



Board Report

File #: 2021-0551, File Type: Oral Report / Presentation

Agenda Number: 31.

CONSTRUCTION COMMITTEE SEPTEMBER 16, 2021

SUBJECT: PROGRAM MANAGEMENT MAJOR PROJECT STATUS REPORT

ACTION: ORAL REPORT

RECOMMENDATION

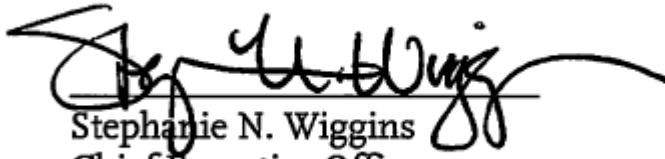
RECEIVE oral report on the Major Project Status by the Chief Program Management Officer.

DISCUSSION

Update report covering the month of September 2021 by the Chief Program Management Officer.

Prepared by:

- **Crenshaw/LAX** - Sameh Ghaly, Sr EO Project Mgmt., (213) 418-3369
- **Regional Connector** - Sameh Ghaly, Sr EO Project Mgmt., (213) 418-3369
- **Westside Purple Line Ext 1** - James Cohen, EO Project Mgmt., (213) 922-7911
- **Westside Purple Line Ext 2** - Michael McKenna, EO Project Mgmt., (213) 312-3132
- **Westside Purple Line Ext 3** - Kimberly Ong, EO Project Mgmt., (323) 903-4112
- **Willowbrook/Rosa Park Station** - Timothy Lindholm, Sr. EO Project Engr., (213) 922-7297
- **Airport Metro connector (AMC)** - Timothy Lindholm, Sr. EO Project Engr., (213) 922-7297
- **Division 20 Portal Widening Turnback** - Rick Meade, Sr EO Project Mgmt., (562)524-0517
- **I-210 Barrier Replacement** - Androush Danielians, Sr EO Project Engr., (213) 922-7598
- **I-5 North County Enhancements** - Timothy Lindholm, Sr. EO Project Engr., (213) 922-7297
- **I-5 North** - Abdollah Ansari, Sr EO Construction & Engr., (213) 922-4781
- **I-5 South** - Abdollah Ansari, Sr EO Construction & Engr., (213) 922-4781
- **Presentation** - Yohana Jonathan, Mgr, Project Control, (213) 418-3031



Stephanie N. Wiggins
Chief Executive Officer

Program Management Major Project Status Report

Presented By

Bryan Pennington

Chief Program Management Officer (Interim)

PROJECT BUDGET & SCHEDULE STATUS SUMMARY CHART

| Project | Cost Performance | | Schedule Performance | | Comments |
|--|-----------------------|-------------------------|----------------------|---------------------------|---|
| | Variance Approved LOP | Variance Revised Budget | Variance Original | Variance Revised Schedule | |
| Crenshaw/LAX | | | | | Project is 99.1% complete. Contractor is not applying sufficient work force to complete their remaining work. Remaining work is primarily underground station finishing, facility equipment and communications system testing. Metro continues to work with contractor to mitigate the delays and impacts to the project schedule; emphasizing safety and reliability in final acceptance of project elements and systems. Equity - 8 of 8 stations (100%) are within or adjacent to Equity Focus Communities. |
| Regional Connector | | | | | Project is 83% complete. Comprehensive planning for testing underway for 7th/Metro Center interfaces; Site work and restoration throughout alignment continues; and MEP and systems work continues in stations and guideway. Equity - 3 of 3 stations (100%) are within or adjacent to Equity Focus Communities. |
| Westside Purple Line Extension-Section 1 | | | | | Project is 71% complete. TBM tunnel mining is complete. The implementation and planning of post-tunnel construction activities continue. The Project's forecast Revenue Service Date is Fall 2024. Equity - This Project is not located within or adjacent to Equity Focus Communities. |
| Westside Purple Line Extension-Section 2 | | | | | Project is 45% complete and proceeding on schedule and within budget. Equity - This project is not located within or adjacent to Equity Focus Communities. |
| Westside Purple Line Extension-Section 3 | | | | | Project is 26% complete and proceeding on schedule and within budget. Equity - 1 of 2 stations (50%) are within or adjacent to Equity Focus Communities. |
| Willowbrook/Rosa Parks Station | | | | | Entire Transit Station is substantially complete and open to the public starting August 9 th . Punch List work, mainly north crossing and security systems work, will continue for a few months as the project team works toward full Project Closeout. Equity - 100% of the project is within or adjacent to Equity Focus Communities. |
| Airport Metro Connector | | | | | Early Works Phase site work continuing with site demolition and grading work. Primary station contract process has issued notice of intent to award to the winning bidder with NTP expected in Fall 2021 and construction start expected at end of 2021. Equity - 100% of the project is within or adjacent to Equity Focus Communities. |
| Division 20 Portal Widening Turnback | | | | | Project is 24% complete. Construction continues with the excavation and grading for duct banks and vaults, Portal excavation, utility installation, the 1st Bridge and duct banks and manholes for the Traction Power Substation. Upon execution of CN6/MOD20 contingency will be drawn significantly, and schedule dates will be updated as time impacts are unknown at this time. Updated information may be available at next reporting cycle. Equity - 100% of the project is within or adjacent to Equity Focus Communities. |
| I-210 Barrier Replacement | | | | | Project 1 design package is approved by Caltrans. Funding source(s) for Project 1 construction is still to be determined. Metro presented its design approach for Project 2 to Caltrans on August 18. Acceptance of this design approach by Caltrans is critical for Metro to proceed with Project 2. A presentation of the barrier results to Caltrans will occur in September. Equity - 8.53% of the corridor is within or adjacent to Equity Focus Communities |
| 1-5 North County Enhancements | | | | | Construction NTP is expected Summer 2021. Equity - This project is not located within or adjacent to Equity Focus Communities |
| I-5 North: SR 118 to SR 134 | | | | | Segment 1, 2 and 4 are completed. Segment 3 (Empire Ave & Burbank) is 92% complete. Equity - I-5 North: 4 of 4 segments of the corridor project are within or adjacent to Metro's Equity Focus Communities. Only 1 segment of the project remains to be completed. Caltrans is the lead on the project. |
| I-5 South: Orange County Line to I-605 | | | | | Segments 1, 3, 4, and the Carmenita Interchange are completed. Segment 2 (Valley View) is 82% complete. Segment 5 (Florence) is 94% complete and started the one-year plant establishment period in April 2021. Equity - I-5 South: 4 of 6 segments of the corridor project are within or adjacent to Metro's Equity Focus Communities. Only 2 segments of projects remain to be completed. Caltrans is the lead on the project. |

CRENSHAW/LAX TRANSIT PROJECT

| BUDGET | Approved | Previous | Current |
|-------------------------------|----------|------------|--|
| TIFIA | LOP* | Period** | Forecast** |
| \$2,148M | \$2,058M | \$2,148M | \$2,148M |
| Variance from Approved LOP: | | \$90M (4%) | \$90M (4%) OK |
| Variance from Revised Budget: | | | \$0 OK |

*At time of the award of contract - Board Approval June 2013
 **Excludes finance costs and includes \$10M Non-TIFIA activities

| SCHEDULE | Approved | (REVENUE OPERATION) | Current |
|---------------------------------|------------|---------------------|--|
| Original | Rebaseline | Previous | Forecast* |
| Oct.2019 | May 2020 | Winter 2021 | Winter 2021 |
| Variance from Original: | | +766d (26%) | +802d (26%) ! |
| Variance from Revised Schedule: | | +581d (23%) | +596d (24%) ! |

*Current Forecast is Contractor's April Schedule update

- Overall Project Progress is 99.1% complete.
- Contractor is not applying sufficient specialty work force to complete remaining work, testing/test reports on time.
- Remaining work is primarily underground station finishing, equipment, communications and systems testing.
- Metro continues to work with contractor to minimize delays and impacts to the project; emphasizing safety and reliability in final acceptance of project elements and systems.
- Equity - 8 of 8 stations (100%) are within or adjacent to Equity Focus Communities.



Leimert Park Station – Mosaic tile artwork installation



UG-3 – Staff performing system integration testing

September 2021



On target



Possible problem (5-10% variance)



Significant Impact (over 10% variance)





Metro 3

Construction Committee

Los Angeles County Metropolitan Transportation Authority



REGIONAL CONNECTOR TRANSIT PROJECT

BUDGET

| <u>FFGA</u> | <u>Approved LOP*</u> | <u>Previous Period**</u> | <u>Current Forecast**</u> |
|-------------------------------|----------------------|--------------------------|--|
| \$1,402M | \$1,420M | \$1,755M | \$1,755M |
| Variance from Approved LOP: | | \$335M (24%) | \$335M (24%)  |
| Variance from Revised Budget: | | \$0 |  |

*At time of the award of contract – Board Approval April 2014
 **Excludes finance costs

SCHEDULE

| <u>Original</u> | <u>Approved** Re-baseline</u> | <u>Previous Period</u> | <u>Current Forecast*</u> |
|---------------------------------|-------------------------------|------------------------|---|
| May 2021 | Fall 2022 | Fall 2022 | Fall 2022 |
| Variance from Original: | | +480d (19%) | +480d (19%)  |
| Variance from Revised Schedule: | | 0d |  |

*Current Forecast is Contractor's March Schedule update
 **Approval in process

(REVENUE OPERATION)

- Overall Project Progress is 83% complete.
- Little Tokyo/Arts District Station & Surrounding Area:** Cut & Cover guideway concrete, MSE wall modifications, station MEP and finishes continue.
- Historic Broadway Station:** Overbuild Load Transfer System (LTS) structural concrete continues; vent structures along Spring and Broadway continue; station finishes and MEP advancing per plan. Backfill operations continue.
- Grand Av Arts/Bunker Hill Station:** Schedule-critical elevator installations continue; backfill and restoration of joint communication trench construction is ongoing; systems and MEP busy on all levels, Ped Bridge advancing on-schedule.
- Flower Street:** Final utility work continues; cut-over plans and actions with 7th/Metro Station established; interface with Operations and Communication to mitigate impacts to ongoing rail service continues.
- Trackwork:** Remedial work underway on various installations to prepare for acceptance inspections. Preparations for special trackwork on Alameda underway.
- Systems:** Installation of signals and communications, as well as equipment and cabling for permanent power continuing; momentum gaining traction throughout alignment.
- Equity:** 3 of 3 stations (100%) are within or adjacent to Equity Focus Communities.



Asphalt pavement complete along Hope Street



1st Street Leg Plug Rail Installation

September 2021



On target



Possible problem (5-10% variance)



Significant Impact (over 10% variance)





Metro 4

Construction Committee

Los Angeles County Metropolitan Transportation Authority

WESTSIDE PURPLE LINE EXTENSION – SECTION 1



BUDGET

| | Approved | Previous | Current |
|-------------------------------|----------|--------------|--|
| FFGA | LOP* ** | Period** | Forecast** |
| \$2,822M | \$2,774M | \$3,129M | \$3,129M |
| Variance from Approved LOP: | | \$355M (13%) | \$355M (13%)  |
| Variance from Revised Budget: | | | \$0  |

*At time of the award of contract – Board Approval July 2014

**Excludes finance costs

SCHEDULE

| | Approved | Previous | Current |
|---------------------------------|------------|-------------|---|
| Original | Rebaseline | Period | Forecast* |
| Nov.2023 | Fall 2024 | Fall 2024 | Fall 2024 |
| Variance from Original: | | +365d (11%) | +365d (11%)  |
| Variance from Revised Schedule: | | | 0d  |

*Current Forecast is Contractor's April Schedule update

- Overall Project progress is 71% complete.
- Wilshire/La Brea Station:** Permanent utility installation/backfill (above the roof) activities, west hammerhead structure, MEP work and appendage construction are ongoing.
- Wilshire/Fairfax Station:** Structural concrete activities continue. Nine out of 16 concrete roof blocks have been placed to date. West hammerhead structure work moves forward. Entrance plaza and appendage work are ongoing.
- Wilshire/La Cienega Station:** TBM gantry removal is ongoing. East hammerhead, platform level interior walls and appendage construction are progressing.
- Reach 1 Tunnel:** All cross-passage structures are complete. Tunnel invert and walkway concrete activities continue. Track installation is scheduled for October 2021.
- Reach 2 Tunnel:** Cross passage excavation is underway.
- Budget/Schedule:** The Project's current target RSD is Fall 2024.
- Equity:** This Project is not located within or adjacent to Equity Focus Communities.



Reach 2 Cross-Passage Excavation Preparation



Track Level View of Wilshire/La Brea Station

WESTSIDE PURPLE LINE EXTENSION – SECTION 2

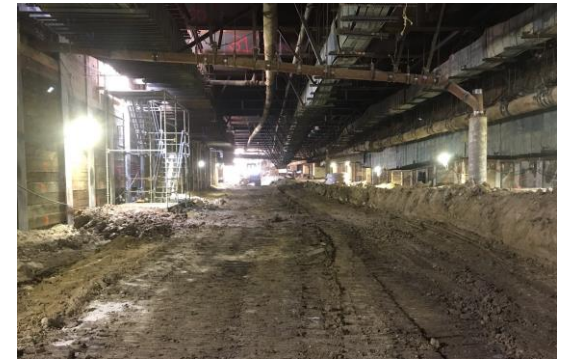
| BUDGET | Approved | Previous | Current |
|-------------------------------|-------------|-----------------|---|
| <u>FFGA</u> | <u>LOP*</u> | <u>Period**</u> | <u>Forecast**</u> |
| \$2,499M | \$2,441M | \$2,441M | \$2,441M |
| Variance from Approved LOP: | | \$0M (0%) | \$0M (0%) OK |
| Variance from Revised Budget: | | | \$0 OK |

*At time of the award of contract – Board Approval January 2017
 **Excludes finance costs

| SCHEDULE | | (REVENUE OPERATION) | |
|---------------------------------|----------------------------|------------------------|--|
| <u>Original</u> | <u>Approved Rebaseline</u> | <u>Previous Period</u> | <u>Current Forecast*</u> |
| Aug. 2025 | N/A | Summer 2025 | Summer 2025 |
| Variance from Original: | | +0d (0%) | +0d (0%) OK |
| Variance from Revised Schedule: | | | 0d OK |

*Current Forecast is Contractor's April Schedule update

- Overall Project progress is 45% complete as of period ending July 2021.
- **Century City Constellation Station**
 - Excavation of the station box is 28% complete as of August 9, 2021.
- **Wilshire/Rodeo Station**
 - Placement of concrete for invert slab is 64% complete, the remaining will be completed after the TBMs are walked through the station box.
 - Installation of waterproofing membrane, rebar, and framework for first level walls is ongoing.
- **Tunneling**
 - The conversion of the muck conveyance systems for both tunnels was completed on July 27, 2021.
 - Both tunnel boring machines (TBMs) “Ruth” and “Harriet” are operating within the City of Beverly Hills. Progress as of August 9, 2021, is as follows:
 - Ruth (eastbound subway tunnel) – 2,294ft (20%)
 - Harriet (westbound subway tunnel) – 2,416ft (21%)
- **Equity** - This project is not located within or adjacent to Equity Focus Communities



Constellation Station Box Excavation



Tunnel Muck Removal in Century City

September 2021

OK On target
 ◆ Possible problem (5-10% variance)
 ▲ Significant Impact (over 10% variance)

Construction Committee

Los Angeles County Metropolitan Transportation Authority



WESTSIDE PURPLE LINE EXTENSION – SECTION 3

BUDGET

| <u>FFGA</u> | <u>Approved LOP*</u> | <u>Previous Period**</u> | <u>Current Forecast**</u> |
|--------------------------------------|----------------------|--------------------------|---------------------------|
| \$3,599M | \$3,224M | \$3,224M | \$3,224M |
| <i>Variance from Approved LOP:</i> | | \$0M (0%) | \$0M (0%) OK |
| <i>Variance from Revised Budget:</i> | | | \$0 OK |

*At time of the award of contract – Board Approval February 2019

**Excludes finance costs

SCHEDULE

(REVENUE OPERATION)

| <u>Original</u> | <u>Approved Rebaseline</u> | <u>Previous Period</u> | <u>Current Forecast*</u> |
|--|----------------------------|------------------------|--------------------------|
| Mar. 2027 | N/A | Spring 2027 | Spring 2027 |
| <i>Variance from Original:</i> | | +0d (0%) | +0d (0%) OK |
| <i>Variance from Revised Schedule:</i> | | | 0d OK |

*Current Forecast is Contractor's March Schedule update

**Approval in process

- Overall Project Progress is 26% complete.
- Final design progress is 87% complete.
- Tunneling
 - TBM Iris (BR) – Full gantry system is undergoing testing and commission for relaunch in August 2021.
 - TBM Aura (BL) – Starter tunnel completed; starter gantry removed and full gantry assembly underway.
- Stations
 - Westwood/VA: Utility relocation continues, Station contract Support of Excavation piling completed.
 - Westwood/UCLA: Utility relocations continues; sound wall at UCLA Lot 36 completed for upcoming piling work.
- Equity - 1 of 2 stations (50%) are within or adjacent to Equity Focus Communities.



Conveyor Belt Tests at Tail Track Exit Shaft



Gates Installed in Sound Wall at Construction Staging Area (UCLA Lot 36)

September 2021

OK On target



◆ Possible problem (5-10% variance)



▲ Significant Impact (over 10% variance)

WILLOWBROOK/ROSA PARKS STATION

| BUDGET | Approved LOP* | Previous Period | Current Forecast |
|------------|------------------|--------------------|---------------------|
| TOTAL COST | \$109.3M | \$128.4M | \$128.4M |

| SCHEDULE | Approved Rebaseline | (Substantial Completion) Previous Period | Current Forecast* |
|------------|------------------------|--|----------------------|
| Original | Rebaseline | Period | Forecast* |
| March 2021 | June 2021 | June 2021 | June 2021 |

Variance from Approved LOP: \$18.5M (16.5%) 
 Variance from Revised Budget: \$0 

Variance from Original: +90d (8%) 
 Variance from Revised Schedule: 0d 

*At time of the award of contract – Board Approval (May 2018)

*Current Forecast is Contractor's May Schedule update

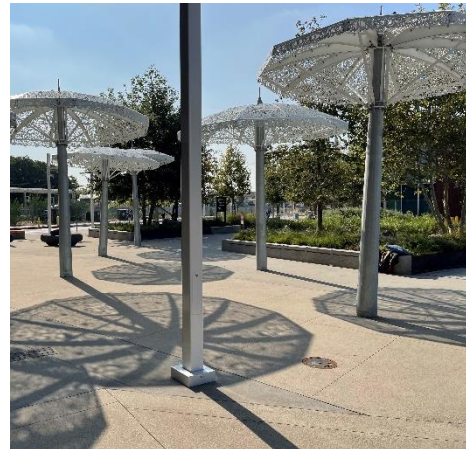
- Package A and C: Remaining punch lists items have been consolidated and are being closed out. Full close-out of punch list expected by end of August. North Pedestrian Crossing and signal case installation in final stages. All of this work has been performed with minimal interruptions to public service.
- Package B: This final phase is substantially complete and open to the public as of August 9th. Focus now on completing punch list work.
- Equity - 100% of the project is within or adjacent to Equity Focus Communities.



West Entrance



North Entry Monument





Art Work completed




New Bus Bays

September 2021

 On target

 Possible problem
(5-10% variance)

 Significant Impact
(over 10% variance)

Construction Committee

Los Angeles County Metropolitan Transportation Authority

AIRPORT METRO CONNECTOR (AMC) PROJECT

| BUDGET | Approved LOP* | Previous Period | Current Forecast |
|-------------------------------|---------------|-----------------|---------------------------|
| TOTAL COST | \$898.6M | \$898.6M | \$898.6M |
| Variance from Approved LOP: | | \$0M (0%) | \$0M (0%) OK |
| Variance from Revised Budget: | | | \$0 OK |

*Approved May 2021 Board

| SCHEDULE | Approved Rebaseline | (Revenue Operation) Previous Period | Current Forecast* |
|---------------------------------|---------------------|-------------------------------------|--------------------------|
| Original June 2024 | N/A | June 2024 | June 2024 |
| Variance from Original: | | +0d (0%) | +0d (0%) OK |
| Variance from Revised Schedule: | | | 0d OK |

*Current Forecast is Metro's May Schedule update

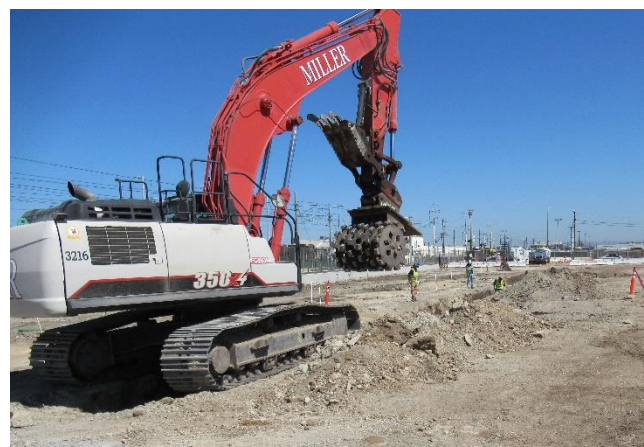
- Early Works Phase construction continues with demolition and site grading work.
- Primary Station Construction Contract process has issued Notice of Intent to Award to winning bidder with full NTP scheduled for Fall 2021.
- APM Guideway structural completed with APM Station heavy structural installation in progress and scheduled for completion fall of 2021 – clearing the area for AMC Station work to begin.
- Equity - 100% of the project is located within or adjacent to Equity Focus Communities.



Grading Work continues



Duct Bank Work



On Site Utility Work

DIVISION 20 PORTAL WIDENING TURNBACK

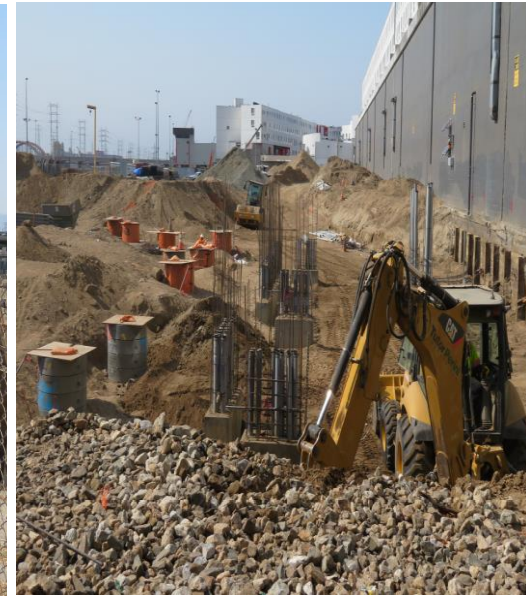
| BUDGET | Approved LOP* | Previous Period | Current Forecast |
|-------------------------------|------------------|--------------------|---|
| TOTAL COST | \$801.7M | \$801.7M | \$801.7M |
| Variance from Approved LOP: | | \$0M (0%) | \$TBD ◆ |
| Variance from Revised Budget: | | | \$TBD ◆ |

*At time of the award of contract – Board Approval (February 2020)

| SCHEDULE | Approved Rebaseline | (Substantial Completion) Previous Period | Current Forecast* |
|---------------------------------|------------------------|--|---|
| Original June 2024 | N/A | June 2024 | TBD |
| Variance from Original: | | +0d (0%) | TBD ◆ |
| Variance from Revised Schedule: | | | TBD ◆ |

*Current Forecast is Contractor's Schedule update

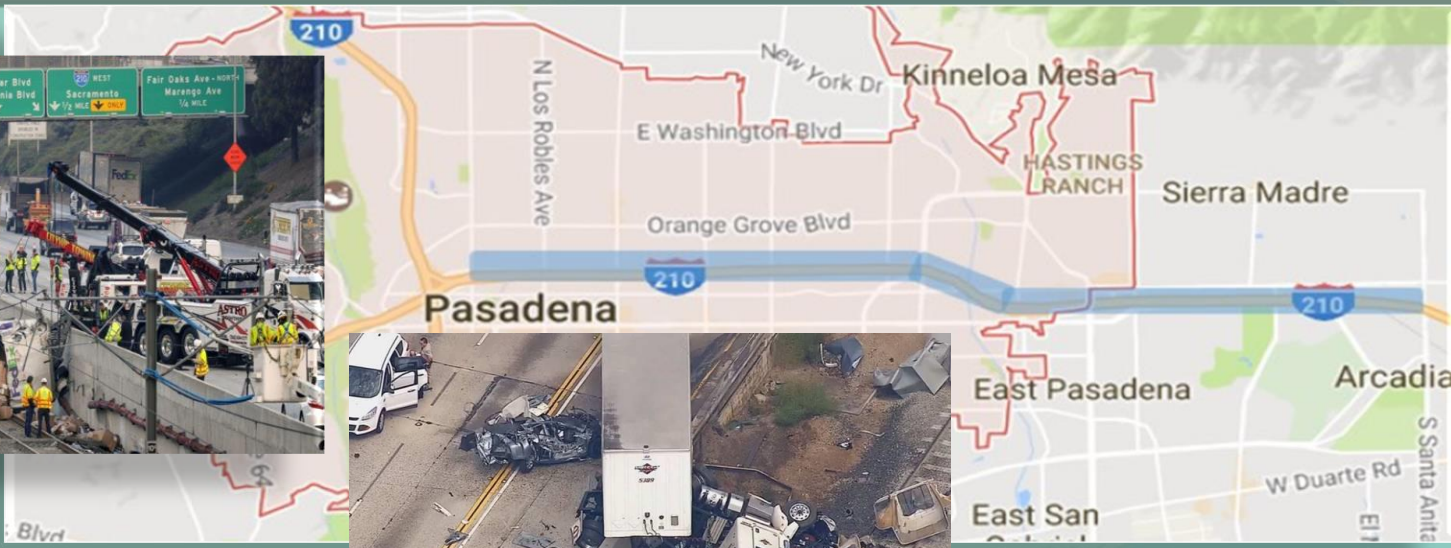
- **Overall Project progress is 24% complete.**
Includes Real Estate Acquisitions, Environmental, Design, Contract Mobilization, Early Demolition, Power, Utility contracts and contract change orders
- **C1136 Portal Widening Turnback Contract**
PWT C1136 Contract progress is 30%.
Phase 1 Track, utilities, and civil work continues
1st Street Bridge Rehabilitation and Portal excavation
- **Major Change Orders to Date:**
Hazardous Material Removal
1st Street Bridge Rehabilitation
Completion of Utility Contracts
3rd Party Unforeseen Interfaces
Design Revisions (*in progress*)
- **C1184 Traction Power Substation Contract** at 57%
- **Coordination with Adjacent Projects**
Purple Line Extension (PLE1)
Regional Connector
Metro Center Project
6th Street Bridge (City of L.A. Project)
- **Continued Regular risk assessments to determine budget/schedule**
- **Equity - 100% of the project is located within or adjacent to Equity Focus Communities**





Gold Line/I-210 Safety Enhancement Project

Project Overview & Update

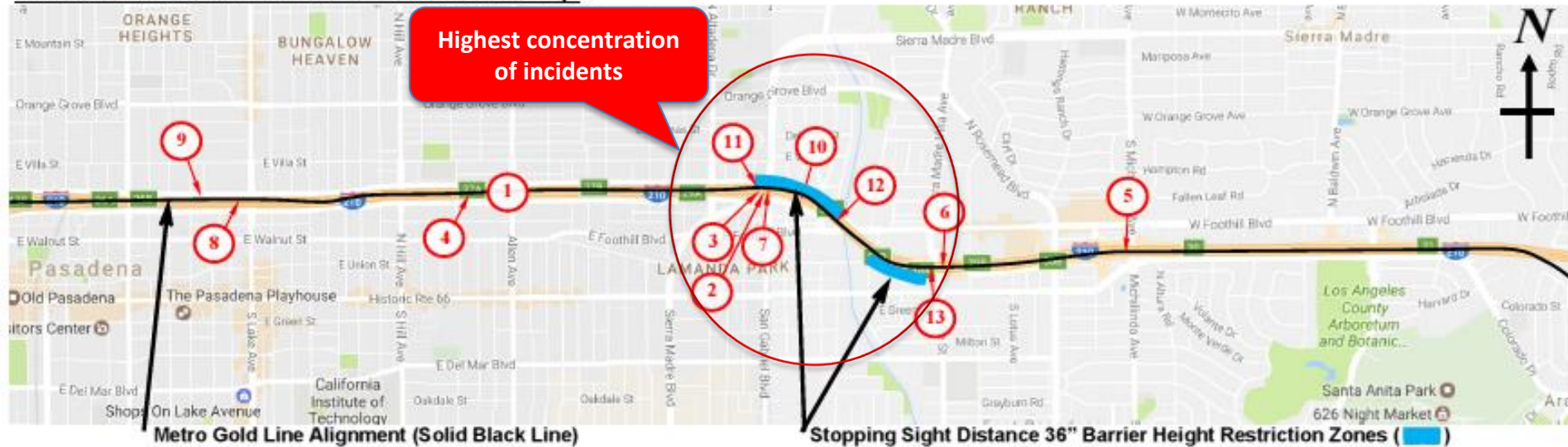


Metro

Gold Line/I-210 Safety Enhancement Project

Incident History

Metro Gold Line: I-210 Median Vehicle Breach Incident Map:



| | |
|-----------------|----|
| Total Accidents | 13 |
| Tractor/Trailer | 11 |
| Dark- AM | 7 |
| Dark-PM | 0 |
| Daytime | 6 |
| Eastbound | 5 |
| Westbound | 7 |

Metro Gold Line: I-210 Median Barrier Crash Confirmed Incident Summary

This summary includes all confirmed cases where vehicles have breached the barrier and entered into Metro's Operating ROW.

| | Date: | Time: | Direction: | Location: | Vehicle Type: | Aggravations: | | Δ Time: (months) |
|---|------------------------|------------|------------|---|--------------------------|---------------|-------|------------------|
| | | | | | | Sun: | Rain: | |
| ① | 10/13/2007 | 1:20 A.M. | Unrecorded | Allen Station | Tractor Trailer | | | N/A |
| ② | 10/7/2010 | 8:00 A.M. | East Bound | Betw. Allen and Sierra Madre Villa Stations | Tractor Trailer & Pickup | | | 36 |
| ③ | 11/21/2013 | 2:57 A.M. | East Bound | Betw. Allen and Sierra Madre Villa Stations | Tractor Trailer | | | 37 |
| ④ | 4/24/2014 ¹ | 1:00 P.M. | East Bound | Near Corson St. on ramp | Tractor Trailer | | | 5 |
| ⑤ | 8/11/2014 | 2:30 P.M. | West Bound | West of Michillinda Ave. | Tractor Trailer | | | 4 |
| ⑥ | 3/6/2016 | 3:00 A.M. | West Bound | Near Sierra Madre Villa Station | Tractor Trailer | X | | 19 |
| ⑦ | 12/22/2016 | 4:52 A.M. | East Bound | I-210 near San Gabriel Blvd. | Tractor Trailer | | X | 9 |
| ⑧ | 1/17/2018 | 11:45 A.M. | East Bound | 200 feet west of N. Lake Avenue | Midsize Sedan | | | 13 |
| ⑨ | 4/26/2018 | 1:30 A.M. | West Bound | 800 feet west of N. Lake Avenue | Tractor Trailer | | | 3 |
| ⑩ | 10/13/2018 | 7:00 A.M. | West Bound | 800 feet east of San Gabriel Blvd. | Tractor Trailer | | X | 6 |
| ⑪ | 11/22/2018 | 1:55 A.M. | West Bound | 200 feet west of San Gabriel Blvd. | Tractor Trailer | | | 1 |
| ⑫ | 8/15/2019 | 6:15 P.M. | West Bound | 350 feet east of N. Sunnyslope Ave. | Honda Midsize SUV | X | | 9 |
| ⑬ | 7/26/2021 | 4:25 A.M. | West Bound | 200 feet west of Sierra Madre Blvd. | Tractor Trailer | | X | 23 |

Δ Time = This is the time elapsed from the previous incident in months Average Frequency of Last 10 known incidents = **9 months**

1) April 24, 2014 was the first time Metro began recording incursion incidents into the Metro (L) Line I-210 Corridor Operating R.O.W.



Metro

Gold Line I-210 Barrier Replacement Standardization at the S-Curve/Current Design Proposal

Freeway design corrections necessary to standardize the S-Curve area:

- Widening the freeway toward the outside (min. 20 feet)
- Reconstruction of local interchanges
- Widening/reconstruction/seismic retrofit of bridges
- Reconstruction of retaining walls and sound walls
- Realignments of local streets

Impacts:

- A full-scale environmental process
- Acquisition of substantial right-of-way
- Major closures and traffic congestion during construction
- Estimated project cost: >\$1B

Current constraints on major investment on freeways:

- No support for ROW acquisitions
- No funding available

Design Being Proposed:

- Avoids major freeway widening
- Maintains or slightly improves the current non-standard features
- At the S-Curve, maintain the current breaking taillight line of sight
- Avoids extended HOV Lane closure during construction by providing a special design for the barrier on retaining walls
- Freeway lane closures and single tracking during construction will be limited to night and some weekends to avoid major traffic congestion

Gold Line/I-210 Safety Enhancement Project

Safety Barrier Project



Project 2:

- Final design by Fall 2022
- Estimated construction cost \$325M

If fully funded by 2024:

- Construction start 2026
- Construction completion 2028

Project 1:

- Final design completed (3/2021)
- Estimated construction cost \$100M

If fully funded by April 2023:

- Construction start 2024
- Construction completion 2025



Metro

Gold Line/I-210 Safety Enhancement Project

Early Corrective/Preventive Measures

- Provide advisory information to truck operators
- Assign more CHP officers for speed enforcement
- Replace regulatory signs to limit trucks to right lane only
- Install additional regulatory traffic signs for lower speed limits
- Install Active Traffic Management System (TMS) Signage



I-5 Construction Projects (Administered by Metro)



September 2021



Construction Committee

Los Angeles County Metropolitan Transportation Authority

I-5 NORTH COUNTY ENHANCEMENTS

| BUDGET | Approved LOP* | Previous Period | Current Forecast |
|-------------------------------|---------------|-----------------|---|
| TOTAL COST | \$679.3M | \$679.3M | \$679.3M |
| Variance from Approved LOP: | | \$0M (0%) | \$0M (0%)  |
| Variance from Revised Budget: | | | \$0  |

*At time of the award of contract – Board Approval (March 2021)

| SCHEDULE | Approved Rebaseline | (Substantial Completion) Previous Period | Current Forecast* |
|---------------------------------|---------------------|--|---|
| Original | | | |
| Spring 2026 | N/A | Spring 2026 | Spring 2026 |
| Variance from Original: | | +0d (0%) | 0d (0%)  |
| Variance from Revised Schedule: | | | N/A  |

*Current Forecast is Metro's Internal Schedule update

- Notice to Proceed is expected to be issued in summer
- Construction Community Meeting and Groundbreaking anticipated in the fall
- Life of Project budget established in March
- Equity - This project is not located within or adjacent to Equity Focus Communities



I-5 Construction Projects (By Caltrans)



I-5 NORTH: SR 118 TO SR 134

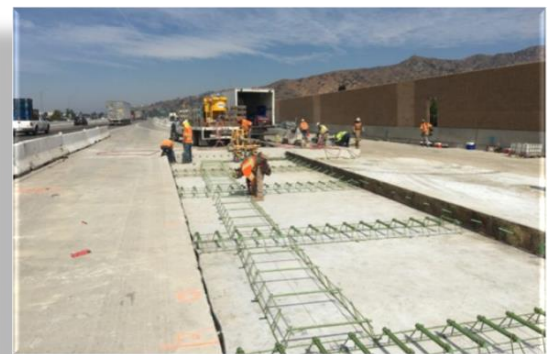
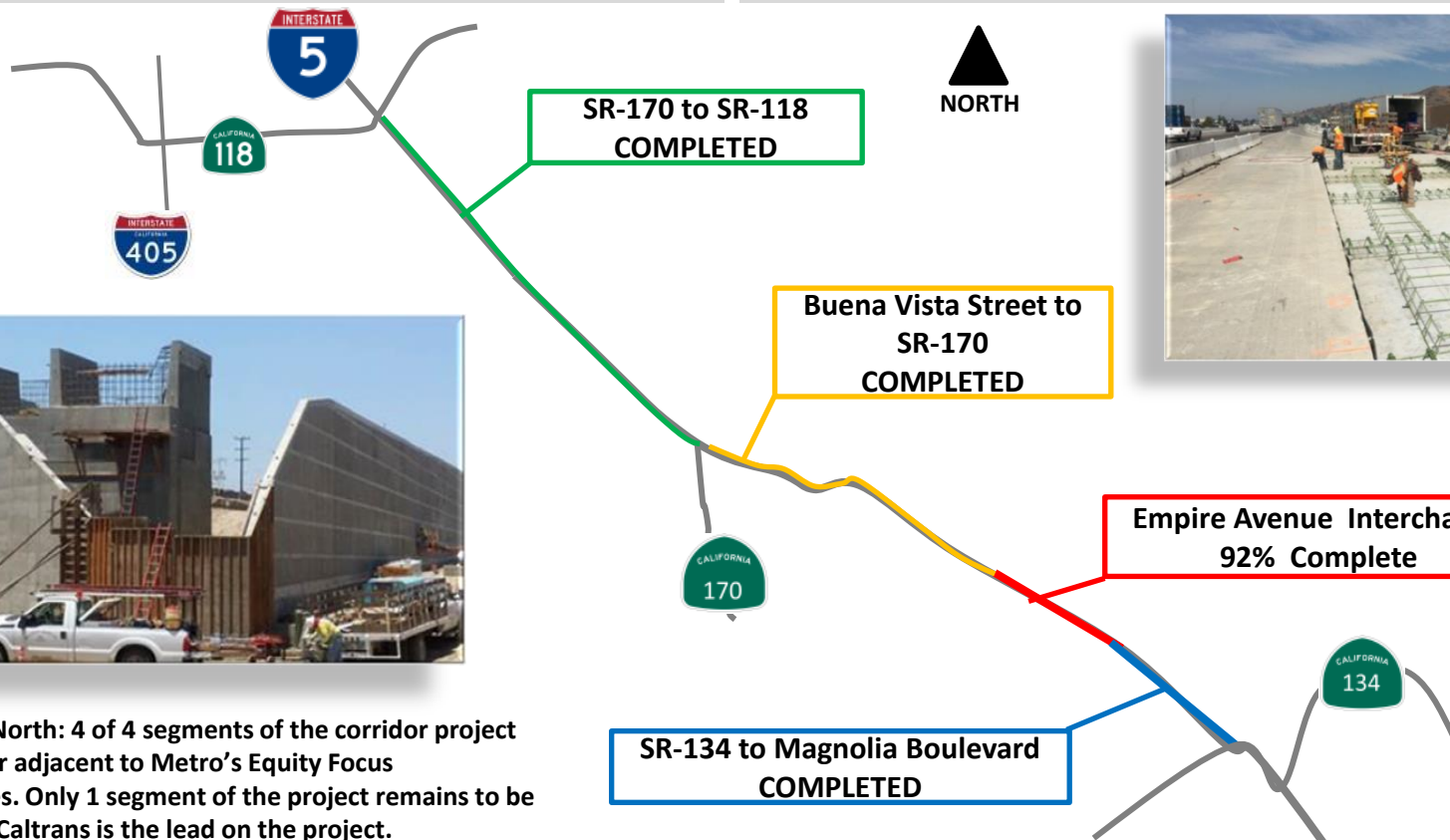


| BUDGET | Approved LOP* | Previous Period | Current Forecast |
|-------------------------------|---------------|-----------------|------------------|
| TOTAL COST | \$845.1M | \$954.1M* | \$935.3M* |
| Variance from Approved LOP: | | \$109M (13%) | \$90.2M (11%) |
| Variance from Revised Budget: | | \$ 73.2M (8%) | \$ 54.4M (6%) |

*At time of the award of contract – Board Approval (December 2012)

| SCHEDULE | (Anticipated Project Completion) | | | |
|---------------------------------|----------------------------------|---------------------|-----------------|-------------------|
| | Original | Approved Rebaseline | Previous Period | Current Forecast* |
| | Fall 2017 | Summer 2022 | Spring 2023 | Spring 2023 |
| Variance from Original: | | | +2034d (77%) | +2034d (77%) |
| Variance from Revised Schedule: | | | +266d (6%) | +266d (6%) |

* Current Forecast is Contractor's April Schedule update



- Equity - I-5 North: 4 of 4 segments of the corridor project are within or adjacent to Metro's Equity Focus Communities. Only 1 segment of the project remains to be completed. Caltrans is the lead on the project.

September 2021

On target
 Possible problem (5-10% variance)
 Significant Impact (over 10% variance)

Construction Committee

Los Angeles County Metropolitan Transportation Authority

* Risk Analysis, May 2021 with the Approved Loan Term Amount



I-5 SOUTH: ORANGE COUNTY LINE TO I-605

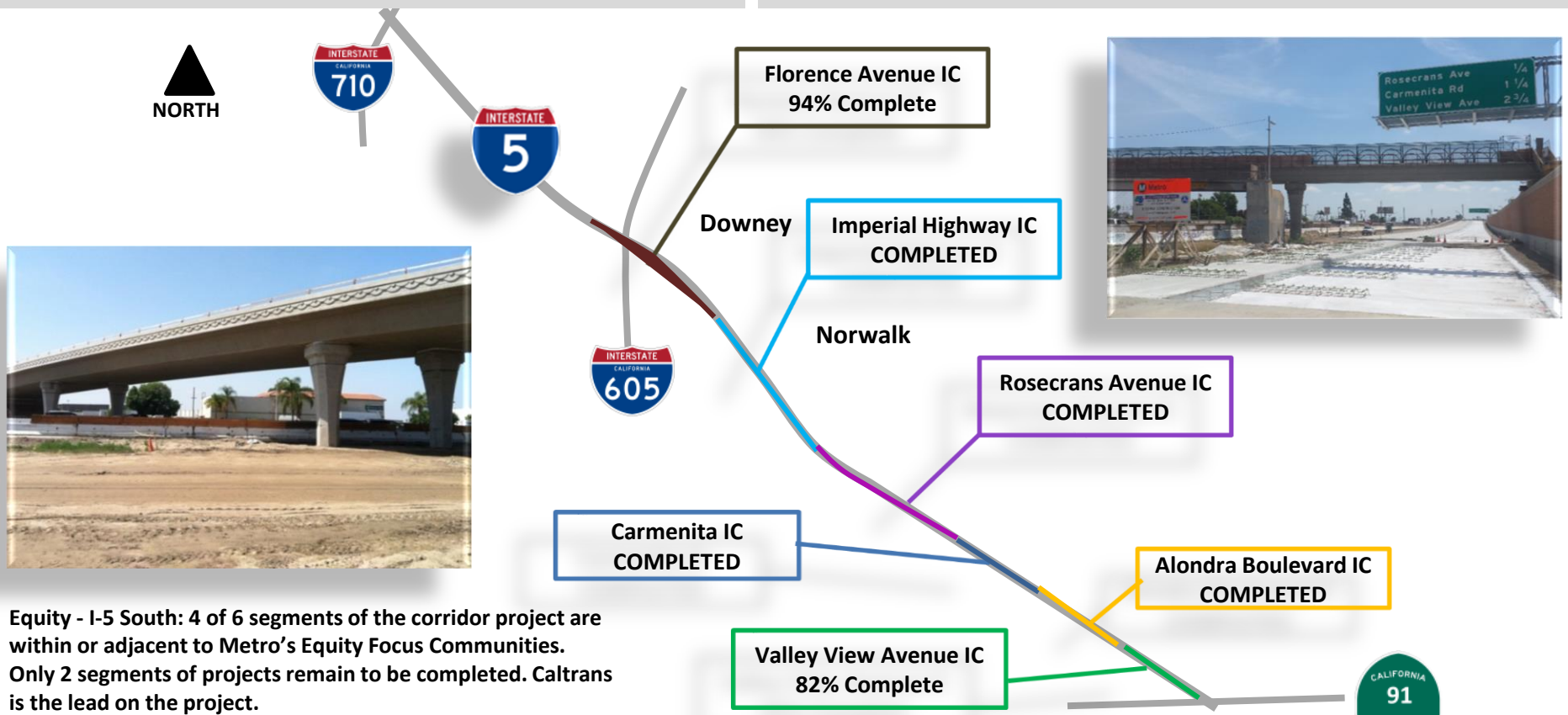


| BUDGET | Approved | Previous | Current | |
|-------------------------------|----------|------------|------------|----|
| | LOP* | Period | Forecast | |
| TOTAL COST | \$1,844M | \$1,888M | \$1,888M* | OK |
| Variance from Approved LOP*: | | \$44M (2%) | \$44M (2%) | OK |
| Variance from Revised Budget: | | \$0 | \$0 | |

* At time of the award of contract – Board Approval (Jun 2013 & May 2009)

| SCHEDULE | (Anticipated Project Completion) | | | |
|---------------------------------|----------------------------------|--------------|--------------|---|
| | Approved | Previous | Current | |
| Original | Rebaseline | Period | Forecast* | |
| Winter 2016 | Spring 2022 | Spring 2023 | Spring 2023 | |
| Variance from Original: | | +2324d (87%) | +2324d (87%) | ! |
| Variance from Revised Schedule: | | +372d (10%) | +372d(10%) | ♦ |

*Current Forecast is Contractor's April Schedule update



- Equity - I-5 South: 4 of 6 segments of the corridor project are within or adjacent to Metro's Equity Focus Communities. Only 2 segments of projects remain to be completed. Caltrans is the lead on the project.

September 2021
 Construction Committee
 Los Angeles County Metropolitan Transportation Authority

● On target
 ♦ Possible problem (5-10% variance)
 ! Significant Impact (over 10% variance)



* Risk Analysis, Feb 2021