



District of Columbia Water and Sewer Authority
David L. Gadis, CEO and General Manager

Northeast Boundary Tunnel Project

Tunnel Forum

Thursday, May 9, 2019

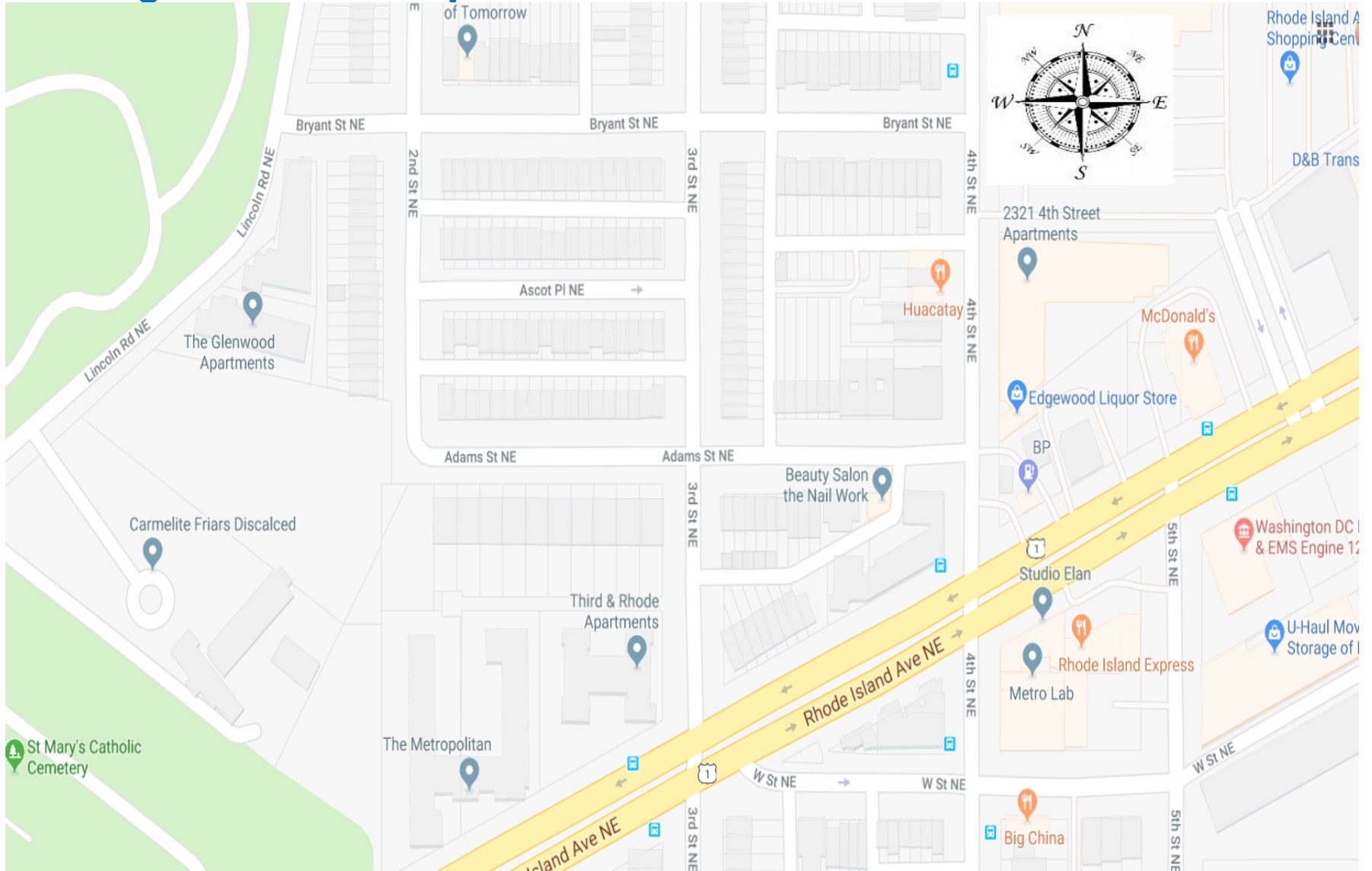
**Inspire Teaching Demonstration School
200 Douglas Street NE**



Agenda

- 1. Rhode Island Avenue NE Main Street Partnership-Business Health Check**
- 2. Update on Neighborhood Traffic and Pedestrian Safety Improvements**
- 3. Update-4th Street NE Construction Site Activity**
- 4. What's Next? Summer Construction Activity**
 - a. 4th Street NE Shaft Excavation
 - b. 4th Street NE What is Ground Freeze Preparation?
 - c. Rhode Island Avenue NE Concrete Pours
 - d. Rhode Island Avenue NE Median Removal
- 5. Who is Chris, the Tunnel Boring Machine (TBM)?**
- 6. Q&A, Community Discussion**

Neighborhood Map



1. Rhode Island Avenue NE Main Street Business Health Check



Kyle Todd, Executive Director
Rhode Island Avenue NE Main Street

- Is Your Business Healthy?
- Get a Business Check Up with Rhode Island Avenue NE Main Street



Rhode Island Avenue NE Main Street Business Health Assessment Checks



RIA Main Street is a non-profit created to help small businesses along Rhode Island Avenue



We have grant funds for storefront improvement (paint, signage, lighting), as well as technical assistance (marketing plans, business plans, social media)



We're partnering with DC Water to concentrate some of that assistance on the 4th St NE corner, starting with business health assessment checks



Visit us at riamainstreet.org, or call at 202-808-9050

2. Neighborhood Traffic and Pedestrian Safety Improvements and Action Items Update

Matt Wolniak, Traffic Engineer

- Pedestrian Safety Improvements at Lincoln Road NE and V Street NE
- Vehicle Yield to Pedestrian signs and **pavement** markings were installed at 4th Street and Rhode Island Avenue NE to improve pedestrian safety
- BP Gas Station directional signs installed
- Truck weight restriction signs for local streets installed
- Several traffic sign upgrades have been installed and tree trimming **completed** by District Department of Transportation



- Freshly marked crosswalk at 4th and Adams St NE

Pedestrian Safety Improvements Lincoln Road and V Street NE

- Replaced Pedestrian Crossing signs with new high visibility signs
- Replaced old signage with new signs
- DDOT will restripe crosswalks with high visibility markings



Pedestrian Safety Improvements

Vehicle Yield to Pedestrian Signs installed

4th Street and Rhode Island Avenue NE

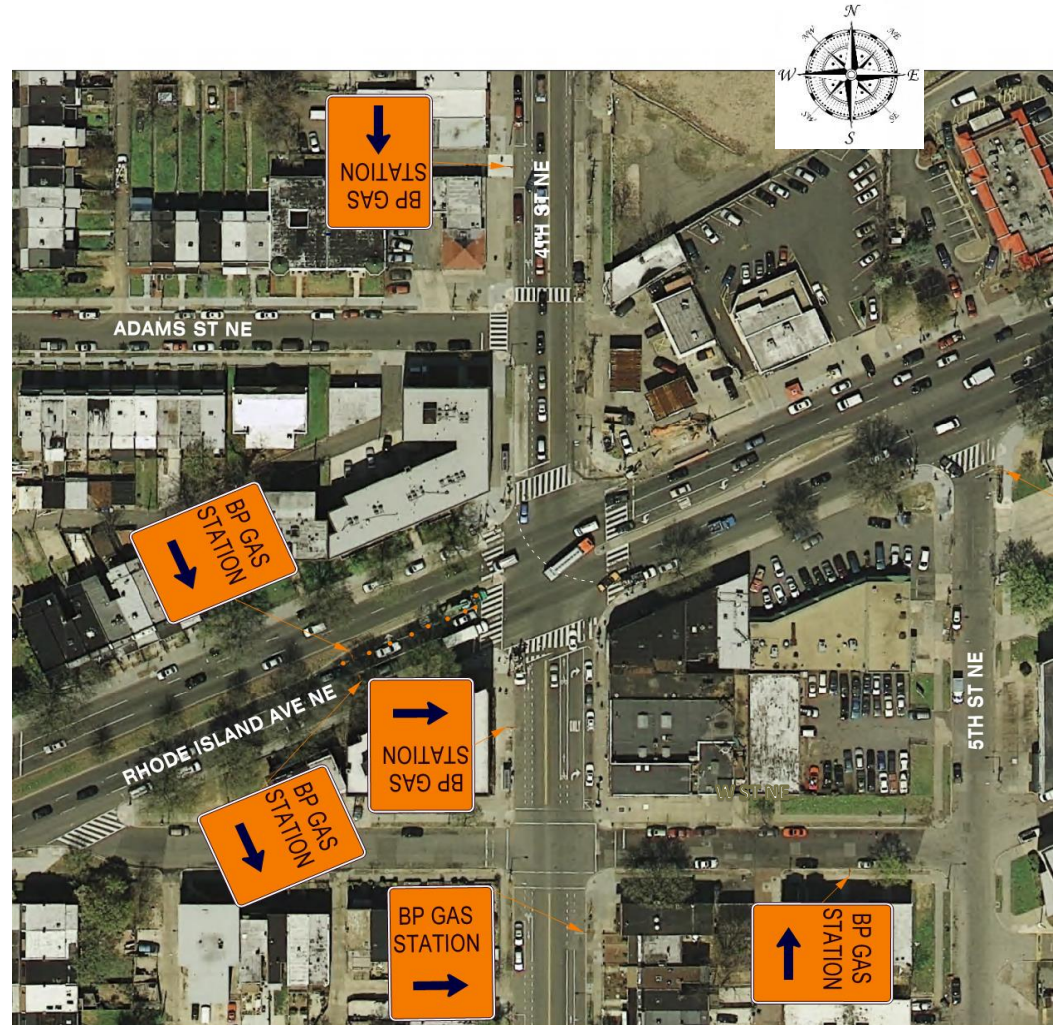
- Installed signs on 4th Street at Rhode Island Avenue NE both northbound and southbound. These signs will improve the recognition of pedestrians at the intersection.



Traffic Safety

BP Gas Station Access Directional Signs Installed

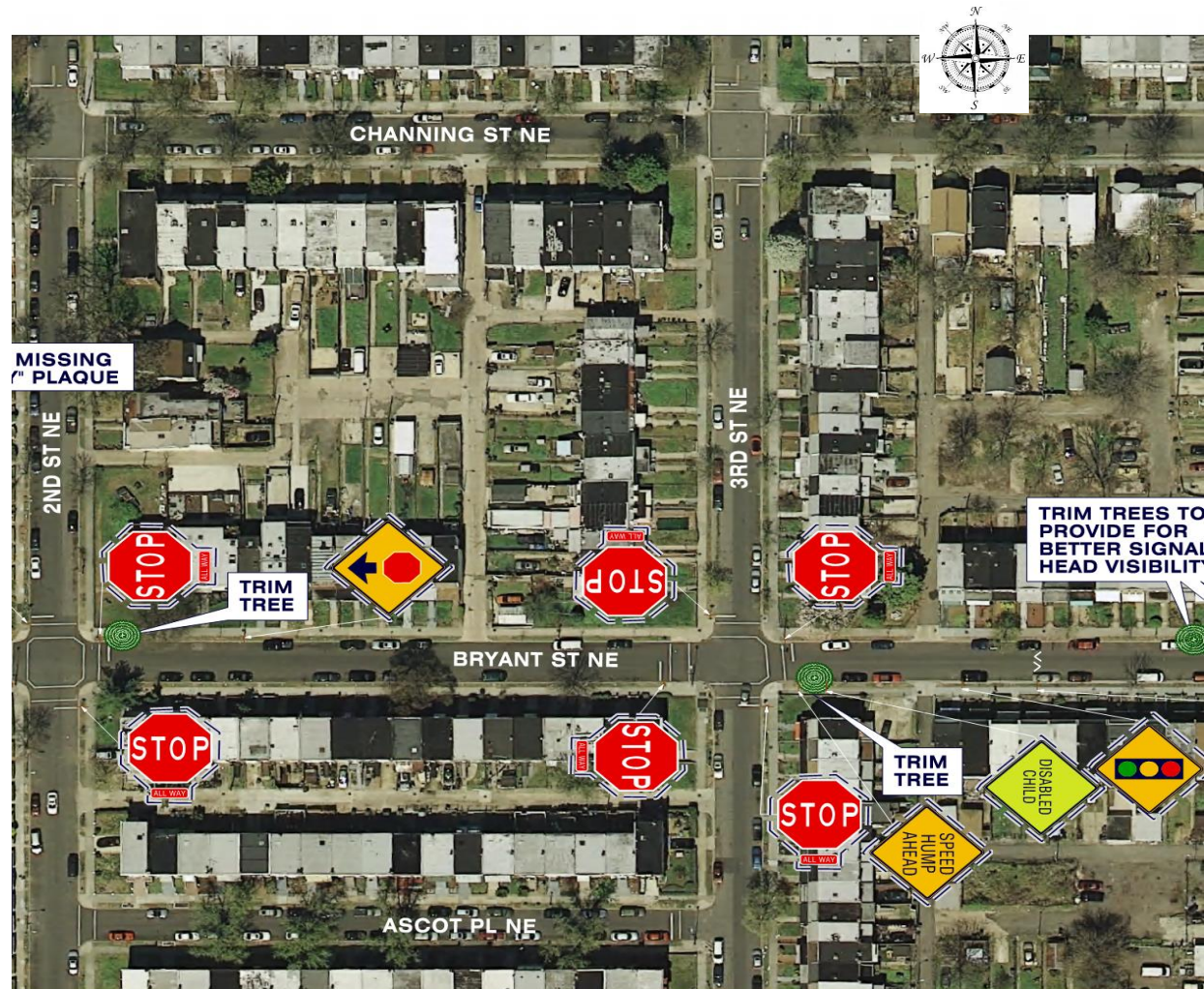
- From southbound 4th Street, NE proceed across Rhode Island Avenue left on W Street, left on 5th Street, left on Rhode Island Avenue to access BP gas station
- From Rhode Island Avenue eastbound, right onto 4th Street, left on W Street, left on 5th Street, left on Rhode Island Avenue to access BP gas station



Traffic Safety Improvements on Bryant Street NE

Several other streets in the neighborhood have received similar safety improvements

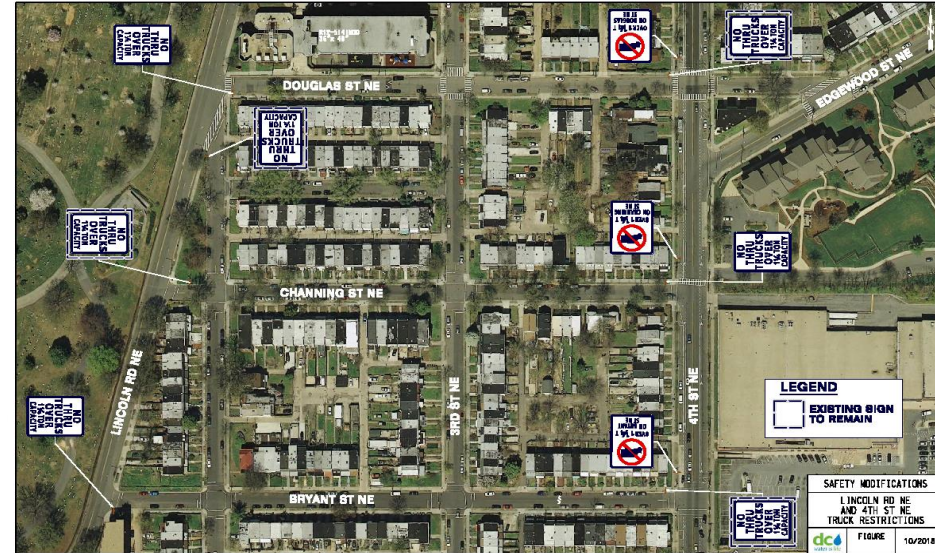
- Trees trimmed for better signal visibility on Bryant Street at 4th Street
- Traffic calming measure to be installed



Traffic Safety

Truck Weight Restriction and No Thru Trucks over 1-1/4 Ton Capacity Signs Placed in the Neighborhood

- Corner of Lincoln Road and Bryant Street
- Channing Street westbound at 4th Street
- Bryant Street westbound at 4th Street
- Douglas Street westbound at 4th Street



Note: *Additional Truck Weight Restriction and No Thru Trucks Over 1-1/4 Ton Capacity Signs were placed in the neighborhood, however they have since disappeared. We have put in a work order to replace the missing signs.*



Traffic Safety

Warning Arrows Added at Adams St and 2nd Street NE



- Warning arrows installed at the 90 degree turn at Adams St and 2nd Street NE to alert motorists of the turn

3. 4th Street NE Construction Site

Shane Yanagisawa, Project Director

Construction Work Completed

January – April 2019

- Hydromill work complete
- Ground samples collected
- Ground improvement work complete
- Slurry wall work



4. What's Next-Summer Construction Activity

Construction Dates Are Approximate

Shane Yanagisawa, Project Director

- a. 4th Street Shaft Excavation
- b. 4th Street What is Ground Freeze Preparation?
- c. Rhode Island Avenue NE Concrete Pours
- d. Rhode Island Avenue NE Median Removal

4a. 4th Street Shaft Work

Construction Dates Are Approximate

Shane Yanagisawa, Project Director

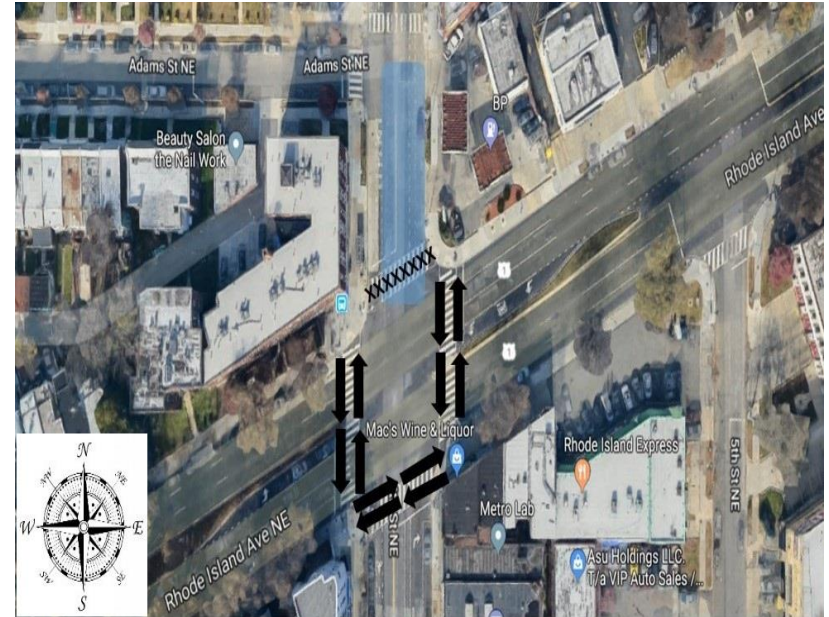
- Shaft excavation preparation began on May 6th.
- Actual excavation work to begin on or about the week of May 20th.

IMPACTS:

- Loss of 1 lane of travel on Rhode Island Avenue NE westbound from McDonald's to the 4th Street construction site. Restriction lifted once past the site.
- Crosswalk across 4th Street at Rhode Island Avenue NE at construction site closed to pedestrians. Use caution when crossing and obey all pedestrian detour signs and flaggers on site.

DURATION:

- This configuration will remain in place for 1-2 months.



Map of the pedestrian detour at the intersection of 4th Street, NE, and Rhode Island Avenue, NE.

4b. 4th Street Ground Freeze Preparation

Construction Dates Are Approximate

Shane Yanagisawa, Project Director

- What is ground freeze?
 - **Ground freezing** is a construction technique used in circumstances where **soil** needs to be stabilized so it will not collapse next to excavations, or to prevent contaminants spilled into **soil** from being leached away. **Ground freezing** has been used for at least 100 years.
- Ground freeze preparation work to begin Summer 2019.

IMPACTS:

- Loss of 1 lane of travel on Rhode Island Avenue NE westbound from McDonald's to the 4th Street construction site. Travel restriction lifted once past the site.

DURATION:

- This configuration will remain in place for 1-2 months.

4b. Ground Freeze Walls/Pipes Process?

- Ground freeze walls/pipes are:
 - Using a refrigeration plant to create a chilled brine solution
 - Circulating brine through a series of drilled vertical pipes set inside a cased hole
 - Cold brine is used to remove heat from the ground
 - As heat is removed “cylinders” of frozen ground form around each pipe
 - As the “cylinders” grow and intersect a ground freeze wall is formed
 - Brine returns to the refrigeration plant where it is continually chilled and re-circulated
 - It takes approximately 8 weeks of circulating brine to form a ground freeze wall (dependent on soil conditions)

Closed-loop
system



Example photograph of a shaft constructed using ground freezing

4b. Why Ground Freeze?

- **Community Benefits**
 - Smaller construction footprint
 - Less construction traffic
 - Reduction of dust during excavation
 - Reduction of noise during construction
 - Less equipment on-site
 - Little or no material waste
 - Minimal surface disturbance relative to traditional excavation methods
 - Drill holes early – shorter

- **Environment Benefits**
 - Risk of water and soil inflows eliminated
 - No dewatering
 - Environmentally safe – no injection of chemicals or cement
 - No residual effects

4c. Rhode Island Avenue NE Slurry Walls, Concrete Pours and Precondition Surveys

Construction Dates Are Approximate

Shane Yanagisawa, Project Director

- Slurry Wall work in progress.
- Concrete Pours began the week of April 29, 2019.
- Precondition Surveys are performed by crews to inform them of what is in the work area, to include utilities and other infrastructure. The surveying is set to begin mid-May and is expected to take about 1 month to complete.
- This configuration will remain in place for at least 1 year.

IMPACTS:

- Parking loss along Rhode Island Avenue NE eastbound and westbound between the Metro overpass and the Foreman Mills ramp.
- Loss of 1 lane of travel westbound on Rhode Island Avenue NE at 8th Place to site entrance for truck staging during concrete pours.
- Crews working under Extended Hours work permit (5AM-9PM, Mon-Fri) to allow for large concrete pours.
- Lane closures and shifts associated with precondition surveys.

DURATION:

- This configuration will remain in place for at least 1 year.



Concrete pour at Rhode Island Avenue NE

4d. Rhode Island Avenue NE Median Removal

Construction Dates Are Approximate

Shane Yanagisawa, Project Manager

- Median removal work to begin Summer 2019. Upon completion, median will be restored and tree replanted.

IMPACTS:

- Left Turn restrictions** at 8th Place, 10th Street and Reed Street NE.
- Dedicated and Protected Left Turn Lane** to be installed eastbound Rhode Island Avenue at 12th Street NE associated with **detour for 8th Place/Reed Street**.
- Travel Lanes on Rhode Island Avenue will be reduced by one lane in both directions eastbound and westbound during the median removal to move traffic safely through the site.
- Parking Loss:** Rhode Island Avenue NE westbound from east of 10th Street to 150 feet beyond the overpass prior to Foreman Mills ramp. Eastbound between the Metro overpass and Washington Place NE.

DURATION:

- Median work expected to take about 1 month to complete.



5. Who is “Chris” the Tunnel Boring Machine (TBM)?

Shane Yanagisawa, Project Director

Like ships, TBMs are traditionally named for women. DC Water broke tradition by naming this tunnel boring machine for Christopher Allen, the Assistant Director for the Clean Rivers Project who passed away in 2018. Allen had 47 years of experience in construction management, general contracting, consulting field supervision and program management of large buildings, mass transit, heavy construction projects and aviation programs.



Video of Chris being lowered into the shaft

<https://www.youtube.com/watch?v=smhpetFiyf8>



6. Q&A, Community Discussion



QUESTIONS?

For More Info

- [24/7 NEBT Hotline: \(800\) 988-6151](tel:(800)988-6151)
- [Email: dccleanrivers@dcwater.com](mailto:dccleanrivers@dcwater.com)
- [Website: dcwater.com/NEBT](http://dcwater.com/NEBT)

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