

Los Angeles County
Metropolitan Transportation Authority

Regional Connector Transit Project

QUARTERLY PROJECT STATUS REPORT

December 2019



Metro[®]

REGIONAL CONNECTOR TRANSIT PROJECT

QUARTERLY PROJECT STATUS REPORT

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December 2019

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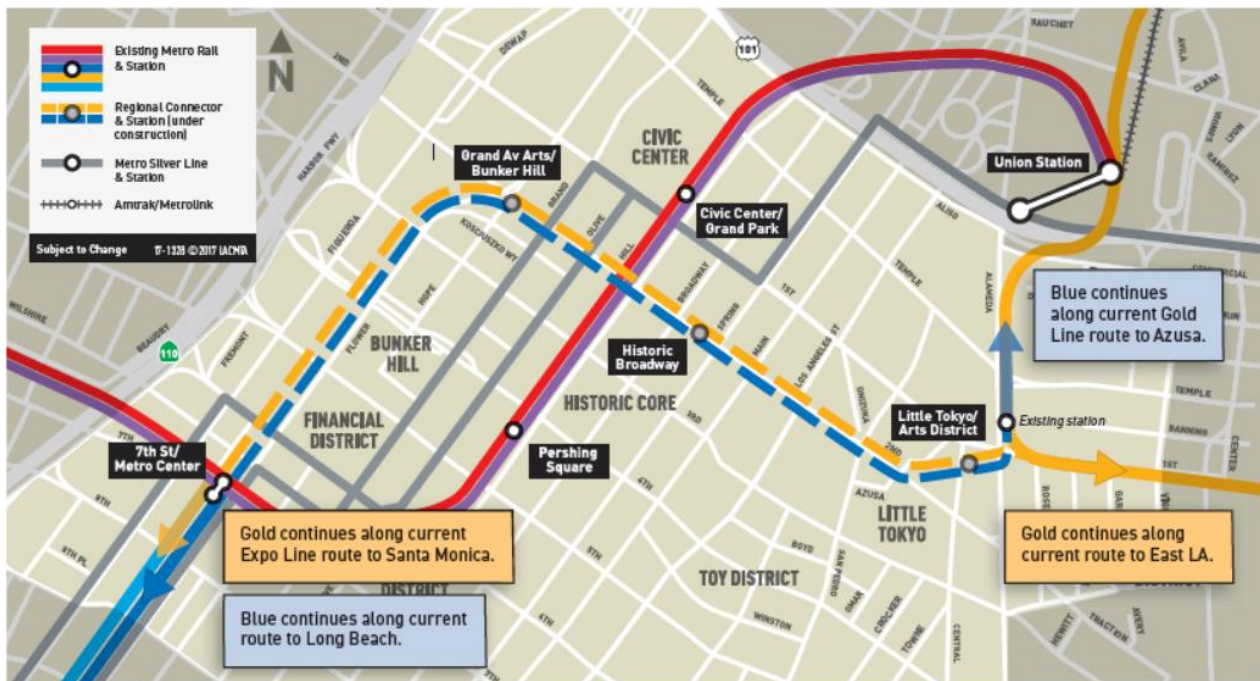
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PROJECT OVERVIEW

Project Background

The Regional Connector Transit Project (Project) will link the terminus of the Blue and Expo Lines at 7th/Metro Center to the Gold Line near the current Little Tokyo/Arts District Station through a new 1.9-mile underground alignment in downtown Los Angeles. The alignment includes three underground stations: Grand Av Arts/Bunker Hill; Historic Broadway; and Little Tokyo/Arts District.

From the existing 7th Street/Metro Center Station, the Project alignment will extend north under Flower Street to 2nd Street. It will then proceed east underneath 2nd Street to just west of Central Avenue where the alignment will veer northeast under privately-held property to the new Little Tokyo/Arts District Station at 1st and Central. The alignment continues briefly eastward through a Wye Junction (Wye) constructed beneath the 1st and Alameda intersection. To the north of the Wye at Temple and Alameda, and to the east of the Wye at 1st and Vignes, trains will connect with the Gold Line by rising to the surface through two new transition portals heading north to Pasadena, and east to East Los Angeles.



Upon completion, the Project will in effect facilitate regional light rail service along a 49-mile north-south route – Azusa to Long Beach, and a 23-mile east-west route – East LA to Santa Monica.

Passenger forecasts in 2035, as a result of the improved service, indicate 90,000 daily transit trips will occur through the 1.9-mile downtown trunk, including 17,000 new riders.

The above Project configuration is based on years of planning and environmental work that is reflected in the following milestones:

- Metro Board approval of Alternative Analysis – January 2009
- Initiation of Draft EIS/EIR – February 2009
- Initiation of Preliminary Engineering (PE) – January 2011
- Metro Board certification of Final EIS/EIR – April 2012
- FTA issuance of Record of Decision – June 2012
- PE and Advanced PE complete – March 2013
- FTA award of Full Funding Grant Agreement – February 2014.

Major Procurements

Utility Relocation: Advanced Utility Relocation Contract, C0981R, was awarded to Pulice Construction, Inc. in January 2014 and the Notice to Proceed (NTP) issued on February 18, 2014. Contract C0981R was terminated for convenience on April 14, 2015 and remaining AUR work was transferred to the C0980 Design/Build (D/B) Contractor.

Guideway & Systems Contract: The Board authorized to solicit a major D/B contract, C0980, in August 2011. A contract was awarded on April 24, 2014 to Regional Connector Constructors (RCC), a joint venture of Skanska USA Civil West California District, Inc. and Traylor Brothers, Inc. in the amount of \$927,226,995. NTP was issued July 7, 2014. The final engineering and design for the joint venture was performed by Mott McDonald.

Vehicles: Metro is procuring four (4) Light Rail Vehicles (LRVs) for the Project. The vehicles are being built and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. Delivery and acceptance of four LRVs is *under review by Metro and Kinkisharyo. The outlook appears to be mid-2020.*

Rail Operations Center (ROC): The existing functional operations at the ROC are being expanded to accommodate the central control functions associated with five new rail lines to include Regional Connector. The Project is contributing \$4.07M towards this expansion which is scheduled to be completed by June 2021.

Fare Collection: Procurement of Universal Fare System and Ticket Vending Machine equipment was completed in January 2018 with award to Cubic Corporation. Metro is coordinating with RCC for installation and testing schedules, which are currently expected to begin in late 2020. The scope addition of fare transfer equipment in the three Regional Connector stations is on hold pending decision to proceed. A decision will be made in early 2020.

Program Management

The RCC contract is being managed by a team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO). The consultant component is comprised of The Connector Partnership, a joint venture between AECOM, Inc. and WSP (CPJV) which provides engineering and design support services while Arcadis, Inc., provides construction management support services. An overview of management staffing is provided under the Staffing Section of this report. The on-site program management team is also supported by Metro Headquarters resources to include, but not limited to, engineering, risk management, environmental, quality management, operations and creative services departments.

Project Schedule and Budget: The Revenue Service Date (RSD) is planned for Summer/Fall 2022.

In January 2017, the Metro Board revised the Life of Project (LOP) Budget for Regional Connector Transit Project 860228 to \$1.756 billion. The LOP budget for Concurrent Non-FFGA activities related to Project 861228 remains at \$39.9 million. Financing costs are estimated at \$14M. Cost forecasts remain consistent with budgets. A detailed FFGA budget forecast is included under the Project Cost Section of this report.

Funding has been secured from a variety of sources, detailed in the Financial/Grant Section on Page 21, to include:

- Federal New Starts Grant
- Federal Congestion Management Air Quality and RIP Programs
- USDOT TIFIA loan proceeds
- State Proposition 1A/1B and Capital Project Loan proceeds
- City of Los Angeles
- Lease revenues.

Construction and Community Relations: The Construction and Community Relations Team is tasked with promoting the Project and performing public outreach within the communities to keep stakeholders informed of construction activities occurring along the Project alignment. To facilitate the communication, community leadership councils have been formed which represent geographic-based constituent groups along the alignment.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed to keep the public informed and supportive of the Project. These efforts are aimed at promoting businesses that are affected by construction. An overview of monthly activities is presented in the Construction and Community Relation Section of this report.

System Integration: The Project's integration of three separate lines, each possessing distinct system technologies, presents significant challenges for both the Project and Metro at-large. Extensive planning continues to be performed to define logistics of the systems' cut-overs that will be required. The Project will continue to coordinate the completed systems interface design, with on-going procurement in preparation for construction and testing as Metro maintains revenue service on the three operating lines.

Rail Activation: The Project and Metro Operations recognize the extensive planning required in preparation for rail activation of the new regional light rail service the Project will enable through downtown Los Angeles. The training of 400+ operators and supervisors across the regions has surfaced as a key component to rail activation. This training will require dedicated time during rail activation to ensure safety.

Planning efforts have outlined a sequence of dependent testing, training, simulation, and safety certification. From the sequence, a twenty-week schedule has been developed to guide the testing, rail activation and start-up. The twenty weeks are initiated by the Project's issuance of the Substantial Completion milestone to RCC.

EXECUTIVE SUMMARY

In *December*, the Project achieved 62.2% completion based on earned value measurements for design and construction. The focus of the Project is on facilitating advancement of construction activities throughout the alignment.

The following is an overview of current design and construction activities.

Design Status

Final Design has been completed. Miscellaneous design changes to approved design packages will be managed as an Engineering Change Instruction (ECI), enabling required changes to be promptly addressed while the balance of the scope is built. *An ECI for the overbuild design is underway and is demonstrative of other ECIs anticipated.*

Construction Status

1st Street Cut & Cover Tunnel & U-Channel: Continued *wall* installation at the U-Channel section. *Continued roof deck at the Cut & Cover Tunnel* section.

Wye Structure: Completed re-shoring temporary decking system for pin pile removal.

Little Tokyo/Arts District Station: Completed station box west Plenum Slab and east Plenum Slab. *Started walls for the platform deck.*

Floating Slab Track: *Although tracking slightly behind plan, RCC* continued fabrication of floating slab pre-cast segments. Continued delivery and staging of material and pre-cast segments at Grand Av Arts/Bunker Hill Station. *Continued* installation of pre-cast segments in Left Tunnel.

Historic Broadway Station: In the station box area, continued the west concourse level exterior walls. Continued east platform level exterior walls. *Started walls for the platform deck.*

Crossover Cavern: *Continued* the plenum concrete placement and the arch rebar and formwork installation. *Continued the interior wall concrete placement.*

Grand Av Arts/Bunker Hill Station: In the west station box area, *continued* the lower ancillary exterior walls. In the center station box area, completed the upper ancillary deck. In the east station box area, completed the interior walls. In the entrance area, *completed* the upper ancillary level deck. *Completed* the installation of excavation support for the Emergency Exit 1 & 2 structure.

Flower Cut & Cover Tunnel: In the north section (4th Street to 5th Street), continued the installation of the exterior and interior walls and roof deck. In the south section (5th Street to 7th/Metro Center Station), continued the invert placement and exterior walls.

Cost and Schedule Summary

As of the reporting date, RCC was late in submitting the *November* 2019 Schedule Update.

RCC Schedule Metrics

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Metro PMS)	Variance CD (Trending)
NTP	7/7/14				
Substantial Completion	10/22/20	527	04/01/22	04/28/22	-27 days

Critical Path

In Metro’s Project Master Schedule, the primary critical path continues through the future Little Tokyo/Arts District Station concrete.

The critical path runs through structural concrete where the current focus is the station box plenum slabs, which will then be followed by the ancillary west tunnel vent fan deck and the upper level exterior walls.

After station concrete and backfill are completed, the critical path continues at the future Little Tokyo/Arts District Station through the removal of the temporary decking and pin pile removal at *the East Station Box (1st/Alameda)*. Track provisioning will begin after *track access is available at all station areas and tunnel reaches* and will be followed by the critical OCS and train control installations. After the majority of the systems installations are complete, systems integration will commence and continue through pre-revenue testing. A summary graphic of the critical path is found on Page 12.

Costs

Project costs continue to track within budget. Contingency draw-downs are lagging as large modifications continue to take longer to reconcile. However, no material net variance in contingency use is anticipated. To date, the design and construction changes related to base scope represent approximately 6.8% of the contract value. There is one notice of intent to claim by RCC. The notice relates to Historic Broadway Station SOE stability issues. Detailed cost and budget information is provided on Page 13.

Key Management Concerns

Item 1: Given the impact the Project will have on light rail operations through downtown Los Angeles and the region, the Rail Activation effort is exceedingly complex. Schedule and cost impacts are likely to surface.

Status/Action: *Ongoing* cut-over, testing and rail activation meetings *are being* conducted with various Metro Departments. Through this process, specific work items have been identified and those requiring further investigation are being evaluated. Notwithstanding considerable progress, planning meetings continue, as the team plans the complex rail activation and certification process. Coordination continues with all stakeholders in both planning and executing tasks. Start-up requirements are similarly being addressed between the Project and Operations' Liaison staff. Operator training will likely govern the pre-revenue operations period. Detailed monitoring of progress will continue.

Item 2: Design comments from the over-build developer at the Historic Broadway Station has led to design revisions with cost impacts.

Status/Action: Metro/RCC have collaborated closely with the developer to finalize design elements necessary to meet development objectives while working within available budget. Constructability analysis has been completed with acceptance of the design by the developer. Metro is now moving to reconcile final design and construction costs dictated by the agreed-to design. Related change notices have been issued to RCC. Cost and schedule proposals are pending.

Item 3: Managing and responding to stakeholder requests in Little Tokyo to defer street restoration work until after the December 2019 Holiday Period will likely impact free float in the schedule and be reflected in the cost forecast.

Status/Action: The Project agreed to defer initiation of the street restoration in Little Tokyo to January 10, 2020. The later start avoids impacting Holiday events and celebrations. The sequencing of work was also altered in response to community preferences. The goal of not delaying overall Project completion was preserved through use of schedule float. RCC has advised that adverse impacts have been/will be experienced as a result of the postponement. Metro awaits a formal RFC on the issue.

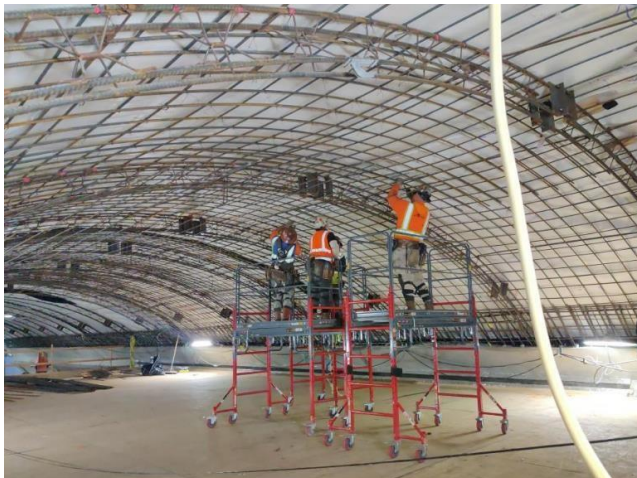
Project Construction Photos



Platform wall placement at the future Little Tokyo/Arts District Station



Interior wall preparation at the east end Track Level at Historic Broadway Station



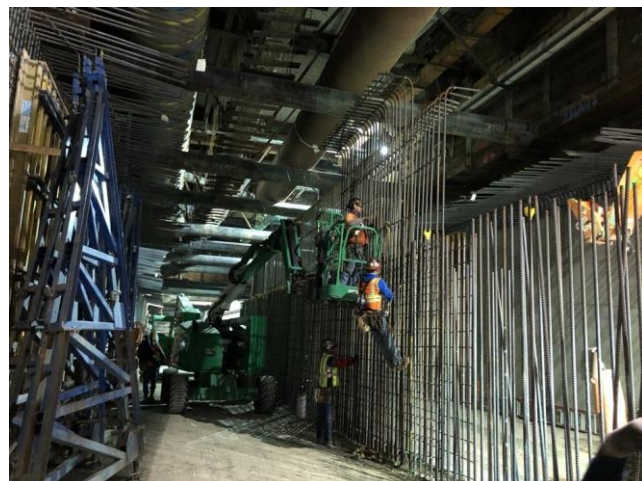
Rebar installation for crowns in SEM Cavern



Floating slab installation in the left tunnel



Bottom mat rebar installation at Upper Ancillary at Grand Av Arts/Bunker Hill Station

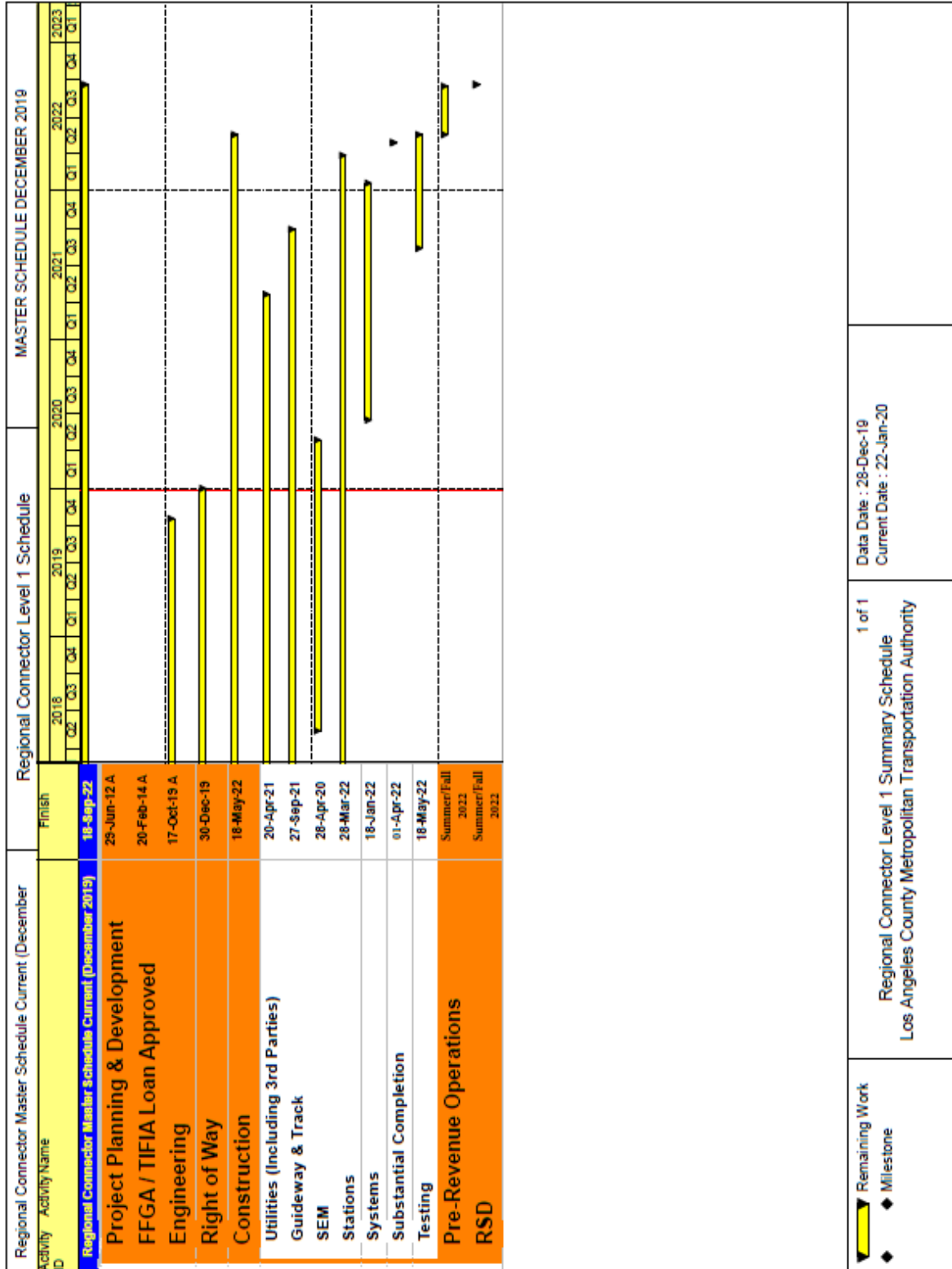


Reinforced steel installation at Flower St

PROJECT UPDATE

PROJECT SCHEDULE

Project Summary Schedule

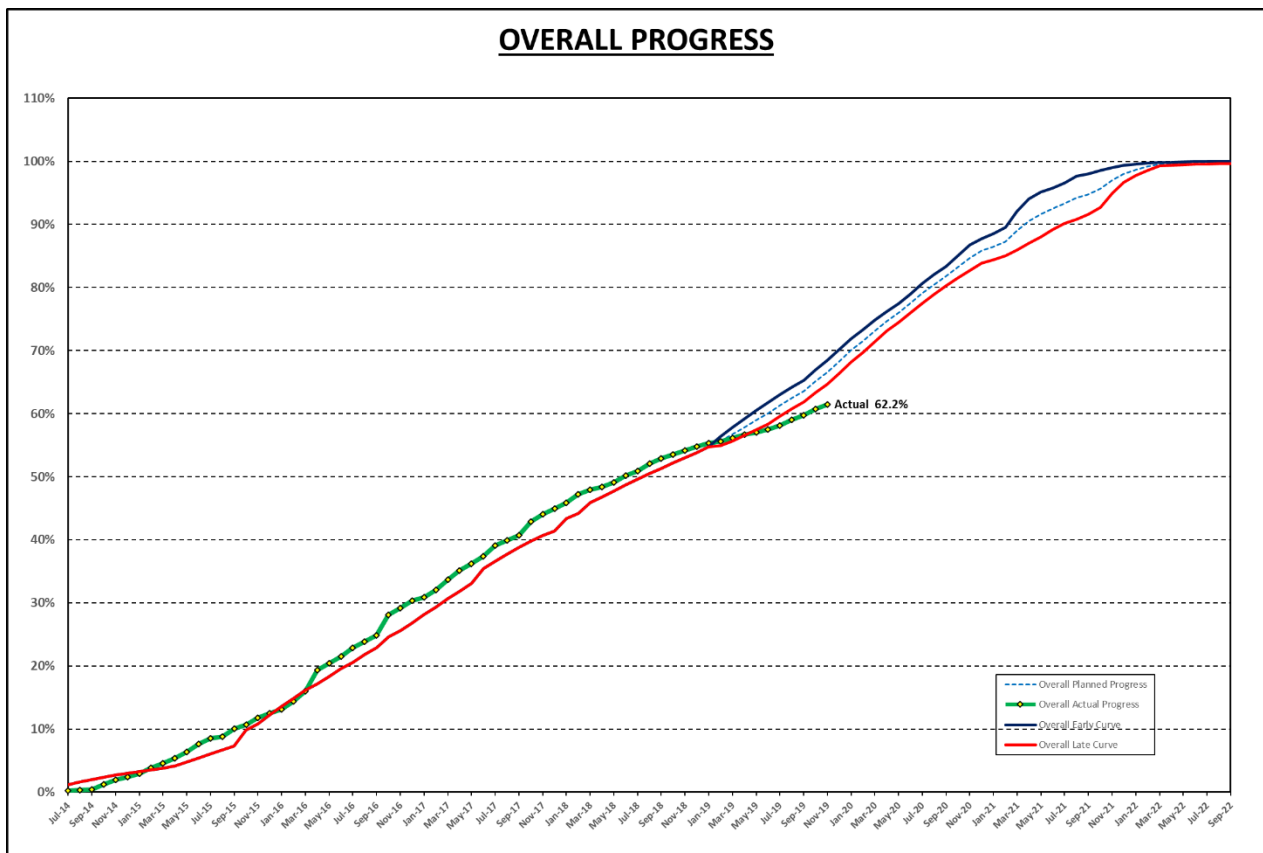


Progress Summary

	Status	Change from Last Month	Comment
Forecast Revenue Service	Summer/Fall 2022	None	
Proposed TIFIA Revenue Service	2/25/2023	None	
Proposed FFGA Revenue Service	2/25/2023	None	
Final Design Progress:			
Contract C0980	100%	0.0%	
Construction Contracts Progress:			
Contract C0981R & C0980	60.1%	0.8%	

Note: Construction Progress excludes General Requirements, Construction and Design Mobilization, Final Design and Provisional Sum costs (Schedule C). Progress values include executed modifications and change orders.

Planned vs. Actual Progress



Current overall planned progress reflects median of early and late finish dates.

Key Milestone Six-Month Look Ahead

	Milestone Date	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-20
Complete Station Box Plenum Deck at Little Tokyo / Art District Station	12/27/19 A	⬡					
Complete 1st Street Tunnel / U-Channel Tunnel Roof Deck	01/07/20		⬡				
Complete SEM Interior Walls Concrete	01/13/20		⬡				
Complete Lower Ancillary Level Walls at Grand Ave / Bunker Hill Station	01/16/20		⬡				
Complete West Concourse Station Box Exterior Walls at Historic Broadway Station	01/23/20		⬡				
Complete Fabrication Pre-Cast Floating Slab Sections	02/13/20			⬡			
Complete West Ancillary Tunnel Vent Fan Deck at Little Tokyo / Art District Station	02/18/20			⬡			
Complete SEM Plenum Slab Concrete	03/01/20				⬡		
Complete Wye Cut & Cover Tunnel Temporary Deck Removal	03/08/20				⬡		
Complete Wye Cut & Cover Tunnel Temporary Deck Removal	03/13/20				⬡		
Complete Ancillary Upper Level Exterior Walls at Little Tokyo / Art District Station	04/16/20					⬡	
Complete Upper Ancillary Level Walls at Grand Ave / Bunker Hill Station	05/18/20						⬡

 MTA Staff
  MTA Board Action
  FTA (Federal Transit Administration)
  Utility Company
 Other Agencies
  Contractors
  Design Consultant
  C0980 D/B Contractor
 * New

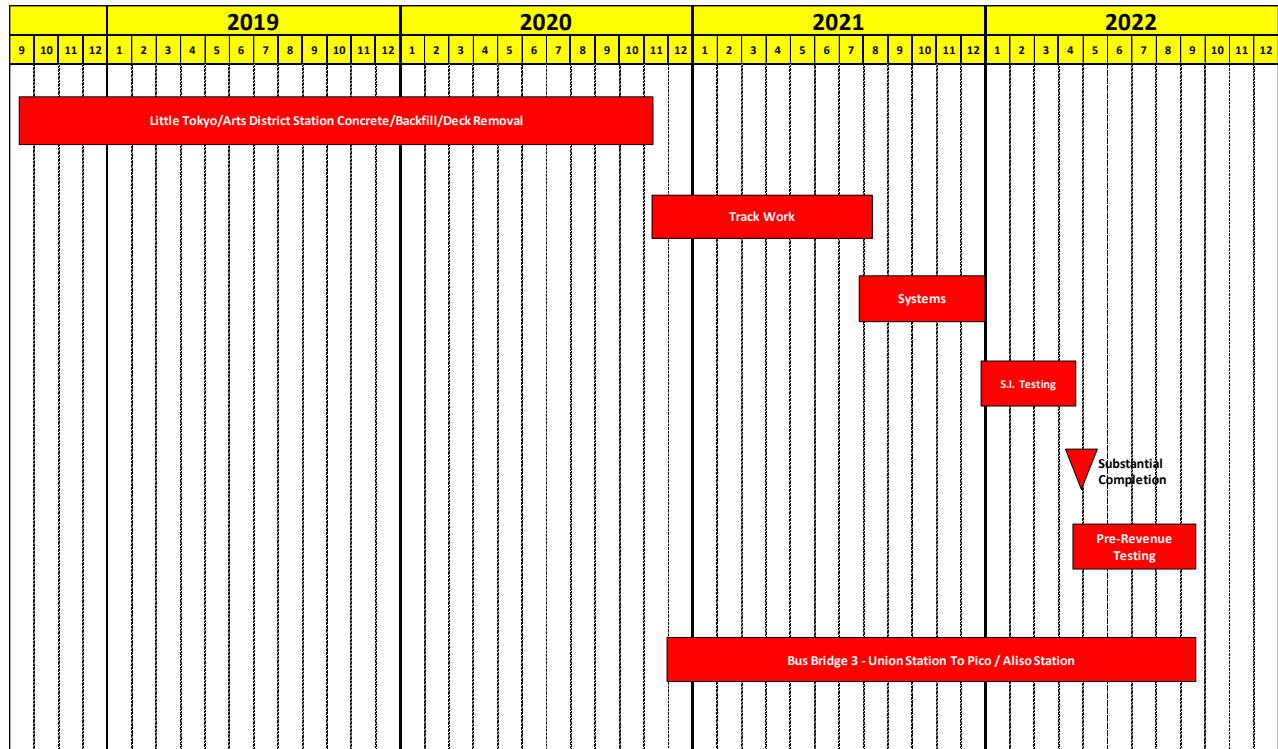
"A" following date is actual and completed

Major Equipment Delivery

Metro Supplied Equipment

Equipment	Initial Procurement	Scheduled Delivery	Scheduled Installation
LRT Vehicles	(NTP) 08/20/2012	Option 2 06/30/2020	N/A
Ticket Vending Machines	~ 01/30/2018	07/08/19 A (warehoused)	05/25/2021 ~08/26/2021

Critical Path (C0980)



This month, the critical path continues to run through the Little Tokyo/Arts District Station structure.

Upon the completion of the structure, backfill and the temporary deck/pin pile removal at the east end of the station, track access will be turned over to allow the start of track material distribution and installation. After the track material necessary for the entire Flower Cut & Cover Tunnel Section has been stored in the North Flower tunnel section, track installation will commence; moving west to east from 4th/Flower to the 1st Street Portal. Following the track installation, the critical OCR and train control systems installations will follow. After the critical systems work are complete, the systems integration testing will commence and reach Substantial Completion through successful completion of all tests. Upon Substantial Completion, Metro Operations will begin its own integrated testing, followed by operator training and Pre-Revenue Operations.

Bus Bridge 3 – Union Station to Pico/Aliso Station will start as late as possible to minimize the disruption to the existing Gold Line service. The Bus Bridge will begin with demolition of the existing Gold Line facilities and systems within the limits of the Regional Connector Project. During the Bus Bridge, the cut and cover guideway along Alameda together with the Fan Plant will be constructed. Track and systems will follow to integrated testing. The Bus Bridge will end when the Regional Connector Revenue Service starts.

PROJECT COST

Project Cost Analysis – 860228

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT (860228)

COST REPORT

DOLLARS IN THOUSANDS

SCC CODE		FFGA BUDGET	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET/ FORECAST VARIANCE
				PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS & TRACK ELEMENTS	280,622	204,691	0	272,696	0	253,199	3,016	191,296	721	273,725	1,029
20	STATIONS, STOPS, TERMINALS, INTERMODAL	354,268	219,477	0	230,857	0	229,795	1,843	88,694	227	231,800	943
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS	0	0	0	0	0	0	0	0	0	0	0
40	SITWORK & SPECIAL CONDITIONS	141,785	422,453	0	626,831	462	581,162	2,956	480,619	0	626,831	0
50	SYSTEMS	69,667	73,848	0	77,972	0	67,724	82	18,652	0	77,972	0
	CONSTRUCTION SUBTOTAL (10-50)	846,343	920,468	0	1,208,356	462	1,131,880	7,897	779,260	948	1,210,328	1,972
60	ROW, LAND, EXISTING IMPROVEMENTS	115,889	74,208	0	59,315	0	52,615	24	52,599	0	59,315	0
70	VEHICLES	16,275	16,275	0	16,275	0	16,275	404	7,316	0	16,275	0
80	PROFESSIONAL SERVICES	261,455	257,973	0	394,216	964	324,970	3,814	301,365	1,078	395,339	1,123
	SUBTOTAL (10-80)	1,239,963	1,268,925	0	1,678,162	1,427	1,525,741	12,139	1,140,541	2,026	1,681,257	3,095
90	UNALLOCATED CONTINGENCY	135,399	126,892	0	51,179	0	0	0	0	-2,026	48,084	-3,095
100	FINANCE CHARGES	27,571	7,115	0	14,301	0	0	0	0	0	14,301	0
	TOTAL PROJECTS (10-100)	1,402,932	1,402,932	0	1,743,642	1,427	1,525,741	12,139	1,140,541	0	1,743,642	0
	ENVIRONMENTAL/PLANNING - 400228		6,075	0	6,075	0	6,075	0	6,075	0	6,075	0
	ENVIRONMENTAL/PLANNING - 460228		18,125	0	20,425	0	20,425	0	18,988	0	20,425	0
	TOTAL PROJECTS (EVN/PLAN'G)		24,200	0	26,500	0	26,500	0	25,063	0	26,500	0
	TOTAL	1,402,932	1,427,132	0	1,770,142	1,427	1,552,240	12,139	1,165,604	0	1,770,142	0

Original Budget:

The Original Budget of \$1.427 billion reflects the April 2014 Board approved LOP Budget, plus finance costs of \$7.1 million.

Current Budget:

In January 2017, the Metro Board revised the LOP Budget for the Regional Connector Project 860228 to \$1.756 billion. Finance costs, estimated at \$14.3 million, are also reflected leading to a total of \$1.770 billion. Budgets were adjusted throughout the SCC structure reflecting revised values as of September 30, 2019.

Commitments:

Overall commitments increased by \$1.43 million this month to \$1.55 billion which represents 87.7% of the Current Budget. The increase is related to *RCC executed mods, purchase orders from Community Relations and fiscal year 2020 work orders issued to Department of Water and Power.*

Expenditures:

Expenditures are cumulative through *December 2019* and increased by \$12.1 million this month for costs associated with C0980 Design Build Contract, Engineering Management Support, Metro Project Administration, Construction Management Support Services, Third Party Master Cooperative Agreements with the City of LA, Community Relations, and Environmental Consultant Services. The \$1.17 billion in expenditures to date represent 65.8% of the Current Budget.

Current Forecast:

The total current forecast remains equal to the total current budget.

Project Cost Analysis – 861228

CONCURRENT NON-FFGA ACTIVITIES (861228)
PROJECT COST STATUS BY FTA SCC
DOLLARS IN THOUSANDS

SCC CODE		ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET/ FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS & TRACK ELEMENTS	0	0	0	0	0	0	0	0	0	0
20	STATIONS, STOPS, TERMINALS, INTERMODAL	0	0	0	0	0	0	0	0	0	0
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS	10,480	0	10,480	0	10,480	0	0	0	10,480	0
40	SITework & SPECIAL CONDITIONS	0	0	0	0	0	0	0	0	0	0
50	SYSTEMS	0	5,950	5,950	500	500	0	0	0	5,950	0
	CONSTRUCTION SUBTOTAL (10-50)	10,480	5,950	16,430	500	10,980	0	0	0	16,430	0
60	ROW, LAND, EXISTING IMPROVEMENTS	27,748	0	27,748	0	27,748	0	22,470	0	27,748	0
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	650	500	1,150	-91	646	13	389	0	1,150	0
	SUBTOTAL (10-80)	38,878	6,450	45,328	409	39,374	13	22,859	0	45,328	0
90	UNALLOCATED CONTINGENCY	1,113	0	1,113	0	0	0	0	0	1,113	0
100	FINANCE CHARGES	0	0	0	0	0	0	0	0	0	0
	TOTAL PROJECTS (10-100)	39,991	6,450	46,441	409	39,374	13	22,859	0	46,441	0
	861228 TOTAL	39,991	6,450	46,441	409	39,374	13	22,859	0	46,441	0

Original Budget:

The Original Budget, Current Budget, and Current Forecast reflect the Board approved LOP Budget established April 24, 2014.

Current Budget:

In December 2019, the Metro Board approved an additional \$6.45 million budget to the Project increasing the total LOP budget to \$46.4 million.

Commitments:

There was a \$0.41 million increased this month to \$39.4 million which represents 85.0% of the Current Budget. The increase is related to an RCC executed mod and uncommitted amounts in professional services.

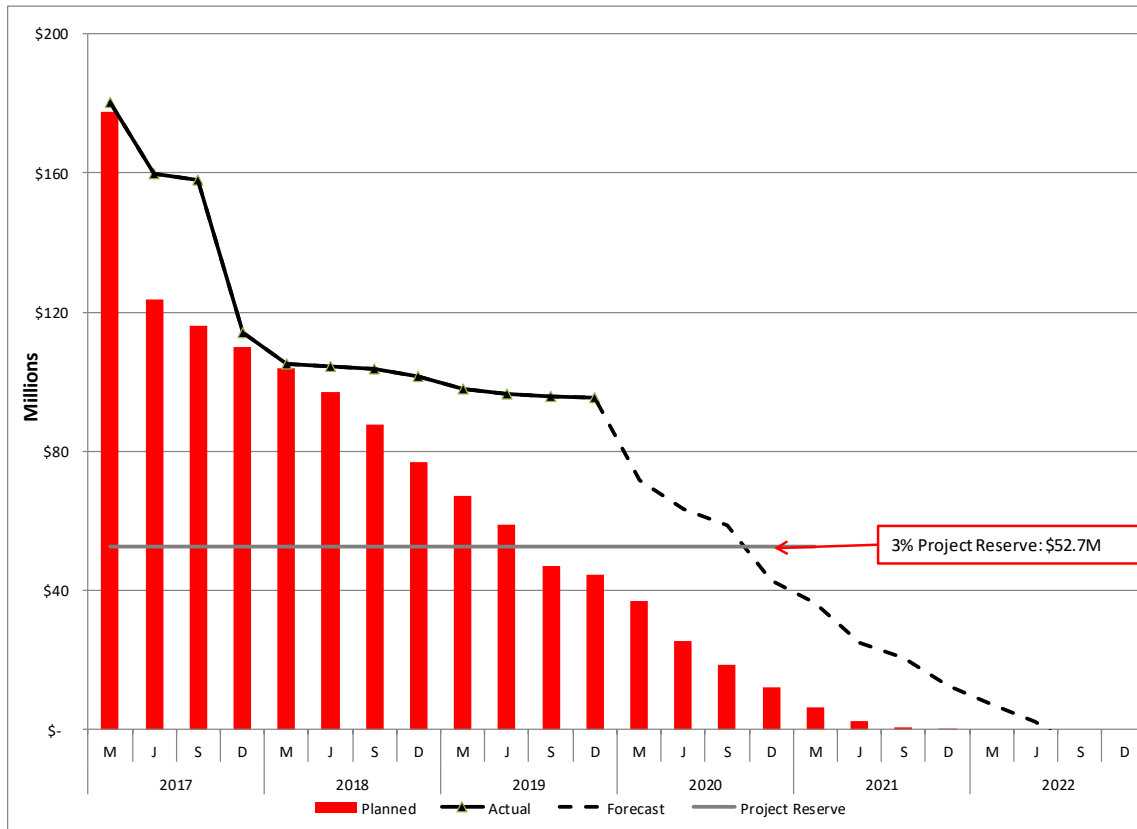
Expenditures:

Expenditures are cumulative through December 2019 and this month's expenditures increased by \$13 thousand. The cumulative \$22.9 million through December 2019 represent 49.2% of the Current Budget.

Current Forecast:

The Metro Board approved additional funding of \$6.45 million related to the radio system. The total current forecast in December 2019 is \$46.4 million.

Cost Contingency Drawdown



Cost Contingency Drawdown Analysis

In January 2017, the Metro Board revised the LOP Budget to \$1.756 billion, which included increasing the unallocated contingency to \$89 million and allocated contingency to \$92.8 million. From that action, a revised drawdown plan for unallocated contingency, correlated to anticipate risk trends, was developed to monitor and measure drawdowns moving forward.

Highlighted in the drawdown is a 3% Project Reserve threshold measured against the LOP Budget. Metro’s Board is to be notified when it becomes necessary to drawdown contingency below the threshold to cover Project costs.

In December, there was a \$0.42 million drawdown from contingency due to executed mods. The remaining total Project Contingency (allocated and unallocated) remains \$101.22 million this month.

PROJECT COST CONTINGENCY						
DOLLARS IN THOUSANDS						
	Original Contingency	LOP Contingency	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	124,919	89,946	(39,836)	(2,026)	(41,862)	48,084
Allocated Contingency	86,345	92,809	(41,281)	1,603	(39,678)	53,131
Total Contingency	211,263	182,754	(81,117)	(423)	(81,540)	101,215

RISK MANAGEMENT

Summary of Risks

During this quarterly reporting period, three (3) active risk were closed and no new risks were identified. There are thirty-nine (39) risks to be managed over the next quarter.

Of the thirty-nine (39) risks, two (2) are scored high, twenty-one (21) as medium and sixteen (16) as low.

Top Risks

The Project's top risks as of December 2019 include:

Risk ID	SCC	Risk Description	Risk Rating
514	30	Fan Plant final modification negotiated above 12M. Costs shown are above the current forecast and adjustment	10
502	40	Temple Sewer Line total costs run higher due to offset constructibility issues and depth	10
304	10	Unknown obstructions may be encountered during station or cut/cover guideway excavation, or Support of Excavation installation; delays may ensue.	9
425	10	Concrete production issues (quality and resources) impact to schedule at 2nd/Hope threaten the Project	9
506	50	Across all interfaces with existing LRT lines, cut-over integration challenges exceed allowances in current forecast (excludes Comm). Costs shown are above the current forecast	8

Risk Score Changes

One (1) active risk had a scoring assessment change this quarter, increasing from 6 to 9.

Risk ID	SCC	Risk Description	Risk Rating
425	10	Concrete production issues (quality and resources) impact to schedule at 2nd/Hope threaten the Project	9

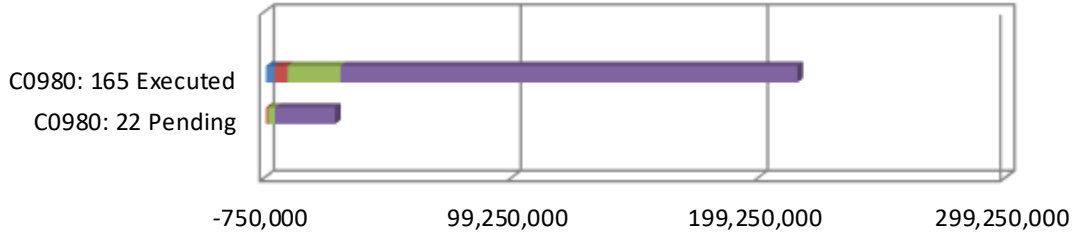
Closed Risks

Three (3) risks were closed during the quarter.

Risk ID	SCC	Risk Description	Risk Rating
500	50	Late redundancy requirements raise radio costs above forecast	8
415	10	RCC eroding float trend will exhaust schedule flexibility; milestones in jeopardy if plan and production continue to miss targets	5
394	40	Additional station and guideway craft and supervisory resources are needed to change the prevailing dynamic of insufficient crews to staff available work fronts.	7.5

Summary of Contract Modifications

Contract Modifications (MODs) by Cost Level



	C0980		Total
	165 Executed	23 Pending	
■ Under \$100K	3,588,361	58,000	3,646,361
■ \$100K to \$250K	5,221,107	760,000	5,981,107
■ \$250K to \$1M	21,419,450	2,896,269	24,315,719
■ Over \$1M	185,077,940	24,300,000	209,377,940
Total Contract MODs	215,306,858	28,014,269	243,321,128
Contract Award Amount	927,226,995	927,226,995	
% of Contract MODs	23.2%	3.0%	

Note:

1. Percent of Contract MODs equals the Total Contract MODs divided by the Contract Award Amount.
2. Pending Mods are under negotiation.

One hundred and sixty-five (165) changes with a total value of \$215.3 million have been executed since NTP of Contract C0980. An additional 22 changes, with a total estimated value of \$28.0 million, are pending.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

As of *November* 2019:

DBE Commitment – Design The percentage of funds apportioned to Design Contracts	22.63%
Current DBE Commitment Design Total DBE Committed Dollars divided by Total Contract Value for Design	\$14.5M (22.63%)
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	24.09%

Twelve (12) Design DBE sub-consultants have been identified to date.

DBE Commitment – Construction The percentage of funds apportioned to Construction Contracts	18%
Current DBE Commitment Construction Contract commitment divided by current contract value for Construction	\$194.9M (18%)
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	14.64%

Ninety-four (94) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA)

As of *November* 2019:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Area in the United States	40.00%
Targeted Worker Current Attainment	59.60%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	18.08%
Disadvantaged Worker Goal Construction work to be performed by Disadvantaged Workers who are residents of the United States	10.00%
Disadvantaged Worker Current Attainment	10.28%

FINANCIAL/GRANT

Status of Funds by Source

December 2019

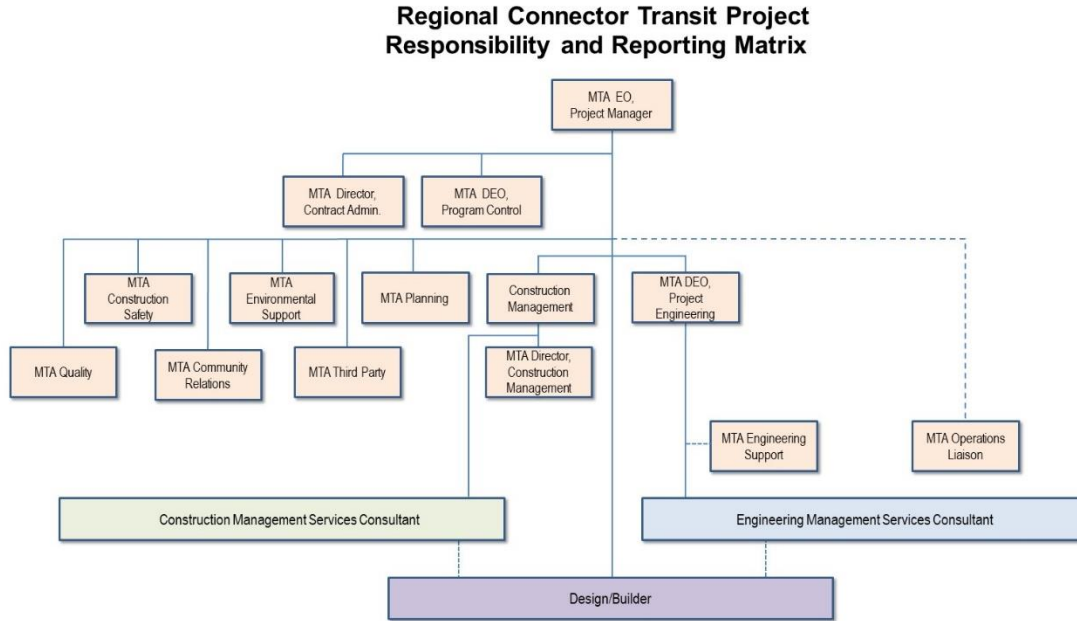
SOURCE	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	COMMITMENTS		EXPENDITURES		BILLED TO FUNDING SOURCE	
				\$	%	\$	%	\$	%
FEDERAL - CMAQ	\$64.00	\$218.11	\$64.00	\$128.91	59%	\$49.98	23%	\$46.13	21%
FEDERAL - SECTION 5309 NEW STARTS	\$669.90	\$669.90	\$465.00	\$651.76	97%	\$411.84	61%	\$411.84	61%
FEDERAL - RIP	\$0.00	\$1.41	\$1.41	\$1.41	100%	\$1.41	100%	\$1.41	100%
MEASURE R - TIFIA LOAN	\$160.00	\$160.00	\$135.71	\$160.00	100%	\$141.89	89%	\$141.89	89%
STATE PROPOSITION 1A HSRB *	\$114.87	\$114.87	\$114.87	\$114.87	100%	\$114.87	100%	\$114.87	100%
STATE PROPOSITION 1B PTMISEA **	\$149.50	\$135.16	\$135.16	\$135.16	100%	\$135.16	100%	\$135.16	100%
STATE STIP RIP	\$2.59	\$17.00	\$2.59	\$15.58	92%	\$2.59	15%	\$2.59	15%
STATE CAPITAL PROJECT LOANS - OTHERS ***	\$132.47	\$274.83	\$274.83	\$274.83	100%	\$238.15	87%	\$224.14	82%
MEASURE R	\$27.57	\$0.00	\$0.00	\$0.00	0%	\$0.00	0%	\$0.00	0%
CITY OF LOS ANGELES	\$41.98	\$41.98	\$28.00	\$28.00	67%	\$28.00	67%	\$28.00	67%
LEASE REVENUE	\$64.25	\$79.07	\$0.00	\$0.00	0%	\$0.00	0%	\$0.00	0%
GENERAL FUND - METRO	\$0.00	\$43.50	\$43.50	\$41.71	96%	\$41.71	96%	\$41.71	96%
TOTAL	\$1,427.13	\$1,755.84	\$1,265.08	\$1,552.24	88%	\$1,165.60	58%	\$1,147.75	65%

NOTES:

1. EXPENDITURES ARE CUMULATIVE THROUGH DECEMBER 31, 2019
 2. METRO AND TRIBUNE AGREED ON REIMBURSEMENT OF \$1.6 MILLION RELATED TO 2ND/BOARDWAY OVERBUILD.
 3. ORIGINAL BUDGET BASED ON FUNDING PLAN INCLUDED IN THE APPROVED FULL FUNDING GRANT AGREEMENT
 4. LACMTA RESERVES THE ABILITY TO UPDATE COSTS AND CHANGE FUND SOURCES AS REQUIRED.
- * STATE PROPOSITION 1A HIGH SPEED RAIL BONDS
 ** STATE PROPOSITION 1B PUBLIC TRANSPORTATION MODERNIZATION, IMPROVEMENT AND SERVICE ENHANCEMENT ACCOUNT
 *** OTHERS INCLUDE TDA ADMINISTRATION, AND NB PROPOSITION A ADMINISTRATION (FOR A TOTAL OF \$.255M)
 *** OTHERS INCLUDE TDA ADMINISTRATION, AND NB PROPOSITION A ADMINISTRATION (FOR A TOTAL OF \$.255M)

PROJECT ORGANIZATION AND STAFFING

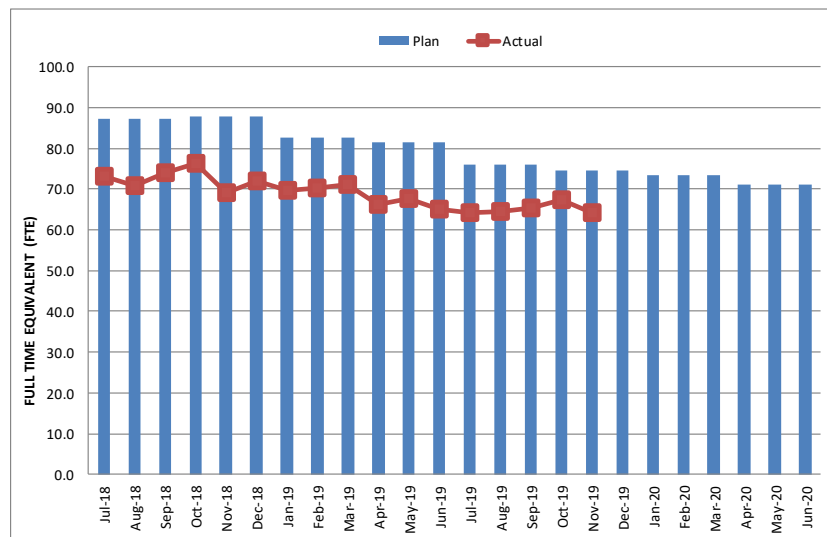
The D/B contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).



Updated: 09/2019

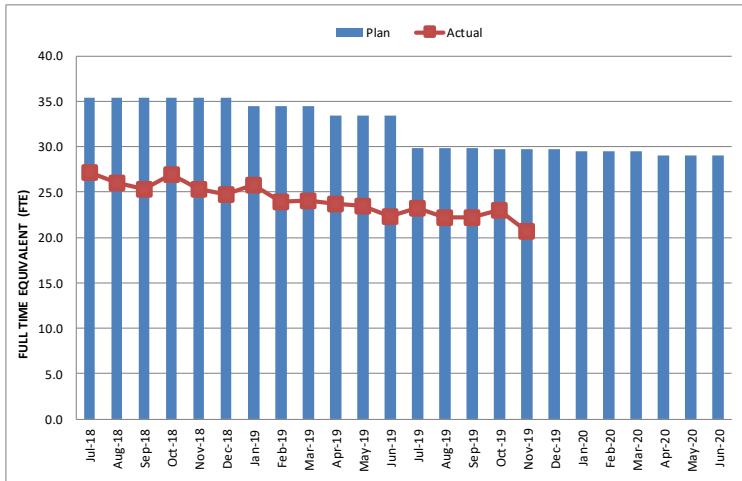
The overall FY20 Total Project Staffing plan averages 73.7 FTE's per month. The total actual project staffing for *November 2019* was 64.3; 20.7 FTEs for Metro's Project Administration staff and 43.6 FTEs for consulting staff. Review of staffing plans is on-going to ensure staffing needs are appropriately managed.

Total Project Staffing – Metro and Consultants

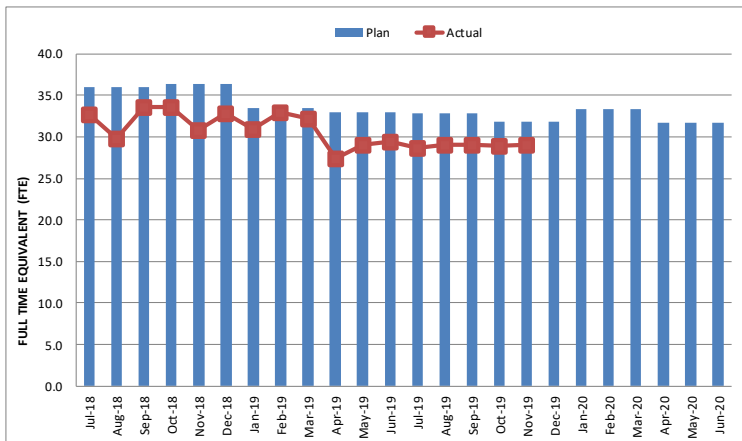


November actuals include 3.4 FTEs related to PMSS Services.

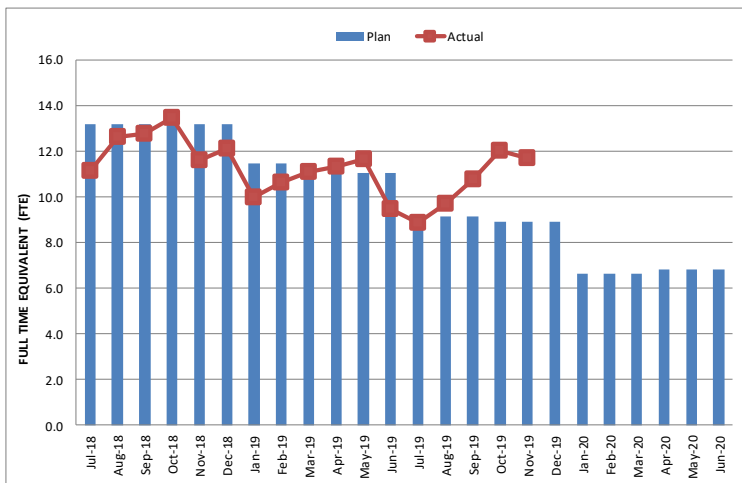
Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)



Staffing by Group

The opposing graphs represent planned vs. actual staffing levels by group.

Metro staffing includes full-time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

Staffing plans are developed for each fiscal year based on Project needs.

REAL ESTATE

Type of Take	Number of Parcels	Certified	Decertified	Appraisals In Process / Completed	Offers Made	Escrow Closed	Effective OIP	Parcels Available	Remaining
Full Takes	2	2		2	2		2	2	
Part Takes	3	3		3	3			2	1
SSE	12	8	4	9	9	6	2	7	
TCE/ROE	14	5	3	6	6	4	1	5	
PE	3	3		3	3	2		3	
Sub Total	34	21	7	23	23	12	5	20	1
Pedestrian Bridge	420-1, 420-2, 420-3								1
Mangrove Fan Plant	TBD								1
Grand Total	36	21	7	23	23	12	5	20	3

Open Real Estate Matters

City of Los Angeles (Mangrove Parcels)

- Agreement *was reached* on the value of the TCE extension and the permanent easements required for the Fan Plant *at Mangrove*. Timely access to the Fan Plant is available for construction needs, and the yard TCE is extended into mid-2022 pending *Los Angeles* City Council approval of the Mangrove agreement. FTA and the MTA Board approval of the extension was obtained in July 2019. Metro Review of the Purchase Agreement prepared by COLA is underway. The outlook for closure of this agreement is late first quarter 2020.

Department of Water and Power 'Duco Yard' – DWP (RC-473)

- The Purchase Agreement has been reviewed and accepted by Metro. Adoption by the LADWP Board is pending.

QUALITY ASSURANCE

Metro QA performed the following activities during the month of *December*:

- Reviewed and provided comments on RCC's quality-related submittals
- Performed oversight verification of RCC's design and construction activities
- Reviewed test results for Portland Cement Concrete, Soils Testing, Asphalt Testing and Non-Destructive Testing of Welding
- Attended "Readiness Review" meetings with RCC
- Attended Bi-Weekly Quality Review Meetings with RCC Quality Management
- *Metro QA conducted a surveillance (C980-Surv-2019-24) for the design of the Switchboards Project Wide. All comments from Metro Engineering were addressed and the surveillance was closed.*
- *Metro QA conducted a surveillance (C980-Surv-2019-25) for the placement of a Damper Slab #2 at 1st/Central Station. The installation was found to be satisfactory and the surveillance was closed.*

RCC NCR 0085 was issued for Sika Rugasol not being removed within the specified 24-hour time period. This NCR is being routed internally and remains open.

RCC NCRs 0038, 0041, 0047, 0052, 0053, 0054, 0057, 0062, 0064, 0067, 0068, 0069, 0073, 0074, 0076, 0077, 0079, 0081, 0082, 0083 and 0084 remain open with no change.

ENVIRONMENTAL

- Stormwater Pollution Prevention Plan (SWPPP) inspections of all active Project work areas are conducted weekly by RCC. Metro staff conducted oversight site observations and *shared feedback on ways to improve BMP preparation and execution. In December, the project experienced rain events. A minor SWPPP update was approved by the California Water Board with a more comprehensive SWPPP update expected in January.*
- *In December, Metro and the PMOC coordinated review of PMOC comments on the 27th Quarterly Mitigation Monitoring and Reporting Plan covering August 2019 to October 2019 to the FTA on November 14, 2019. Metro and the PMOC will meet next month to review documentation related to the PMOC comments.*
- Noise and vibration spot checks continue to be conducted weekly at multiple sensitive locations, and at the location of new activities along the alignment. There have been inquiries from stakeholders adjacent to the future Grand Av Arts/Bunker Hill Station, Flower Cut and Cover, and Historical Broadway Station construction sites; however, Metro/RCC's Community Relations team have been responsive and continue to actively address community concerns.
- *Seven new historic period isolates were collected in December, including an amber glass bottle with maker's marks, clear glass bottles, a brown glass bottle base, and a white ceramic piece. One new historic period feature was recorded during December. Feature 169, consisting of structural remains and associated refuse deposit, was encountered on December 2, 2019. On December 3, 2019, Metro notified the FTA and SHPO of this new discovery in accordance with Stipulation I.J of the Memorandum of Agreement between the Federal Transit Administration and the California State Historic Preservation Officer Regarding the Regional Connector Transit Corridor Project, Los Angeles County, California (MOA) for this undertaking, the Amended Cultural Resource Monitoring and Mitigation Plan for the Regional Connector Transit Corridor Project, Los Angeles County, California (CRMMP), and 36 CFR 800.13(b)(3). On December 3, 2019, the FTA determined that the feature does not meet the criteria for eligibility for the National Register of Historic Places and requested SHPO's concurrence on this determination. On December 4, 2019, SHPO concurred with the FTA determination.*

CONSTRUCTION AND COMMUNITY RELATIONS

Construction Relations

- Responded and addressed Project related inquiries from the public received via the hotline, email and during office hours at the Little Tokyo Community Office. Concerns were addressed by RCC and Metro project staff.
- Performed public outreach and construction coordination to impacted area stakeholders regarding the following construction activities: concrete placement throughout the alignment, utility relocation/pile installation/paving work on Alameda and Temple St, planned street closures at 1st/Alameda for restoration, *equipment mobilization, soil testing, and geotechnical monitor maintenance.*
- *Distributed nine (9)* construction notices to the public on the above activities through email and made it available on the Project website and social media outlets.
- Completed a total of *six (6)* construction coordination activities with project adjacent property owners to perform maintenance on *geo-tech* equipment: Metropolitan News, Onni Times Square, Broadway Civic Center, *Walt Disney Concert Hall Choral Hall, Red Cat and Hikari Apartments.*
- Provided weekly construction updates and coordinated work activities with 23 stakeholders: The Westin-Bonaventure Hotel, 444 S Flower St, Central Library/Maguire Gardens, City National Plaza, The California Club, The Standard Hotel, Public School 213, Pegasus Apartments, Charles Dunn, Paragon Parking, Takami Sushi, The Roosevelt Lofts, 888 Figueroa, and 818 7th St, LTBA, LTCC, LTBD, LTSC, JACCC, Sustainable Little Tokyo, JANM, MOCA at Geffen, and Savoy Community Association.
- Presented to *five (5)* community organizations with updates on utility investigation/relocation for Alameda tunnel box construction and planned street closures at 1st/Alameda for restoration: Little Tokyo Business Association, Little Tokyo *Business Improvement District, Rotary Club of Little Tokyo, Historic Cultural Neighborhood Council, and Downtown Los Angeles Neighborhood Council Outreach Committee.*
- Conducted *eighteen (18)* briefings to local stakeholders on planned construction activities:
 - 1st/Alameda street closures and restoration: *Chado Tea Room, Savoy Community Association, LTBA/LTBD, Akimoto Chiropractors, NT Auto, KC Beauty, Nishi Hongwanji Buddhist Temple, Koyasan Buddhist Temple, Zenshuji Soto Mission Buddhist Temple, JANM, MOCA at Geffen, St. Francis Xavier, Mura, Newberry Lofts, and The Garey Building.*
 - Flower St concrete placement and *deck panel removal: City National Plaza, Westin Bonaventure Hotel, Charles Dunn.*

- Completed the Little Tokyo Parking Needs Assessment annual meeting pursuant to measure EJ-11 of the Regional Connector Transit Project Mitigation Monitoring and Reporting Program.
- Continued standing meetings with: LA City Council District 14, the Mayor's Office.

Social Media Outreach

- Published *ten (10)* newsletters, including *four (4)* construction updates, totaling *15.7k* mailings.
- Trending stories on social media included news of street restoration closures at 1st/Alameda St; progress photos of *floating slab delivery and progress photos of concrete placement at the crossover cavern.*



Eat, Shop, Play – Construction Impact Business Mitigation Program Highlights

- Released quarterly *Eat Shop Play Newsletter* featuring *3 businesses (Central Library, Drago Centro, and Café Demitasse)* and *4 special events (Little Tokyo Holiday Guide, Shogun Santa, Oshogatsu Festival, and CicLAVia)*.
- Hosted Sustainable Little Tokyo Holiday Pop-Up Preview with Café Demitasse at the Winter Eat Shop Play Pop-Up at Metro Headquarters with both Sustainable Little Tokyo and Café Demitasse selling out their inventory at the event.

Community Relations

- Continued *bi-weekly coordination meetings with Little Tokyo Community Council, Little Tokyo Service Center and additional community partners as part of a new collaboration with Little Tokyo with the goal to better serve Little Tokyo businesses through Metro's Eat, Shop, Play program.*
- Continued work with the monthly Little Tokyo Marketing & Business Task Force to promote special events in Little Tokyo. Launched digital and printed holiday guides to promote unique gift ideas only found in Little Tokyo. *Reviewed special programming that will occur in 2020.*
- Assisted with the promotion of the 2019 Little Tokyo Business Association's Shogun Santa holiday celebration.
- Coordinated the Little Tokyo Circulator and made available, as a *construction mitigation*, the Mangrove Parking Lot to Japanese Chamber of Commerce's Oshogatsu Festival held January 1, 2020. The Circulator and parking *accommodated* visitors looking to start the New Year in Little Tokyo's religious and cultural celebrations while visiting local eateries.

CREATIVE SERVICES

Art Program

- *Reviewed art glass samples for exploratory research and development.*
- Reviewed glass mosaic artwork fabrication progress for Grand Ave/Bunker Hill and Historic Broadways Stations.
- Reviewed and responded to RCC PSR, CN and RFI submittals.
- Continued assessment of Project operating impacts to signage systemwide.

SAFETY & SECURITY

C0980 Regional Connector

- Monitored RCC's pre-employment drug/alcohol testing and new employee safety orientation to ensure compliance with contract specifications.
- Participated in weekly progress meetings with RCC's management personnel and Metro's Construction Manager to discuss safety/security/quality related issues and construction work schedules.
- Conducted Project Safety Orientation for new Metro/Consultants, visitors, and IPMO project staff. Training sessions included Safety Orientation, Underground Safety, and Self Rescuer Training.
- Participated in work plan reviews, daily crew safety meetings, and the RCC 'Safety Stand Down' sessions.
- Monitored construction field activities daily to ensure compliance with contract specifications. Participated with RCC staff in field safety inspection walks of multiple project worksites, laydown areas, and storage yards.
- Monitored Third Party contractor's work activities to ensure safety compliance.
- Made recommendations to utility crews regarding contract activities and improving overall traffic control and pedestrian safety.

Project Safety Record

- RCC reported no Recordable Injuries during the month of *December* 2019.
- RCC reported 74,359 work hours for *November* 2019. RCC's total Contract to Date work hours through November 2019 are 3,440,225 with a total of 17 Recordable Injuries and no Lost Workday (Days Away) case injuries. The C0980 Contract Recordable Injury Rate is 0.99. The Bureau of Labor Statistics reports that the National Average Recordable Injury Rate is 2.8 for heavy civil construction projects.
- Total Contractors' Project to Date Work Hours, including both the C0980 and the completed C0981 AUR contract, through *November* 2019 is 3,551,284 hours with 18 recordable injuries. The Total Project Contractor Recordable Injury Rate is 1.01.
- Total Aggregate Project work hours for Contractors, Metro, and Support Services Consultants, through *November* 2019 is 4,314,549 with 19 Recordable Injuries and no Lost Workday (Days Away) injury cases. The Total Project Aggregate Safety Rate is 0.88.*

* Using RIR method of calculating.

APPENDIX CHRONOLOGY OF EVENTS

June 2007	Began Alternatives Analysis study
January 2009	Board approval of Alternatives Analysis study and next phase
February 2009	Began Draft Environmental Impact Statement / Report (EIS / EIR)
October 2010	Board approval of Draft EIS / EIR and selection of locally preferred alternative
January 2011	FTA approval to Enter into Preliminary Engineering
January 2011	Began Preliminary Engineering
August 2011	Board authorized to solicit major D/B contract C0980
October 2011	Issued RFQs for D/B contract C0980
December 2011	Began Real Estate Acquisition
March 2012	Completed PE and began Advanced PE
April 2012	Board certification of Final EIS / EIR and adoption of project
April 2012	Began Final Design - Advanced Utility Relocations (AUR)
June 2012	FTA Record of Decision
August 2012	Issued RFQs for D/B contract C0980
January 2013	Issued RFPs for D/Build contract C0980
March 2013	Completed Final Design - Advanced Utilities Relocation (AUR)
May 2013	NTP for Construction Management Services contract MC070
June 2013	Beginning of AUR contract C0981R Bid Period
July 2013	Submitted TIFIA loan application
July 2013	Submitted first draft FFGA application to FTA for review

September 2013	Received proposals for D/B Contract C0980
September 2013	Submitted second draft FFGA application to FTA, incorporating FTA comments
October 2013	Submitted Application to FTA Requesting an FFGA
November 2013	Started Emergency Generator Replacement Tank at 2nd Street and Historic Broadway Station (LA Times Building)
December 2013	Issued "Notice of Intent to Award" letter to contract C0981R contractor Pulice Construction Inc.
January 2014	Awarded AUR contract C0981R to Pulice Construction Inc.
February 2014	Issued Notice to Proceed for AUR Contract C0981R
February 2014	FTA issued Full Funding Grant Agreement to Metro
March 2014	Issued Amendment # 11 for D/B Contract C0980
March 2014	Started Survey for AUR Contract C0981R
April 2014	Metro Board approved the award of D/B Contract C0980 and established a LOP Budget
May 2014	Awarded D/B Contract C0980 to Regional Connector Constructors, Joint Venture
June 2014	Obtained possession of the Mangrove property from the City of Los Angeles
July 2014	Issued Notice to Proceed for D/B contract C0980
August 2014	C0980 D/B Contractor (RCC) began Final Design
September 2014	Metro performed the ground-breaking ceremony for C0980 D/B Contract
October 2014	EN077 Contractor, Arcadis, removed the underground storage tank at LA Times Parking Lot
November 2014	C0981R AUR Contractor completed DWP power work at 1st St. and Alameda
December 2014	Metro completed Field Vibration Testing for existing Expo and Gold Lines
January 2015	Demolish Buildings at 1st/Central Station
February 2015	Metro approved the Baseline Schedule for C0980 D/B Contract

March 2015	RCC started Historic Broadway Station Site Move-In
April 2015	Metro terminated C0981R Contract for convenience
May 2015	RCC started pile installation at Mangrove Launch Pit
June 2015	RCC started decking for shoofly bridge (Pile Cap & Grade Beam)
July 2015	DWP Water started installing 36" Water Valve at Alameda St.
August 2015	RCC completed DWP Power work at Flower & 5th Street
September 2015	RCC started Phase 2 DWP Power Relocation work at Broadway (Behind K Rail).
October 2015	RCC started pile installation at 1st/Central Station
November 2015	RCC completed Central Ave Full Closure (Pile & Decking)
December 2015	Metro Board approved the increase (\$131.8M) of the Project LOP Budget to \$1,589.9 million.
January 2016	RCC began implementation of Bus Bridge # 1 (Shoofly Tie-In Work at Little Tokyo).
February 2016	RCC began implementation of full closure at 2nd/Broadway intersection.
March 2016	RCC completed Bus Bridge # 1 (Shoofly Tie-In at Little Tokyo) work.
March 2016	Excavation of 1st/Central Station was initiated.
April 2016	TBM (Tunnel Boring Machine) was delivered to the temporary storage site.
May 2016	Closed 1st Street between Alameda and Central Streets. Opened northbound 1st East of Alameda Street.
June 2016	RCC completed excavation at 1st/Central Station Box
June 2016	RCC began pile installation on west side of Flower Street between 4th and 5th Street
July 2016	RCC initiated pile installation at Historic Broadway Station (West Hammer Head)
July 2016	RCC Initiated CIP invert at 1st/Central Station Box
August 2016	RCC completed 36" waterline replacement at 1st/Alameda

September 2016	RCC completed temporary decking at 1st/Alameda intersection (Wye)
October 2016	Metro performed TBM lowering ceremony
October 2016	RCC completed CIP invert at 1st/Central Station Box
November 2016	RCC completed CIP invert at Mangrove Launch Pit and Wye
December 2016	RCC completed Phase 1, 2nd Street Decking in front of LA Times Bldg.
January 2017	Metro Board approved a LOP Budget increase
February 2017	RCC initiated TBM mining (1st – Left)
March 2017	RCC completed TBM mining under JVP (first 500 ft.)
March 2017	RCC completed temporary decking on Flower St. (between 4th and 5th)
April 2017	RCC completed sub-invert at TBM retrieval pit
April 2017	RCC completed CIP invert at Grand Av Arts/Bunker Hill Station Box
May 2017	RCC completed temporary decking at Historic Broadway Station
May 2017	RCC completed water relocation work along Flower Street
June 2017	RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station
June 2017	Five-month full closure of 6th Street approved by LADOT, Caltrans and LADWP
July 2017	RCC completed TBM mining of the first tunnel
August 2017	RCC extracted TBM shields from the Retrieval Shaft
September 2017	RCC began TBM mining of the second tunnel (right)
October 2017	RCC completed TBM mining under JVP (first 500 ft.)
October 2017	RCC completed temporary decking on Flower St. (between 5th and 6th, deck beam 16 to deck beam 58)
November 2017	Completed five-month full closure of 6th Street

November 2017	Initiated underpinning related to the Historic Broadway Station
December 2017	RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station (Right Tunnel)
January 2018	RCC completed TBM mining of the second tunnel (right)
February 2018	RCC began excavation of cross passages
February 2018	RCC began SEM canopy pipe installation
March 2018	RCC began tunnel invert concrete
March 2018	RCC completed infrastructure for power relocation work at 6th/Flower
April 2018	RCC completed entrance structure excavation of Historic Broadway Station
May 2018	RCC began SEM excavation
June 2018	LADWP Power completed cable pulling at 6 th /Flower
June 2018	Completed underpinning related to the Historic Broadway Station
July 2018	RCC completed station box excavation of Historic Broadway Station
August 2018	Completed entrance structure invert of Historic Broadway Station
September 2018	Completed temporary decking of Flower Street
October 2018	RCC started the CN 106.2 Final Design of the Revised Cable Transmission System for the Gold Line
October 2018	Metro completed approval of floating slab test results
October 2018	RCC completed SEM left drift excavation
October 2018	RCC completed Trainway Feeder duct bank at Flower St & 7 th St
November 2018	RCC completed Little Tokyo / Arts District Station Box Excavation
November 2018	RCC completed Grand Av Arts/Bunker Hill Station East Platform Level Exterior Walls
December 2018	RCC completed SEM right drift excavation

December 2018	RCC completed the Historic Broadway Station west invert
December 2018	RCC started tunnel walkways between the future Little Tokyo/Arts District Station to Historic Broadway Station
December 2018	RCC started the future Little Tokyo/Arts District Station east invert
December 2018	RCC completed Grand Av Arts/Bunker Hill Station mezzanine concrete
January 2019	RCC completed Grand Av Arts/Bunker Hill Station invert concrete
January 2019	RCC completed SEM center top drift excavation.
January 2019	RCC started Little Tokyo/Arts District Station west cable pit and sump pit
February 2019	RCC completed SEM excavation
February 2019	RCC completed platform level exterior walls at Grand Av Arts/Bunker Hill Station
February 2019	RCC started fire protection in tunnels
March 2019	RCC completed Little Tokyo/Arts District Station invert concrete
March 2019	RCC completed Bored Tunnels walkway concrete
April 2019	RCC completed Grand Av Arts/Bunker Hill Station east concourse deck concrete
April 2019	RCC completed 1 st Street Cut & Cover / U-Channel Level 1 excavation
May 2019	RCC completed North Flower Cut & Cover tunnel invert concrete
May 2019	RCC completed Wye Cut & Cover tunnel invert concrete
June 2019	RCC completed Right Tunnel floating slab curb
July 2019	RCC completed Left Tunnel floating slab curb
July 2019	RCC completed SEM Cavern concrete invert
August 2019	RCC completed 7th Street / Metro Center Wall Demolition
August 2019	RCC completed the Historic Broadway Station West Concourse Deck

September 2019	RCC completed Historic Broadway Station east invert
September 2019	RCC completed South Flower Cut & Cover tunnel excavation
October 2019	RCC completed Wye Tunnel Cut & Cover walls
October 2019	RCC completed Grand Av Arts/Bunker Hill Station concourse walls
November 2019	RCC completed Wye Tunnel Cut & Cover Roof Deck
November 2019	RCC completed SEM Cavern Exterior Walls
<i>December 2019</i>	<i>RCC completed Little Tokyo/Arts District Station plenum deck concrete</i>