

Crenshaw/LAX Transit Project

Budget/Schedule Presentation – January 28, 2021



Budget / Schedule

◆ BUDGET

	<u>Current</u>	<u>Forecast</u>
TOTAL COST	\$2,148M	\$2,148M

▲ SCHEDULE

	<u>Current</u>	<u>Forecast</u>
REVENUE OPERATION	May 2021	TBD - 2021

- Overall Project Progress is 97.7% complete
- Contractor is not applying sufficient work force to complete their remaining work
- Metro continues to work with contractor to mitigate the schedule forecast; emphasizing safety and reliability in final acceptance of project elements and systems
- Remaining work is primarily systems – power, train control, station/tunnel fire life safety and communications



P3010 LRT Vehicle testing on Crenshaw Blvd. and 54th Street.



Leimert Park Station – contractor working on communication rack in train control and communication room.



On target



Possible problem



Significant Impact

*Contractor Substantial Completion

Life-of-Project Budget Status

- Project total commitments are 96% and expenses are 92% of the LOP Budget of \$2,148 million
- Professional services, including Metro staff, expenses are between \$3.7 - \$4.0 million per month
- Anticipate that based on current monthly rate of professional services expenses, additional Project funding may be required by 4th quarter FY22
- The actual value that may be required is unknown until the contractor successfully completes Substantial Completion
- \$26 million in unallocated contingency remains of the original LOP Budget of \$2,058 million
- Budget does not include any potential claim settlement funding

WSCC Contract Liquidated Damages

Milestones per Unilateral Non-Compensable Time Extension (September 2018)	Completion Date	\$'s per Day	Accrued to Date
No. 3 – Commence all Systems Integration Testing Phase 1	September 12, 2019	\$30,000	
No. 1 – Substantial Completion	December 11, 2019	\$36,800	
Total Accrued through December 31, 2020			\$15,000,000
The daily limit for accessing Liquidated Damages is \$36,800 and the Contract Limit is \$15,000,000			

- Contractor has missed both milestone completion dates.
- The time extension stipulated that the maximum daily limit for liquidated damages would be accessed if Revenue Service on May 23, 2020 was not achieved.
- Metro is accruing liquidated damages but has not yet accessed liquidated damages in the contractor's monthly payment application.
- Metro reserved the right to assess and withhold the accrued liquidated damages in the future.



Project Sequence of Completion

- Installation of Equipment (Contractor)
- Local Field Acceptance Tests – (LFAT) (Contractor)
- Systems Integration Tests – (SIT-1) (Contractor)
- Vehicle Software – (P3010) Metro (Carborne)/Contractor (Wayside)
- Systems integration Tests (SIT-2) - interface with Rail Operations Control (ROC) – Metro
- Training, Simulated Service, Emergency Drills - Metro
- Safety Certification – California Public Utility Commission
- Revenue Service



Schedule Status

- Contractor did not complete substantial completion by December 2020
- Progress monitoring indicates that this goal may be attained in 2021
- Schedule projections are dependent on number of variables - productivity, contractor resources, amount of re-work, testing success rate and complexity of work
- Contractor needs to make more progress in LFAT testing before a reliable estimate of completion can be made
- Consider strategies such as overlapping activities

WSSC Contract

Milestone Substantial Completion Forecast

- WSSC needs to make significant performance improvement by taking the following potential mitigation actions:
 - Add crews and resources to prepare/complete required prerequisites before conducting Local Field Acceptance Tests and System Integration Tests,
 - Double testing personnel and increase to two work shifts,
 - Double dedicated management and integration supervision to complement increased work force,
 - Develop a realistic plan to complete testing, and
 - Increase schedule measurement resource for real time tracking of progress.

Overall Systems Completion Status (as of 1/21/21)

Segment A (8+08.15 - 159+50)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	100%	85%
LFAT Test	95%	75%	90%	9%
SIT-1 Test	10%	85%	5%	0%
Segment B1 (159+50 - 274+00)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	95%	100%	100%	70%
LFAT Test	90%	95%	90%	12%
SIT-1 Test	10%	50%	5%	0%
Segment B2 (274+00 - 364+80)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	100%	80%
LFAT Test	95%	91%	90%	11%
SIT-1 Test	N/A	46%	5%	0%
Segment C (364+80 - 448+34)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	100%	65%
LFAT Test	95%	75%	85%	7%
SIT-1 Test	10%	0%	0%	0%



Schedule considerations

- Current field team personnel (Metro, contractor, subcontractors) are experienced and committed to a successful start-up
- Equipment interfaces are very complex, but the technology is service proven
- The most recent tunneling project that Metro opened was a small section of the Eastside Extension, so there are systems project characteristics that are new to Metro projects as technology has advanced since then
- Metro working to remove pieces of scope from WSCC Contract. Most significant is agreement with the City of Los Angeles to perform paving work at Park Mesa Heights



Remaining Project Key Issues

These issues will determine the final completion dates:

- Significant amount of physical installation work that remains to be completed
- Volume of complex testing that remains to be done
- 1,279 (51%) remain as of December 3, 2020
- Subcontractor coordination and integration management
- Labor resources
- Design resources
- Ability to control schedule delays
- Amount of re-work

Metro Efforts to Work With and Help WSCC

- Minimize additional change orders
 - Park Mesa Heights paving being done by others
 - Fiber optic diversification done by others
- Collaborative Review of Submittals
 - Same day review of critical submittals with WSCC staff present
 - RFI's reviewed in the field - allowing quicker turn around times
- Expedite required field witness testing
 - 7-day scheduling timeframe reduced to 2 days

Metro Efforts to Work With and Help WSCC (continued)

- Provide early punch list activities
 - Walk work areas early to identify potential punch list items to minimize last minute work
 - Identify remaining work required prior to closing work areas up to help reduce rework
- Weekly joint review of work schedule with WSCC and subcontractors
 - Identify scope gap issues early to allow work to occur efficiently
 - Discuss work execution logic to help work to occur efficiently
- Metro / WSCC review bi-weekly extended work schedules and activities to identify conflicts and plan future work



Conclusion

- Number of variables impact actual completion dates
- Metro continues to work with contractor to mitigate the schedule forecast
- Metro will continue to emphasize safety and reliability in final acceptance of Project elements and systems
- Remaining work is primarily systems – power, train control, station/tunnel life safety and communications