

**Board Report**

File #: 2023-0197, **File Type:** Budget**Agenda Number:** 26.

**CONSTRUCTION COMMITTEE
APRIL 20, 2023****SUBJECT: DIVISION 20 PORTAL WIDENING TURNBACK FACILITY LOP INCREASE****ACTION: APPROVE RECOMMENDATION****RECOMMENDATION**

AMENDING the Life-of-Project (LOP) budget by \$80,000,000 for the Division 20 Portal Widening Turnback Facility (Project) from \$876,749,577 to \$956,749,577 using the fund sources as summarized in Attachment A, consistent with the provisions of the Board-adopted Measure R and Measure M Unified Cost Management Policy (Attachment B).

ISSUE

A key element of the complexity of the Division 20 Portal Widening Turnback Facility Project is the requirement of maintaining existing service for the B Line and D Lines that necessitates a distinct order of phasing to keep the rails operational while constructing sections of the rail yard improvements. This constraint, combined with a significant number of unknown factors, has contributed to changes and delays to the Project that has consumed much of the budgeted Life of Project (LOP) contingency.

Some of the unknown factors include the expansion of the Division 20 Yard into 20 acres of a previous industrial site with underground conditions and hazardous waste, major structural changes required to the 100-year-old First Street Bridge, unknown utilities encountered within the existing Yard that required relocation or re-design to incorporate into the work, interface with multiple adjoining projects, design deficiencies, and third-party requirements.

On February 17, 2022, a Life of Project Budget increase was approved by the Board in the amount of \$75,000,000. The increase was for the projected funds anticipated for a 12-month duration. Given that the Project was 30% complete, at that time, and had encountered a significant number of design changes, delays, and unforeseen site conditions, it was determined that assessing the full increase of the LOP contingency could better be determined by advancing the Project an additional Fiscal Year, incorporating design changes undertaken, and to better evaluate the range of costs of unforeseen site conditions.

The Project has advanced to 48% complete, with many of the costs associated with the First Street Bridge and the industrial site fully realized. A recently conducted update to the risk analysis and

modeling identified the need for additional LOP given the many challenges of this complex Project, staff is recommending an increase of \$80,000,000 to the LOP.

BACKGROUND

The Division 20 Portal Widening Turnback Facility (Project) enables trains to operate at required headways and increases the storage capacity to support the expansion of the Purple Line Extension (D Line). As part of the Full Funding Grant Agreement (FFGA) from the Federal Transit Administration (FTA) under Purple Line Section 1 (PLE1), the Division 20 Portal Widening Turnback Facility Project will allow trains to turn back quickly to meet the planned service levels and FTA requirements. Achievement of the reduced headways requires significant modifications to the Division 20 Yard which includes portal widening, power relocation and upgrades, First Street Bridge modifications and seismic upgrade, installation of turnback facility and storage tracks, train control, signaling systems installation and integration.

The Metro B/D Line trains currently “turn-back” at Union Station, reversing direction from east to west. The current minimum headway that can be achieved at Union Station is approximately four-minute service for combined B/D Line service (or seven-and-a-half minutes on the branches), but that will become impracticable and less efficient once the Westside Purple Line Extension begins operating and more trains are using the same tracks.

At present, non-revenue Metro B/D Line trains proceed south of Union Station and through the portal just south of the US 101 Freeway before entering a complex set of switches in the Division 20 rail yard. To produce a clear benefit to current and future operations by increasing train speeds and ensuring reliability of the system, the existing tunnel portal must be widened to accommodate additional tracks and switches that diverge to become the turnback and yard leads.

In addition to the turnback facility, the Purple Line 1, Purple Line 2, and Purple Line 3 projects will add train vehicles to the Metro Fleet that will generate a need for increased storage capacity in the B/D Line Yard. Storage tracks are being constructed North and South of the First Street Bridge as part of the Division 20 Project. Complex switching and train movements must be integrated with the turnback facility to enable trains to move from storage onto the main line and into service through the portal.

To install the new turnback facility and new storage for train vehicles, the current power substation for the Yard must be relocated and upgraded to meet the power requirements for the Project turnback facility and added storage. Twelve different construction phases are necessary as geometry and alignments are modified for relocating and upgrading track, power, utilities, and train control systems in different locations in the yard. The Contractor must maintain 24/7 operations with each phase requiring safety testing and formal turnback procedures before trains can be returned for in-service operations.

Finally, construction and pre-revenue testing of the portal widening and turnback facility must be coordinated in accordance with PLE Section 1 schedule for opening for Revenue Service.

On February 25, 2020, Metro issued a conformed contract with a Contract Award of \$431,777,000 for construction of the Division 20 Portal Widening Turnback Facility Project to Tutor Perini Corporation and a Life of Project budget in the amount of \$801,749,577. The Notice To Proceed was issued on April 8, 2020. On February 17, 2022, a Life of Project Budget increase was approved by the Board in the amount of \$75,000,000, adjusting the amount to \$876,749,577.

The costs impact related to the First Street Bridge, design changes, and encountered site conditions have reduced the Project contingency to less than 2% of the current LOP budget. This Board Action requests authorization to replenish contingency and provide sufficient funding for contract changes and base contract activities through the Project completion.

DISCUSSION

The Division 20 Portal Widening Turnback Facility has advanced to 48% overall completion. The Design-Bid-Build (DBB) Project has encountered significant changes and cost impacts related to unknown underground site conditions, third party requirements, and design changes that have directly relate to future costs for schedule delays to the contractor and maintenance of Project oversight staffing.

The additional contract changes that were not anticipated, detailed in the previous Board Report (2021-0765), included significant design changes necessary to reconcile corrections to the design, the old industrial facility that was not under Metro ownership during the design that could not be fully examined to determine actual quantities of hazardous materials or site conditions, and the First Street Bridge deteriorated state and subsequent delays to the Project schedule. The total cost of these impacts continued over the last year and are now nearing completion.

A significant portion of the future contingency expenditures will be for future underground site conditions encountered, delay costs to the contractor, and the extended duration of the Project oversight staffing for the extended schedule. Approximately 25-acres of the 60-acre yard remain in service and will be under reconstruction within the next 18-months with anticipated underground differing site conditions. The Project schedule has increased by 492 days which will result in extended staffing for the Project designer and consultant Construction Management Support Services (CMMS). Additionally, the contractor will have added costs for the extended contract duration.

Since February 2022, the Project has successfully completed a major milestone consisting of structural and seismic upgrades to the First Street Bridge to accommodate the additional track work, primary power utility work to support the new traction power substation, more than 5 miles of new duct bank installation, demolition of westerly portal to support the additional tracks, and installation of one of the train control bungalows.

The completion of much of the First Street Bridge, underground work in the old industrial area, and existing yard, significantly reduces the unknown risks for the Project. Many of the design changes have been attributed to underground changed conditions, conflicts not anticipated during design development, or other design factors. Much of the old industrial area contained old foundations,

utilities, hazardous materials, and industrial piping at depths greater than 20 feet below the existing surface that required mitigation by removal or redesign to avoid clashes. In the existing yard there is a network of numerous underground utilities that support signal, communication, lighting, electrical components that have been added, modified, and abandoned in place over the last 30 years, in which drawing records were not accurately depicted or the drawings were not found that resulted in design changes/additional work. A majority of the Project footprint for underground work has been opened up and existing conditions exposed that should reduce the quantity of changes related to differing site conditions. The project is currently 48% complete.

The Project contingency remaining is currently less than 2%, this Board Action will increase the amount to 8% of the Project's budget for any future anticipated contract changes and related activities through the Project's completion. The increase will amend the LOP budget of \$876,749,577 to \$956,749,577.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an impact on established safety standards for Metro's construction projects.

FINANCIAL IMPACT

Funds required for fiscal year 2024 have been requested through the fiscal year 2024 budget development, to be adopted at the May 2023 Board meeting. Since this is a multi-year capital project, the Chief Program Management Officer and the Project Manager will be responsible for budgeting costs in future fiscal years.

Impact to Budget

The sources of funds for the recommended actions are local and other funds that are eligible and available at the time of expenditure.

Multiyear Impact

The sources of funds for the Project are capital funds identified in the recommended Funding/Expenditure Plan as shown in Attachment A. With respect to the \$80,000,000 increase, Attachment B shows the Measure R and Measure M Unified Cost Management Policy (the Policy) analysis and funding strategy required for cost increases to Measure R and Measure M Projects.

To comply with the Policy of the Metro Board of Directors, Metro staff has evaluated potential offsetting cost reductions, including scope reductions, value engineering, shorter segments. Because the project is so far along, these actions are no longer feasible.

This report identifies additional funding resources consistent with the Policy approved by the

Board in 2018. Attachment B provides a detailed discussion of the Policy. In summary, the Policy was developed in recognition that some projects would need additional funding and the Policy provides a consistent and equitable process to ensure that any financial impacts are limited to the local area where the project is located and not have a region-wide impact.

The source of funds to address the LOP increase are Measure R Transit Capital (35%) for WPLE, made available from additional New Starts funding.

EQUITY PLATFORM

The benefits of this action are to ensure that transit service for disadvantaged communities. Based on the 2019 Customer Survey, the Red and Purple heavy rail lines serve the following ridership:

- 27.7% below the poverty line
- 56.4% had no car available
- Rider Ethnicity: Latino 38.9%; Black 13.1%; White 25.8%; Asian/Pacific Islander 15.2%; Other 6.5%

In addition, areas served include Union Station to Downtown LA, Koreatown (Wilshire/Western), Hollywood, Universal City, and North Hollywood, a majority of which serve people living in Equity Focus Communities.

The Division 20 C1136 Mainline contract will support the Purple and Red Line system by increasing service frequency, reliability and access for communities that use the Metro transit system along both alignments for housing, jobs, educational, medical and entertainment needs. These service upgrades have a positive impact for riders of the system from marginalized communities that travel along Red and Purple Line Corridors, by increasing access, capacity, and reliability to meet these essential travel needs.

The contract has Small Business Enterprise (SBE) commitments of 19.34% and Disabled Veteran Business Enterprise (DVBE) commitments of 3.31%, and the contract modifications requested in this report do not change the level of commitments. Current level of participation is 5.60% SBE and 2.71% DVBE. The majority of the SBE scope is trackwork and the Project must complete the underground heavy civil and utility work first before the trackwork begins. There are three more years left in the contract to achieve the 19.34% SBE and 3.31% DVBE commitments.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Recommendation supports Strategic Plan Goal #1 - Provide high-quality mobility options that enable people to spend less time traveling. Deliver outstanding trip experience for all users of the transportation system. Enhance communities and lives through mobility.

ALTERNATIVES CONSIDERED

The Board may choose to not move forward with amending the LOP budget. This is not recommended as Metro will be unable to provide funding to complete the Project according to the current schedule.

NEXT STEPS

Upon approval by the Board, the LOP budget will be amended accordingly per the recommendation.

ATTACHMENTS

Attachment A - Funding/Expenditure Plan

Attachment B - Measure R and Measure M Unified Cost Management Policy Analysis

Attachment C - Projected Breakdown of Cost Allocation for \$80 Million

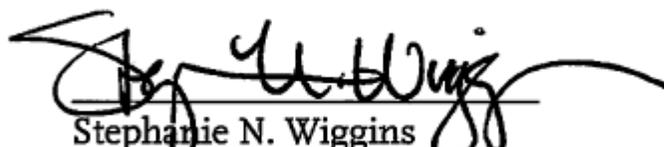
Prepared by:

Albert Soliz, Deputy Executive Officer, Program Management, (213) 922-4002

Debra Avila, Deputy Chief, Vendor/Contract Management (213) 418-3051

Reviewed by:

Sameh Ghaly, Chief Program Management Officer, (213) 418-3369



Stephanie N. Wiggins
Chief Executive Officer

ATTACHMENT A
DIVISION 20 PORTAL WIDENING TURNBACK FACILITY
LOP INCREASE APRIL 2023
Funding/Expenditure Plan
(Dollars in Millions)

Capital Project No. 865519	Prior LOP	Prior Spent	FY23	FY24	FY25	FY26	TOTAL	% of Total
<i>USES OF FUNDS</i>								
Construction	535.31	328.91	142.15	74.43	30.00	19.62	595.11	62.20%
Right of Way	101.54	101.54	-	-	-	-	101.54	10.61%
Professional Services	164.90	105.10	25.00	25.00	15.00	10.00	180.10	18.82%
Project Contingency	75.00	-	-	40.00	40.00	-	80.00	8.36%
Total Life of Project Cost:	876.75	535.55	167.15	139.43	85.00	29.62	956.75	100.00%
<i>SOURCES OF FUNDS¹</i>								
Measure R - Transit Capital (35%) ²	674.28	512.72	147.15	8.96	56.00	29.62	754.45	78.86%
Transit and Intercity Rail Capital Program (TIRCP)	69.21	22.83	-	46.38	-	-	69.21	7.23%
SB1 - Local Partnership Program	133.26	-	20.00	84.09	29.00	-	133.09	13.91%
Total Life of Project Funding:	876.75	535.55	167.15	139.43	85.00	29.62	956.75	100.00%

1. Funding sources subject to change based on availability and eligibility of funds at the time of expenditure.

2. Measure R amount subject to change based on actual debt interest charged to Westside PLE per the 2011 Fiscal Responsibility Policy.

ATTACHMENT B

Division 20 Portal Widening Project

Measure R and Measure M Unified Cost Management Policy Analysis

Introduction

The Measure R and Measure M Unified Cost Management Policy (the Policy) was adopted by the Metro Board of Directors in July 2018. The precursor Measure R cost management policy was adopted in March 2011. The intent of the Policy is to inform the Metro Board of Directors regarding cost increases to Measure R- and Measure M-funded projects and the strategies available to close a funding gap. The Division 20 Project (the Project) is subject to this policy analysis as it is considered an integral part of the Westside Purple Line Extension (WPLE) Section 1, Section 2, and Section 3 projects, which are Measure R- and Measure M-funded.

The life of project (LOP) budget for the Project was last approved by the Board in February 2022 at \$876,749,577. The Project is subject to the Policy analysis now due to a proposed \$80,000,000 (9.1%) increase to the LOP budget. Funding for the cost increase may be needed through FY 2026. This analysis recommends trade-offs required by the Policy to identify the funds necessary to meet the cost increase.

Measure R and Measure M Unified Cost Management Policy Summary

The adopted Policy stipulates the following.

If a project cost increase occurs, the Metro Board of Directors must approve a plan of action to address the issue prior to taking any action necessary to permit the project to move to the next milestone. Shortfalls will first be addressed at the project level prior to evaluation for any additional resources using these methods in this order as appropriate:

- 1) Scope reductions;
- 2) New local agency funding resources;
- 3) Value Engineering;
- 4) Other cost reductions within the same transit or highway corridor;
- 5) Other cost reductions within the same subregion; and finally,
- 6) Countywide transit or highway cost reductions or other funds will be sought using pre-established priorities.

Scope Reductions

The Project cost increase is funding depleted contingency that has been needed for additional work and schedule delays due to unknown utilities that required relocation or re-design, interface with multiple adjoining projects, design deficiencies, and third-party requirements. Any attempt to identify and negotiate agreeable reductions to the scope may result in further delays and potential additional costs. Because of this, we recommend moving to the next step.

New Local Agency Funding Resources

Local funding resources (i.e., specific to the affected corridor or subregion) are considered in the next step as opposed to countywide or regional sources so as not to impact the funding of other Metro Board-approved projects and programs or subregions in the County.

The Project is eligible for Measure M and Measure R funding and is currently allocated a portion of the total \$4,074,000,000 of Measure R funding that is identified in the Measure R sales tax ordinance Expenditure Plan for the Westside Subway Extension. Measure R totaling \$415,391,156 has also been transferred from other Metro projects to the Westside Subway Extension to address prior cost increases.

The Project is in the Central City Area but serves the Metro Red and Purple Line which are within both the Central City Area and Westside Cities subregions. Local funding resources from both subregions and cities within the subregions could be considered for the cost increase.

Funding Within the Corridor

No other surplus or otherwise available funding has been identified from other Metro projects on the Metro Red and Purple Line corridors.

Subregional Programs and Local Agency Contributions

Measure M has funding for a transit-eligible Subregional Equity Program (SEP) in the Central City Area and Westside Cities subregions. The Measure M Expenditure Plan includes \$235 million for the Central City Area SEP and \$160 million for the Westside Cities SEP. The Metro Board previously approved funding plans that include SEP funding from the San Gabriel Valley subregion to address a \$126 million cost increase on Gold Line Foothill Extension, South Bay and Central City Area subregions to address a \$90 million cost increase on Crenshaw/LAX Transit, Central City Area and Westside Cities subregions to address a \$150 million cost increase on Westside Purple Line Extension Section 1, and Central City Area subregion to address a \$11.9 million cost increase on Eastside Light Rail Access (Gold Line). However, motion #2021-0435 from June 2021 states that, henceforth, the Policy is amended to eliminate the Subregional Equity Program from consideration to address project funding shortfalls during construction. Because of this motion, the SEP is not considered for the Project cost increase.

Local Agency Contributions

The cities with Project stations are expected to contribute funding to the Project as part of the 3% local agency funding assumption included in the Measure R and Measure M ordinances. The cities are generally not responsible for cost increases to the projects and are not considered as a source of funding for the Project cost increase.

Measure M, as well as Measure R and Propositions A and C, provide “local return” funding to Los Angeles and Beverly Hills. However, prior Board actions relating to the Twenty-Eight by '28 Initiative and funding for the cost increase to Gold Line Foothill

Extension to Pomona did not support use of local return, and it is presumed these funds would not be available for the cost increase to the Project.

State and Federal Funding (Discretionary)

The FTA has previously granted the WSE Section 1, 2, and 3 projects \$669.9 million, \$1.187 billion, and \$1.3 billion respectively through the New Starts program. The March 2021 federal American Rescue Plan Act increased the New Starts grants on Section 1, 2, and 3 by a combined \$218,284,002. The federal FY 2023 budget provides an additional \$59,583,554 for Section 1. In addition, the FY 2023 budget includes advance appropriations and accelerated payments for WSE Section 1, 2, and 3 of \$513,016,299. The increase in New Starts and advance and accelerated amounts can make Measure R funding available that is currently programmed on WSE Section 1, 2, and 3 to address the cost increase on the Project. Additional State or federal discretionary funding (where Metro would compete for the funding) is not probable, given the Project has experienced a cost increase and the design/build contract is already awarded.

Value Engineering

The Project cost increase is funding depleted contingency that has been needed for additional work and schedule delays due to unknown utilities that required relocation or re-design, interface with multiple adjoining projects, design deficiencies, and third-party requirements. Any attempt to identify and negotiate agreeable value engineering may result in further delays and potential additional costs. As a result, we recommend moving to the next step.

Other Cost Reductions within the Same Transit or Highway Corridor, or within the Same Sub-region

The cities receive funding through the Call-For-Projects, the competitive grant program that is funded and managed by Metro for the benefit of LA County cities, transit operators, and State highway projects that was last held in 2015. At times the funding for certain projects in the Call-For-Projects is "de-obligated" if not spent within a reasonable timeframe and this can be a funding source for other uses. Currently there is not a meaningful amount of de-obligated funds available unless the cities choose to terminate an existing project, and all other projects are moving through their respective development process.

Countywide Cost Reductions and/or Other Funds

If new local agency resources are not allocated to the Project cost increase, regional or countywide funding could be considered. These funds are being programmed for uses in Metro's financial forecast, during the timeframe when funds are needed for the Project cost increase. Eligible sources of countywide funding include Proposition A and C (allocated to the portion of the Project that is not attributable to "new subway"), General Fund, and Lease Revenues.

State and Federal Funding (Formula)

Metro receives quasi-formula funding from the State through the Regional Improvement Program (RIP) and Local Partnership Program (LPP). This is considered regional

funding as it can be applied countywide to both transit and highway spending. The most recent 2022 RIP has zero funding available for new Metro projects. Nevertheless, Metro determined in December 2021 it would request an advance of future RIP shares for mobility improvement projects associated with the I-710 North project. LPP is already programmed for the Project. Future LPP funding is allocated for other projects in Metro's financial forecast.

Metro receives federal formula funding from the Congestion Mitigation and Air Quality (CMAQ) Improvement Program and the Surface Transportation Block Grant Program (STBG). Metro's apportionments from these programs have increased in the 2021 Bipartisan Infrastructure Law (i.e., Infrastructure Investment and Jobs Act), which is a five-year authorization bill. Unfortunately, the Project is not eligible for federal funding because it was not environmentally cleared under the National Environmental Policy Act (NEPA).

Recommendation

Metro staff recommends the use of \$80,000,000 of additional New Starts, which will make available an equal amount of Measure R Transit 35% for the proposed \$80,000,000 LOP budget increase.

ATTACHMENT C
 DIVISION 20 PORTAL WIDENING TURNBACK FACILITY
 LOP INCREASE APRIL 2023
 Projected Breakdown of Cost Allocation

Amount	Description
\$50,000,000	CONSTRUCTION <ul style="list-style-type: none"> ◦ Portal Wall, Ductbanks, Trackwork, Systems and Systems Integration Testing, Third Party requirements, Schedule Impacts
\$30,000,000	PROFESSIONAL SERVICES <ul style="list-style-type: none"> ◦ Metro Staff at Gateway and field offices who perform oversight in various disciplines. ◦ Engineering - Design support during construction (DSDC) <ul style="list-style-type: none"> - TY LIN Contract AEAE66758000: Design and Engineering - SecoTrans Contract AE47810E0128: Systems Engineering ◦ CMSS - ANSER: Construction Management Support Services procured to support Metro staff in oversight of specific areas of project construction disciplines such as field inspectors, resident engineer, engineers and other construction support. ◦ Program Management Support Services (PMSS) - KTJV support services ◦ 3rd Party Coordination <ul style="list-style-type: none"> - City and County of Los Angeles administration and services - Freight and Rail Line coordination adjacent to Division 20 ◦ Claim Support Services - Arcadis Inc.: claims support consultant to assist with preparing documentation and analysis in support of Metro's defense against claims submitted by the contractor. ◦ Labor Compliance Monitoring: Consultant companies monitor the construction contractor compliance with project labor agreement and DBE requirements. ◦ Legal Services: Procured legal services to assist project management. ◦ Auditing Services: Consultant companies conduct labor compliance audits of main professional services and construction contracts. ◦ QA Test Lab Services: Consultant companies provide materials verification testing and inspections services. ◦ Escalation and Inflation cost impacts.
\$80,000,000	Total LOP Increase

Division 20 Board Report 2023-0197

April 2023

DIVISION 20 LOP INCREASE

DIVISION 20 PORTAL WIDENING TURNBACK FACILITY

RECOMMENDATION:

AMENDING the Life of Project (LOP) budget by \$80,000,000

Current LOP: \$876,749,577

Revised LOP:\$956,749,577

BACKGROUND

- Purple Line Full Funding Grant Agreement (FFGA) for PLE1 requires capacity for 5-minute headways.
- Metro's commitment to meet the terms of the FFGA, existing portal must be widened and a turnback track constructed
- PLE 1, 2 and 3 will add vehicles to the Metro Fleet, requiring increased Yard storage
- Original contract includes substantial upgrades to power the new turnback and vehicle storage



DIVISION 20 PORTAL WIDENING TURNBACK FACILITY

ISSUE

- Maintaining the active yard combined with a significant number of site conditions, has contributed to changes and delays to the Project that has consumed much of the budgeted Life of Project (LOP) contingency

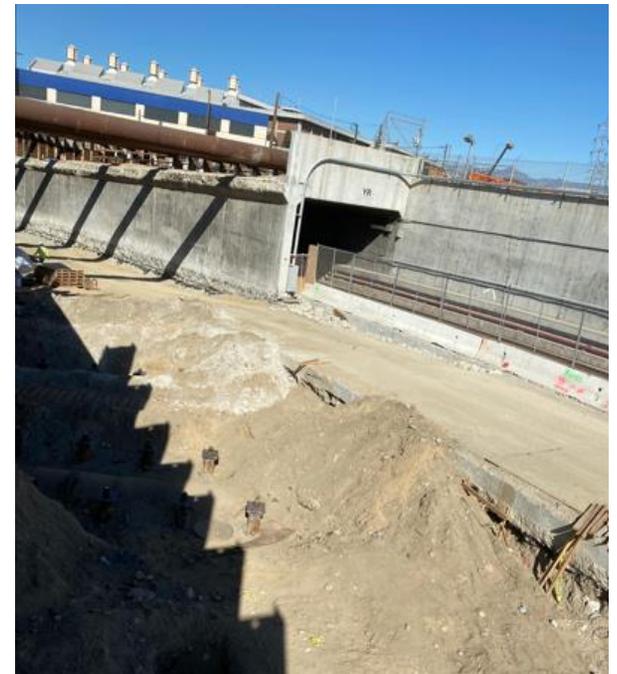
DISCUSSION

- Multiple design issues
- D20 yard is over 30-years old causing repairs and replacement of equipment
- Old industrial site, excessive removal of hazardous materials
- Multiple interfacing projects have caused delays and construction challenges
- 3rd-Parties, City of Los Angeles, Utilities
- First Street Bridge is 100-years old and required unforeseen repairs
- Currently, the project is about 48% complete, less than 2% of the of the Project contingency remaining



FUNDING FOR THIS LOP INCREASE REQUEST

- The use of \$80,000,000 of additional New Starts funding will make available an equal amount of Measure R Transit 35% for this proposed increase
- LOP budget increase actions to address the cost increase are evaluated using the Measure R and Measure M Unified Cost Management Policy
 - The completion of much of the First Street Bridge, underground work in the old industrial area, and existing yard, has reduced unknown risks
 - A majority of the Project footprint for underground work has been opened up and existing conditions exposed that should reduce changes related to differing site conditions



DIVISION 20 PORTAL WIDENING TURNBACK FACILITY

NEXT STEPS:

- Incorporate lessons learned between previously identified differing site conditions and design
- Continue risk assessments to manage remaining schedule and budget risks
- Identify resources to validate constructability, potential schedule conflicts, and contractor oversight coordination

