Program Management Major Project Status Report

Presented By Bryan Pennington Chief Program Management Officer (Interim)

September 2021

Construction Committee Los Angeles County Metropolitan Transportation Authority



PROJECT BUDGET & SCHEDULE STATUS SUMMARY CHART

Cost Performance		ormance	Schedule Performance		
Project	Variance Approved LOP	Variance Revised Budget	Variance Original	Variance Revised Schedule	Comments
Crenshaw/LAX	OK	6		A	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		OK		<u></u>	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		Ø		<u></u>	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	<u>ok</u>	K	<u>()</u>	<u>o</u>	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	8	8	<u>ok</u>	<u>()</u>	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		б	\diamond	•	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	<u>o</u> k	K	<u>()</u>	<u>()</u>	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	\diamond	\diamond	\diamond	\diamond	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	OK	ŏ	<u></u>	ø	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	ø	6	<u>ok</u>	<u>ok</u>	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		\diamond		\diamond	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	OK	ĸ		\diamond	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.
September 2021 Construction Comm				target	 Possible problem (5-10% variance) Significant Impact (over 10% variance)
Los Angeles County	Metro	politar	n Trans	portatio	on Authority Metro 2

CRENSHAW/LAX TRANSIT PROJECT

BUDGET	Approved	Previous	Current	SCHEDULE
	LOP* \$2,058M Approved LOP: Revised Budget:	<u>Period**</u> \$2,148M \$90M (4%)	Forecast** \$2,148M \$90M (4%) © \$0 or	Original Oct.2019 Variance from
*At time of the awa	Variance from			
	costs and includes \$1			*Current Forecast

SCHEDULE	Approved	(REVENUE O Previous	PERATION) Current
<u>Original</u>	Rebaseline	Period	Forecast*
Oct.2019	May 2020	Winter 2021	Winter 2021
Variance from C	Driginal:	+766d (26%)	+802d (26%) 🛕
Variance from F	Revised Schedul	e: +581d (23%)	+596d (24%) 🔥
*Current Forecast is	s 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



Possible problem (5-10% variance)



Significant Impact (over 10% variance)



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REGIONAL CONNECTOR TRANSIT PROJECT

BUDGET	Approved	Previous	Current
<u>FFGA</u> \$1,402M	LOP* \$1,420M	<u>Period**</u> \$1,755M	<u>Forecast**</u> \$1,755M
Variance from A	• •	\$335M (24%)	\$335M (24%) \$0 or

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

SCHEDULE	(REVENUE OPERATION)				
OUNEDOLL	Approved**	Previous	Current		
<u>Original</u>	Re-baseline	Period	Forecast*		
May 2021	Fall 2022	Fall 2022	Fall 2022		
Variance from Or		+480d (19%)	+480d (19%) 🛕		
Variance from Re	evised Schedule:		0d 👩		

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

- 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



^{1&}lt;sup>st</sup> Street Leg Plug Rail Installation

September 2021



Possible problem (5-10% variance)



Significant Impact (over 10% variance)



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WESTSIDE PURPLE LINE EXTENSION – SECTION 1

BUDGET	Approved	Previous	Current
<u>FFGA_</u>	LOP* **	Period**	Forecast**
\$2,822M	\$2,774M	\$3,129M	\$3,129M
Variance from Ap		\$355M (13%)	\$355M (13%) 🛕
Variance from Rev	vised Budget:		\$0 💽

SCHEDULE		(REVENUE OPERATION)					
	Approved	Previous	Current				
<u>Original</u>	Rebaseline	Period	Forecast*				
Nov.2023	Fall 2024	Fall 2024	Fall 2024				
Variance from O	riginal:	+365d (11%)	+365d (11%) 🛕				
Variance from Revised Schedule: 0d 0d							
*Current Forecast is Contractor's April Schedule update							

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

- 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.

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Possible problem (5-10% variance)



Significant Impact (over 10% variance)



Reach 2 Cross-Passage Excavation Preparation



Track Level View of Wilshire/La Brea Station



WESTSIDE PURPLE LINE EXTENSION – SECTION 2

BUDGET	Approved	Previous	Current
FFGA_	LOP*	Period**	Forecast**
\$2,499M	\$2,441M	\$2,441M	\$2,441M
Variance from A	pproved LOP:	\$0M (0%)	\$0M (0%) 🤒
Variance from R	evised Budget:		\$0 0

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

	(REVENUE OPERATION)			
Approved	Previous	Current		
Rebaseline	Period	Forecast		
N/A	Summer 2025	Summer		
riginal:	+0d (0%)	+0d (0%		
evised Schedule	:	0d		
	Rebaseline N/A iginal:	Approved RebaselinePrevious PeriodN/ASummer 2025		

*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

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On target

Possible problem (5-10% variance)



Significant Impact (over 10% variance)



Constellation Station Box Excavation



Tunnel Muck Removal in Century City



2025

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WESTSIDE PURPLE LINE EXTENSION – SECTION 3

BUDGET	Approved	Broviouo	Current	SCHEDULE		(REVENUE OPERATION)	
EEC A	Approved LOP*	Previous Period**	Current Forecast**		Approved	Previous	Current
<u>FFGA</u> \$3,599M	\$3.224M	\$3,224M	\$3,224M	<u>Original</u>	Rebaseline	Period	Forecast*
Variance from A	+-)	\$0M (0%)	\$0M (0%) 🕟	Mar. 2027	N/A	Spring 2027	Spring 2027
Variance from Re		, , ,	\$0 \$	Variance from O		+0d (0%)	+0d (0%) 💿
*At time of the award	d of contract – Board	Approval Februarv			evised Schedule:		Od 😡
**Excludes finance of		,,		*Current Forecast is **Approval in proce	s Contractor's March ss	Schedule update	

- 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

On target

Possible problem (5-10% variance)



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

Significant Impact (over 10% variance)



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WILLOWBROOK/ROSA PARKS STATION

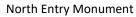
BUDGET	Approved	Previous	Current					
	LOP*	Period	Forecast					
TOTAL COST	\$109.3M	\$128.4M	\$128.4M					
Variance from Approved LOP: \$18.5M (16.5%) \$18.5M (16.5%)								
Variance from Revised Budget: \$0 or								
*At time of the award of contract – Board Approval (May 2018)								

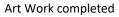
	SCHEDULE	Approved	(Substantial Previous	Completion) Current
	<u>Original</u>	Rebaseline	Period	Forecast*
	March 2021	June 2021	June 2021	June 2021
	Variance from Or	iginal:	+90d (8%)	+90d (8%) 🔶
)	Variance from Re	evised Schedule:		0d
	*Current Forecast is			

- 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





New Bus Bays





Possible problem (5-10% variance)



Significant Impact (over 10% variance)



Construction Committee

AIRPORT METRO CONNECTOR (AMC) PROJECT

BUDGET	Approved	Previous	Current		SCHEDULE		(Revenue O	peration)	
DODOLI	LOP*	Period	Forecast		••••	Approved	Previous	Current	
TOTAL COST					<u>Original</u>	Rebaseline	Period	Forecast*	
TOTAL COST	\$898.6M	\$898.6M	\$898.6M		June 2024	N/A	June 2024	June 2024	
Variance from A	pproved LOP:	\$0M (0%)	\$0M (0%)	ОК	Variance from O	riginal:	+0d (0%)	+0d (0%)	0
Variance from R	evised Budget:		\$0	ОК	Variance from R	evised Schedule:		0d	
*Approved May 202	1 Board				*Current Forecast i	's Metro's May Scheo	lule 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





Possible problem (5-10% variance)



Significant Impact (over 10% variance)



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DIVISION 20 PORTAL WIDENING TURNBACK

BUDGET	Approved	Previous	Current		
	LOP*	Period	<u>Forecast</u>		
TOTAL COST	\$801.7M	\$801.7M	\$801.7M		
Variance from Ap Variance from Re	-	\$0M (0%)	\$TBD \$TBD		

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

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

On target

Equity - 100% of the project is located within or adjacent to Equity Focus Communities

September 2021

Possible problem (5-10% variance)

Significant Impact (over 10% variance)



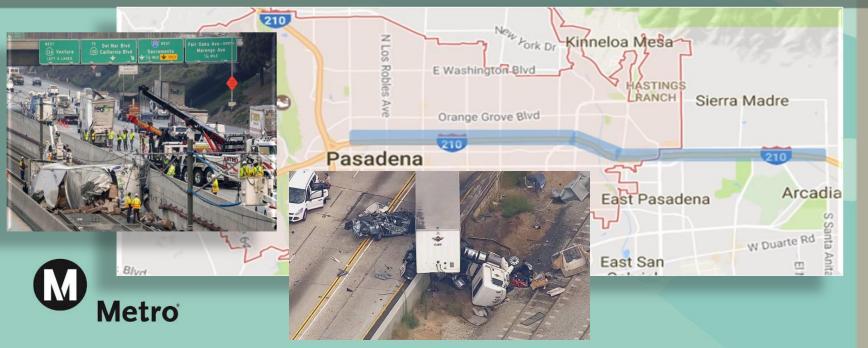
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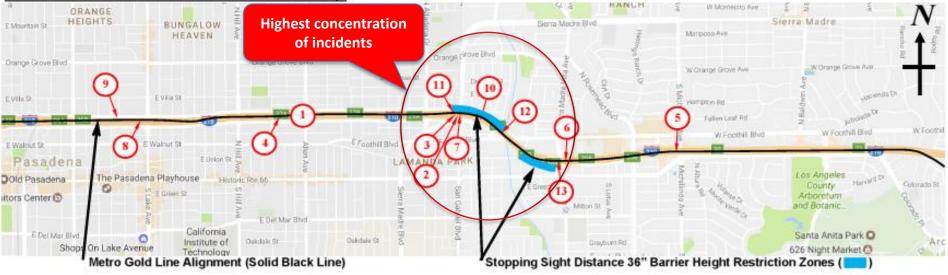
Gold Line/I-210 Safety Enhancement Project Project Overview & Update

11



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



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

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.

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:

Metro

- 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

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)



Metro 16

September 2021

Construction Committee

I-5 NORTH COUNTY ENHANCEMENTS

BUDGET	Approved	Previous	Current	
	LOP*	Period	<u>Forecast</u>	
TOTAL COST	\$679.3M	\$679.3M	\$679.3M	
Variance from Ap Variance from Re	-	\$0M (0%)	\$0M (0%) \$0	

	SCHEDULE	Approved	(Substantial C Previous	completion) Current
	<u>Original</u>	<u>Rebaseline</u>	Period	Forecast*
	Spring 2026	N/A	Spring 2026	Spring 2026
6	Variance from Or	iginal:	+0d (0%)	0d (0%)
k	Variance from Re	vised Schedule:		N/A
	*Current Forecast is	hedule update		

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

- 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



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ok) On target

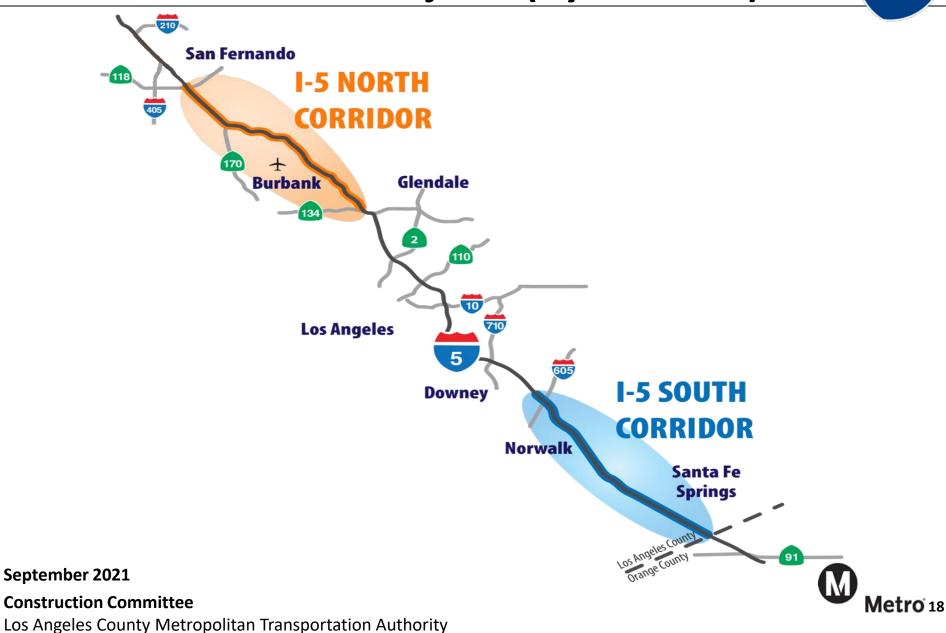
Possible problem (5-10% variance)



Significant Impact (over 10% variance)



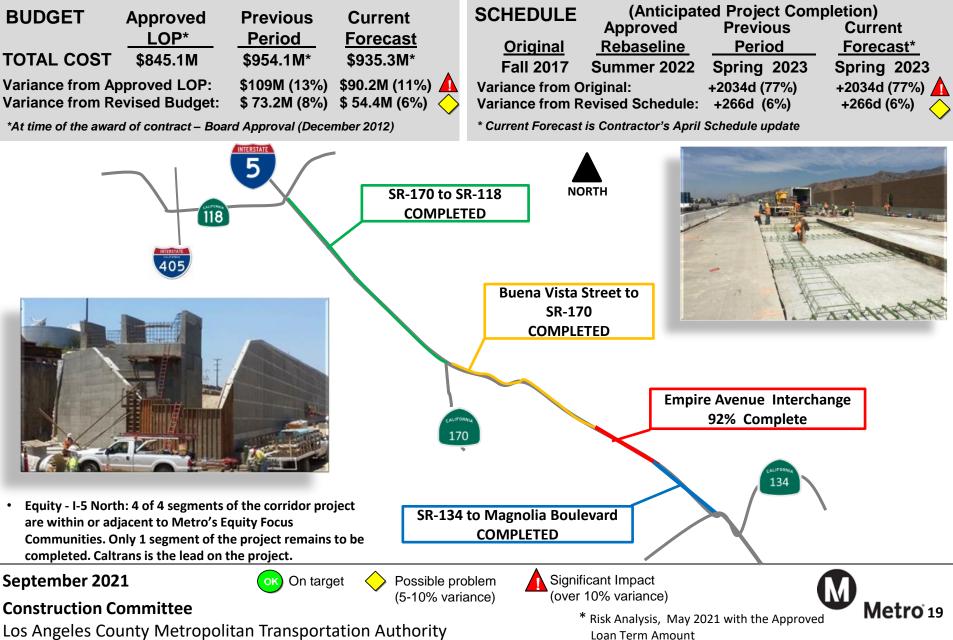
I-5 Construction Projects (By Caltrans)



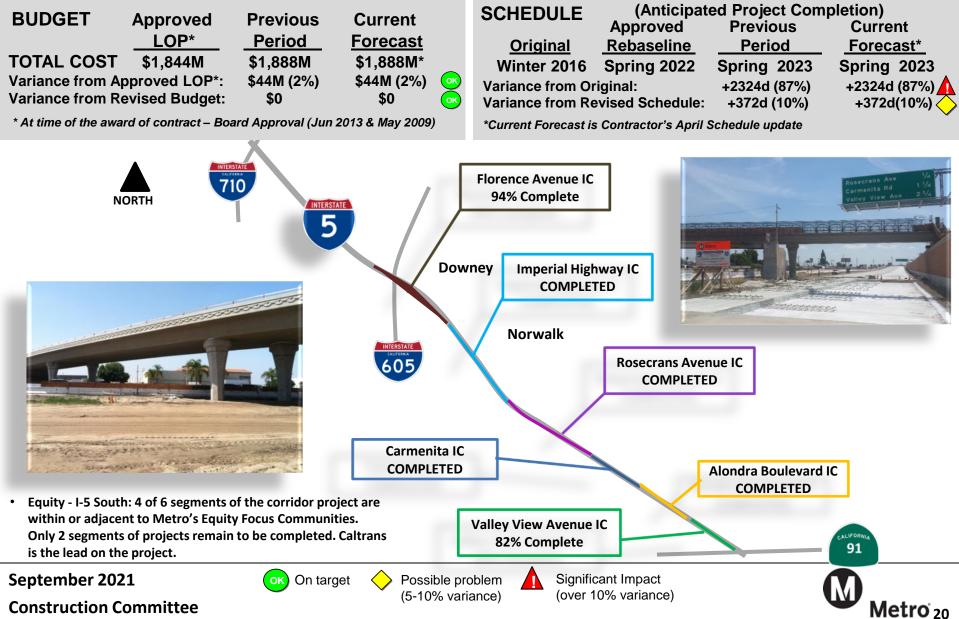
INTERSTATE

I-5 NORTH: SR 118 TO SR 134





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



^{*} Risk Analysis, Feb 2021