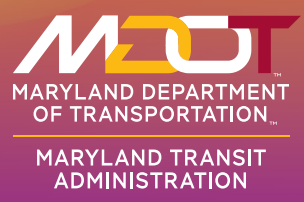


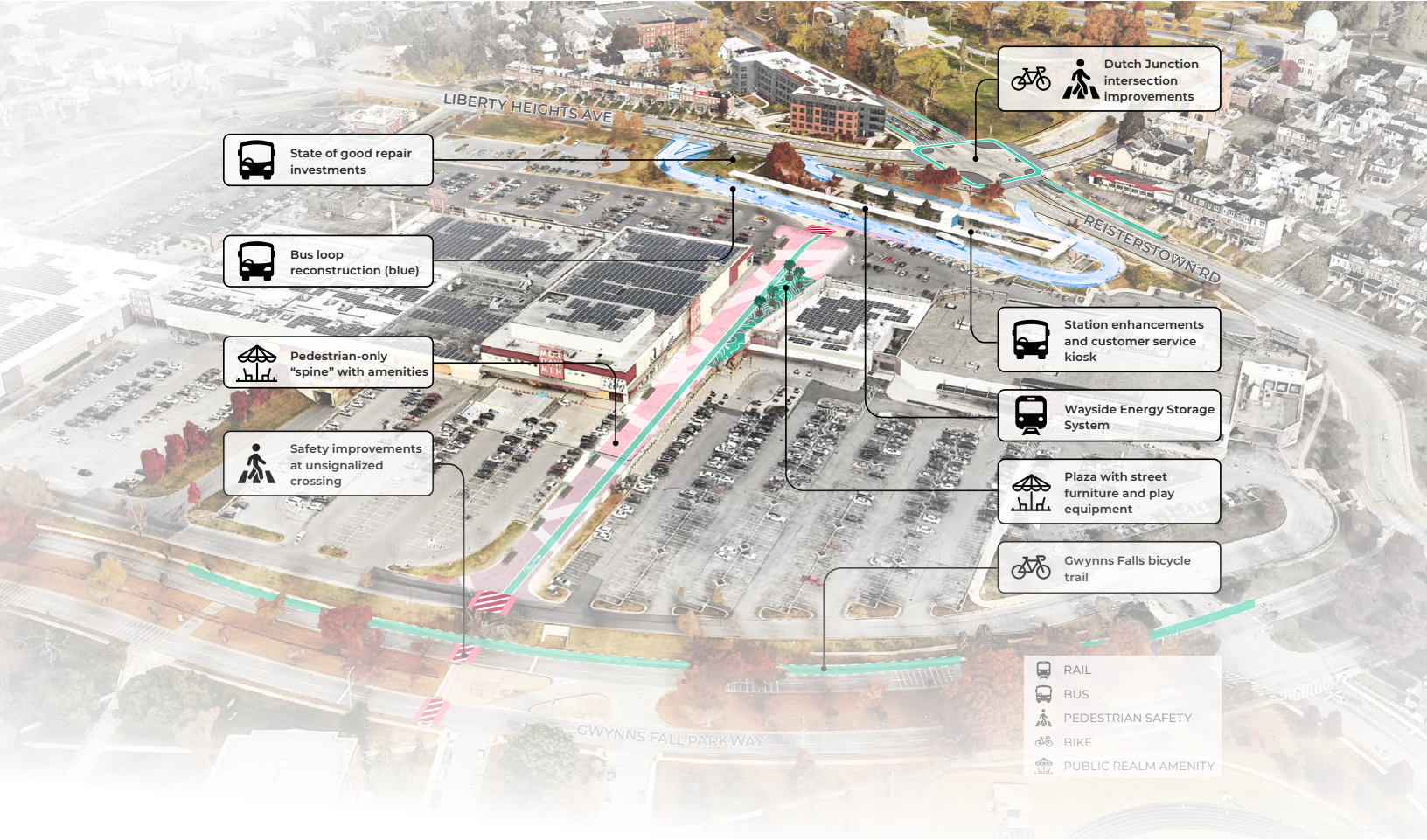
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) 2023


# Mondawmin Transit Hub

Investing in Multi-Modal Infrastructure to Advance Equity, Safety and Sustainability in West Baltimore


February 2023







 State of good repair investments


 Bus loop reconstruction (blue)


 Pedestrian-only "spine" with amenities

 Safety improvements at unsignalized crossing






  Dutch Junction intersection improvements

 Station enhancements and customer service kiosk

 Wayside Energy Storage System

 Plaza with street furniture and play equipment

 Gwynns Falls bicycle trail

-  RAIL
-  BUS
-  PEDESTRIAN SAFETY
-  BIKE
-  PUBLIC REALM AMENITY

# Project Description

## 1. Project Description

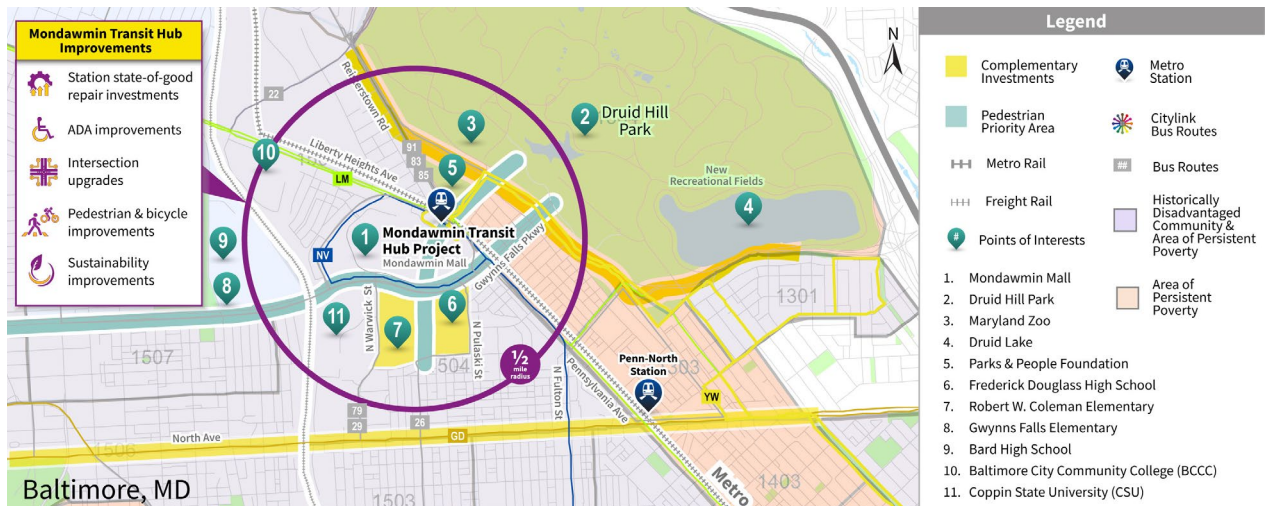


Figure 1: Mondawmin Transit Hub Project area overview

The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA), in partnership with the Baltimore City Department of Transportation (BCDOT), requests \$25 million in Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant funds for the *Mondawmin Transit Hub Project*, a \$38.5 million multi-modal transportation enhancement project that will perform safety, accessibility, state of good repair, and sustainability improvements at this vital transit hub in West Baltimore.

Mondawmin Station is a Metro and bus transit station situated at the heart of a half dozen majority-Black neighborhoods in West Baltimore and is the primary transit connection to five public schools, two colleges, recreational amenities, and Mondawmin Mall, a major retail and social services center. This station has served communities in West Baltimore and the 745-acre Druid Hill Park for 40 years, but suffers from significant state of good repair needs, unsafe pedestrian and bicycle connections, lack of Americans with Disabilities Act (ADA) infrastructure on connecting sidewalks, and an uninviting station environment.

MDOT MTA and BCDOT envision infrastructural upgrades to improve the station condition, enhance multi-modal connections, create seamless transfers between Metro and the station's 11 connecting bus routes, ensure accessibility for people with disabilities, generate sustainable energy, and ultimately set the stage for transit-oriented development anchored by this station.

The Mondawmin Transit Hub Project provides a comprehensive package of station upgrades, state of good repair improvements, multi-modal investments, and environmental sustainability enhancements that will create a modernized, safe, multi-modal, and well-connected transit hub in West Baltimore. The project scope includes:

### Project Goals for Mondawmin Station & 1/2 Mile Radius

- Bring station assets into a state of good repair
- Create an attractive station that anchors future transit-oriented development
- Eliminate transportation-related fatalities and injuries
- Achieve ADA compliance
- Enhance pedestrian and bicycle connections
- Invest in sustainable energy generation and green infrastructure
- Expand the electric vehicle charging network





 <b>State of Good Repair</b>	<ul style="list-style-type: none"> <li>• State of good repair investments to upgrade station assets past their useful lives, including replacement of the bus loop, fire protection system cabling, platform tactile warning surface, attendant booth, plumbing, platform signage, and employee restrooms</li> <li>• Regrading of the station plaza to mitigate water drainage issues</li> </ul>
 <b>Station Upgrades</b>	<ul style="list-style-type: none"> <li>• Addition of a new transit customer service kiosk at street level</li> <li>• Inclusionary wayfinding</li> <li>• Customer amenities, such as seating, real-time information signage, and station plaza</li> <li>• Upgraded station lighting</li> </ul>
 <b>Pedestrian and Bicycle Safety</b>	<ul style="list-style-type: none"> <li>• Pedestrian infrastructure upgrades for ADA compliance within ½ mile of the transit hub</li> <li>• Redesign and reconstruction of 9 high-crash intersections for improved pedestrian and bicycle safety</li> <li>• Installation of new protected bicycle infrastructure</li> <li>• Pedestrian-scale lighting</li> <li>• Installation of dedicated bicycle parking at the station</li> </ul>
 <b>Environmental Sustainability</b>	<ul style="list-style-type: none"> <li>• Installation of a regenerative braking system to produce sustainable electricity from Metro Subway operations</li> <li>• Installation of 10 electric vehicle chargers</li> <li>• Replacement of impervious surfaces with 3 new roadside bioretention facilities that capture stormwater and create new green spaces</li> </ul>

Figure 2: Project Scope

This project boasts a strong benefit-cost ratio, indicative of its positive impacts.

<b>Total Benefits</b> (Discounted 7%)	<b>\$67.4 million</b>
<b>Total Costs</b> (Discounted 7%)	<b>\$21.7 million</b>
<b>Benefit-Cost Ratio</b> (BCR)	<b>3.11</b>

Figure 3: Benefit-Cost Ratio

### Partnership

This project will be delivered through partnership between MDOT MTA, BCDOT, Baltimore City Department of Public Works (DPW), and Baltimore Gas and Electric Company (BGE).

MDOT MTA and BCDOT have a strong record of partnership on transportation projects funded by U.S. Department of Transportation (USDOT) RAISE and TIGER grants, including the \$12 million Building Baltimore Penn Station Connections Project, which received a \$6 million RAISE grant in 2022, and the \$50 million East-West Priority Corridor Project, which received \$22 million in RAISE support in 2021.

### Complementary Infrastructure Investments

The Mondawmin Transit Hub project will complement significant ongoing investment in transit, Complete Streets, public school buildings, park space, and recreation centers in this area of West Baltimore, strengthening multi-modal connections to all of these projects. MDOT MTA is currently replacing the elevator at Mondawmin Station with funding support from the Federal Transit Administration and plans to replace all entry gates, fare collection machines, and rail vehicles in the Metro system. Figure 4 shows the many other complementary projects in planning, design, and construction near the Mondawmin Transit Hub project.

#### Project Partner Commitments

- **MDOT MTA:** \$12 million
- **BCDOT:** \$1 million
- **DPW:** \$500,000
- **BGE:** 10 electric vehicle chargers

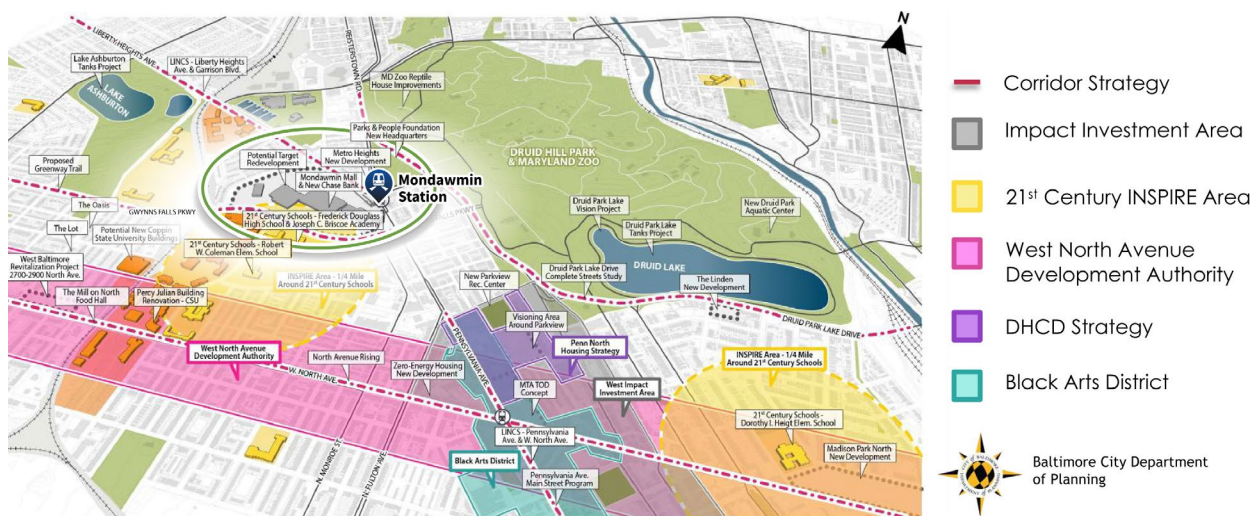


Figure 4: Projects in planning, design, and construction near the Mondawmin Transit Hub project

### Why Mondawmin Transit Hub?

This project provides a ready opportunity to directly impact a large, diverse population in West Baltimore. **Mondawmin Station is located in a Historically Disadvantaged Community where, within a half-mile radius, 23% of households earn less than \$15,000 annually and 27% of residents were living at or below the poverty line as of the 2020 decennial census. Ninety-five percent of residents within a half-mile of the station identify as non-white or of Hispanic/Latino origin.** The station’s location qualifies the project area as an Area of Persistent Poverty and a Historically Disadvantaged Community under USDOT-specified criteria.<sup>1</sup> Approximately two-in-five residents within a half-mile do not have access to a personal vehicle (42%) and rely upon public transportation to get to work (37%), demonstrating a clear need for a high-quality, safe, and accessible Mondawmin Station. Recent challenges with violent crime at Mondawmin Station also emphasize the need for infrastructural investments to improve the built environment and help reduce crime.<sup>2</sup>

The Mondawmin Transit Hub project aligns with regional and local plans. MDOT MTA’s Central Maryland Regional Transit Plan (RTP) identifies Mondawmin Station as a priority location for transit hub investment to strengthen connections between modes and enhance the transit network. The Mondawmin Transit Hub project will also help to achieve goals set in community and city agency plans, summarized in Appendix 4: Existing Plans and Studies. These plans illustrate shared goals to implement safer multi-modal infrastructure in these majority-Black communities (adhering to the City’s adopted Complete Streets Manual required by City Code) and improve connections to transit and surrounding green spaces.

Total Population (2020 Census)	Total Households	Households in Poverty	Households without Personal Vehicle	Black, Hispanic, Indigenous Population	Jobs (LEHD Origin-Destination Employment Statistics 2009-2018)
6,930	2,774	749 (27%)	2,910 (42%)	6,584 (95%)	1,500

Figure 5: Key statistics within a half-mile of the Mondawmin Transit Hub

Mondawmin station is one of 14 Metro stations on Baltimore’s only Metro Subway line, providing rapid transit service to downtown Baltimore (Charles Center) in under 10 minutes and Johns Hopkins Hospital in 15 minutes. The 11 bus routes connecting to the station provide connections throughout Baltimore City and the Central Maryland region.

1. USDOT, Areas of Persistent Poverty Project (APP) and Historically Disadvantaged Community (HDC) List, updated Jan. 10, 2023, <https://datahub.transportation.gov/stories/s/tsyd-k6ij>.
2. Washington, S., Love, H., Sebastian, T. The infrastructure law’s untapped potential for promoting community safety. Brookings Institution. Mar. 29, 2023, [Link](#)

The station is a critical transit hub for a broad group of users, including commuters, students who ride transit to access Frederick Douglass High School and other nearby schools, employees at Mondawmin Mall, grocery store shoppers, visitors to nearby Druid Hill Park and the Maryland Zoo, social services clients, individuals in job training programs at Mondawmin Mall, and residents from the half-dozen bordering neighborhoods who travel through the station area. As shown in Figure 6, the station is situated at the nexus of many key origins and destinations.

### Transportation Challenges

#### 1. State of Good Repair

Mondawmin Metro Station was built in 1983 and many of the key systems and station components have not been upgraded since they were first installed. Mondawmin Station has several assets in “poor” condition with ratings below 2 on a scale of 1-5. Work is already underway to replace the station’s elevators, but other unaddressed major deficiencies include cracked and eroded concrete in the bus loop and outdated fire protection cabling, drainage and stormwater piping, platform lighting, and the station attendant booth. This project will bring this key station infrastructure into a state of good repair and reduce ongoing maintenance costs.

#### 2. Lack of ADA infrastructure

Mondawmin Station and the surrounding area have a significant need for ADA accessible infrastructure. **This station has an average of 149 wheelchair boardings per day<sup>3</sup> and 21% of residents within a half-mile of the station have a disability (2020 Census).** An overwhelming majority of station users (91%) reach this transit hub by either walking or using a wheelchair, highlighting the severity of need for ADA upgrades at pedestrian crossings and bus stops. This project will upgrade station infrastructure and its immediate approaches to meet full ADA compliance.

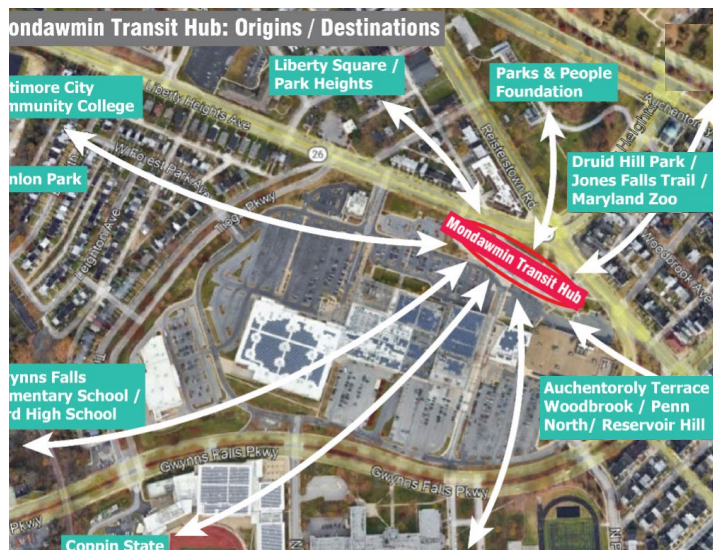


Figure 6: Origins and destinations within 1/2 Mile of Mondawmin Transit Hub

#### 3. Lack of safe multi-modal connections to nearby destinations

The existing roadway infrastructure around Mondawmin Station is not safe for pedestrians or bicycle users. The station is surrounded by four-lane, high-speed corridors with poor pedestrian infrastructure and only one short segment of protected bicycle infrastructure. Safety concerns on these roadways are illustrated by high crash rates, including four fatal crashes between 2017 and 2021. This project will redesign and upgrade nine surrounding intersections and add protected bicycle infrastructure to enhance safety and eliminate roadway injuries and fatalities in alignment with BCDOT’s Toward Zero initiative.

3. MDOT MTA August 2021-July 2022 transit boarding data

**Current Design Status**

MDOT MTA and BCDOT have completed 30% design and higher for several project components, while others are still in the conceptual design phase. MDOT MTA and BCDOT will complete a planning study in spring 2023 for project components that have not yet reached 30% design. These scope items will be ready to advance to 30% and final design if RAISE grant funding is awarded. Figure 8 includes a summary of the design status of the project components.

Design Level Complete	Scope Item
Final design	<ul style="list-style-type: none"> <li>• Bioretention facilities</li> </ul>
85% design	<ul style="list-style-type: none"> <li>• Bus loop replacement</li> </ul>
30% design	<ul style="list-style-type: none"> <li>• Station customer service kiosk</li> <li>• Gwynns Falls Pkwy separated bike and pedestrian trail</li> </ul>
Concept design	<ul style="list-style-type: none"> <li>• Safety improvements at 9 intersections</li> <li>• ADA upgrades</li> <li>• State of good repair improvements</li> <li>• Station amenities</li> <li>• Streetscape improvements</li> <li>• “Pedestrian spine” linear plaza</li> </ul>

*Figure 8: Design status of project components*

**Project Area Description**

The Mondawmin Transit Hub Project is located entirely in the Baltimore, MD Urbanized Area, which is considered urban for the purpose of the RAISE grant. The project area includes Mondawmin Station (coordinates 39.318096, -76.652988) and the half-mile radius around the station. The Project is within Census Tracts 1504 and 1505, both of which are Areas of Persistent Poverty and Historically Disadvantaged Communities, as well as 1304, an Area of Persistent Poverty.

**Description of technical and engineering aspects of the project**

**State of Good Repair**

- The project team will reconstruct the concrete bus loop, regrade the center island plaza at street level, renovate two operator restrooms, install new fire protection system cabling, replace drainage and stormwater plumbing, replace station lighting with LED, build a new station attendant booth, replace tactile warning surfaces, and install new wall paneling.

**Station Upgrades**

- The project team will upgrade the below-ground Metro station with real-time signage, digital message boards, new wayfinding, and additional passenger amenities.
- The project team will design and install street-level station improvements in the bus loop plaza, including a new customer service kiosk, real-time signage, seating, lighting, wayfinding, trash cans, bicycle parking, and additional passenger amenities.

**Pedestrian and Bicycle Safety**

- The project team will perform ADA upgrades, including curb ramp construction, sidewalk reconstruction, and installation of tactile warning surfaces and audible pedestrian signals, at 9 intersections and on blocks adjacent to the station. ADA compliant ramps will be installed at staircases.
- The project team will upgrade or reconstruct intersections with protected intersection features, including corner islands, high-visibility crosswalks and pedestrian refuge islands.
- The project team will construct a 2-mile grade-separated bike and pedestrian trail on Gwynns Falls Parkway between Druid Hill Park and the Gwynns Falls Trail.
- The project team will install pedestrian-scale lighting on connecting corridors.
- The project team will create a 0.15-mile pedestrian linear plaza with street furniture and public art between Mondawmin Station and Frederick Douglass High School.

**Environmental Sustainability**

- The project team will design and construct a Wayside Energy Storage System (WESS) within the station’s Traction Power Sub-Station.
- The project team will install 10 electric vehicle chargers, five of which will be fast chargers.
- The project team will construct 3 bioretention facilities for stormwater retention.

*Figure 8: Description of project’s technical and engineering aspects*