

First Bimonthly Purple Line Construction Status Report

Fiscal Year 2024

(2023 JCR, p. 82)

A Report to the Maryland General Assembly

Senate Budget and Taxation Committee

and

House Appropriations Committee

July 2023

Maryland Department of Transportation

Maryland Transit Administration

Introduction

The Maryland Department of Transportation (MDOT) prepared this report in response to language contained in the 2023 Joint Chairmen's Report (JCR). The language states:

, provided that \$100,000 of this appropriation made for the purpose of agency administration may not be expended until the Maryland Transit Administration submits five bimonthly construction status reports for the Purple Line Project to the budget committees. The status reports shall provide:

- 1) the completion percentages for the project as a whole and for each major category of work;*
- 2) the running total amount expended for construction; and*
- 3) an explanation of any material change to the total construction cost estimate or construction schedule as set forth in the revised public-private partnership agreement as amended to add Maryland Transit Solutions as the replacement design-build contractor for the project.*

The first status report shall be submitted by July 1, 2023, and subsequent reports shall be submitted every second month thereafter, and the budget committees shall have 45 days from the date of the receipt of the final report to review and comment. Funds restricted pending the receipt of a report may not be transferred by budget amendment or otherwise to any other purpose and shall be canceled if the report is not submitted to the budget committees.

The Purple Line is a critical investment in Maryland's transportation system that will provide reliable east-west travel in Montgomery and Prince George's counties, help reduce congestion, improve our environment, increase transit connectivity, create jobs, and drive economic growth.

The Purple Line will transform the region by:

- advancing the shared mission to improve the quality of life and economic vitality in our communities by creating and sustaining an integrated, convenient, and reliable transportation network;
- creating several new multimodal connections across the region, linking to five Washington Metropolitan Area Transit Authority (WMATA) Metro lines, three Maryland Area Regional Commuter (MARC) commuter rail lines, Amtrak, and a host of bus services;
- greatly expanding transit opportunities in Maryland's two most populous and fastest-growing counties in the State;
- creating convenient, dependable east-west access to jobs, educational centers, shopping, recreation, and attractions;
- supporting more than 6,000 jobs, with 26% for design services going to small and minority-owned businesses and 22% for construction going to small and minority-owned businesses;

- relieving automobile congestion on major arteries and local roads in one of the most congested areas in the nation;
- providing significant environmental benefits through the operation of clean electric energy light rail vehicles and taking thousands of vehicles off the road daily, thereby reducing vehicle emissions caused by single occupancy vehicle drivers;
- spurring economic growth along the Purple Line alignment in and between Prince George’s and Montgomery counties and having a positive impact on property values by improving access and mobility; and
- revitalizing communities and providing much-needed opportunities for transit- oriented developments, many of which are already under development in anticipation of completion of the Purple Line.

Information Requested

As requested in the 2023 Joint Chairmen’s Report, MTA is providing the most recent information collected and summarized through the end of May 2023.

1. The percent completion for the overall project and for each major category of work.

As of May 31, 2023, the following completion percentages have been achieved:

Completion Category	% Complete (as of 5/31/23)	% Complete (as of 3/31/23)
Overall Project ⁽ⁱ⁾	54.6%	51.1%
Utility Relocations ⁽ⁱⁱ⁾	80.4%	80.0%
Civil Design ⁽ⁱⁱⁱ⁾	99.5%	99.0%
Systems Design ^(iv)	73.7%	73.7%
Construction Possession of Property Acquisitions ^(v)	100%	99.5%
Civil Construction ^(vi)	38.3%	35.4%
Rail Installation ^(vii)	2.3%	2.2%
Systems and Station Construction ^(viii)	8.1%	5.7%
Glenridge Operations and Maintenance Facility ^(ix)	95.0%	95.0%
Rail Vehicles Ready to Ship ^(x)	92.8%	92.8%

UPDATED CALCULATION FORMULAS:

- i. Overall Project completion is calculated by summing the earned value (EV) for the three P3 project phases (prior Design-Build Contractor, MTA interim, current Design-Build Contractor) and dividing by the sum of the estimates at completion (EAC) for the three P3 project phases.

$$(EV_{priorDB} + EV_{interim} + EV_{currentDB}) / (EAC_{priorDB} + EAC_{interim} + EAC_{currentDB})$$

- ii. Progress of Utility Relocations is now calculated using partial progress information for each individual utility relocation package. Of the 260 total utility relocations packages, the following progress is noted:
 - a. 200 packages at 100% Complete
 - b. 5 packages at $90\% \leq \text{Complete} < 100\%$
 - c. 6 packages at $50\% \leq \text{Complete} < 90\%$
 - d. 2 package $0\% < \text{Complete} < 50\%$
 - e. 47 packages at 0% Complete
- iii. Civil Design progress is based on 198 of 199 civil design packages having a Released for Construction status; the one remaining civil design package is near final completion.
- iv. Systems Design progress is based on 14 of 19 systems design packages having a Released for Construction status. Systems designs packages are the last packages to complete, because equipment location and cable routing must fit into the completed civil design environment. The remaining five systems design packages are progressing towards completion, lagging as necessary to be coordinated with the remaining civil design packages.
- v. Construction Possession of Property Acquisitions refers to available access for Purple Line Project construction. The category includes all original (P3A Exhibit 9) and additional (P3A Exhibit 9B) properties required for the project.
- vi. Civil Construction is calculated based on physical construction progress of major civil components (retaining walls, bridges, drainage, paving, and underground structures) across the project alignment.
- vii. Rail Installation is calculated based on physical construction progress across the project alignment.
- viii. Systems and Station Construction is calculated based on physical construction progress of major systems components (overhead power, train & traffic signals, communications equipment, substations) and stations across the project alignment.
- ix. This category measures the progress of just the maintenance facility. Civil, rail, and systems construction within the Glenridge Yard is now tracked and reported under the Civil Construction, Rail Installation, and Systems and Station Construction status.
- x. All 26 of the original fleet of 26 light rail vehicles are ready to ship to Maryland from Elmira, New York when the Glenridge Operations and Maintenance Facility is ready. An additional two light rail vehicles were ordered and six of ten of the car shells arrived in the Port of Baltimore in mid-June to be sent to Elmira for final assembly and storage.

2. *The running total amount expended for construction.*

Since the execution of the new design-build contract on April 15, 2022, through May 31, 2023, \$614.8 million has been expended on the design-build contract. Reported expenditures are based on the latest monthly construction progress report prepared by the Concessionaire.

3. *An explanation of any material change to the total construction cost estimate or construction schedule as set forth in the revised P3 Agreement as amended to add Maryland Transit Solutions as the replacement design-build contractor for the project.*

The Concessionaire is required to publish monthly construction progress reports for its lenders. The report for the month ending May 31, 2023, notes that (1) Owner Utility Adjustments and Remaining Utility Adjustments are experiencing delays; (2) the Concessionaire and the Design-Build Contractor have quantified this delay to be 263 days; and (3) the quantified 263-day delay is prior to any mitigation efforts or change to the Revenue Service Availability Deadline. Revenue service availability is the date the Independent Engineer issues a certificate of revenue service availability for the Project, allowing the rail line to begin passenger service. It is important to note that the schedule is based on the views of the Concessionaire and Design-Build Contractor and the schedule is subject to review by MTA.

Project delays reflect delays in completion of utility relocation activities, the ongoing challenges and complexities of completing construction in a dense urban environment while minimizing disruptions to vehicular and pedestrian access, the ongoing national workforce and supply chain issues, and the unique history of the Purple Line Light Rail Project. The project's history includes two highly uncommon events: a set aside, and later reinstatement, of a key federal government environmental approval in 2016 and the replacement of the design-build contractor in 2022. The new design-build contractor faced unexpected conditions as some construction sites that sat dormant for nearly two years were reopened.

The MTA, the Concessionaire, and the Design-Build Contractor formed a tiger team tasked to identify and recommend potential schedule mitigation opportunities with the goal of mitigating delays. On April 18, 2023, MTA and the Concessionaire reached agreement on the design and implementation of certain mitigation activities to the planned construction phasing to allow for work to proceed in critical areas concurrent with the remaining utility relocation work and to allow for greater flexibility in ordering materials in advance, at a cost of \$21.3 million. The tiger team continues to meet regularly to review construction progress, anticipate potential schedule impacts, and identify mitigation opportunities to reduce the risk of further delays.

In addition to identifying and evaluating potential schedule mitigation activities, MTA and the Concessionaire reached agreement to provide contractual relief for project delays. The relief extends the Revenue Service Availability Deadline to Spring 2027 and provides net compensation to the Concessionaire of \$148 million, including \$205 million paid during the construction period, less a \$57 million reduction to payments during the operations and maintenance period. This compensation amount reflects the additional cost of continuing construction activities during the extended period. The relief also includes an additional contingent payment of up to \$38 million to be assessed if the project is delayed beyond the new Revenue Service Availability Deadline.

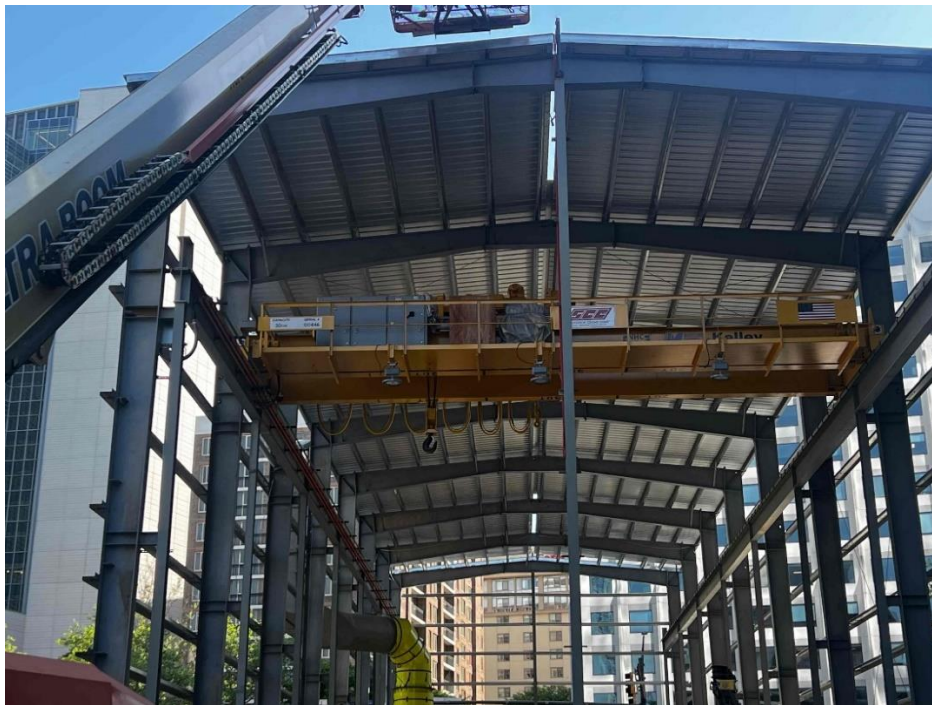
The MTA notes that this modification does not address the full 263 days of delay currently showing on the Concessionaire's project schedule and that utility relocation work continues to be challenging. As with any mega project, the schedule will fluctuate monthly. MTA and the Concessionaire are actively working to mitigate any additional delays. MTA will continue to provide regular updates to the public and remains committed to delivering this critical transit project for the region.

Work along the entire 16-mile project alignment continues to advance. The project is more than 50% complete and construction is actively advancing along the entire alignment from New Carrollton to Bethesda at 60 active construction sites with approximately 700 workers. A significant amount of construction activity currently underway, including utility relocation work and replacement and upgrading of storm drain systems, has less of an impact visually than building a station but is inherently critical to the completion of the overall project.

More recognizable activities underway include several Purple Line stations currently under construction, including Bethesda, Connecticut Ave, Lyttonsville, Manchester Place, Silver Spring, Silver Spring Library, Campus Drive UMD, Riverdale Park – North, and Glenridge; bridge and retaining wall construction, including completion of Talbot Avenue in Silver Spring; light rail track being laid at several locations, including Ellin Road, the Plymouth Tunnel, and Campus Drive at the University of Maryland; and vertical excavation (blasting) of a 130-foot shaft at the Bethesda station that will connect future Purple Line riders to the Washington Metropolitan Area Transit Authority Metro’s Red Line. Additionally, work continues to prepare the Glenridge Operations and Maintenance Facility to start receiving light rail vehicles in early 2024.

Construction Progress

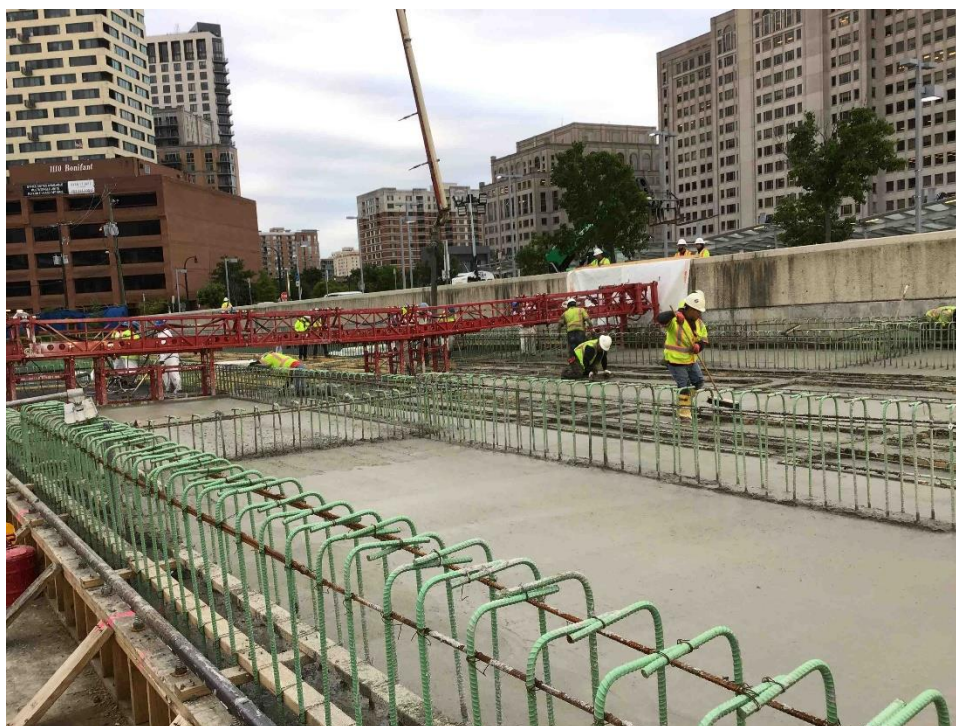
Segment 1 – Gantry Shed Roof Installation at Bethesda Metro South Entrance (04/18/23)



Segment 2 – Structure S07 Pedestrian Bridge Deck Rebar at Connecticut Ave. (04/05/23)



Segment 3 – Structure S20 LRT Bridge Concrete Placed at Silver Spring Transit Center (05/25/23)



Segment 4 – Mud Mat Concrete Placed at Manchester Place (05/19/23)



Segment 5 –RCP Installed for Fish Passage at Long Branch Culvert (05/09/23)



Segment 6 – Ground Rod Installation at Campus Dr.-UMD Station (05/25/23)



Segment 7 – Structure S29 LRT Bridge over Kenilworth Ave. Deck Pan Installation (05/29/23)



Segment 8 – Roof View looking West of MOW Track Installation at Glenridge (04/19/23)

