



# Memorandum

**Date:** 03.18.15

**RE:** Citizens Advisory Committee  
March 25, 2015

**To:** Citizens Advisory committee

**From:** Lee Saage – Deputy Director for Capital Projects

**Subject:** **INFORMATION** – Major Capital Projects Update – Central Subway

## Summary

2014 was another milestone year for the Central Subway project. Work on the \$233 million tunnels contract reached a major milestone in June, when both tunnel boring machines completed the tunnel bores from the launch box under I-80 to the extraction pit in North Beach. The contractor also completed the construction of the headwalls for the three underground stations and all five cross passages between the tunnels. Substantial completion of this contract is expected in April 2015. Work is also underway on the largest single construction contract ever awarded by the San Francisco Municipal Transportation Agency: the \$840 million Stations and Systems contract. The contractor, Tutor Perini will construct the three underground stations, the surface station, and the overall systems for the project. In January, work ramped up at the Union Square station after the removal of the Winter Walk, an urban park and open space which was installed for the holidays. At that station, pile installation has been completed and work has commenced at the Union Square garage. Slurry wall installation on the perimeter walls for the Chinatown Station headhouse has been completed, and construction has begun on the roof slab at the Yerba Buena/Moscone station. As of the end of January, this contract was 26.88% complete. Substantial completion of this contract is scheduled for February 2018. As of December 31, 2014, the project had paid out \$95.57 million to Small Business Enterprises. With a budget of \$1.578 billion, revenue service is anticipated by December 2018. **This is an information item.**

## BACKGROUND

The San Francisco Municipal Transportation Agency's (SFMTA's) Central Subway project will extend the T-Third light rail line (also known as the Initial Operating Segment of the Third Street Light Rail Project) north from King Street along Fourth Street, entering a tunnel north of Bryant Street, crossing beneath Market Street, and running under Stockton Street to Stockton and Washington Streets. A surface station will be provided near Brannan Street, and underground stations will be located at Yerba Buena/Moscone Center, Union Square, and Chinatown. The Central Subway is one of the signature projects in the Prop K Expenditure Plan.

On March 30, 2010, through Resolution 10-51, the Transportation Authority Board adopted a Baseline Budget, Schedule and Funding Plan for the Central Subway project and subsequently adopted an amended funding plan on February 15, 2011, through Resolution 11-44. On October 11, 2012 the SFMTA received the Full Funding Grant Agreement from the Federal Transit Administration (FTA), which represents the federal government's commitment of \$942 million in New Starts funds to the project. All design work for the project has been completed. Construction started in January 2010 and is scheduled to be completed in June 2018, with revenue service starting in December 2018.

## DISCUSSION

The purpose of this memorandum is to provide an update on the Central Subway project.

**Budget:** The Baseline Budget for the Central Subway project is \$1.578 billion in year-of-expenditure

dollars As of January 31, 2015, the project has incurred \$747.65 million in costs against \$1.03 billion in allocations. The current cost Forecast-at-Completion remains unchanged at \$1.578 billion. The expenditures reflect 47.3% of the overall budget and the earned value is 46.6%.

<b>Central Subway Baseline Budget (in millions)</b>	
Preliminary Engineering	\$46.2
Final Design	\$83.7
Construction	\$1,080.6
Real Estate	\$37.4
Vehicles	\$26.4
Project Management	\$206.4
Other*	\$22.9
Unallocated Contingency	\$74.4
<b>Approved Baseline Budget Total</b>	<b>\$1,578.3</b>
<b>Forecast Cost at Completion</b>	<b>\$1,578.3</b>

\*Other includes legal, permits, review fees, survey, testing, investigation, inspection, and startup

**Funding:** The funding plan for the project is depicted in the table below and in a more detailed format in Attachment 1. All funding sources are allocated, with the exception of about \$437 million in Federal New Starts funds, which are committed to the project by the FTA, but subject to annual appropriations by Congress, and \$75.5 million in State Regional Improvement Program (RIP) funds, which are planned.

The Transportation Authority and SFMTA have long recognized that the RIP is a very erratic source of funding and one that has been chronically under-funded for more than a decade. Thus, we have been supporting SFMTA in the identification of alternate fund sources that can meet the project’s cash flow needs. The Transportation Authority will uphold its RIP commitment by programming those funds to other eligible SFMTA RIP projects as the funds become available.

<b>Central Subway Funding Plan by Source (in millions)</b>	
Federal 5309 New Starts Program	\$942.2
Federal Congestion Mitigation & Air Quality Improvement Program (CMAQ)	\$41.0
State Prop 1B- SFMTA	\$225.3
State Regional Improvement Program/Other Local	\$88.0
State Prop 1B- MTC	\$82.5
State Prop 1A High Speed Rail Connectivity	\$61.3
State Traffic Congestion Relief Program (TCRP)	\$14.0
Local Prop K Sales Tax	\$124.0
<b>Total Funding</b>	<b>\$1,578.3</b>

**Schedule:** As shown below, revenue service on the Central Subway is scheduled to commence on December 26, 2018. The controlling critical (longest) path currently runs through the excavation and construction of the Union Square/Market Street Station (UMS), followed by UMS commissioning, systems construction and, finally, commissioning and pre-revenue activities. Construction of the Chinatown station is close to the critical path.

<b>Central Subway Construction Milestones</b>	
Notice to Proceed for Stations and Systems contract	May-13
Start tunnel boring with tunnel boring machine (TBM)	May-13
Tunnels substantial completion	Apr-15
Complete Yerba Buena/Moscone Station	Jul-17
Complete Chinatown Station	Oct-17
Complete Union Square/Market Street Station	Oct-17
Substantial Completion of Stations and Systems contract	Jan-18
Startup and Commissioning begins	Jul-18
Revenue service	Dec-18

**Status:** The project is being delivered in four construction packages, all of which have been awarded. Utility Relocation 1 and Utility Relocation 2 have been completed and the tunnels contract is nearing completion. Work is underway on the Stations and Systems contract.

2014 was another milestone year for the Central Subway project. Work on the \$233 million tunnels contract reached a major milestone in June, when both TBMs, Mom Chung and Big Alma, completed the tunnel bores from the launch box under I-80 to the extraction pit in North Beach. The contractor, a Joint Venture of Barnard/Impregilo/Haley, also completed the construction of the headwalls for the three underground stations and all five cross passages between the tunnels. Work is now concentrating on the tunnel portal under I-280 at 4th and Bryant Streets. Substantial completion of this contract is expected in April 2015.

Work is also proceeding on the largest single construction contract ever awarded by the SFMTA: the \$840 million Stations and Systems contract. The contractor, Tutor Perini, will construct the three underground stations, the surface station, and the overall systems for the project. In January, work ramped up at the Union Square station after the removal of the Winter Walk, an urban park and open space which was installed for the holidays. At that station, pile installation has been completed and work has commenced at the Union Square garage with hazardous material abatement and demolition. Slurry wall installation on the perimeter walls for the Chinatown Station headhouse has been completed in preparation for excavation. At the Yerba Buena/Moscone station the slurry perimeter wall has also been completed and construction has begun on the roof slab. For the surface station at 4<sup>th</sup> and Brannan Streets, work was started on the cast-in-place drilled piles. As of the end of January, this contract was 26.88% complete. Substantial completion of this contract is scheduled for February 2018.

**DBE/SBE Program:** The Central Subway's Small Business Enterprise (SBE) program is based on contract-specific goals ranging from 6% to 30%, depending on the type of work and availability of SBEs. As of December 31, 2014, the project has paid out \$95.57 million to SBEs, 13.1% of the total expenditures. For its part, the \$838 million Stations and Systems contract has a goal of 25.5%, which represents \$214 million to SBE's. A detailed SBE report is included as Attachment 2.

**Challenges:** Although the project's Forecast-at-Complete indicates that the project will be completed within budget, the total cost contingency stands at \$81.22 million, \$58.78 million below the current FTA recommended minimum of \$140 million. SFMTA has implemented a cost containment program in partnership with the FTA and the Transportation Authority's project management oversight team which includes Cost Containment Workshops in addition to the already existing Risk Management workshops and Configuration Management Board, which reviews and approves all proposed project changes.

Although all funding for the project is identified, there is a need for ongoing advocacy to ensure that annual appropriations of the remaining New Starts funds remain at the levels needed to meet project cash flow needs. Recent appropriations have been keeping pace with projected needs. Another funding concern is the need to secure an alternate funding source for the remaining \$75.5 million in RIP funds which almost certainly won't be available when required to meet the project's cash flow needs given projected state funding levels. As noted above, Transportation Authority and SFMTA staffs continue to work together on this topic.

Although the schedule for revenue service remains unchanged, the schedule contingency on the critical path is 4.8 months, which is below the FTA's recommended minimum schedule contingency level of 8 months at this stage of construction.

**ALTERNATIVES**

None. This is an information item.

**FINANCIAL IMPACTS**

None. This is an information item.

**RECOMMENDATION**

None. This is an information item.

Attachments (2):

1. Central Subway Funding Plan
2. Central Subway SBE Participation

**Attachment 1**  
**Central Subway Full Funding Plan**  
**Updated: March 2015**

Source <sup>2</sup>	Type	Status	Project Phases <sup>1</sup>				Total by Status	TOTAL
			PE/ENV	PS&E	ROW	CON		
5309 New Starts	Federal	Allocated	\$36,310,980	\$47,690,426	\$0	\$385,180,078	\$469,181,484	<b>\$942,200,000</b>
		Programmed	\$0	\$0	\$0	\$473,018,516	\$473,018,516	
		Planned	\$0	\$0	\$0	\$0	\$0	
CMAQ	Federal	Allocated	\$0	\$14,328,445	\$0	\$26,696,555	\$41,025,000	<b>\$41,025,000</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
Prop 1A High Speed Rail Connectivity	State	Allocated	\$0	\$0	\$0	\$61,308,000	\$61,308,000	<b>\$61,308,000</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
Prop 1B- MTC	State	Allocated	\$0	\$14,044,096	\$10,580,906	\$63,270,813	\$87,895,815	<b>\$87,895,815</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
Prop 1B-SFMTA	State	Allocated	\$0	\$1,200,000	\$24,196,508	\$194,499,677	\$219,896,185	<b>\$219,896,185</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
RIP-SF/Other <sup>3</sup>	State	Allocated	\$0	\$0	\$0	\$12,498,000	\$12,498,000	<b>\$88,000,000</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$75,502,000	\$75,502,000	
TCRP	State	Allocated	\$5,000,000	\$9,000,000	\$0	\$0	\$14,000,000	<b>\$14,000,000</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
Prop K	Local	Allocated	\$4,142,132	\$27,418,669	\$0	\$92,414,199	\$123,975,000	<b>\$123,975,000</b>
		Programmed	\$0	\$0	\$0	\$0	\$0	
		Planned	\$0	\$0	\$0	\$0	\$0	
<b>Totals</b>		<b>Allocated</b>	<b>\$45,453,112</b>	<b>\$113,681,636</b>	<b>\$34,777,414</b>	<b>\$835,867,322</b>	<b>\$1,029,779,484</b>	<b>\$1,578,300,000</b>
		<b>Programmed</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$473,018,516</b>	<b>\$473,018,516</b>	
		<b>Planned</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$75,502,000</b>	<b>\$75,502,000</b>	
			<b>\$45,453,112</b>	<b>\$113,681,636</b>	<b>\$34,777,414</b>	<b>\$1,384,387,838</b>	<b>\$1,578,300,000</b>	

<sup>1</sup> Acronyms used for project phases include: PE/ENV - Preliminary Engineering/Environmental Documentation, PS&E - Plans, Specifications & Estimates or Final Design, ROW - Right of Way, CON - Construction. For the purposes of this table, construction includes procurement (e.g. vehicles).

<sup>2</sup> Acronyms used in this column include: CMAQ - Congestion Mitigation and Air Quality Improvement Program, MTC - Metropolitan Transportation Commission, RIP - Regional Improvement Program, SFMTA - San Francisco Municipal Transportation Agency, and TCRP - Traffic Congestion Relief Program.

<sup>3</sup> In November 2005, through Resolution 06-30, the Transportation Authority committed to prioritizing its RIP funds to four signature Prop K projects, including Central Subway. This commitment stems from the 2001 Regional Transportation Plan. In March 2012, through Resolution 12-44, the Transportation Authority Board made Central Subway the second highest priority after Presidio Parkway (required by the State) for future RIP funding cycles until those commitments are fulfilled. The Presidio Parkway RIP commitment was fulfilled with adoption of the 2012 State Transportation Improvement Program, making Central Subway the highest priority for RIP funds. The Transportation Authority and SFMTA are working together to ensure that alternate funding is available to the project, given that the remaining RIP funds are not likely to be available in time to meet the project's cash flow needs.

## Attachment 2 Central Subway SBE Participation

			A	B	C	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 = A * B	SBE Amount to Date = C * D	Contractor's SBE Goal (in Bid)	
<b>A Project Professional Services Contracts</b>			<i>millions</i>		<i>millions</i>		<i>millions</i>	<i>millions</i>		
1	149	CS Partnership	Project Management	\$85.14	30%	\$46.30	36%	\$25.54	\$16.69	31.4%
2	156	Hill International	Project Controls Task 1	\$17.11	26%	\$7.87	22%	\$4.45	\$1.71	26.0%
3	155-1	PB Telemon	Tunnels Design	\$7.49	30%	\$7.65	30%	\$2.25	\$2.33	31.6%
4	155-2	CS Design Group	Stations Design	\$36.52	30%	\$28.40	44%	\$10.96	\$12.38	36.4%
5	155-3	HNTB, Inc.- B&C	Systems, Track & Surface Station Design	\$17.23	30%	\$12.04	29%	\$5.17	\$3.50	30.0%
<b>Subtotal Professional Services</b>			<b>\$163.50</b>		<b>\$102.25</b>		<b>\$48.36</b>	<b>\$36.61</b>		
<b>B Project Construction Contracts</b>			<i>millions</i>		<i>millions</i>		<i>millions</i>	<i>millions</i>		
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	\$241.08	6%	233.57	5.8%	\$14.47	\$13.62	6.1%
4	1277	MH Construction	Pagoda Demolition	\$0.68	100%	\$0.64	98.7%	\$0.68	\$0.63	100.0%
5	1300	Tutor-Perini	Stations/Track/Systems - in Construction	\$838.09	20%	\$210.17	7.2%	\$167.62	\$15.14	25.5%
<b>Subtotal Construction Contracts</b>			<b>\$1,112.61</b>		<b>\$477.14</b>		<b>\$189.31</b>	<b>\$59.20</b>		
Contract	Contractor	Services/Segment	Base Contract	SFMTA Goal	Expenditures	SBE Actual	= A * B	= C * D	Bid Goal	