



**PLEASE NOTE:
This meeting is
being recorded.**

Welcome

Frederick Douglass Tunnel Program

Bi-Monthly Program Outreach Meeting

Monday, November 18, 2024

Virtual Meeting

Virtual Meeting Safety Reminder

- Be aware of your surroundings
- Push your chair in if you get up
- Use covered containers for beverages



❌ Don't



✅ Do

- **Monitor distance** – Should be 18” to 24” from your eyes
- **Monitor height** – Top of the monitor should be eye-level and slightly tilted
- **Arms** – Relax shoulders; forearms parallel to the floor; minimal bend at the wrist
- **Chair** – Should have a backrest and armrests; adjust height
- **Legs** – Thighs parallel to the floor
- **Feet** – Parallel to the floor; use a footrest if necessary

Virtual Meeting Guidelines

- **Please note:** This presentation is being **recorded** and will be available in a few days on the Frederick Douglass Tunnel Program website
- The facilitator's role is to help the move through the presentation and lead the community and subject matter experts through the Q&A
- Attendees are encouraged to submit your questions during the meeting using the Slido Q&A chat function
- We will respond to questions in the order they were received during a facilitated discussion at the end of the presentation
- If you are joining via phone call, please press *5 to raise your hand and we will unmute you (*6) to allow you to ask your question
- If you have questions regarding topics not being covered in tonight's presentation, please contact us via email at fdtunnel@amtrak.com or call (443) 423-1115

Agenda

- Program Overview
- Program Delivery / CMAR
- Program Sequence
- Real Estate
- Jordan Street
- Current Activities
 - Inspections
 - Instrumentation & Monitoring
 - Utility Location
- Traffic Modifications
- Community Engagement
- Q & A / Next Steps



Program Background and Overview

About Amtrak: America's Railroad



- 500+ destinations across 46 states and 3 Canadian provinces
- 24,000+ employees
- 30 million passengers per year

B&P Tunnel Background

- The existing tunnel located between West Baltimore MARC Station and Baltimore Penn Station is over 150 Years old...that's nearly as old as Druid Hill Park!
- The B&P Tunnel carries 12 million Amtrak passengers per year on the Northeast Corridor (NEC)

Top Issues:

- Aging structure
- Trains frequently delayed traveling through the tunnel with speeds limited to 30 mph maximum
- High maintenance (frequent outages)
- No redundancy & resiliency
- Biggest rail bottleneck between Washington, DC and New Jersey



Frederick Douglass Tunnel Program Overview



- 10 miles of rail improvements along the NEC
- ~2 miles of new tunnel per bore in West Baltimore (two tunnel bores)
- New and improved railroad infrastructure
- New ADA-accessible West Baltimore MARC Station
- State-of-the-art modern fire/life safety systems
- 5 Bridge replacements in Baltimore City (2 roadway, 3 railroad bridges)
- 11 Baltimore City roadway modifications
- Noise barriers in Midtown Edmondson and Greater Rosemont communities

Program Benefits



\$50 million for **COMMUNITY INVESTMENTS**



Local jobs centers to train the **WORKFORCE**



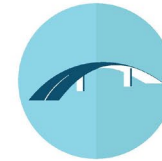
Increased **ACCESS TO REGIONAL JOBS** for Baltimore City residents



Approximately **20,000 JOBS GENERATED** over the course of construction



Construction of a new **ADA-ACCESSIBLE MARC STATION**



IMPROVEMENTS to roadway and bridge **INFRASTRUCTURE**



ENVIRONMENTAL SUSTAINABILITY addition of electrified trains and solar powered facilities and stations



ACCESS TO SALVAGE MATERIALS for residents of Midtown Edmondson and Edmondson Avenue Historic Districts



RELIABILITY, REDUNDANCY and RESILIENCY for MARC and Amtrak trains



Construction of a **NEW TUNNEL**, named in honor of Frederick Douglass



IMPROVED TRIP TIME. Travel from Baltimore to Washington in under 30 minutes



Complete **MODERNIZATION** of Amtrak's **NORTHEAST CORRIDOR** in West Baltimore

Program Delivery

Construction Manager At Risk (CMAR)

Amtrak has decided to use the CMAR method to procure and construct the Frederick Douglass Tunnel Program. To use this method of project delivery, Amtrak has contracted with a Construction Management Team (CMAR Contractor). The CMAR collaborates with Amtrak and the design firm during the design phase to provide constructability review and optimize cost and schedule. This collaboration will continue from program mobilization through completion.

Early Involvement

The CM is involved early in the design process which allows them to provide input on constructability, costs and scheduling.

Risk Management

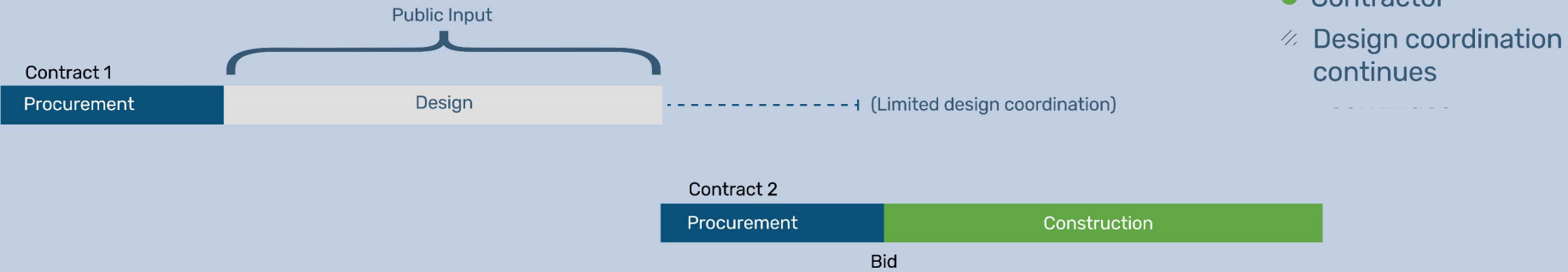
The CM ensures (takes on risk) that the project is completed within the Guaranteed Maximum Price (GMP) which was established prior to starting work.

Collaboration

Amtrak (the owner) collaborates with the designer and CMAR throughout the process to create a more integrated approach.

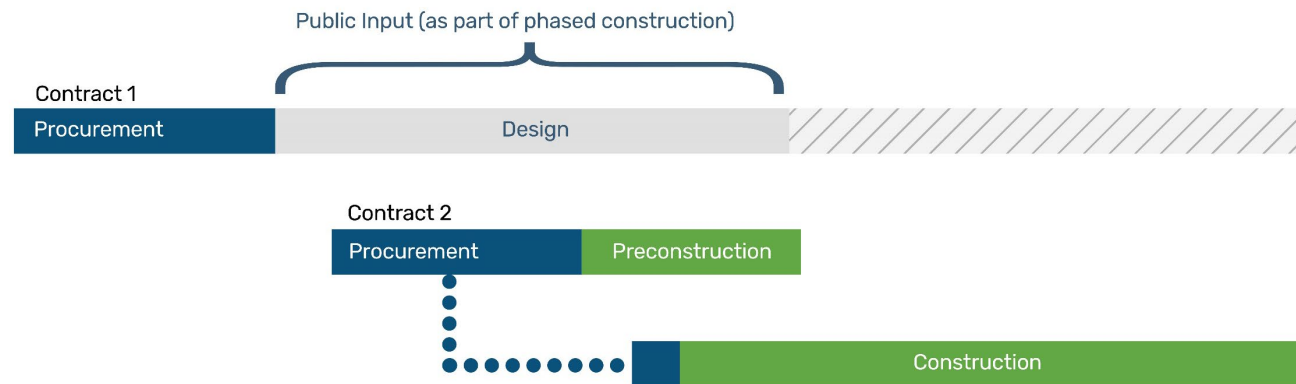
Understanding CMAR

Design-Bid-Build



Construction Manager at Risk (CMAR)

- Accelerate Schedule
- Collaboration
- Construction Input
- Insight into cost



Program Sequence

Sequence of Construction

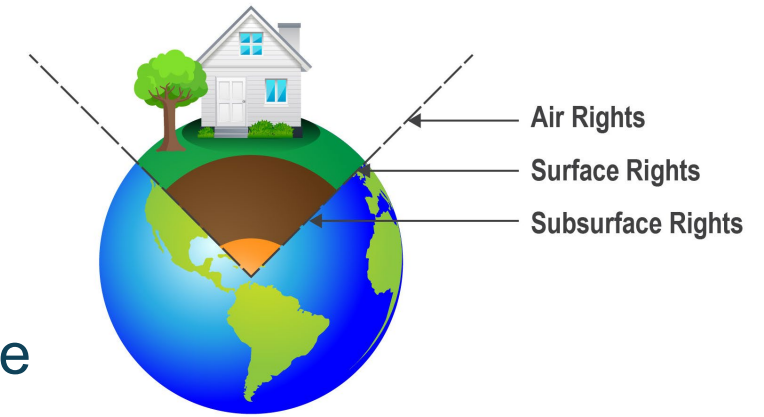
- Property Acquisition (Ongoing)
- Demolition (Ongoing)
- Preconstruction Inspection / Install Monitoring Equipment (Ongoing)
- Utility Location (Ongoing)
- Utility Relocation (Water, Sewer, Gas, Electric) - Late 2024/Early 2025
 - N. Pulaski, Harlem, Rayner, W. Lanvale St, N. Brice, Mosher, Riggs, N. Payson
- Utility Siphon – Early 2025
 - Between N Pulaski St. - Spedden St.

Sequence of Construction

- Mulberry St
 - Roadway Lowering (Fall 2025)
 - Railroad Bridge Construction (Fall 2026)
- Franklin St
 - Roadway Lowering (Fall 2027)
 - Railroad Bridge Construction (Fall 2028)

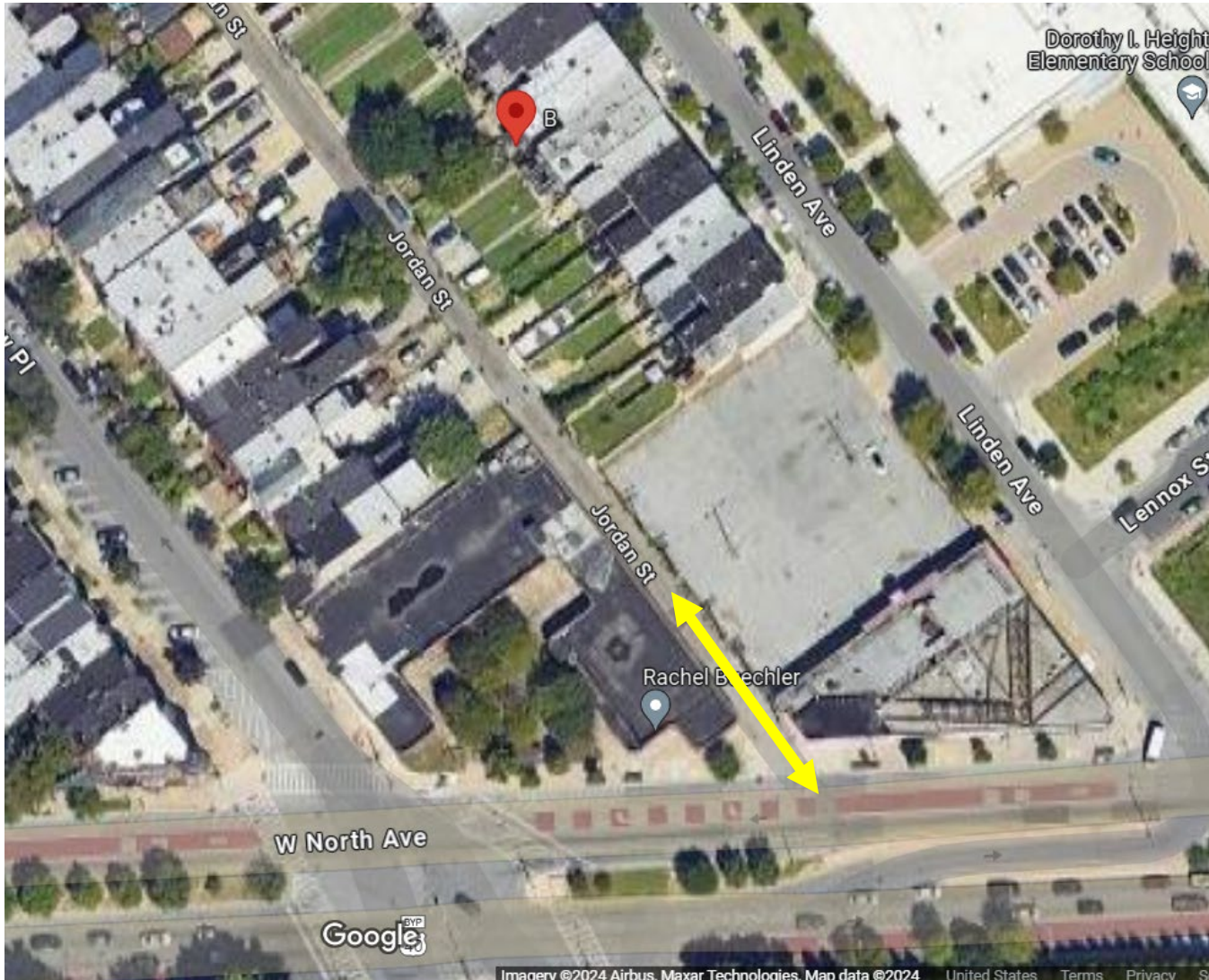
Real Estate Overview

- To make room for the Frederick Douglass Tunnel, Amtrak must acquire over 600 properties:
 - Over 90 surface acquisitions.
 - Over 500 subsurface acquisitions.
- Amtrak needs subsurface rights to construct and operate the tunnel below the horizontal plane purchased
 - This is not an easement; Amtrak is buying in fee simple below a plane
 - This area has no function to anyone but Amtrak
 - Property owner will still control the real estate above the plane
 - Amtrak would not have the right to cause damage above the plane
- URA states that Amtrak must follow “fair market value” in acquiring any such property



Jordan Street

Existing Jordan Street at W. North Avenue



The Challenge

- Jordan Street currently connects directly to W North Avenue
- The new Intermediate Ventilation Facility will eliminate this connection requiring traffic to circle the block to access W. North Avenue
- The design team was asked to assess another option to try and eliminate this reduced access

Options for Jordan Street Alley

Option 1 (Two Alleys – 13 and 14)

- Create a one-way alley that connects to the east to Linden Avenue
- Create a two-way alley that connects to the west to Eutaw Place

Option 2 (One Alley – 13 only)

- Create a two-way alley that connects west to Eutaw Place

Option 1 (Alleys 13 & 14) Considerations²²

PROS	CONS
Creates a shorter travel length from Jordan Street to access W. North Avenue.	Approximately 3 parking spaces need to be removed along Linden Avenue to provide adequate line of sight.
	Alley 14 may be used for access between Linden Avenue and Eutaw Place. This may result in the following: <ul style="list-style-type: none">• Conflict between pedestrian and vehicles• Congestion along Linden Avenue• Challenging visibility for drivers
	Alleys do not have sidewalks for pedestrians; This can create conflict between pedestrians and vehicles.
	Limited available space on IVF site provides less flexibility for revisions to site design to accommodate CHAP meeting comments.

Option 2 (Alley 13) Considerations

PROS	CONS
Maintains existing pedestrian travel patterns.	Eliminates existing alley's direct access to Jordan Street.
Improves safety and traffic operations along W. North Avenue by relocating one access point from W. North Avenue.	Adds ± 2 minutes of travel time from Jordan Street to North Avenue.
More available room on IVF site to address site related comments received from CHAP and the community <ul style="list-style-type: none">- Reduce impervious surfaces- Shift the parking lot of the IVF- Add more landscaping to screen the parking lot from the street	
Maintains function of Jordan Street as an alley. There is no intersection within an alley.	

Input on Jordan Street Design Option

To get feedback on this option, the Program team:

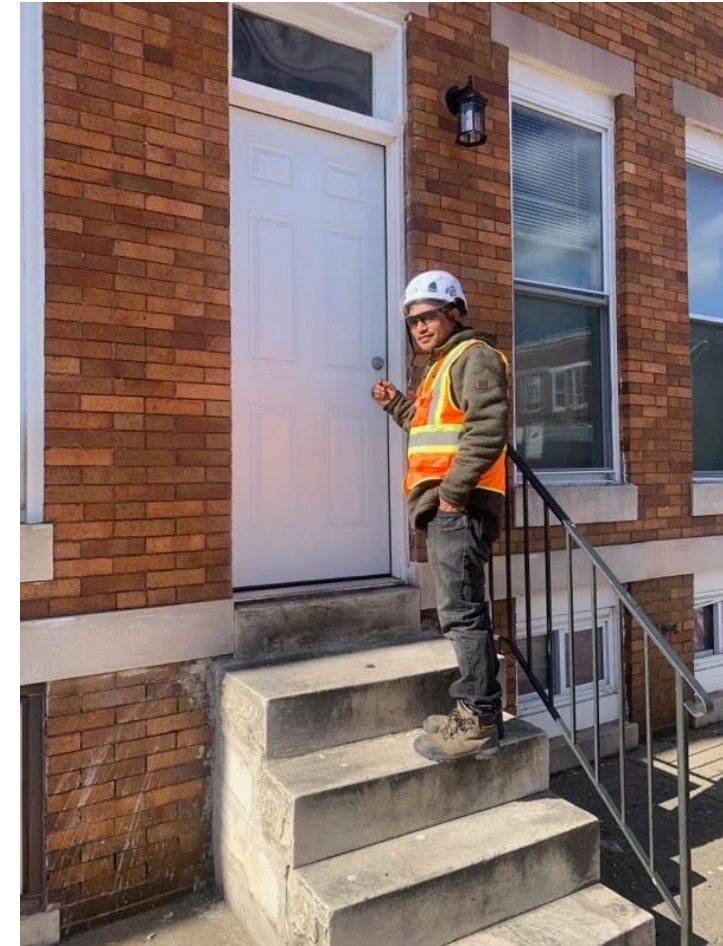
- Shared at the Reservoir Hill Listening Session meeting on 01/11/24
- Requested feedback from property owners/residents along Jordan Street
- Shared options with the public during May bi-monthly meetings
- Met with BCPS to share the design alternative
- Coordinated with Dorothy I Height representatives to solicit feedback
- Included options in the materials sent to CHAP

Based on the review of pros and cons, Amtrak has decided to move forward with only Alley 13 access

Current Activities

Preconstruction Inspection

- A preconstruction inspection documents the existing interior and exterior conditions of homes/buildings adjacent to the Frederick Douglass tunnel alignment.
- Property owners benefit from getting this inspection prior to the start of construction to document the condition of their property in the unlikely event of damage during construction
- Inspections will take approximately one hour and will include photos that document existing physical conditions and a written report of the findings of the inspector.
- Eligible property owners will receive a letter via UPS or FedEx with instructions on how to schedule an appointment.



Preconstruction Inspection Areas

- Boundaries for preconstruction inspections are defined by
 - Depth of excavation
 - Type of construction
 - Influence zones
 - Depth of excavation
 - Distance excavation is from critical structures (homes, buildings, schools)
 - Standard Zone excavations greater than 10 feet have a typical radius ranging from 25 – 50 feet from excavation

Construction Monitoring (Movement)



- Once eligibility for a preconstruction inspection has been determined, the contractor will install instruments to monitor for movement
- This work will be coordinated and permitted with Baltimore City agencies
- The contractor will provide security for monitoring devices
- The instruments may be placed:
 - In ground to measure potential movement and groundwater
 - On adjacent structures (with owner permission)
 - On ground (sidewalk) surface
 - On utilities

Construction Monitoring (Noise & Vibration)



Noise monitor



Vibration monitor

- The contractor will install instruments to monitor for noise and vibration in public right-of-way (not on homes)
- This work has been coordinated and permitted by Baltimore City agencies
- The contractor will measure current background noise and vibration prior to the start of construction to establish baseline readings

Upcoming Traffic Modifications and Construction Activities

Early Construction Activities

- **Mobilization:** Fall/Winter 2024
- **Work Duration:** Approximately 2 years
- **Expected Work Activities**
 - Utility relocation (water, sewer, electric duct)
 - Roadway reconstruction & realignment of Lanvale St
 - Sidewalk, curb & gutter reconstruction
 - Final signing & pavement marking installation
 - Inverted siphon construction
- **Traffic Modifications:**
 - Street closures on N. Pulaski & N. Payson St
- **Parking Restrictions:**
 - Yes. On-street parking will be restricted.



Early Intermediate Ventilation Facility Work

Mobilization: Winter 2024

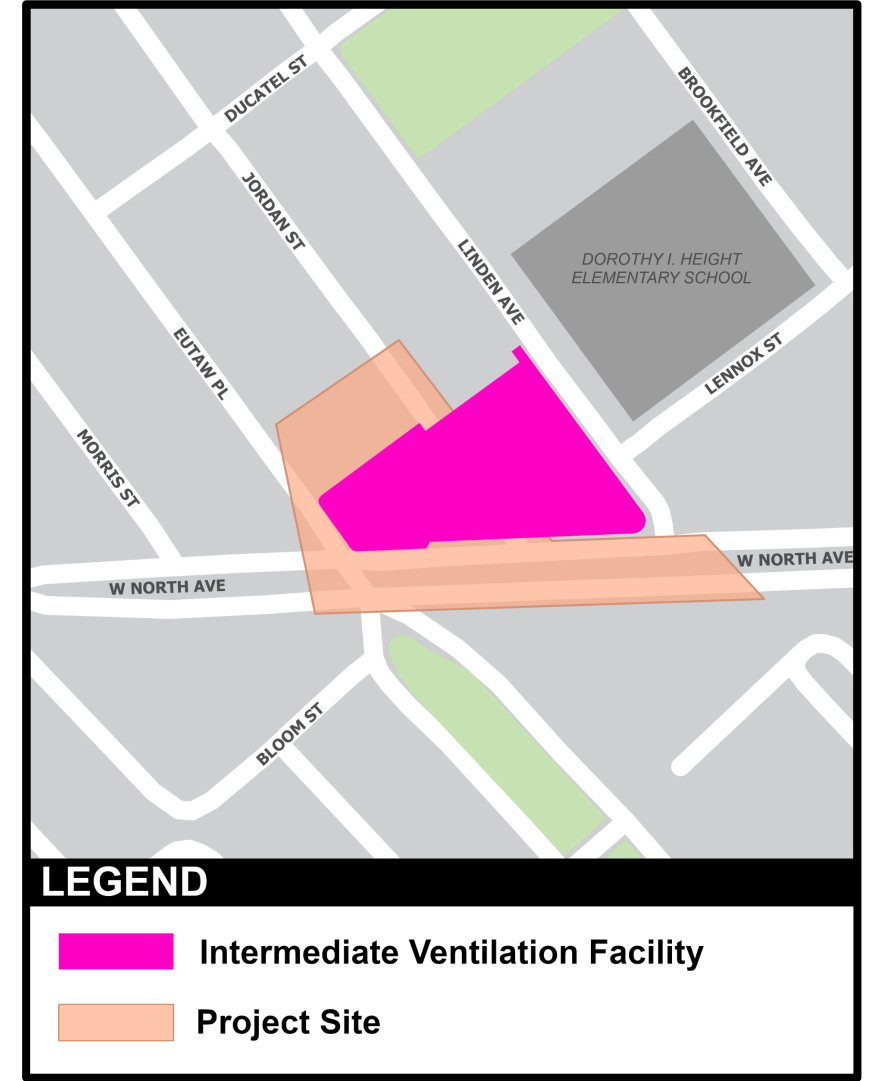
Work Duration: Winter 2024 – Summer 2026

Expected Work:

- Utility Relocation (water, sewer, storm, electric)
- Roadway reconstruction & realignment of Jordan St
- Sidewalk, curb & gutter reconstruction
- Final signing & pavement marking installation
- Traffic signal upgrade Eutaw Pl. and W. North Ave

Traffic Modifications:

- Partial closure of Jordan St. and Ducatel St
- Lane Closures on W North Ave. and Eutaw Pl



Early West Baltimore MARC Work

Expected Work:

- Roadway lowering
- Utility reconstruction
- Mulberry St abutment construction
- New Mulberry St bridge construction

Mobilization:

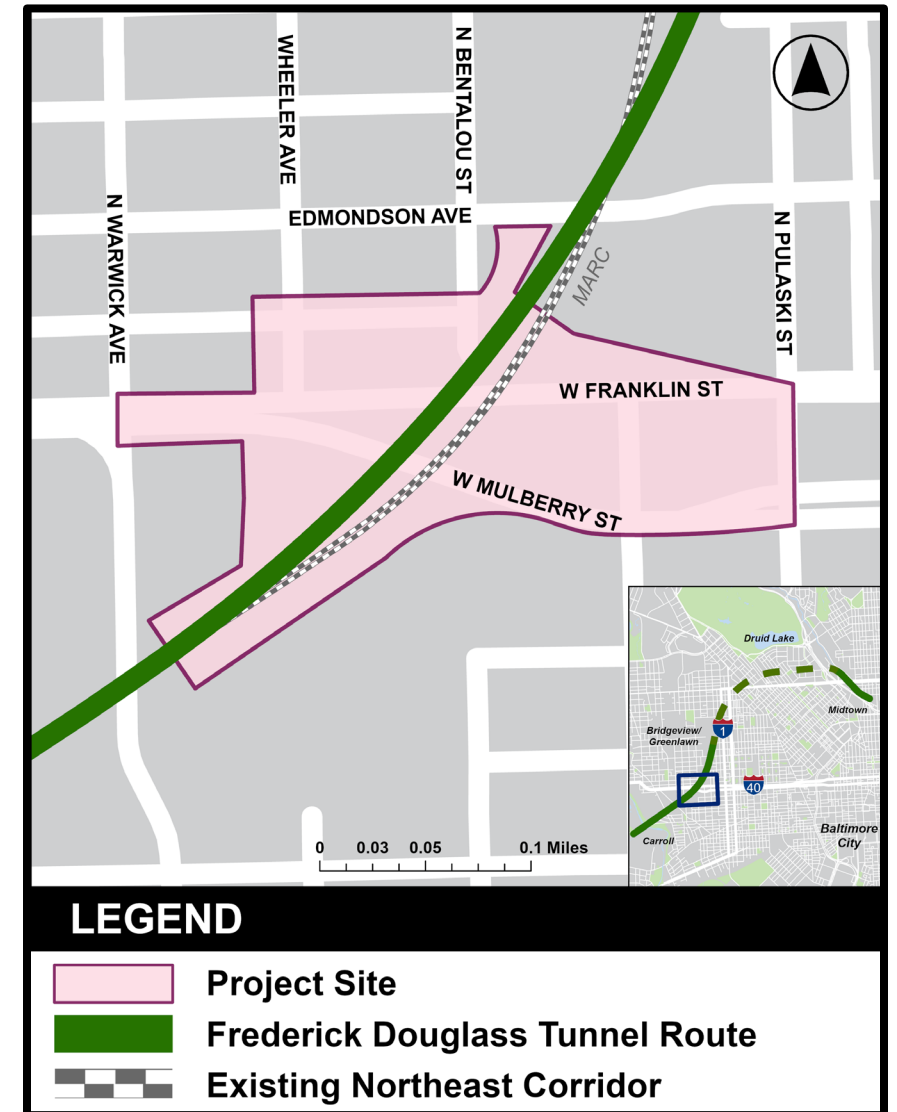
- Winter 2024

Duration:

- Spring 2025 - Winter 2026

Impacted Roadways:

- **Closure:** W. Mulberry Street

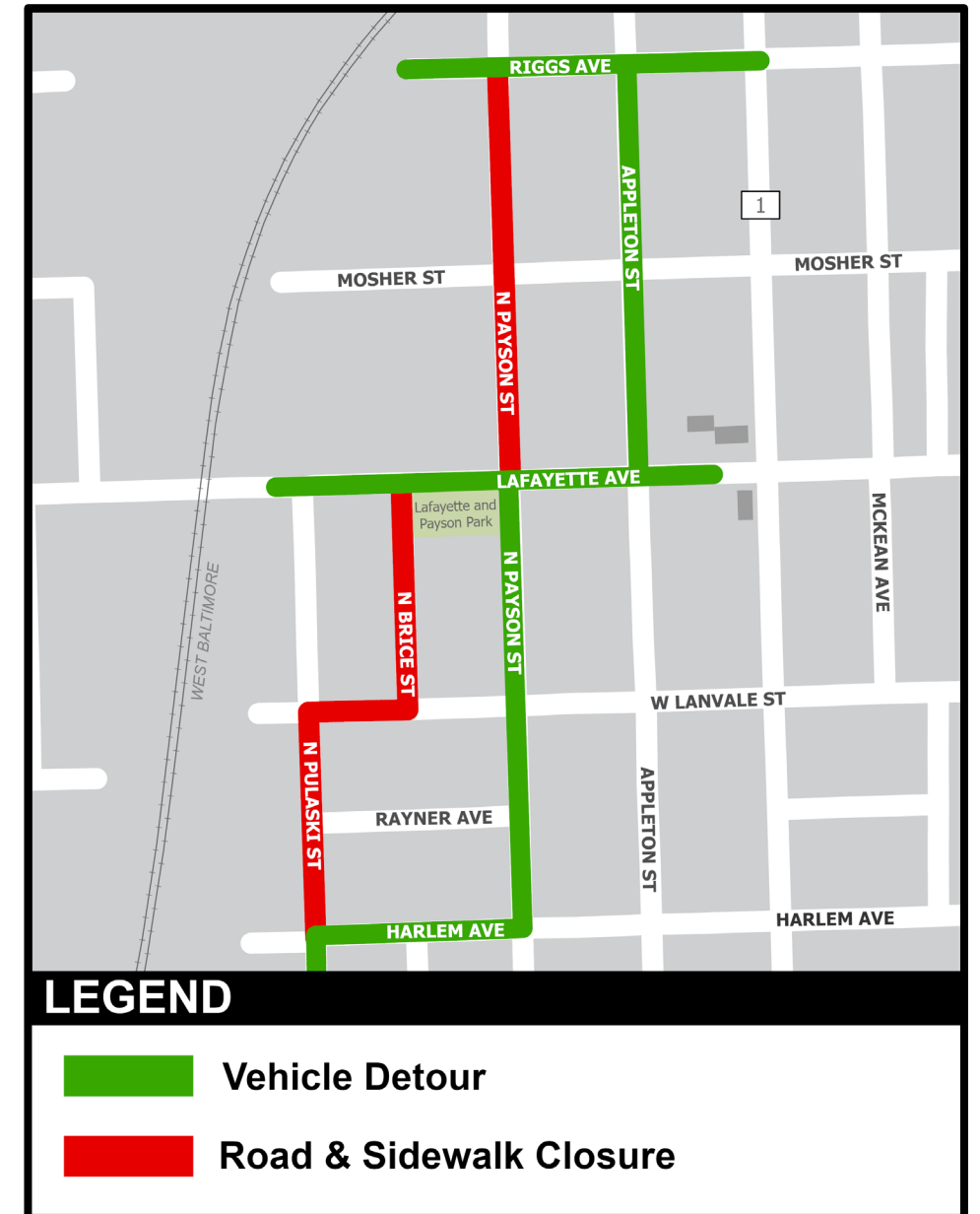


Upcoming Road Closures

Impacted Roadways: Partial or Full Closures

- Pulaski St: Winter 2024 – Summer 2026
- Lanvale St: Winter 2024 – Summer 2026
- Brice St: Winter 2024 – Summer 2026
- Payson St: Spring 2025 – Summer 2026

Local traffic will be permitted access

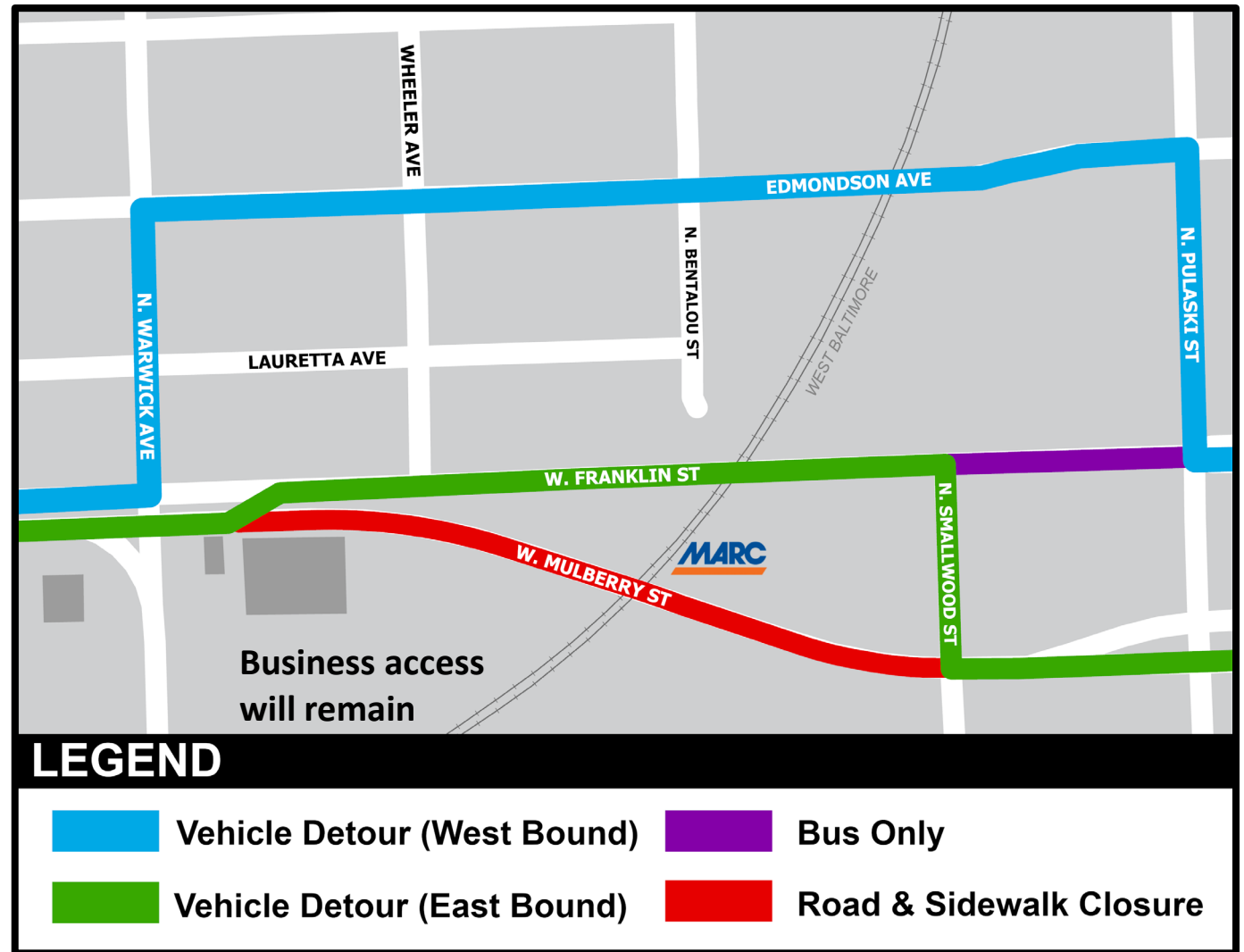


W. Mulberry Street Detour

Impacted Roadways:

W. Mulberry St CLOSED
Winter 2024 – Summer 2026

- EB Mulberry St. traffic will detour onto W. Franklin St. between N. Warwick Ave and N. Smallwood St
- WB Franklin St. traffic will detour onto Edmondson Ave between N. Pulaski St and N. Warwick Ave
- Buses will still have access to W. Baltimore MARC Station



What to Expect During Construction

- Shuttles to project site for craft workers to reduce parking in neighborhoods
- Advance notice of impacts to roadways
 - Lane restrictions
 - Parking restrictions
 - Roadway closures
- Maintained pedestrian and bicycle access
- Commitment to clean project site
 - Covered trash receptacles
 - Convenient port-a-potty locations
- Coordination with adjacent projects to minimize impacts



Shuttle bus for craft workers

Keeping You Safe During Construction

■ Safety Measures

- Secured access to construction entrances to protect children and pets
- Fully verifiable identification of crew members
- 8-foot construction fencing around all sites
- Watering and dust control to protect air quality
- Erosion and sediment controls to limit runoff into critical waterways



Mitigation Strategies

Noise and Emission Compliance Checks

- **Emissions:** In-field analysis to make sure any emissions are within specification limits. Contractor will mitigate as needed using:
 - Latest generation equipment
 - Solar/battery options (when available)
- **Noise:** In-field analysis to make sure any noise is within specification limits. Contractor will mitigate as needed using:
 - Sound barriers & enclosures
 - Local enclosures
 - Portable or fixed noise barriers

Dust Mitigation Strategy

- Use of water trucks and other dust suppressions methods
- Placement of woodchips, straw, tack coats, stone haul roads, etc

Install Erosion & Sediment Controls

We will place controls throughout work sites in accordance with approved plans from Maryland Department of the Environment

- Silt Fence
- Inlet Protection
- Concrete Washout Structures
- Other Best Management Practices
- Earth Dikes
- Portable Pump Stations
- Wheel Washes

MDE Compliance Tools

- Install erosion and/or sediment controls as required by Baltimore City Inspector and inspect / maintain / repair weekly



Subsurface Utility Investigations (SUI)

- Contractors will perform utility investigations throughout the Program lifecycle
- Utility Video Inspections
 - Inspect utility conditions
 - Completed using inspection trucks
- Potholing/Test pitting
 - Locate subsurface utilities
 - Completed using air vacuum trucks and/or hydro excavation equipment



Controlled Blasting

Controlled Blasting Expertise

Brian Barker – Blaster In Charge

- BS, Mining Engineering, University of Utah
- 24 years in the industry
- Industrial Society of Explosive Engineers (ISEE) Member
- Possesses his OSHA 30 hour and is an MSHA Instructor
- Has held a Colorado Blasting License and is currently in process of getting his Maryland Blasting License
- Brian has extensive knowledge and experience with underground excavation using drill and shoot methodologies in both heavy civil and underground mining operations

Clearing the Work Zone

Blasting is needed to break up rock found along the program alignment.

- The rock will be broken into manageably-sized pieces so it can be removed.
- **Controlled drill and shoot** is a technique used worldwide to safely and effectively excavate rock for shafts and tunnels, especially in urban environments.
- Micro-Tunnel boring machines were evaluated as an alternative to blasting for this utility siphon tunnel but determined to be less effective.

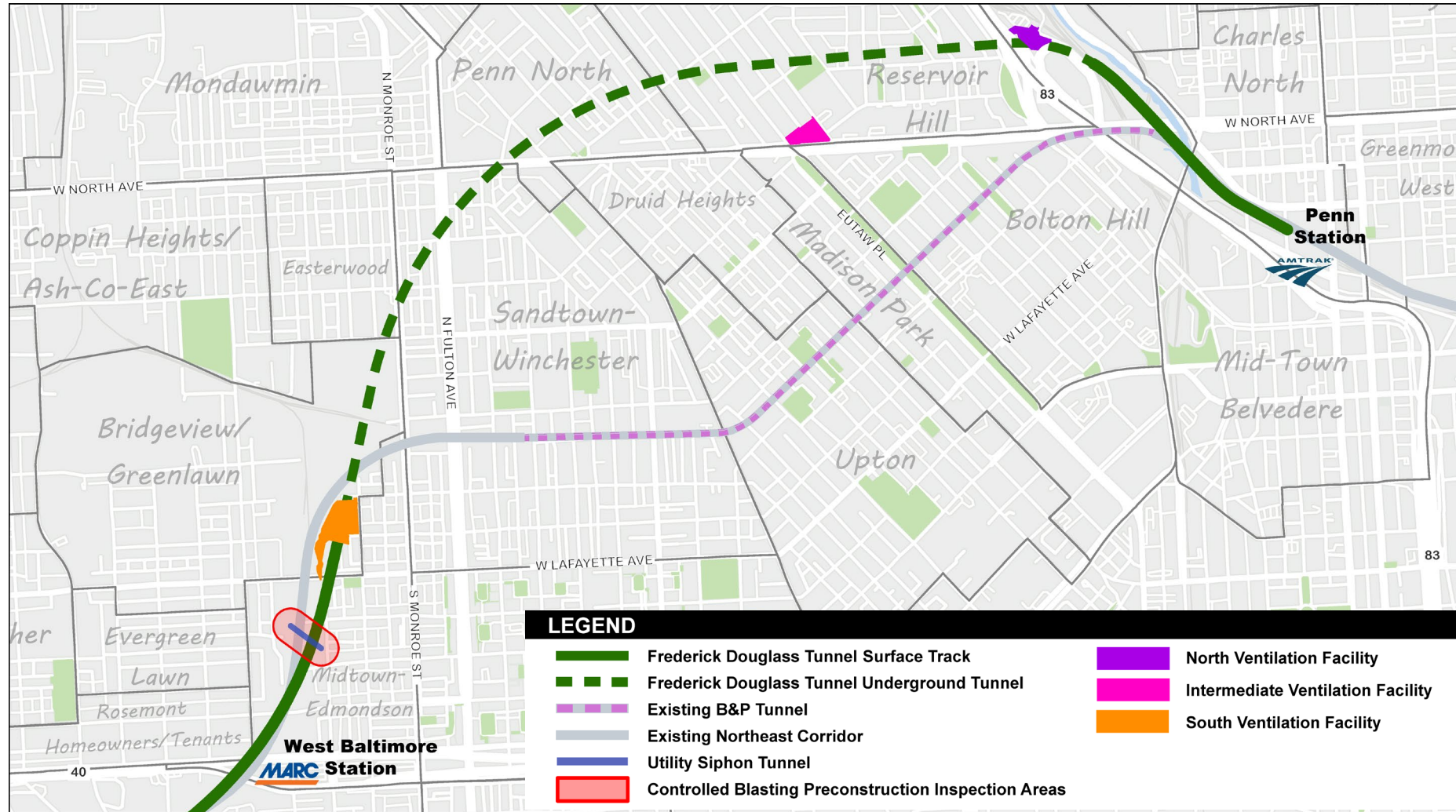
We will blast:

- **Shafts** – two vertical shafts down to approximately 40 - 50 feet below existing grade.
- **Utility siphon tunnel** – that will carry the relocated water, sewer, storm, CTV, and electric utilities across the Amtrak railroad right-of-way width

Rock Excavation Planning

- Assess excavation needs
- Prepare a blasting plan with blasting consultant
- Identify key mitigation measures to be used
- Select mitigation methods to limit impacts to adjacent structures
 - Controlled blasting
 - Use of blast mats
 - Use of shaft covers
- Controlled blasting work windows
 - Limited to daylight hours unless extended hours or nightwork is approved by the City
 - Off hour work may be required when working close to or under operating railroad tracks for safety reasons

Early Construction Activities Program Map



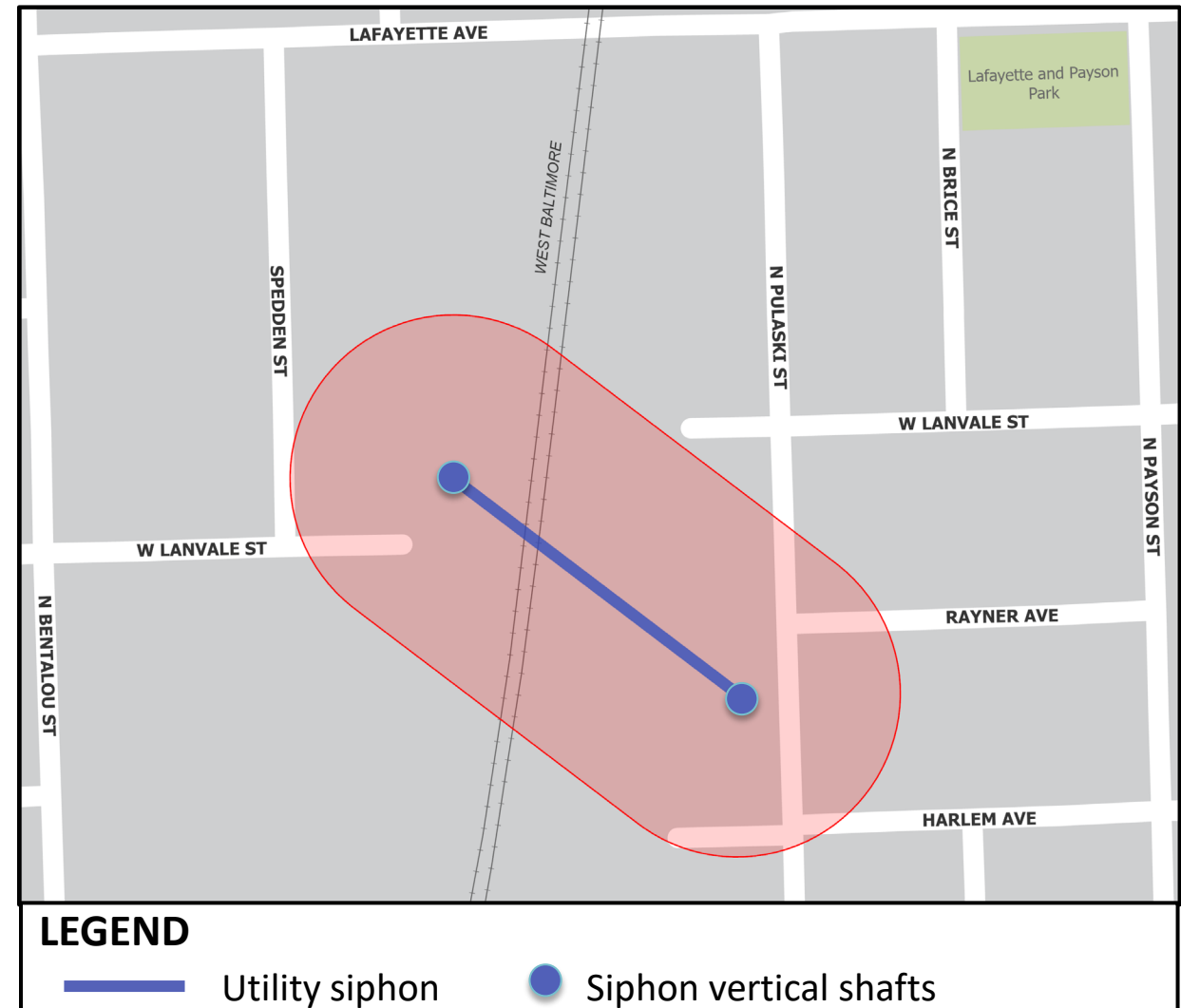
Preconstruction Surveys – Controlled Blasting Zone of Influence

- **Limit of Conditions Surveys**
- Defined by Baltimore City Green Book
 - Surveys will be conducted within a 150-foot radius of proposed drill and shoot rock excavation locations



Preconstruction Surveys – Controlled Blasting Zone of Influence

- **Limit of Conditions Surveys**
- Defined by Baltimore City Green Book
 - Surveys will be conducted within a 150-foot radius of proposed controlled blast rock excavation locations
 - For use at the utility siphon (tunnel to carry utilities beneath Amtrak railroad tracks)



Process to prepare for Utility Siphon

- **Support of Excavation Installation** – team will use a liner plate and rib to support excavation design
- **Excavation** – uses heavy equipment to dig through soil from the surface down to the depth where rock is encountered



Controlled Blasting Mitigation Measures



Blast Mats placed prior to round initiation



Shaft covers placed prior to round initiation

Protecting neighbors during blasting work

- A Federally licensed contractor, Dyno Nobel will be responsible for transporting and handling all explosives from their facilities to/from the jobsite
- All explosive materials removed from truck will be inventoried to keep an accurate accounting of all materials used
- Each round will be loaded and tied-in per the blasting plan, and initiated by the Blaster in Charge
- Dyno Nobel will remain on site until after the blast and the round is cleared
- Once drill and shoot work is complete, any explosives remaining on-site will be returned to Dyno Nobel and recorded on the inventory log



**No explosives will be stored on site
outside of work hours**

Advance Notifications

In addition to the notifications that the FDT team sends regarding construction work, additional notifications will be provided to affected neighbors as the Program begins drill and shoot rock excavation work. You can expect:

- **Advanced notifications for property owners immediately adjacent to the work**

- **On site 5-Minute, 1-Minute, “Fire In The Hole” Notifications**
 - ✓ Clearing and Guarding
 - ✓ Air Horn
 - ✓ Provided for every blast
 - ✓ Verbal on-site “All Clear”

Community Engagement

The Program Engagement Team is committed to meeting with community members and other stakeholders to discuss the Program, answer questions, and learn from the community.

Digital, Traditional, and Media Engagement Tools

- Program website
- Program social media
- Newsletters, fact sheets, FAQs
- Doorhangers
- Direct mail, email, text messages
- Media Outreach
- Program email and phone number

In-Person Engagement:

- Host in-person and virtual public meetings
- Attend community meetings
- Participate in community clean-ups, events, and community service activities

Sign up for construction notifications

■ Slick Text

- Tool being used to send text messages to community members who opt IN to receive construction notifications.

Text colored **KEYWORDS** below to
(833) 917-3749



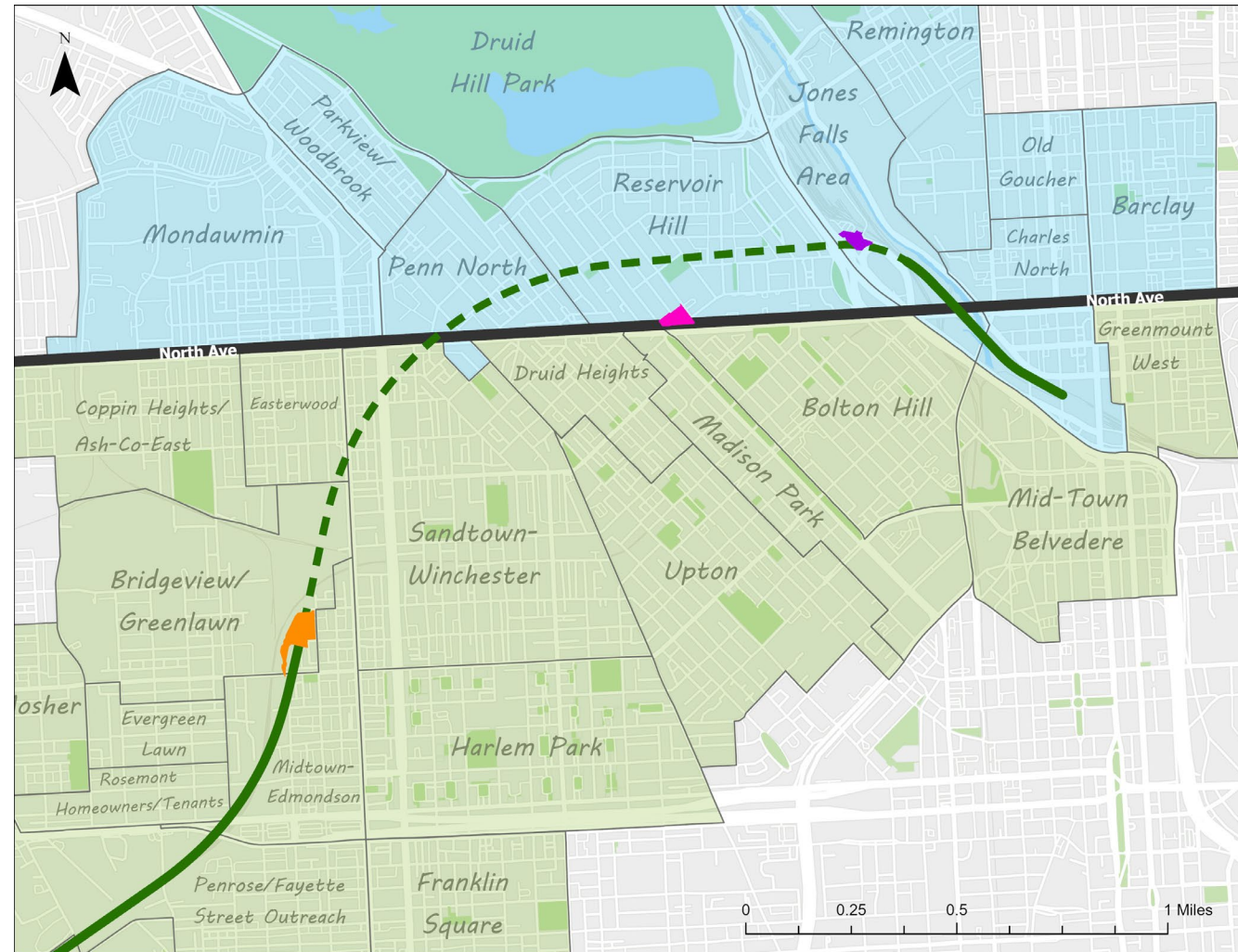
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