTS.31.71.720       Excavate & Support Center Bench - Crossover       10       07/20/17       08/02/17       -232         CTS.31.71.730       Excavate & Construct Invert - Crossover       7       08/03/17       08/11/17       -232         CTS.31.71.740       Derno Sidewalls, Repair Indeadvall & Top Joint - Crossover       10       08/14/17       09/22/17       -232         CTS.31.71.740       Derno Sidewalls, Repair Indeadvall & Top Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       -232         CTS.31.71.760       Excavation & Mining Complete       277       03/02/17       03/23/18       -207         Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Masonry       104       04/18/18       09/10/18       -219         Masonry       330       04/13/17       10/01/18       -214         Misc Metal       104       02/17       10/01/18       -214         Electrical       330       04/13/17       10/21/18       -214         Electrical       330       08/27/17       10/22/18       -214         Electrical       17       10/22/18       07/20/18       -2	Excavate & Support Center Drif	Excavat					-232	7	07/17/17	05/26/17	35	Excavate & Support Center Drift	CTS.31.71.700
CTS.31.71.730       Excavate & Construct Invert - Crossover       17       08/03/17       08/11/17       -2.32         CTS.31.71.740       Demo Sidewalls, Repair Headwall & Top Joint - Crossover       10       08/14/17       08/25/17       -2.32         CTS.31.71.750       Repair Invert Joint - Crossover       10       08/28/17       09/11/17       -2.32         CTS.31.71.760       Excavation & Mining Complete       0       0       09/22/17       -2.00         Cavern Lining       277       03/02/17       03/01/17       09/11/18       -2.07         Concrete/Shotrete       379       03/02/17       09/10/18       -2.07         Masonry       104       04/18/18       09/10/18       -2.07         Masonry       104       02/02/18       06/27/18       1.91         Misc Metal       383       04/13/17       100/18       -2.11         Electrical - Transportion       384       03/25/17       10/218       -2.21         Architectual Finishes       383       04/13/17       10/218       -2.21         Conveyances       393       06/19/18       11/01/18       -2.02         Catture & Testing       CTS_UP - Pre-Revenue Punchlist Corrections       115       05/03/18       08/17/18	I Remove Crossover Excavation	I Remove					-232	7	07/19/17	07/18/17	2	Remove Crossover Excavation Ramp	CTS.31.71.710
CTS.31.71.730       Excavate & Construct Invert - Crossover       17       08/03/7       08/11/17       -232         CTS.31.71.740       Demo Sidewalls, Repair Headwall & Top Joint - Crossover       10       08/28/17       09/21/17       -232         CTS.31.71.750       Repair Invert Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       30/23/18       -207         Concrete/Shotcrete       277       03/30/17       09/11/18       -197       -201       -20	Excavate & Support Center Be	Excava					-232	7	08/02/17	07/20/17	10	Excavate & Support Center Bench - Crossover	CTS.31.71.720
CTS.31.71.750       Repair Invert Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       3/20         Cavern Lining       277       03/02/17       03/23/18       -207         Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       -197         Mechanical       383       04/13/17       10/01/18       -214         Misc Metal       282       08/17/17       10/05/18       -214         Electrical - Transportation       380       03/27/18       07/20/18       -214         Architectual Finisber       414       03/15/17       10/22/18       -214         Startup & Testing       171       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchist Corrections       15       05/09/18       08/17/18       110         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       117         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Tes	Excavate & Construct Invert						-232	,	08/11/17	08/03/17	7	Excavate & Construct Invert - Crossover	CTS.31.71.730
CTS.31.71.750       Repair Invert Joint - Crossover       10       08/28/17       09/11/17       -232         CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       -200         Cavern Lining       277       03/02/17       03/23/18       -207         Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       -197         Mechanical       383       04/13/17       10/01/18       -214         Mise Metal       282       08/17/17       10/05/18       -214         Electrical - Transportion       84       03/27/18       07/20/18       -214         Electrical - Transportion       84       03/27/18       07/20/18       -214         Startup & Testing       414       03/15/17       10/22/18       -214         Startup & Testing       111       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       01/21/9       -233         CTS UP - 18       CTS_UP - Pre-Revenue Startup & Test MEP Equip       15       05/09/18<	Demo Sidewalls, Repair Hea						-232	7	08/25/17	08/14/17	10	Demo Sidewalls, Repair Headwall & Top Joint - Crossover	CTS.31.71.740
CTS.31.71.760       Excavation & Mining Complete       0       09/22/17       03/02/17       03/23/18       -200         Cavern Lining       277       03/02/17       03/02/17       03/23/18       -207         Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       195         Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/01/18       -211         Electrical       300       08/27/18       10/22/18       -214         Electrical       50       08/27/17       10/22/18       -214         Architectual Finis+x       414       03/15/17       10/22/18       -224         Architectual Finis+x       51       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchits Corrections       115       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start	Repair Invert Joint - Cross	1 1						,	09/11/17	08/28/17	10	Repair Invert Joint - Crossover	CTS.31.71.750
Cavern Lining       277       03/02/17       03/23/18       -207         Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       195         Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/05/18       -214         Electrical       300       08/29/17       10/22/18       -202         Architectual Finishes       414       03/15/17       10/22/18       -202         Architectual Finishes       414       03/15/17       10/24/18       -183         Startup & Testing       171       05/09/18       01/02/19       -233         GTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       05/29/18       -121         GTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -179         CTS LUP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -179         CTS LUP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equi	<ul> <li>Excavation &amp; Mining Comp</li> </ul>			•							0		CTS.31.71.760
Concrete/Shotcrete       379       03/30/17       09/11/18       -197         Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       -195         Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/05/18       -214         Electrical       292       08/17/17       10/05/18       -214         Electrical       300       08/29/17       10/22/18       62/21         Felectrical       700/05/18       7/20       -214         Felectrical       700/05/18       07/20/18       -214         Felectrical - Transportation       84       03/27/18       07/20/18       -216         Architectual Finisher       619       03/18       07/20/18       -220         Startup & Tesup Mechanica Corrections       171       05/09/18       110/118       -234         Conveyances       173       05/09/18       01/20       -233         GTS UP - 20       CTS_UP - Pre-Revenue Startup & Test MEP Equip       15       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Startup & Test MEP Equip										03/02/17	277		Cavern Lining
Structural Steel       104       04/18/18       09/10/18       -209         Masonry       104       02/02/18       06/27/18       -195         Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/05/18       -214         Electrical       300       08/29/17       10/02/18       -216         Electrical - Transportation       300       08/29/17       10/02/18       -216         Architectual Finisher       414       03/15/17       10/24/18       -183         Convegances       98       06/19/18       11/01/18       -223         Startup & Testing       111       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       05/29/18       -1121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -1121         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -1121													U
Masonry       104       02/018       06/27/18       195         Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/05/18       -214         Electrical       109       08/29/17       10/02/18       -211         Electrical - Transportion       84       03/27/18       10/21/8       -212         Architectual Finisher       641       03/17/7       10/22/18       -216         Architectual Finisher       414       03/15/17       10/21/8       -216         Startup & Testing       98       6/19/18       11/01/18       -223         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       115       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       115       07/30/18       08/17/18       -171         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       115       07/30/18       08/17/18       -171         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       115       09/04/18       -171	i i i <b>n n</b> i <b>n</b> i												
Mechanical       383       04/13/17       10/01/18       -211         Misc Metal       292       08/17/17       10/05/18       -214         Electrical       300       08/29/17       10/02/18       -216         Electrical - Transportation       84       03/27/18       07/20/18       -202         Architectual Finisher       414       03/15/17       10/24/18       -183         Conveyances       98       06/19/18       11/01/18       -234         Startup & Testing       171       05/09/18       11/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -171         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -171			•										
Misc Metal       292       08/17/17       10/05/18       -214         Electrical       300       08/29/17       10/22/18       -216         Electrical - Transportation       84       03/27/18       07/20/18       -202         Architectual Finisher       414       03/15/17       10/24/18       -202         Conveyances       414       03/15/17       10/24/18       -203         Startup & Testing       06/19/18       11/01/18       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchist Corrections       115       05/09/18       01/02/19       -233         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       115       07/30/18       08/17/18       -117         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       115       08/15/18       09/04/18       -117													
Electrical       300       08/29/17       10/22/18       -216         Electrical - Transportation       84       03/27/18       07/20/18       -202         Architectual Finisher       414       03/15/17       10/24/18       -183         Conveyances       98       06/19/18       11/01/18       -234         Startup & Testing       1171       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       115       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       115       07/30/18       08/17/18       -131         CTS PL - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       115       08/15/18       09/04/18       -191					<b></b>	<b>-</b>							
Electrical - Transportation       84       03/27/18       07/20/18       -202         Architectual Finisher       6414       03/15/17       10/24/18       -183         Conveyances       98       06/19/18       11/01/18       -234         Startup & Testing       171       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       115       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -131         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       15       08/15/18       09/04/18       -191			0,10,00		•••								
Architectual Finishes       414       03/15/17       10/24/18       -183         Conveyances       98       06/19/18       11/01/18       -234         Startup & Testing       171       05/09/18       01/02/19       -233         CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -131         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       15       08/15/18       09/04/18       -191													
Conveyances         98         06/19/18         11/01/18         -234           Startup & Testing         05/09/18         01/02/19         -233           CTS UP - 20         CTS_UP - Pre-Revenue Punchlist Corrections         115         05/09/18         01/02/19         -233           CTS UP - 18         CTS_UP - Pre-Revenue Start up & Test MEP Equip         115         07/30/18         08/17/18         -179           CTS PL - 18         CTS_PL - Pre-Revenue Start up & Test MEP Equip         115         08/15/18         09/04/18         -191													•
Startup & Testing         171         05/09/18         01/02/19         -233           CTS UP - 20         CTS_UP - Pre-Revenue Punchlist Corrections         15         05/09/18         05/29/18         -121           CTS UP - 18         CTS_UP - Pre-Revenue Start up & Test MEP Equip         15         07/30/18         08/17/18         -179           CTS PL - 18         CTS_PL - Pre-Revenue Start up & Test MEP Equip         15         08/15/18         09/04/18         -191			<b>~</b> •	1	<b>\$000</b> 00							es	
CTS UP - 20       CTS_UP - Pre-Revenue Punchlist Corrections       15       05/09/18       05/29/18       -121         CTS UP - 18       CTS_UP - Pre-Revenue Start up & Test MEP Equip       15       07/30/18       08/17/18       -179         CTS PL - 18       CTS_PL - Pre-Revenue Start up & Test MEP Equip       15       08/15/18       09/04/18       -191													
CTS UP - 18         CTS_UP - Pre-Revenue Start up & Test MEP Equip         15         07/30/18         08/17/18         -179           CTS PL - 18         CTS_PL - Pre-Revenue Start up & Test MEP Equip         15         08/15/18         09/04/18         -191													
CTS PL - 18         CTS_PL - Pre-Revenue Start up & Test MEP Equip         15         08/15/18         09/04/18         -191	_ Стѕ_и		-				-121	3	05/29/18	05/09/18	15	CTS_UP - Pre-Revenue Punchlist Corrections	CTS UP - 20
	C						-179	3	08/17/18	07/30/18	15	CTS_UP - Pre-Revenue Start up & Test MEP Equip	CTS UP - 18
							-191	3	09/04/18	08/15/18	15	CTS_PL - Pre-Revenue Start up & Test MEP Equip	CTS PL - 18
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SFMTA Central Subway Project Master Project Schedule						ect							

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Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
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STU101		S&S Certification / Pre-Revenue Activities		01/02/19	06/14/19	-118								<u></u>	-	
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SFMTA Central Subway Project	
Master Project Schedule	Require
One Month Back & Remaining Work - May 2016 Update	

				Page 4 of 4						
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# Appendix C

# PROJECT SCOPE AND FUNDING OVERVIEW

# **Project Overview**

The Central Subway Project will construct a modern, efficient light-rail line that will improve public transit in San Francisco. This new 1.7-mile extension of Muni's T Third Line will provide direct connections to major retail, sporting and cultural venues while efficiently transporting people to jobs, educational opportunities and other amenities throughout the city.

The Central Subway Project is Phase 2 of the San Francisco Municipal Transportation Agency's (SFMTA) Third Street Light Rail Transit Project. Phase 1 of the project constructed a 5.1-mile light -rail line along the densely populated 3rd Street corridor. It began revenue service in April 2007, restoring light-rail service to a high transit-ridership area of San Francisco for the first time in 50 years.

The Central Subway Project will extend the T Third Line from the 4th Street Caltrain Station to Chinatown, providing a direct, rapid transit link from the Bayshore and Mission Bay areas to So-Ma, Union Square and downtown.

Four new stations will be built along the 1.7-mile project alignment—an above-ground station at 4<sup>th</sup> and Brannan streets and three underground stations at Moscone Center, Union Square and Chinatown.

The Central Subway will run through the burgeoning technology and digital-media hub in SoMa, where dozens of companies have taken up residence along the 4th Street corridor. Increased



### Project Overview - continued

transit options will attract new employers – the Central Subway makes travel more convenient throughout the corridor and improves connections to downtown, local and regional rail and the Muni bus system.

The Central Subway Project will contribute to San Francisco's economic competitiveness and help secure the city's status of a regional, national and global hub. It will provide a pollution-free transit option that will reduce the environmental impact of transportation in the city, save natural resources, reduce traffic congestion and improve public transit for thousands of San Franciscans.

### **Funding Overview**

The Central Subway Project is funded by the federal government, the State of California, the Metropolitan Transportation Commission, the San Francisco County Transportation Authority (SFCTA) and the City and County of San Francisco.

The majority of funding for the Central Subway Project is expected to be provided by the Federal Transit Administration's (FTA) New Starts program, with a total commitment over the life of the project of \$942.2 million. To date, \$41 million in Department of Transportation Congestion Mitigation and Air Quality Improvement Program funds have been committed and expended.

With the addition in the December 2013 MPR of work to relocate the retrieval site for two tunnel boring machines (TBMs), the SFMTA's baseline budget for the Central Subway Project is \$1.588 billion. In total, about half of the Third Street Light Rail Transit Project's funding is from federal sources, with the remaining half from state and local sources. This is in line with the expectations of the FTA for New Starts-financed programs.

The table below summarizes the local, state and federal fund sources for both phases of the T Third Line including with the addition of the retrieval shaft to the Phase 2 totals.

	T Third (Phase 1)	Central Subway (Phase 2 + Retrieval Shaft Relocation)	Total (Phase 1 + Phase 2 + Retrieval Shaft Relocation)	Percentage of Total
Federal	\$123.380	\$983.225	\$1,106.605	49.5%
State	\$160.700	\$471.100	\$631.800	28.2%
Local	\$364.380	\$133.675	\$498.055	22.3%
Total	\$648.460	\$1,588.000	\$2,236.460	100.0%

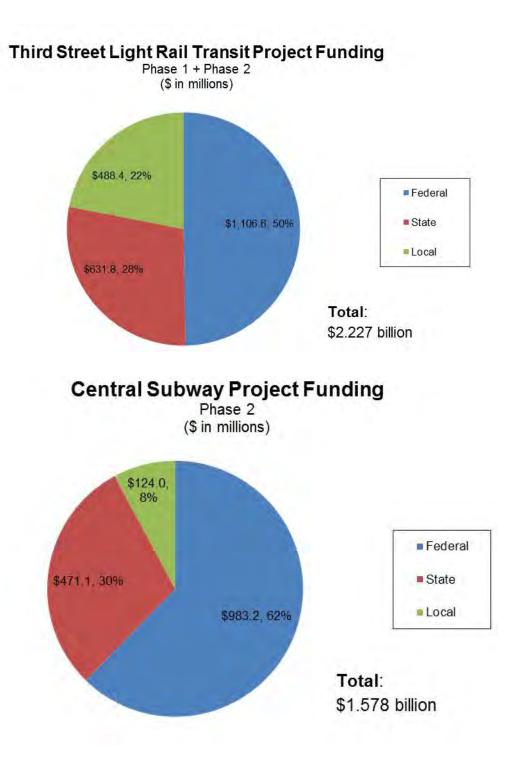
All amounts in millions of dollars

The six charts that follow summarize use of fund sources by phase and with the addition of the retrieval shaft relocation additional budget and funding:

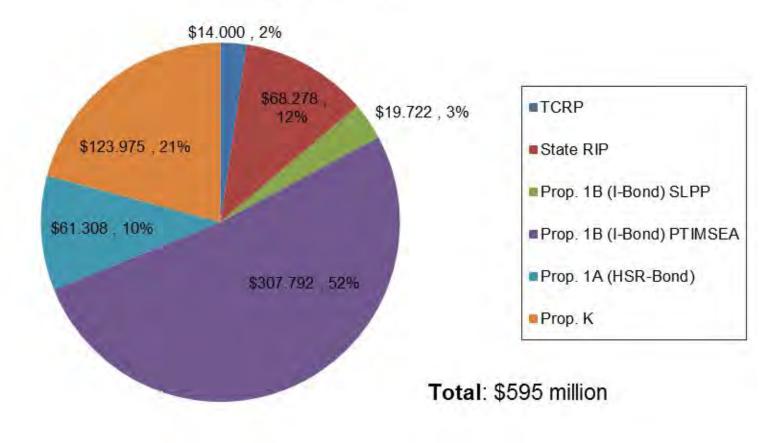
• Phase 1 + Phase 2 of the T Third Line federal, state and local funding percentages previous to the addition of the retrieval shaft relocation budget and funding in December 2013.

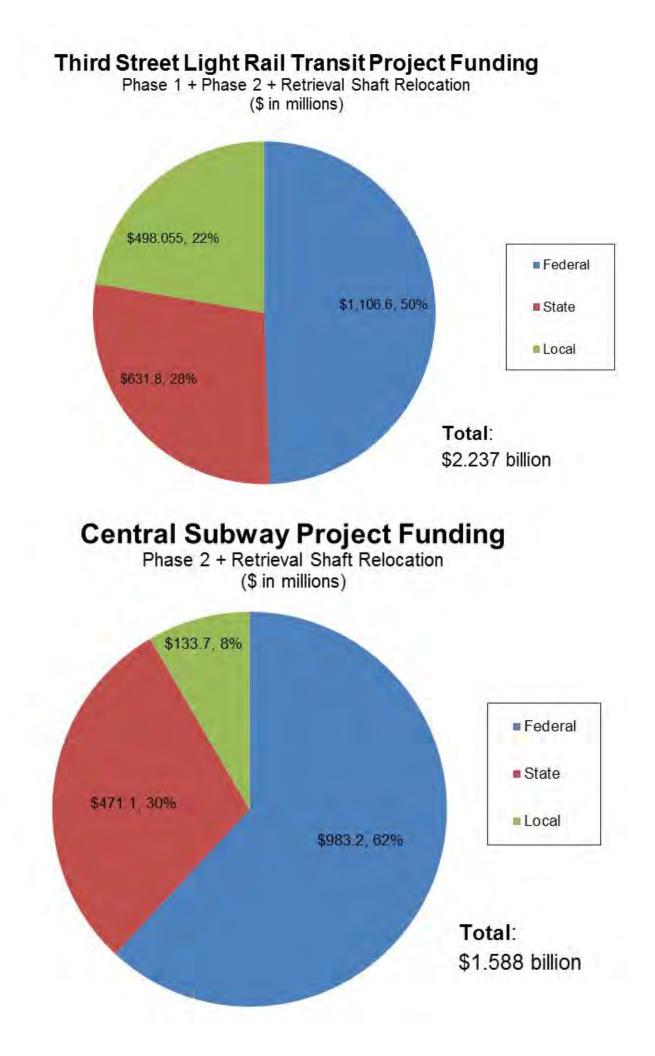
# Funding Overview - continued

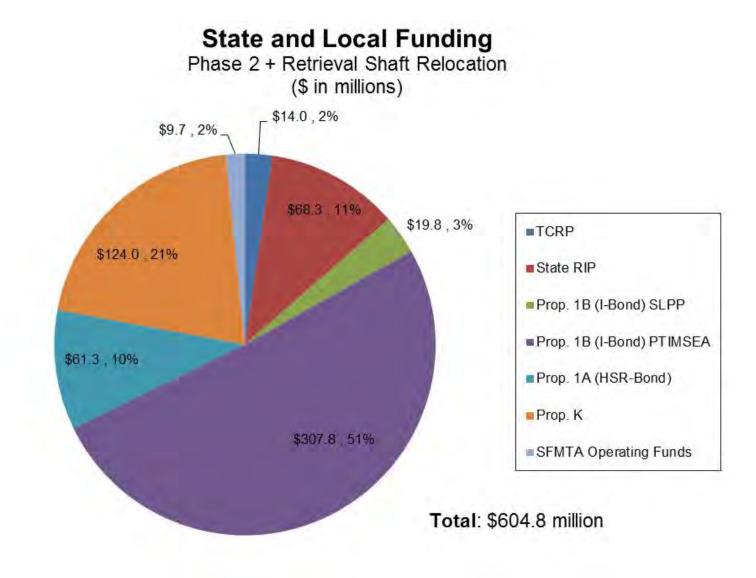
- Phase 2 Central Subway Project only total funding source percentages previous to the addition of the retrieval shaft relocation budget and funding.
- Phase 2 Central Subway Project only detail of the six State and Local funding sources previous to the addition of the retrieval shaft relocation.
- The next three charts that follow are the above three data sets above with the retrieval shaft relocation budget and funding added to the overall presentation.



State and Local Funding Phase 2 (\$ in millions)









# Appendix D

# **COMPLETED CONTRACTS**

# **Moscone Station and Portal Utility Relocation**

# Contract 1250

Contractor: Synergy Project Management, Inc.

Budget/Expenditures			
Category	Amount		
Original Budget	\$11,227,316		
Expenditures Final	\$11,968,150		
Utility Reimbursements	(\$2,275,419)		
Final Program Cost	\$9,692,731		
Budget Impact (Underrun) (\$1,534,585)			

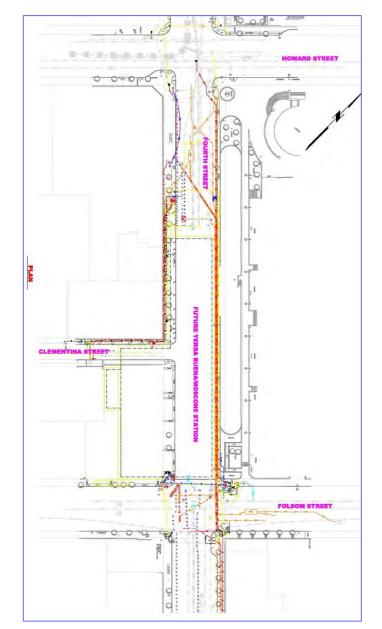
Contract Details		
Contract Awarded: No	ovember 17, 2009	
Notice to Proceed:	January 4, 2010	
Substantial Completion:	June 23, 2011	
Contract Award Value:	\$ 9,273,939	
Modifications Final :	\$ 2,694,211	
Final Contract Value:	\$11,968,150	

# Status

- Work complete
- Project closeout administration and documentation
- Final Completion Date: June 23, 2011

# Description

This project relocates utilities within the footprint of the proposed Yerba Buena/Moscone Station and the 4th Street Portal where the tunnel boring machines will descend underground. Also included is installation of building protections and monitoring of buildings adjacent to utility trenches.



# **Union Square/Market Street Station Utility Relocation**

### Contract 1251

Contractor: Synergy Project Management, Inc.

Budget/Expenditures			
Category	Amount		
Original Budget	\$22,199,847		
Expenditures Final	\$20,794,581		
Utility Reimbursements	(7,413,510)		
Final Program Costs	\$13,176,169		
Budget Impact (Underrun)	(\$9,023,678)		

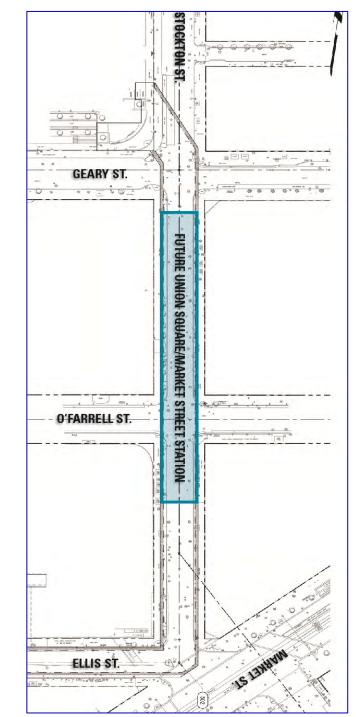
Contract Details	
Contract Awarded:	December 7, 2010
Notice to Proceed:	January 12, 2011
Substantial Completion:	August 16, 2012
Contract Award Value:	\$16,832,550
Modifications Final:	\$3,962,031
Final Contract Value:	\$20,794,581

# Status

- Final completion date October 15, 2012.
- Completed punch list work
- Project Final Acceptance by the SFMTA Board of Directors

# Description

This project relocates utilities for the Union Square/Market Street Station and temporarily reroutes existing trolley coach lines around the construction.



### Contract 1277 Contractor: MH Construction

# Work Description

Demolish and clear the former Pagoda Theater for use the site to recover the tunnel boring machines when tunnels are completed in 2015. Locate and supply contractor facilities and installations. Obtain permits and approvals and coordinate work with City agencies and utility companies. Furnish and install signs and distribute notices to the local community prior to commencing with construction, cleanup and remove of debris from the site.

- Work was substantially completed Sept. 24, 2013.
- Administrative closeout in progress.

Budget/Expenditures			
Category	Amount		
Current Budget	\$722,592		
Expenditures to Date	\$638,278		

Contract Details	
Contract Awarded:	June 12, 2013
Notice to Proceed:	July 15, 2013
Substantial Completion:	Sept. 24, 2013
Contract Award Value:	\$498,995
Modifications to Date:	\$108,228
Current Contract Value:	\$678,134



## Contract 1252 Contractor: Barnard Impregilo Healy Joint Venture

### **Description of Work**

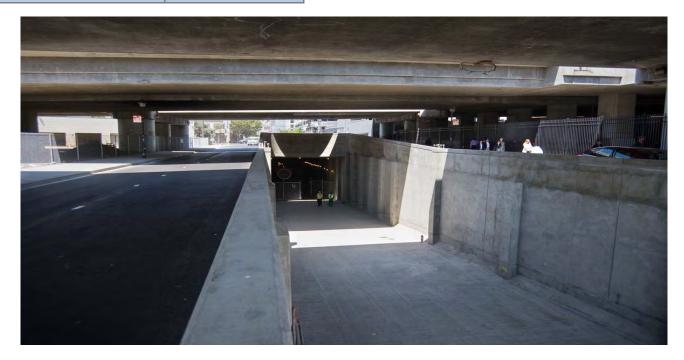
1.5-mile twin bore tunnels from Hwy I-80 to North Beach using two tunnel boring machines (TBMs). Contractor procurement and installation of the TBMs; construction of the TBM launch box and retrieval shaft excavation support; Yerba Buena/Moscone Station and Union Square/Market Street Station end walls; tunnel excavation and installation of precast segmental lining, the 4th Street portal transition to the surface and cross passages. Throughout, settlement monitoring and protection of existing utilities, buildings and BART tunnels.

### **Status**

- Final Completion Date: May 15, 2015
- Administrative closeout in progress

Budget/Expenditures		
Category	Amount	
Current Budget	\$235,913,500	
Other Project Budget	\$5,150,000	
Other Offset Credits \$1,291,0		
Expenditures to Date	\$234,881,397	

Contract Details			
Contract Awarded:	June 28, 2011		
Notice to Proceed 1:	January 27, 2012		
Notice to Proceed 2:	March 14, 2012		
Partial NTP 3:	April 12, 2012		
Notice to Proceed 3:	October 15, 2012		
Substantial Completion:	April 13, 2015		
Contract Award Value:	\$233,584,015		
Modifications to Date:	\$8,270,765		
Current Contract Value:	\$241,854,780		





# Appendix E

# **SBE PARTICIPATION**

**Quarterly Report** 

Current Report: January 2016 - March 2016

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#### PROGRAM SUPPORT CONTRACTS – SBE PARTICIPATION

Appendix E presents the Central Subway Program Small Business Enterprise or SBE goals and the actual SBE participation achieved to date – as of March 31, 2016.<sup>1</sup>

#### CS Program SBE Summary Table for Professional Services and Construction Contracts

The summary compares the dollar value of the Base Contracts, the SBE Contract Goals, the percent and dollar value expended to date and the SBE actual participation to date.

				Α	В	С	D	E	F	G
	Contract No.	Contractor	Services/Segment	Contract Amount	SFMTA SBE Contract Goal	Contract Expenditure to Date (Est.)	SBE Actual to Date	SBE Contract \$s <u>= A * B</u>	SBE Amount to Date '= C * D	Contractor's SBE Goal (in Bid)
A	Project Pr	ofessional Servio	ces Contracts	millions		millions		millions	millions	
1	149	CS Partnership	Project Management	\$85.14	30%	\$52.94	35%	\$25.54	\$18.74	31.4%
2	156	Hill International	Project Controls Task 1	\$17.11	26%	\$9.02	29%	\$4.45	\$2.62	26.0%
3	155-1	PB Telemon	Tunnels Design	\$7.94	30%	\$7.75	30%	\$2.38	\$2.30	31.6%
4	155-2	CS Design Group	Stations Design	\$36.52	30%	\$31.44	42%	\$10.96	\$13.25	36.4%
5	155-3	HNTB, Inc B&C	Systems, Track & Surface Station Design	\$17.23	30%	\$24.72	28%	\$5.17	\$6.92	30.0%
	Subtotal P	rofessional Servi	ces	\$163.94		\$125.87		\$48.50	\$43.83	
в	Project Co	nstruction Contr	acts	millions		millions		millions	millions	
1	1250	Synergy Inc	Utility Relocation 1	\$11.97	20%	\$11.97	97.2%	\$2.39	\$11.63	96.4%
2	1251	Synergy Inc	Utility Relocation 2	\$20.79	20%	\$20.79	87.4%	\$4.16	\$18.18	94.9%
3	1252	BIH	Tunnels and Portal - in Construction	\$241.29	6%	233.70	5.8%	\$14.48	\$13.66	6.1%
4	1277	MH Construction	Pagoda Demolition	\$0.68	100%	\$0.64	100.0%	\$0.68	\$0.64	100.0%
5	1300	Tutor-Perini	Stations/Track/Systems - in Construction	\$842.61	20%	\$362.88	17.2%	\$168.52	\$62.56	25.5%
	Subtotal Construction Contracts		\$1,117.34		\$629.98		\$190.23	\$106.66		
	Contract	Contractor	Services/Segment	Base Contract	SFMTA Goal	Expenditures	SBE Actual	= A * B	= C * D	Bid Goal
				Α	В	С	D	E	F	G

#### SBE Summary Table Notes and Sources:

a) Column A is the base contract amount awarded. Column B is the Agency SBE goal percent for each contract awarded.

The SFMTA SBE Contract Goals are also on the Central Subway web site under the listing of on-going contracts – see "**Closed and Awarded Contracts**" at this link: <u>http://centralsubwaysf.com/content/closed-and-awarded-contracts</u>

b) Column C shows each contract's current amount expended to date (estimated) including accruals. Column D is the actual SBE percent level of each contract based on payments to date. Column E is the expected SBE dollar amount when the contract amount is completed and the SFMTA SBE goal achieved using this calculation: Columns A \* B = Column E, the SBE Expected \$ Amount.

Column F is the actual SBE dollar amount out of the total contract expenditure to date:

Columns C \* D = Column F, the SBE Expended \$ Amount.

The source of the SBE Actual percent to date and dollar amounts are Progress Payment Applications and Contractor's monthly submittals that may include the current estimated accruals. The BIH SBE percent is from the contractor's progress payment #40, Form 6.

<sup>&</sup>lt;sup>1</sup> An SBE is a for-profit, small business concern with a three (3) year average gross revenue not exceeding \$14 million or \$12 million, depending on the scope of work to be performed, that is certified under any of the following programs: the State of California's Small Business Program with the Department of General Services ("State Program"), the City and County of San Francisco's LBE Program ("City Program"), or the California Unified Certification Program ("Federal DBE program").

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- c) Column G, the Contractor's SBE Goal in the submitted bid, is background information that is not calculated in the table. The table source of the Contractor's SBE Goals is from the SFMTA Contract Compliance Office. A Contractor's SBE goal in the bid is one source used by SFMTA Contract Compliance to assess and propose the Agency's SBE goal for a contract.
- d) The three constructions contracts shown in **bold type**, **1250**, **1251** and **1277**, with gray background, are completed contracts. Little to no changes will be shown in future reports.
- e) The SBE Hill International Actual to Date SBE participation is 28.9% for the overall SFMTA contract. The Hill International data is for the Central Subway Task 1 portion of the Hill International contract to provide SFMTA Project Controls services and systems.
- f) The SBE SFMTA goal for Contract 1300 Tutor-Perini is 20% SBE with a provision of 50% for trucking.

The 1300 Tutor-Perini SBE percent Actual is based on the SBE data provided in Progress Payment #27, March 2016, SFMTA SBE FORM No. 6.

g) The SBE SFMTA goal for Contract 1277 MH Construction was based on an SBE set-aside.

#### **SBE Participation Details**

The two tables that follow present the Central Subway's professional services and construction contract amounts, expenditures and SBE levels with additional details.

### Active Professional Services Contracts - SBE Participation Details

Contract:	Project Management and Cons	struction management		
	p. CS-149 Central Subway Partnership			
	Status: On-going			
Status.	Base Contract Value	\$85,139,09		
	Approved Change Orders	-(		
	Current Contract Value	\$85,139,09		
	Expended to Date (est.)	\$52,936,91		
	% Expended	62.29		
	SBE Participation	35.4		
Contract:	Project Controls Cost and Sch	nedule Support		
	CS 156 Hill International Task			
	On-going	•		
otatuo.	Base Contract Value	\$17,112,87		
	Approved Change Orders	•17,12,01		
	Current Contract Value	\$17,112,87		
	Expended to Date (est.)	\$9,018,72		
	% Expended	52.7		
	SBE Participation	29.1		
Contract:	Design Package 1 for CNs 125	0. 1251 and 1252 Tunnels*		
	CS-155-1 PB / Telemon	-,		
	Design is completed. Constructi	ion support ongoing		
	Base Contract Value	\$5,795,00		
	Approved Change Orders (7)	\$2,145,15		
	Current Contract Value	\$7,940,15		
	Expended to Date (est.)	\$7,754,84		
	% Expended	97.7		
	SBE Participation	29.6		
Contract:	Design Package 2 for 1253 UM	IS, 1254 CTS, 1255 YBM Stations.		
	CS-155-2 Central Subway Des			
Status:	Design is completed. Constructi	ion support ongoing		
	Base Contract Value	\$35,059,25		
	Approved Change Orders (1)	\$1,460,36		
	Current Contract Value	\$36,519,61		
	Expended to Date (est.)	\$31,436,14		
	% Expended	86.1		
	SBE Participation	41.8		
Contract:	DP 3 Systems, Track work, Su	rface station.		
Contract No.	CS-155-3 HNTB-B&C			
Status:	Design is completed. Constructi	ion support ongoing		
	Base Contract Value	\$16,822,23		
	Approved Change Orders (5)	\$312,81		
	Current Contract Value	\$17,232,25		
	Expended to Date (est.)	\$24,719,95		
	% Expended	143.5		

### Active and Completed Construction Contracts - SBE Participation Details

	Data as of:		3/31/2016	
Contract:	Synergy Inc Utility Relocation	on 1 '	YBM & Launch E	Зох
Contract No.	1250			
Status:	Contract is completed and c	losed	d out	
	Base Contract Value		\$9,273,	939
	Approved Change Orders		\$2,694,2	211
	Final Contract Value		\$11,968,	150
	% Expended		10	0%
	SBE SFMTA Goal		2	0%
	SBE Participation To Date		97.	2%

Contract:	Synergy Inc Utility Relocation 2 UMS		
Contract No.	1251		
Status:	Contract is completed and c	losed out	
	Base Contract Value	\$16,832,550	
	Approved Change Orders	3,962,031	
	Final Contract Value	\$20,794,581	
	% Expended	100%	
	SBE SFMTA Goal	20.0%	
	SBE Participation To Date	87.4%	

Pagoda Palace Demolition / MH Construction	
1277	
Construction is complete. Contract in Close Out	
Base Contract Value	\$498,995
Approved Change Orders	\$179,139
Current Contract Value	\$678,134
Expended to Date (est.)	\$638,278
% Expended	94.12%
SBE SFMTA Goal	100.0%
SBE Participation To Date	100.0%
	1277 Construction is complete. C Base Contract Value Approved Change Orders Current Contract Value Expended to Date (est.) % Expended SBE SFMTA Goal

Contract:	Tunnels Barnard/Impregilo/Haley	
Contract No.	1252*	
Status:	Construction is underway and ongoing	
	Base Contract Value	\$233,584,015
	Approved Change Orders	\$8,084,852
	Current Contract Value	\$241,668,867
	Expended to Date (est.)	\$233,697,189
	% Expended	96.7%
	SBE SFMTA Goal	6.0%
	SBE Participation To Date	5.8%

Contract:	Stations and Systems / Tutor Perini	
Contract No.	1300*	
Status:	Construction is underway and ongoing	
	Base Contract Value	\$839,676,400
	Approved Change Orders	\$2,933,000
	Current Contract Value	\$842,609,400
	Expended to Date (est.)	\$362,881,108
	% Expended	43.1%
	SBE SFMTA Goal	20.0%
	SBE Participation To Date	20.1%

#### Photos on the next page:

Following the tremendous success of Winter Walk 2014, the green turf, vintage-inspired lamp posts, and nightly light show were set up once more for the 2015 holiday season. Off the Grid food trucks were present for four days a week, offering a wide variety of culinary delights. Winter Walk's pedestrian plaza was set up on Stockton between Geary and Ellis.

# central <br/> subway

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Municipal Transportation Agency









