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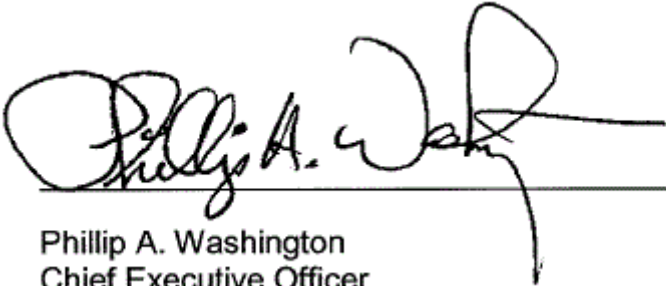
**REGULAR BOARD MEETING  
FEBRUARY 25, 2021**

**SUBJECT: UPDATE CRENSHAW/LAX PROJECT**

**ACTION: ORAL REPORT**

**RECOMMENDATION**

RECEIVE oral report on Crenshaw/LAX Project



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Phillip A. Washington  
Chief Executive Officer

# Crenshaw/LAX Transit Project

## Budget/Schedule Presentation – February 25, 2021



# Budget / Schedule

## ◆ BUDGET

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

## ▲ SCHEDULE

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

- Overall Project Progress is 98% complete (progress from 96% - 98% completion achieved in a 7-month period)
- 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



Expo Station plaza level elevator



UG3 contractor performing mechanical testing on tunnel booster fans



**Metro**



On target



Possible problem



Significant Impact

\*Contractor Substantial Completion

# Life-of-Project Budget Status

- Project total commitments are 96.9% and expenses are 93% of the LOP Budget of \$2,148 million
- Professional services, including Metro staff, expenses are between \$3.4 - \$3.7 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
- \$26.5 million in unallocated contingency remains
- Budget does not include any potential claim settlement funding

# 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

# WSCC Contract

## Milestone Substantial Completion Forecast

- WSCC 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.

# Systems Testing Progress (as of 2/12/21)

Monthly LFATs Outcome						
Month	Total Scheduled	Passed	Passed %	Failed	Ongoing/ Partial	Canceled/ Rescheduled
Aug-20	77	32	42%	11	8	26
Sep-20	85	52	61%	4	12	17
Oct-20	59	35	59%	3	8	13
Nov-20	82	43	52%	9	3	27
Dec-20	90	44	49%	3	14	34
Jan-21	49	23	47%	1	7	18
Target per month		117				

Monthly SITs Outcome						
Month	Total Scheduled	Passed	Passed %	Failed	Ongoing/ Partial	Canceled
Aug-20	2	0	0%	2	0	0
Sep-20	1	0	0%	0	0	1
Oct-20	5	2	40%	3	0	0
Nov-20	13	4	31%	8	0	1
Dec-20	4	1	25%	2	0	1
Jan-21	15	8	53%	2	0	2
Target per month		52				



**Metro**



# 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
- 297\* (97%) remain as of January 27, 2021 (\*Contractor changed LFAT count approach since December 2020 summary)
- Subcontractor coordination and integration management
- Labor resources
- Design resources
- Ability to control schedule delays
- Amount of re-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