



County of Fairfax, Virginia

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# Route 28 Widening

Prince William County/ Fairfax County Line to Route 29

## *Design Public Hearing*

Centreville Elementary School  
September 23, 2019

W. Todd Minnix, PE  
James Beall, PE

Fairfax County Department of Transportation





## Introductions

- District Supervisors' and Staff
  - Sully District – Supervisor Kathy Smith
  - Springfield District – Supervisor Pat Herrity
- Fairfax County Department of Transportation (FCDOT)
- Fairfax County Department of Public Works & Environmental Services (DPWES)
- Consultants
- Prince William County
- VDOT
- Northern Virginia Transportation Authority (NVTA)
- Others



## Purpose

To update project status, provide information to, and solicit feedback, comments, and suggestions from the community on the Design Features and Environmental Analyses for the proposed widening of Route 28 from the Prince William/Fairfax County Line to Route 29.





## Agenda

- Project Overview – Design Elements
- Environmental
- Noise Analysis
- Limited Access (LA) Line
- Right-of-Way
- Estimated Cost and Schedule Summary
- Public Comment/Questions





## Project Overview

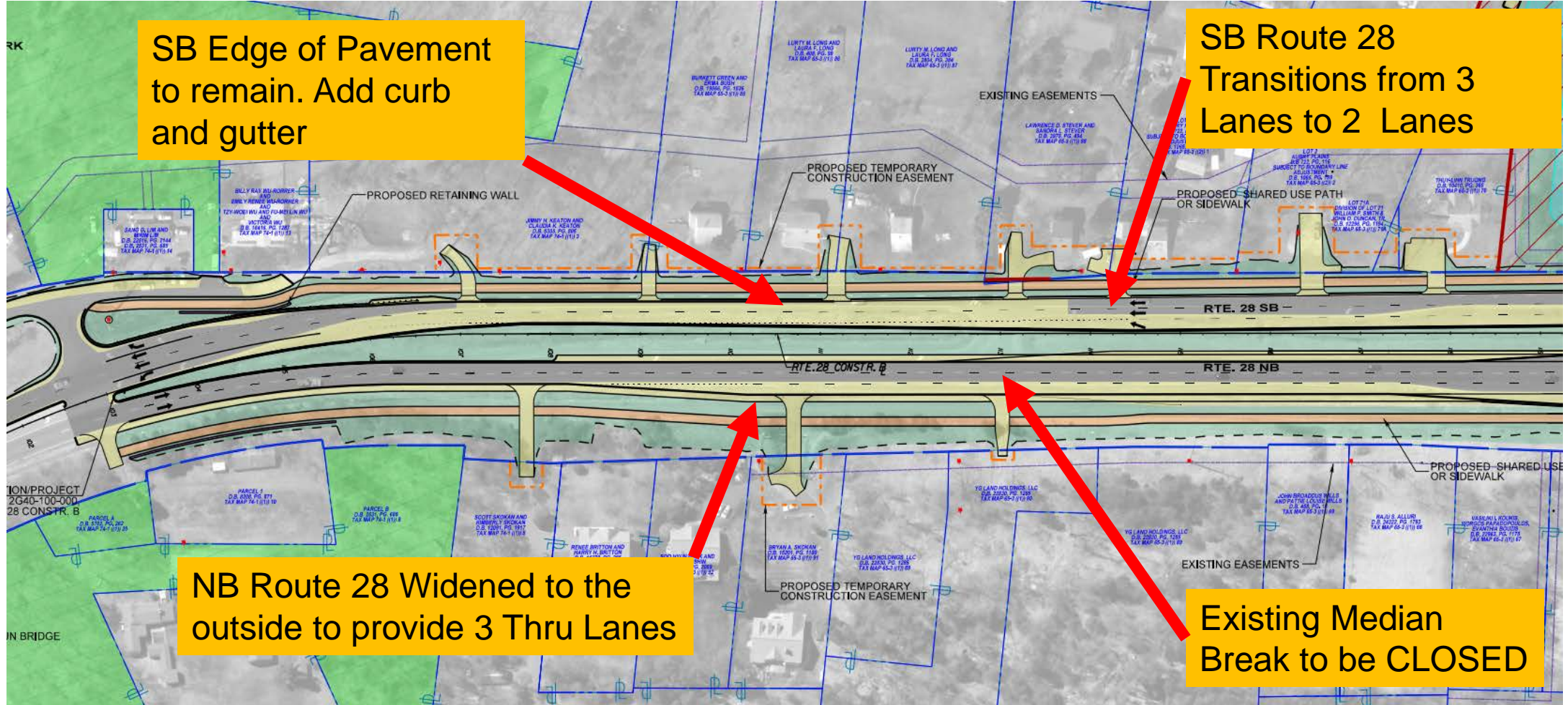
### Route 28 Widening and Reconstruction:

- Construct an additional through lane in each direction (three lanes in each direction) from just north of the bridge over Bull Run to the Route 29 Interchange
- Reconstruct sub-standard crest vertical curves on SB Route 28 to meet current standards
  - SB Route 28 between Compton Road and Bradenton Drive
  - SB Route 28 just south of New Braddock Road
- Include Shared Use Paths
  - Both Sides of Route 28
  - Short Section of Sidewalk on SB side between Upperridge Drive and Machen Road due to Right-of-Way constraints





## Project Overview – Rt. 28 South of Compton



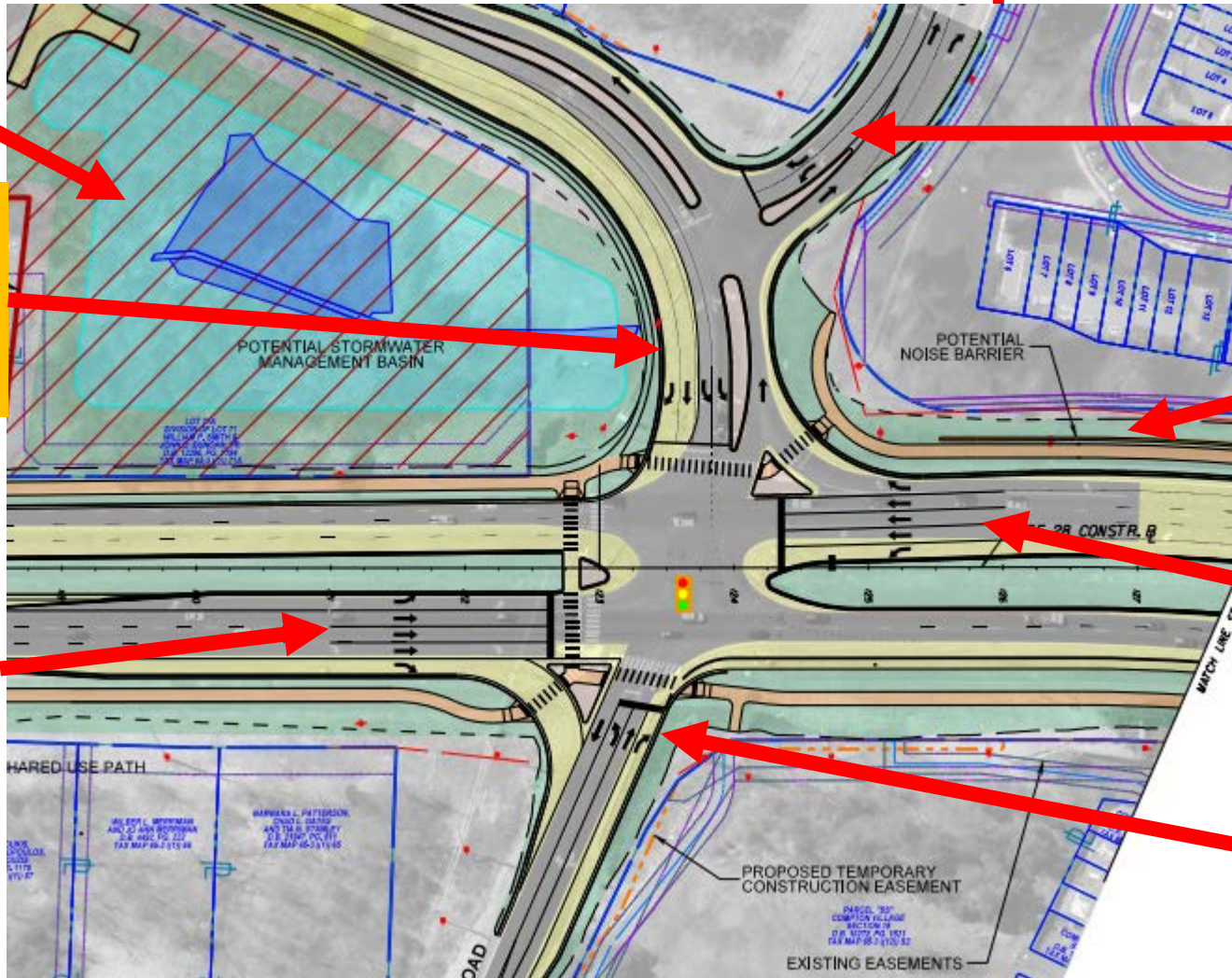


## Project Overview – Rte. 28/Compton/Ordway

Potential SWM Pond

Ordway Rd. EB  
2 - Left Turn Lanes  
1 - Thru Lane  
1 - Right Turn Lane

Route 28 NB  
1 - Left Turn Lane  
3 - Thru Lanes  
1 - Right Turn Lane



Compton Road EB  
1 - Left Turn Lane  
1 - Right Turn Lane

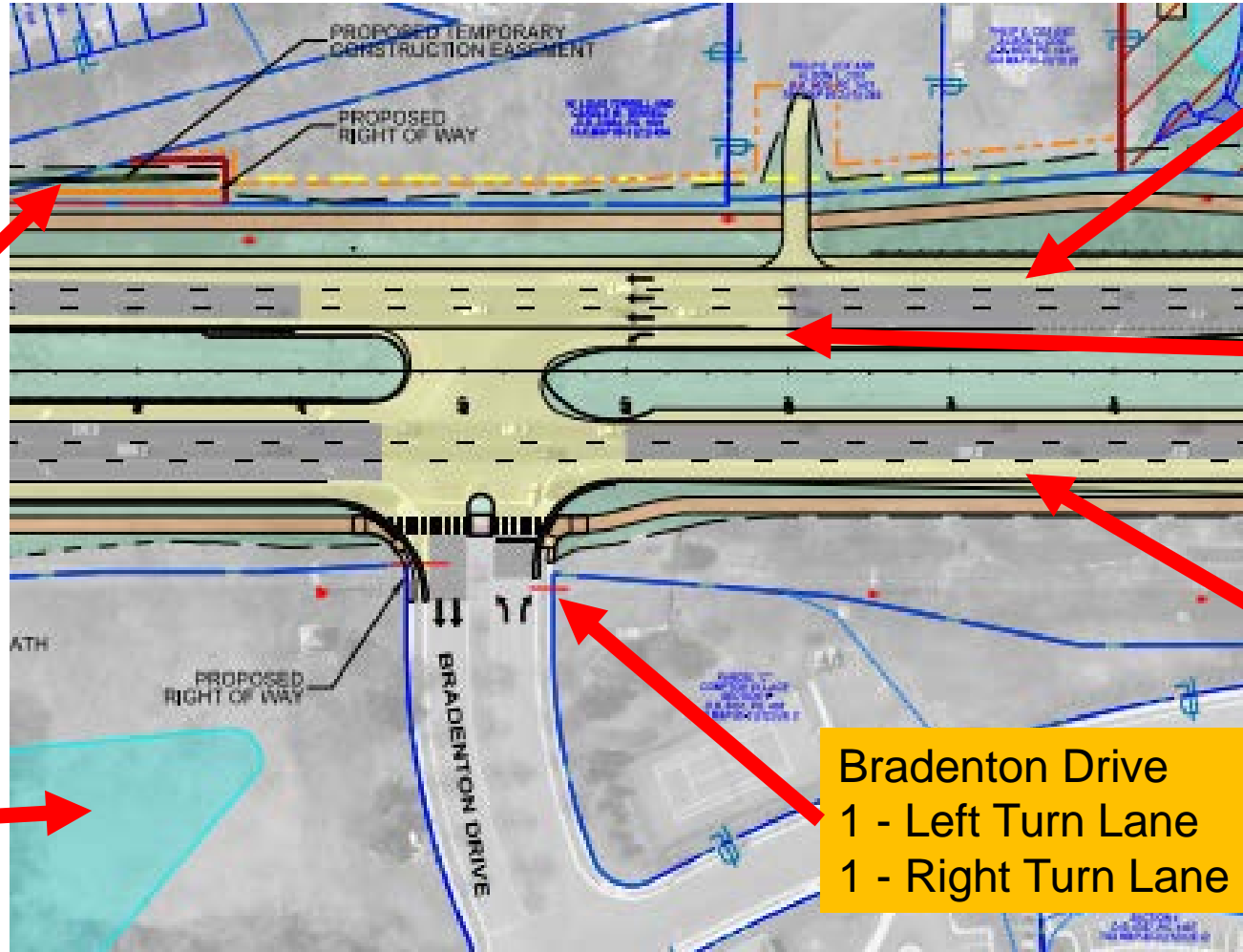
Potential Noise Barrier

Route 28 SB  
1 - Left Turn Lane  
3 - Thru Lanes  
1 - Right Turn Lane

Compton Road WB  
1 - Left Turn Lane  
1 - Thru Lane  
1 - Right Turn Lane



## Project Overview – Bradenton Drive



Potential Noise Barrier

Centerline of SB Route 28 Shifted 5' toward median

Route 28 SB  
1 - Left Turn Lane  
3 - Thru Lanes

Route 28 NB  
Widened to the Outside within existing RW

Potential SWM Pond

Bradenton Drive  
1 - Left Turn Lane  
1 - Right Turn Lane





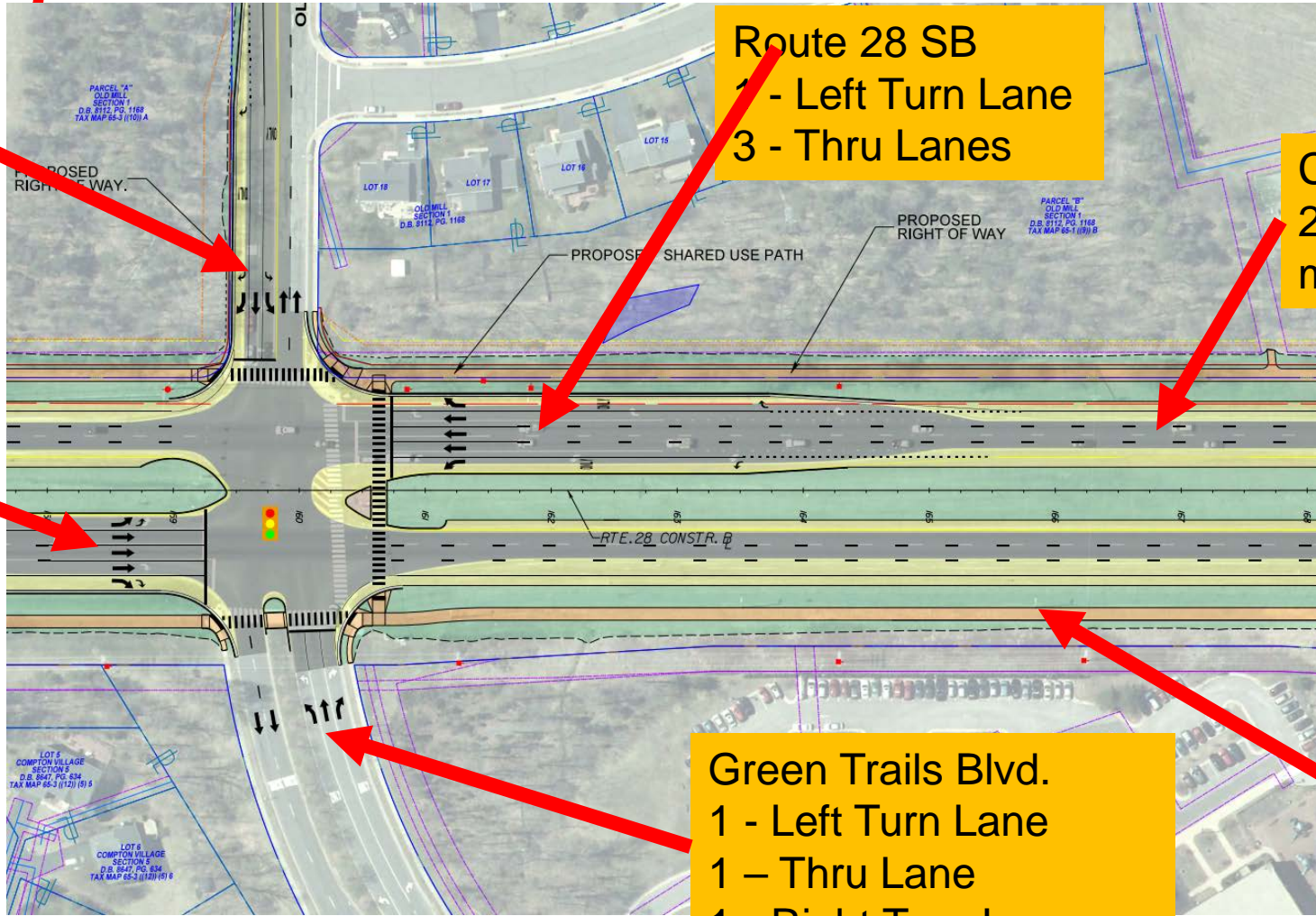
## Project Overview – Old Mill/Green Trails

Old Mill Road EB  
 1 – Left Turn Lane  
 1 – Thru Lane  
 1 – Right Turn Lane

Rte. 28 NB  
 1 – Left Turn Lane  
 3 – Thru Lanes  
 1 – Right Turn Lane

Route 28 SB  
 1 - Left Turn Lane  
 3 - Thru Lanes

Centerline of SB Route 28 Shifted 5' toward median



Green Trails Blvd.  
 1 - Left Turn Lane  
 1 – Thru Lane  
 1 - Right Turn Lane

Route 28 NB  
 Widened to the outside within existing ROW





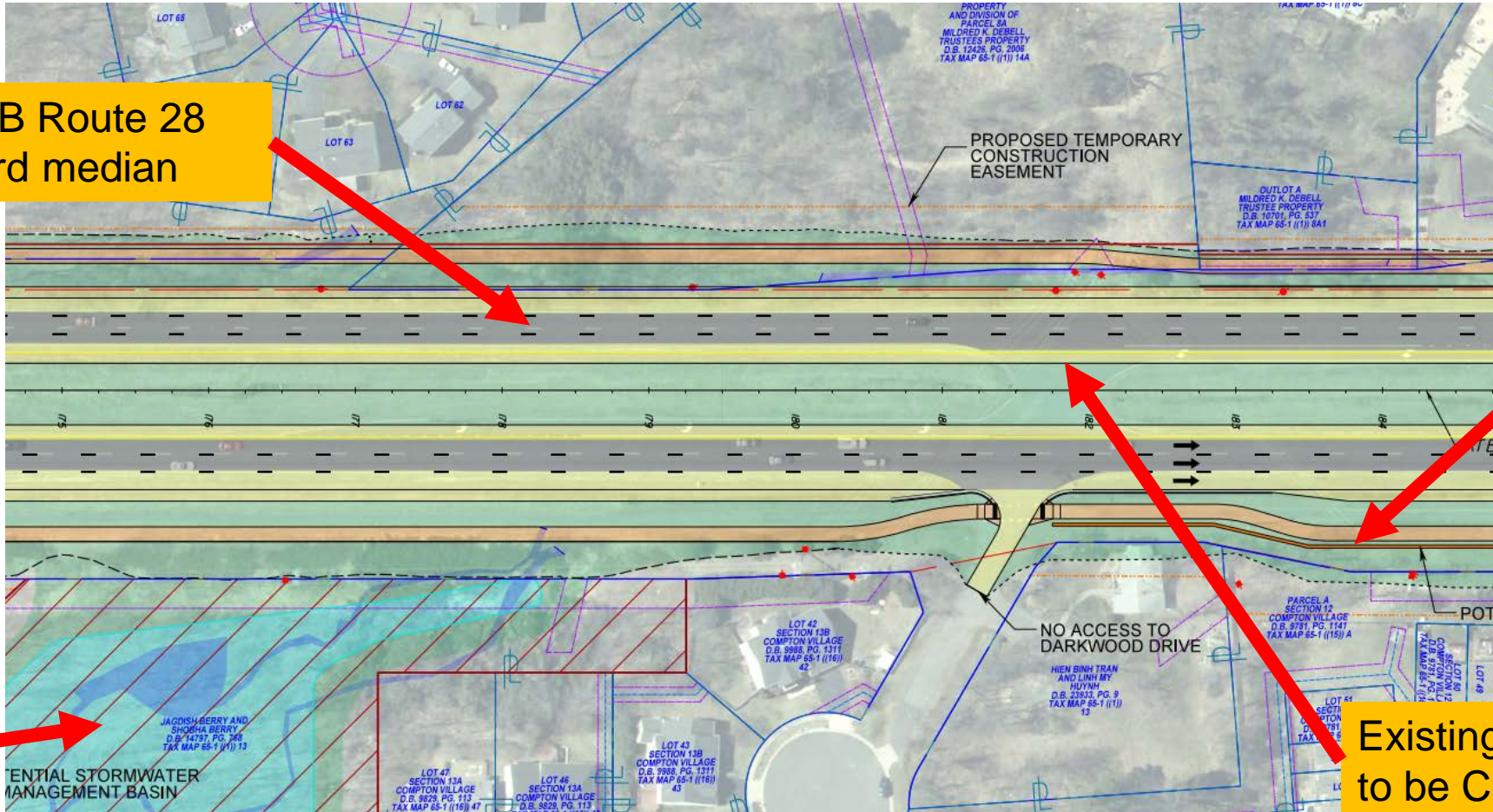
## Project Overview – Darkwood Drive Area

Centerline of SB Route 28  
Shifted 5' toward median

Potential Noise  
Barrier

Potential  
SWM Pond

Existing Median Break  
to be CLOSED





## Project Overview – New Braddock Road

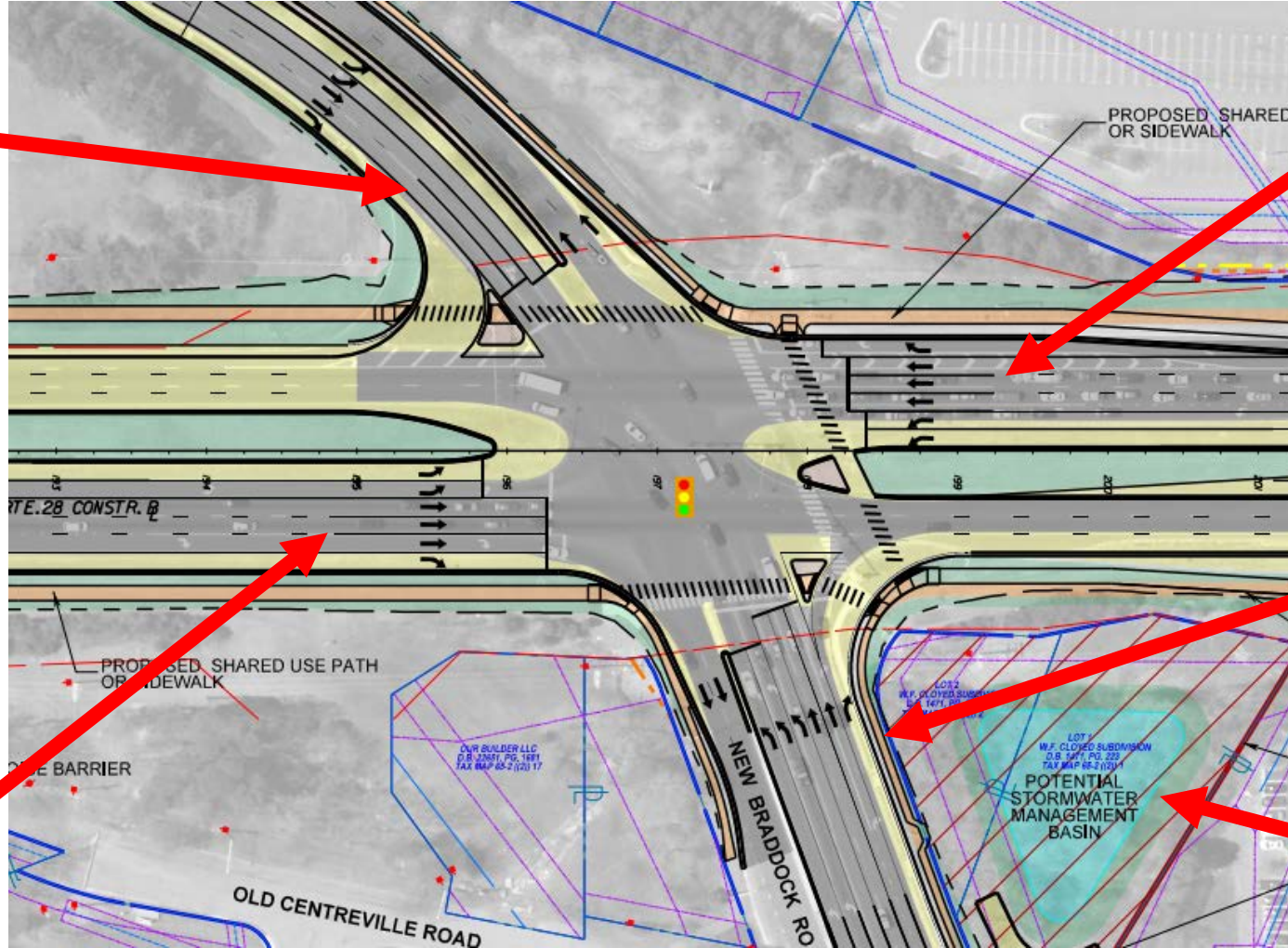
New Braddock Rd EB  
 2 – Left Turn Lanes  
 2 – Thru Lanes  
 1 – Right Turn Lane

Route 28 SB  
 2 – Left Turn Lanes  
 3 – Thru Lanes  
 1 – Right Turn Lane

Route 28 NB  
 2 – Left Turn Lanes  
 3 – Thru Lanes  
 1 – Right Turn Lane

New Braddock Rd WB  
 3 – Left Turn Lanes  
 2 – Thru Lanes  
 1 – Right Turn Lane

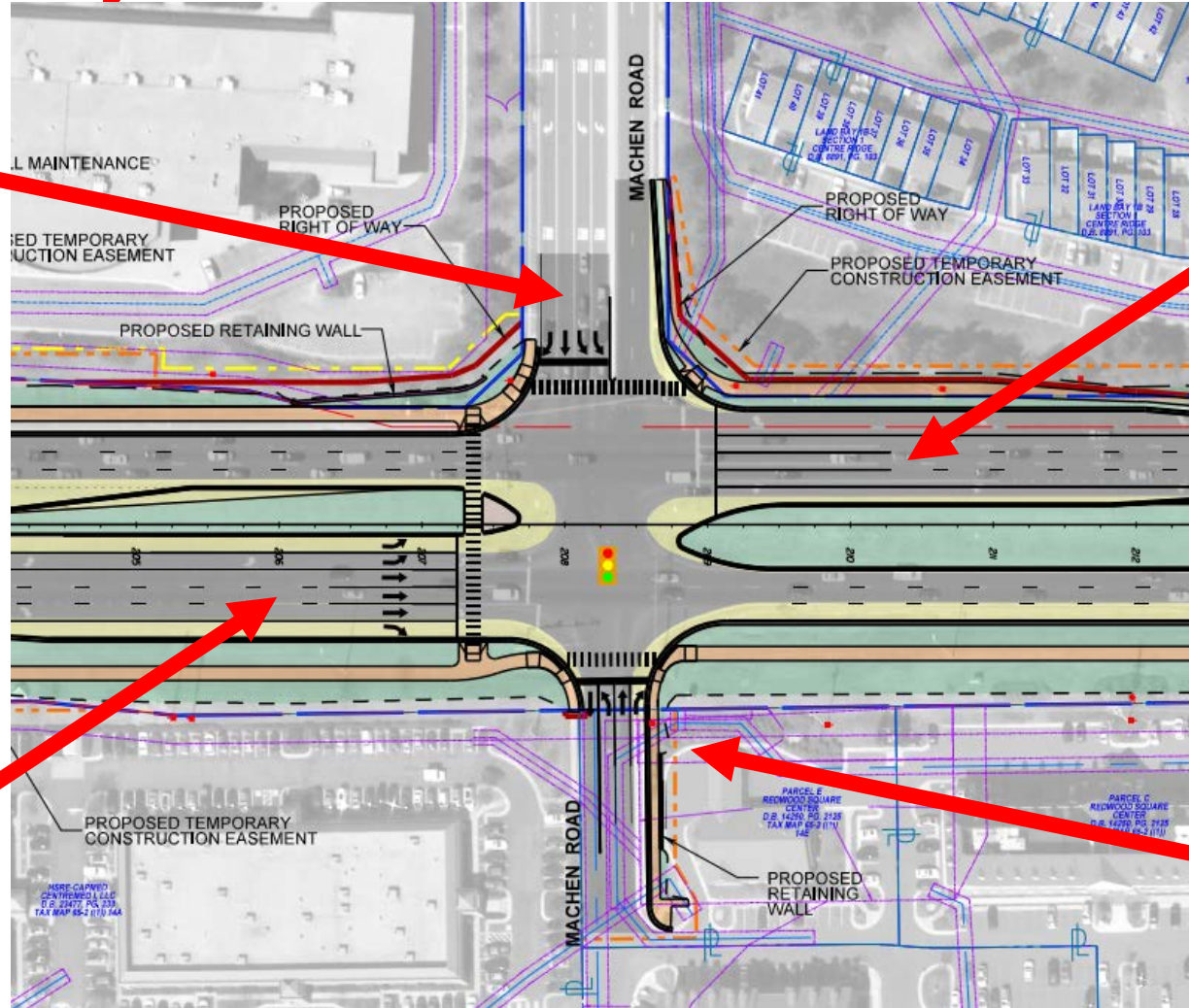
Potential SWM Pond





## Project Overview – Machen Road

Machen Rd EB  
 2 – Left Turn Lanes  
 1 – Thru Lane  
 1 – Right Turn Lane



Route 28 SB  
 1 – Left Turn Lane  
 3 – Thru Lanes  
 1 – Right Turn Lane

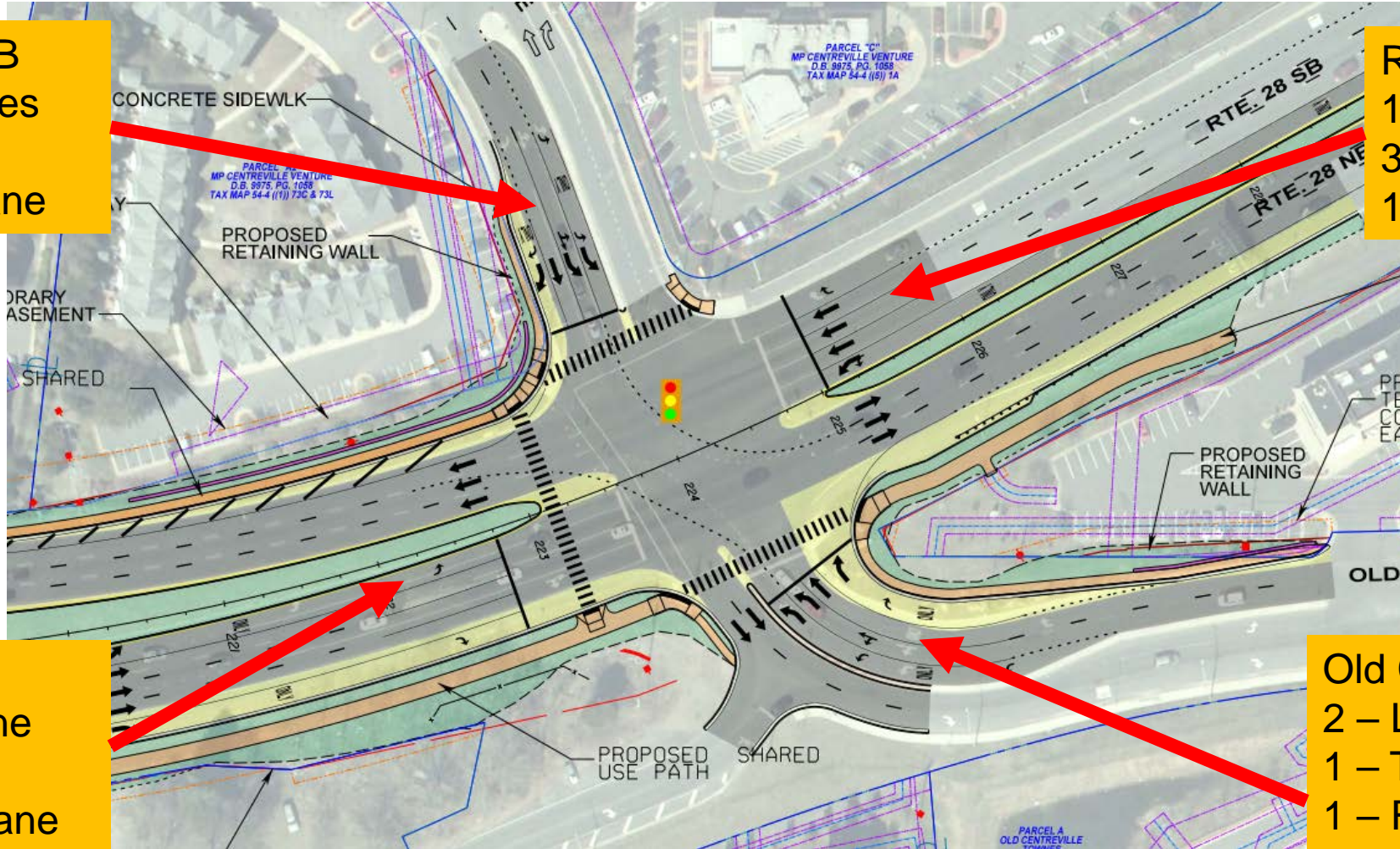
Route 28 NB  
 2 – Left Turn Lanes  
 3 – Thru Lanes  
 1 – Right Turn Lane

Machen Rd WB  
 1 – Left Turn Lane  
 1 – Thru Lane  
 1 – Right Turn Lane



## Project Overview – Old Centreville/Upperridge

Upperridge Rd EB  
 2 – Left Turn Lanes  
 1 – Thru Lane  
 1 – Right Turn Lane



Route 28 SB  
 1 – Left Turn Lane  
 3 – Thru Lanes  
 1 – Right Turn Lane

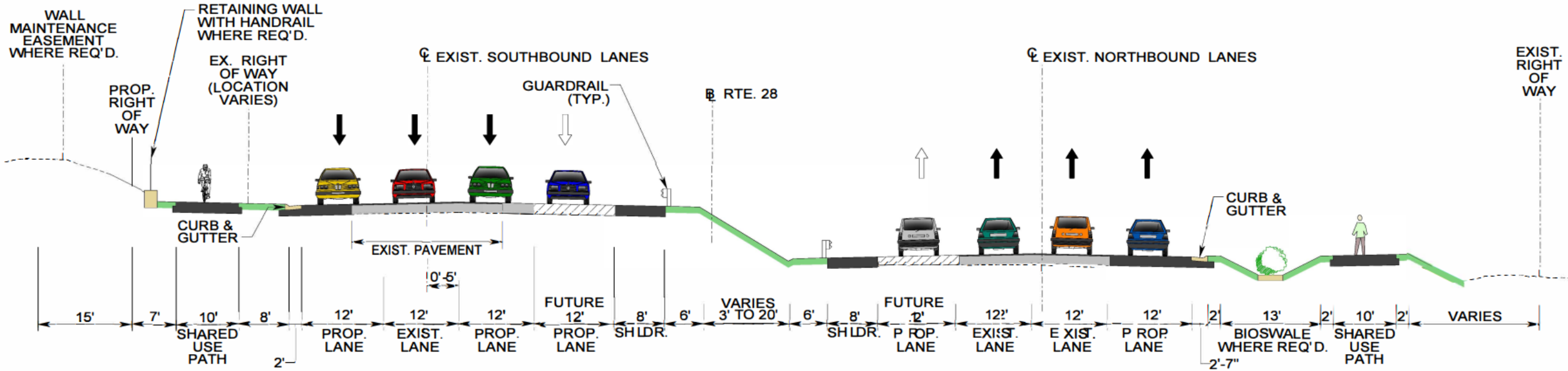
Route 28 NB  
 1 – Left Turn Lane  
 3 – Thru Lanes  
 1 – Right Turn Lane

Old Centreville Rd WB  
 2 – Left Turn Lanes  
 1 – Thru Lane  
 1 – Right Turn Lane



## Typical Sections

Route 28 Widening Prince William County Line to Route 29

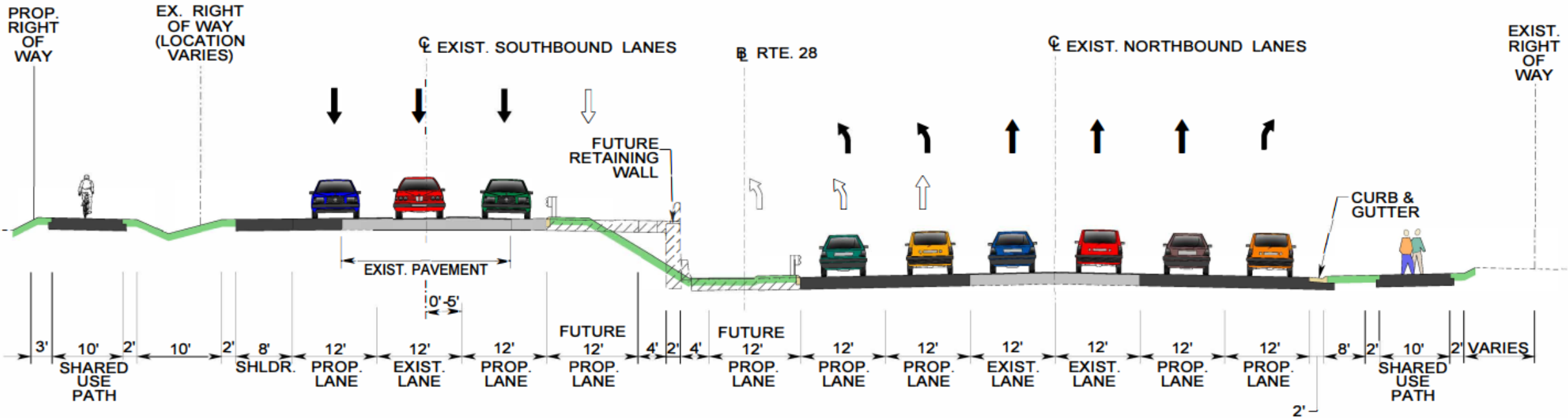


TYPICAL 6 LANE SECTION (WITH OUTSIDE CURB AND GUTTER)  
(100' SOUTH OF DARKWOOD DRIVE TO ROUTE 29)





 **Typical Sections**  
Route 28 Widening Prince William County Line to Route 29



**TYPICAL SECTION  
(WITH RETAINING WALL AND RIGHT AND LEFT TURN LANES)**



## Traffic Analyses

Detailed final analysis **APPROVED** by VDOT

Prepared several options for optimal lane configuration based on projected 2040 traffic volumes:

- Existing conditions (based on 2016 traffic counts)
- 6-Lanes (3 lanes in each direction) at opening year 2023
- 6-Lanes (3 lanes in each direction) at design year 2040
- Ultimate 8-Lanes (4 lanes in each direction) at design year 2040





## Traffic Analyses

Due to Funding Constraints, **this project will widen Route 28 to 6-lanes.**

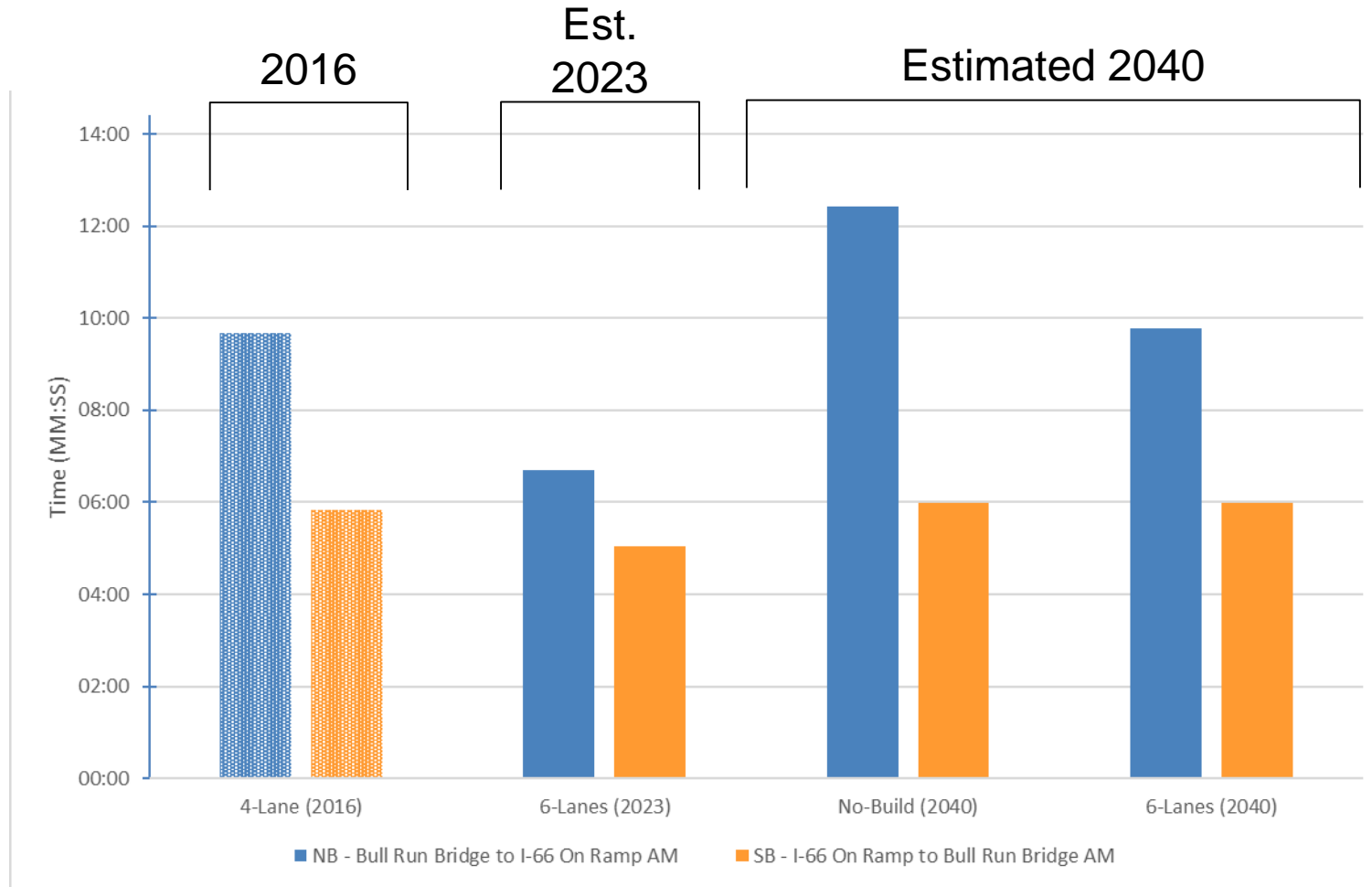
Additional widening of Route 28 to accommodate the estimated traffic demand will be needed prior to 2040.

This widening of Route 28 to 6-lanes will be designed and constructed to permit the addition of one lane in each direction with as minimal impact to the community and environment as possible.

Current design plans have been developed such that the additional lane(s) can be constructed in the median.

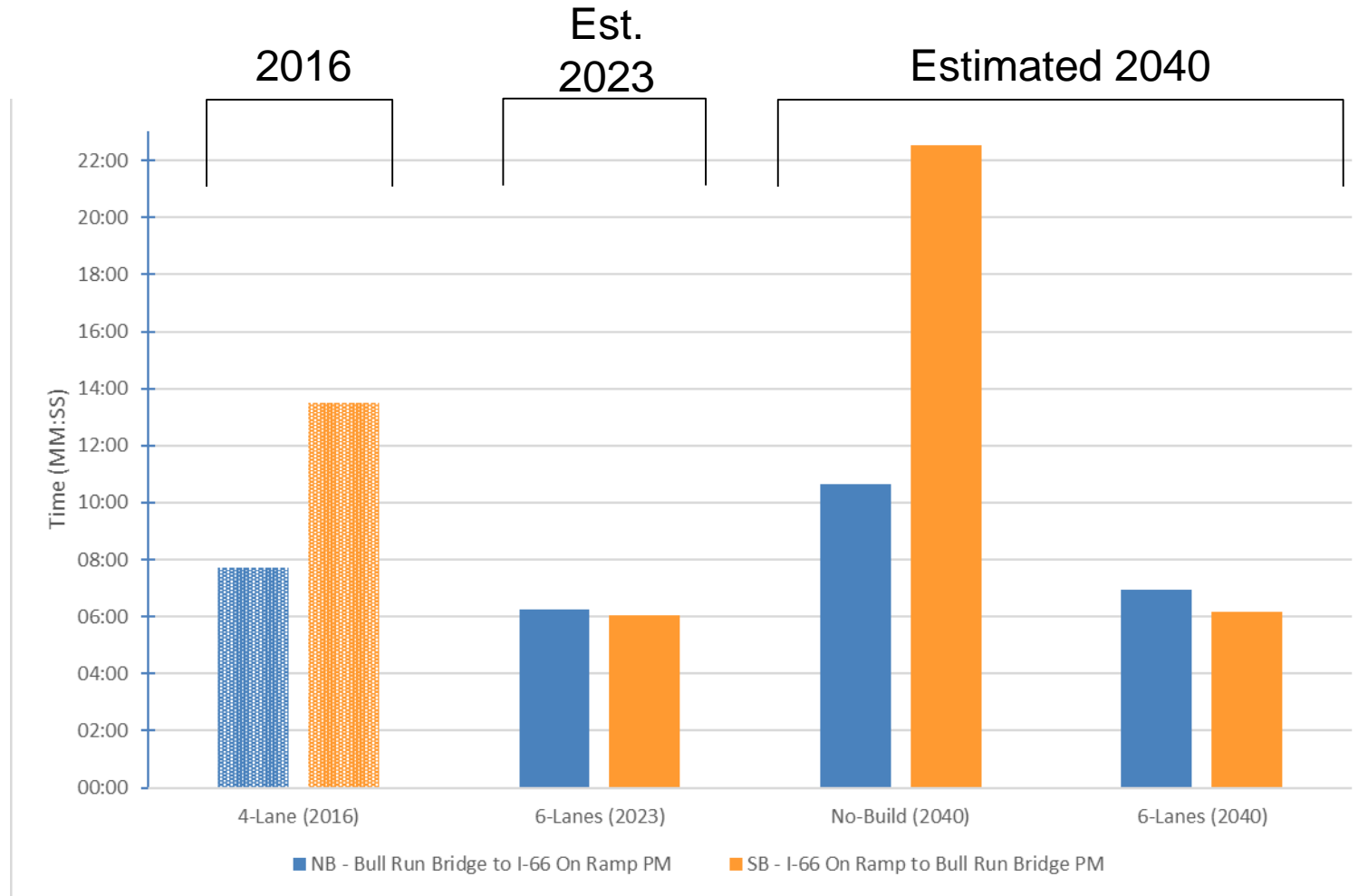


## AM Travel Time Comparison





## PM Travel Time Comparison





## Environmental

- FCDOT prepared and submitted to VDOT and FHWA a Documented Categorical Exclusion (CE) in compliance with the National Environmental Policy Act (NEPA)
- FHWA has approved release of the CE Document and findings for public review and comment.
- Full CE Document including supporting analyses and appendixes are available tonight and on the project website.



## Summary of CE Findings

- Permits Required
  - Design-Builder to acquire necessary permits from various agencies
- No known Historic, Architectural or Archeological Resources are impacted by the project.
  - Va. Dept. of Historic Resources (DHR) has issued a finding of “No Adverse Effect”
- No known threatened or endangered species are located within the Area of Potential Effect (APE).



## Summary of CE Findings

- Hazardous Materials
  - Colonial Pipeline spill of petroleum product at southeast corner of Route 28 and New Braddock Road; remediation is underway
  - Design-Builder on notice of potential contamination in the area, which Design-Builder must address in accordance with Federal and State regulations, if it is encountered during construction
- Air Quality
  - Air Quality Analysis completed; detailed Air Quality analysis NOT required
- Final Noise Analysis and mitigation required



## Noise Barriers 101

- As required by Federal law, a preliminary noise impact analysis was conducted as part of the NEPA process per VDOT Noise Policy.
- Where project noise levels are projected to exceed established criteria, FCDOT is *required to propose noise mitigation*
- Sound Barriers will be constructed *only* if the people who are directly benefitted vote in favor of them
- Noise Analysis
  - Computer model calibrated to existing conditions
  - Based on design year traffic volumes (2040) with future 8-lanes
  - Loudest hour – AM or PM on Route 28



## Summary of Preliminary Noise Analysis and Results

- Currently, 26 noise-sensitive receptors (e.g., residences, etc.) experience “noise impacts” defined as approaching (within 1 dBA) or exceeding the Noise Abatement Criteria (67 dBA (Leq)) during the loudest hour of the day.
- By 2040, it is anticipated that the number of impacted receptors will increase to 68.
- All proposed Sound Barriers must be “Reasonable and Feasible” per VDOT Noise Barrier Policy





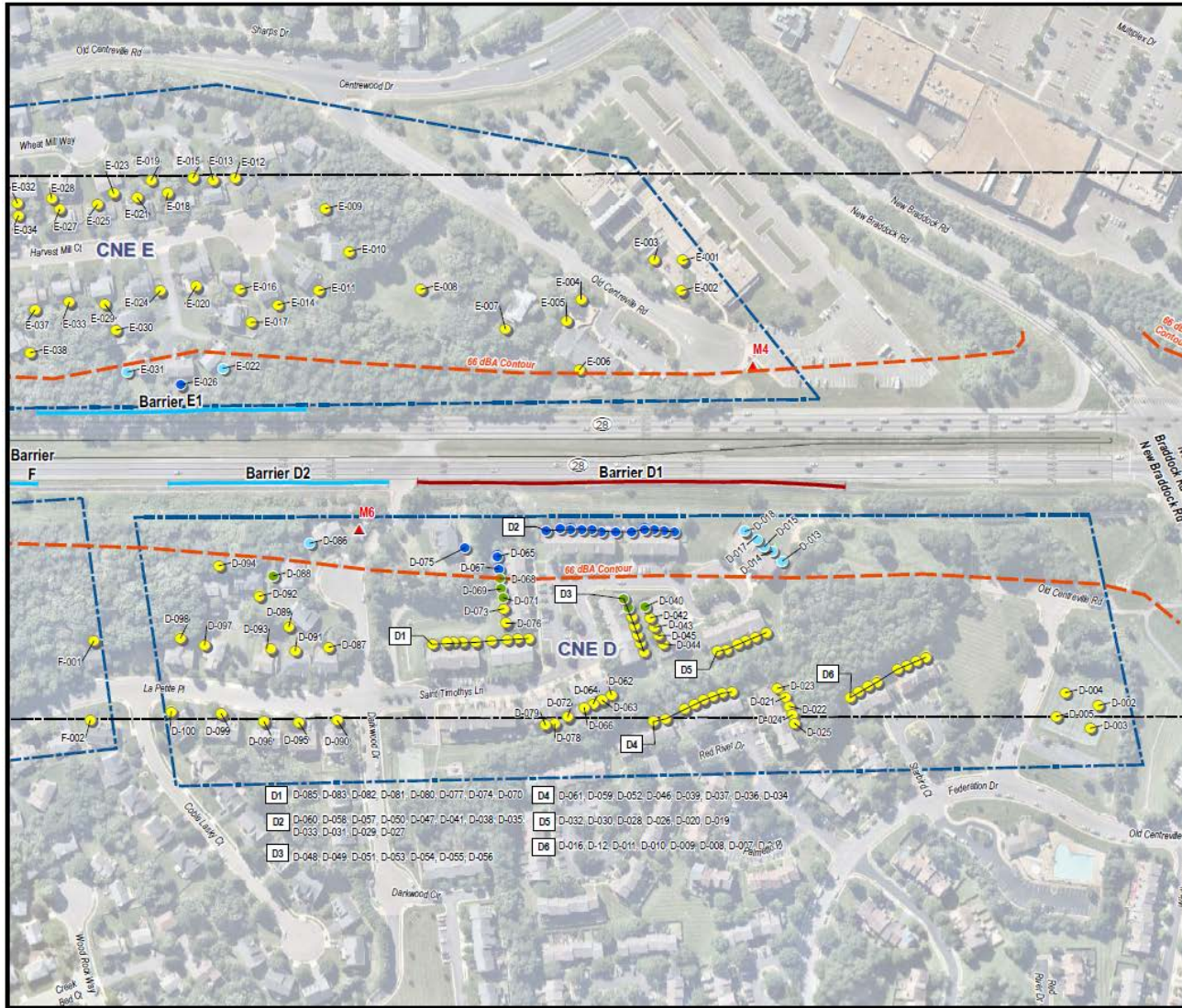
## Summary of Preliminary Noise Analysis and Results

- 10 Sound Barriers were evaluated based on VDOT's five criteria of reasonableness and feasibility:
  1. Acoustically effective by reducing levels at impacted receptors by at least 5 dBA
  2. Possible to design and construct the barrier
  3. Face of barrier cannot be larger than 1600 sq. ft. per benefited receptor
  4. At least one receptor achieves a 7 dBA reduction
  5. Most owners or residents of benefited receptors favor the barrier



## Summary of Preliminary Noise Analysis and Results

- Two barriers were found to meet the first four criteria and will undergo further evaluation:
  - A. Barrier D1 - East side of Route 28 between New Braddock Road and Darkwood Drive
  - B. Barrier I - West side of Route 28 north of Compton Road



**Figure 2**  
Location Map for Common Noise Environments, Receptors, Build Contours and Barriers

**Route 28 Widening, Fairfax County Noise Analysis**

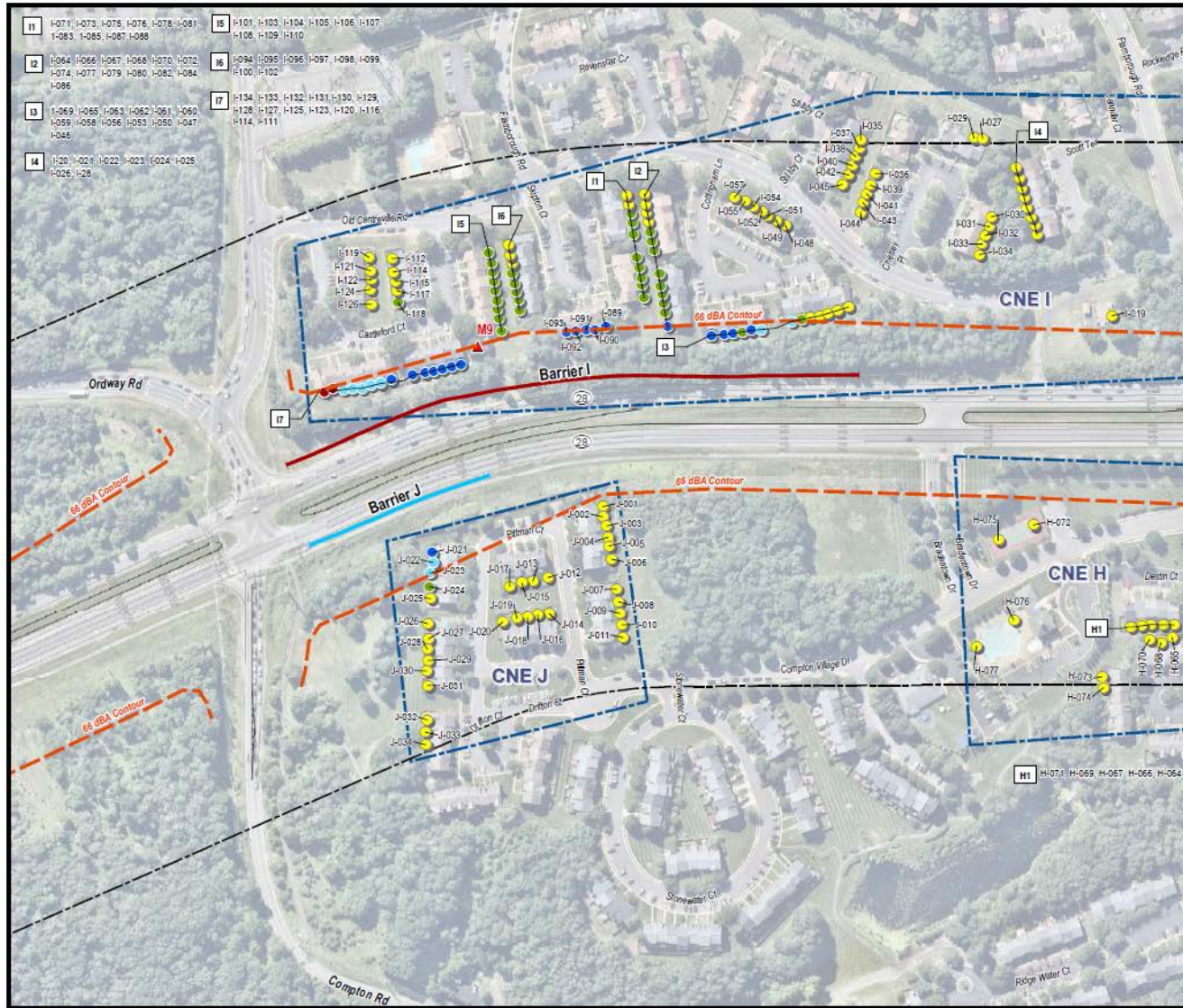
FCDOT Project 2G40-100-000 VDOT UPC 108720

- Receiver Site and Number**
- Impacted and 5 or 6 dBA Insertion Loss
  - Impacted and 7 dBA or more Insertion Loss
  - Impacted but Not Benefited
  - Benefited but Not Impacted
  - Not Benefited or Impacted

- Noise Barriers**
- ▬ Feasible and Reasonable
  - ▬ Feasible and Not Reasonable
  - ▬ Not Feasible

- ▲ M# Measurement Site
- ▬ CNE Boundary
- ▬ 66 dBA Noise Contour
- ▬ 500' Noise Study Area





**Figure 2**  
Location Map for Common Noise Environments, Receptors, Build Contours and Barriers

Route 28 Widening, Fairfax County Noise Analysis

FCDOT Project 2G40-100-000 VDOT UPC 108720

- Receptor Site and Number**
- Impacted and 5 or 6 dBA Insertion Loss
  - Impacted and 7 dBA or more Insertion Loss
  - Impacted but Not Benefited
  - Benefited but Not Impacted
  - Not Benefited or Impacted

- Noise Barriers**
- Feasible and Reasonable
  - Feasible and Not Reasonable
  - Not Feasible

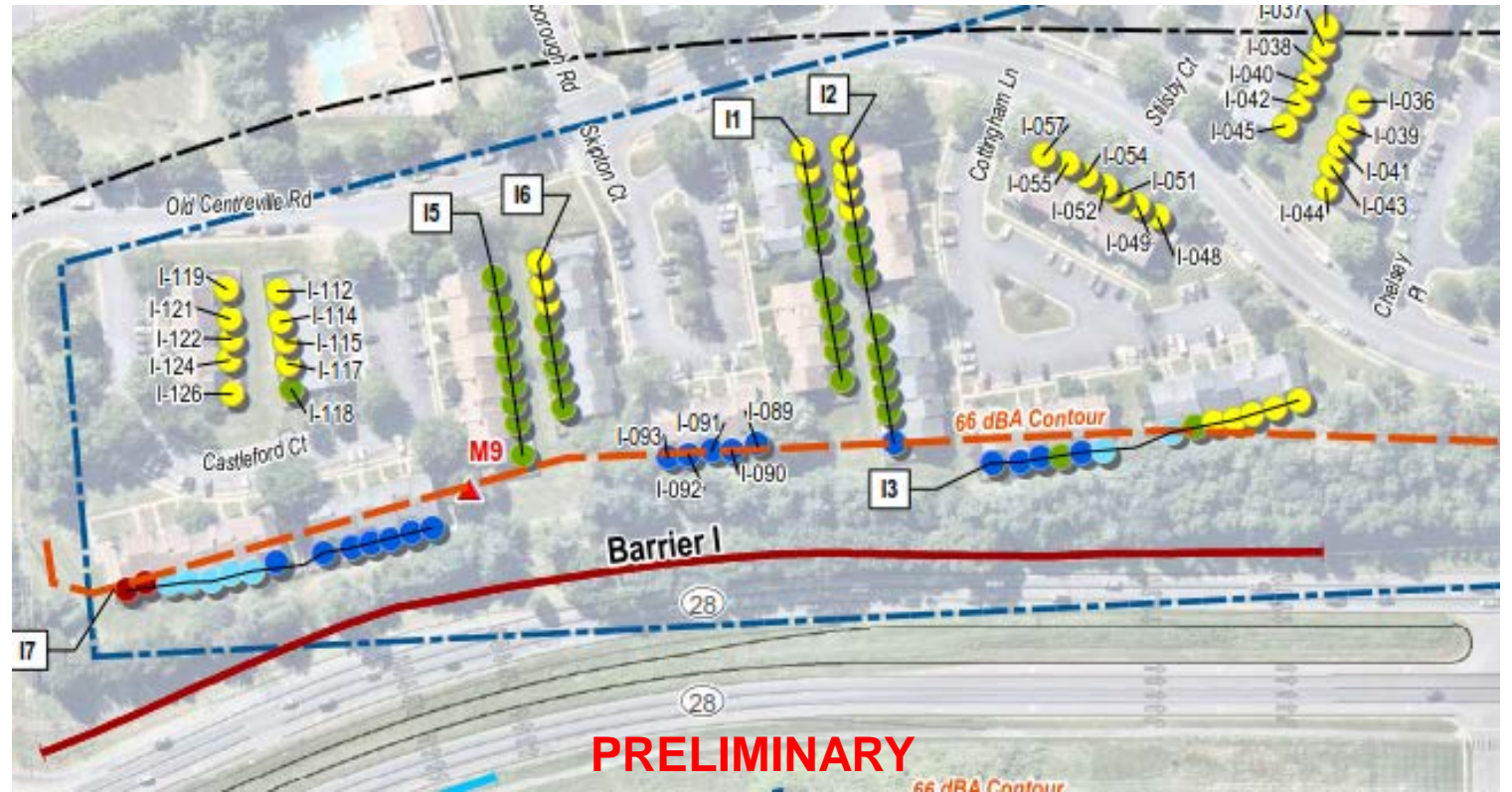
- ▲ M# Measurement Site
- CNE Boundary
- 66 dBA Noise Contour
- 500' Noise Study Area





## Criterion 5: Noise Barrier Voting – Barrier I

Color	No. of Benefited Receptors
Blue	24
Green	33



- Blue receptor – impacted and benefited: each vote weighted as 5
- Green receptor – not impacted but benefited: each vote weighted as 3
- Yellow receptor – Not impacted and not benefited: do not vote
- Both owners and renters can vote



## Final Noise Analysis

- Final Noise Analysis and Design of the Barriers, including exact location, length, height, architectural treatment, etc., will be performed by the Design-Build Contractor under supervision of FCDOT, VDOT and FHWA
- Once Final Noise Analysis is complete including barrier location, height, length, and impacted receptors identified, Design-Build Contractor will contact benefited receptors (property owners and/or tenants) to start the voting process.
- FCDOT's consultant is here tonight to discuss the Noise analysis with property owners



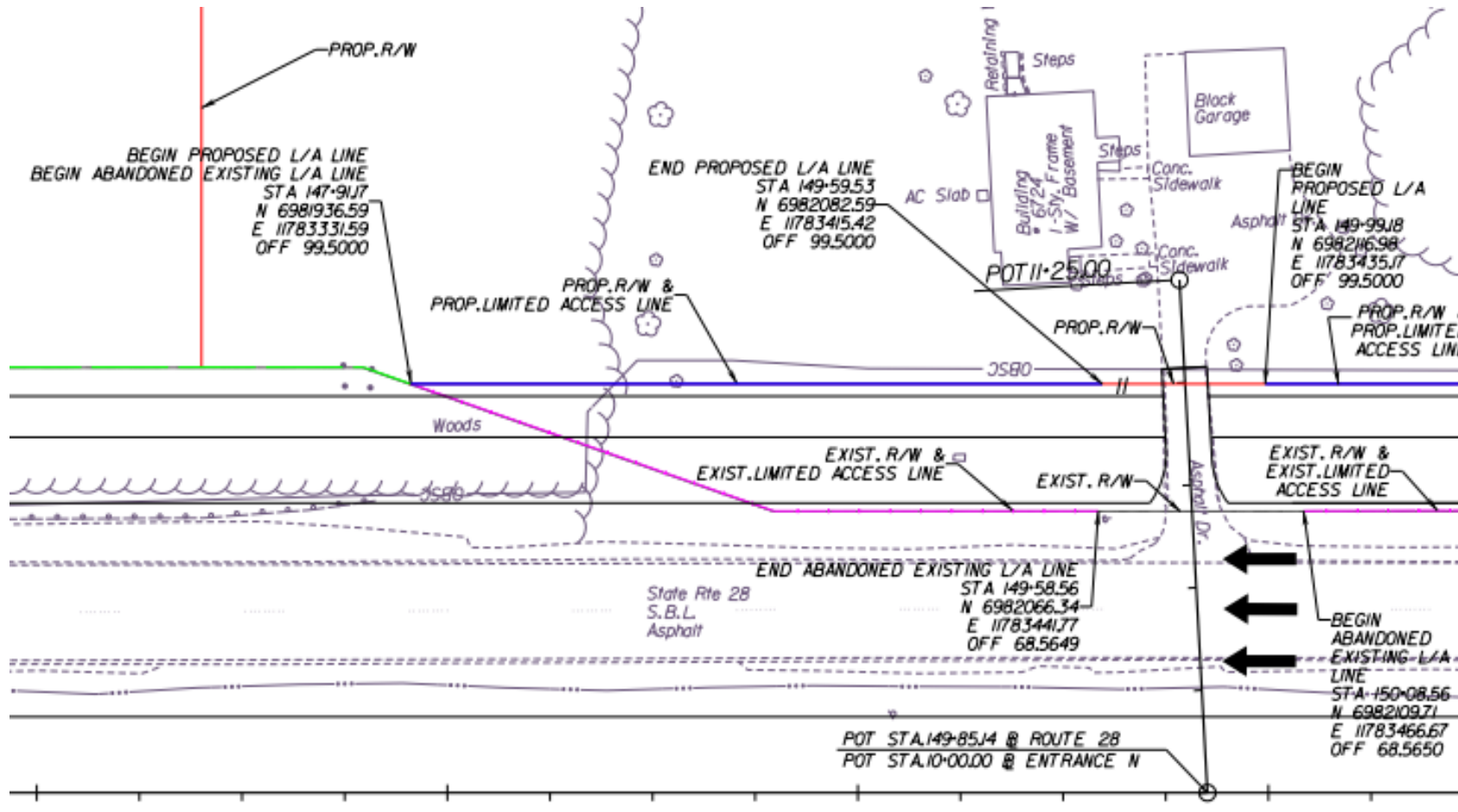
## Limited Access Line Adjustment

- Existing Limited Access (LA) line extends on both sides of Rt 28 from Compton Road to Upperridge Drive
- Proposed widening requires LA line adjustment to accommodate access to RT 28 and correct errors in the LA line
- FCDOT will apply to the Commonwealth Transportation Board in Fall 2019 to adjust LA lines
- No existing driveway access from RT 28 is proposed for removal or relocation.
- Boards here tonight show full extent of existing and proposed LA lines





## Limited Access Line Adjustment









## Estimated ROW Requirements Based Upon Preliminary 6-Lane Plans

	Number of Parcels		
	Total parcels affected	ROW and Easements	Easements Only
Route 28 Roadway	53	19	27
Stormwater Management Ponds	7 (6 total acquisitions)	7	0
Total Parcels	53	26	27

**No demolition or removal of residential or commercial structures.**

**Utility relocations may require additional easements**





## Land Acquisition Process

- Land Acquisition must be completed in accordance with FHWA, VDOT, and Fairfax County procedures.
- Plats will be prepared showing easements and/or right-of-way needed.
- Appraisals will be conducted in accordance with County, VDOT and FHWA requirements.
- A Land Acquisition Agent from Design-Build Team will contact property owners to negotiate fair market value for easements and/or right-of-way needed.





## Land Acquisition Process

- Negotiations with property owners cannot commence until VDOT and FHWA has provided Authorization to FCDOT and the Design-Build Team to do so. (Expected to begin Fall 2020.)
- Land Acquisition Agents from Fairfax County are here tonight to answer any questions you may have about the process.





## Current Project Funding

• NVT A Regional Funds -		\$26,000,000
• State Revenue Sharing Funds -		\$10,000,000
• State SmartScale Funds -		\$23,422,583
• Federal Demonstration Funds -		\$ 9,626,444
• County Funds -		\$17,430,973
• Total Funding to Date	=	\$86,480,000
• <b>Cost Estimate</b>	<b>=</b>	<b><u>\$86,480,000</u></b>



## Preliminary **Design-Build** Schedule (6 Lane Design)

- Advertise Request for Qualifications (D-B Contract) – April 16, 2019
- “Final” 30% Plans – August 2019
- Advertise Request for Proposals (D-B Contract) to three shortlisted firms– September 23, 2019
- **Design Public Hearing – September 23, 2019**
- **Final Environmental (NEPA) Document – December 2019**
- **Award Design Build Contract - Spring 2020**
- **Notice to Proceed to D-B Contractor – Spring 2020**
- **60% Plans – Summer/Fall 2020**
- **Start ROW Acquisition – Fall 2020**
- **Start Construction – Fall 2020**
- **Substantial Construction Completion – December 31, 2022**
- **Final Construction Completion – Spring 2023**



## Project Website

<https://www.fairfaxcounty.gov/transportation/projects/route28-widening>

**Website will be updated monthly or as more information/data becomes available.**

How Do I submit Comments/Concerns regarding the project:

1. Email via Project Website
2. Email to Project Manager – James.Beall@fairfaxcounty.gov
3. Mail Comment Sheet via US Mail- FCDOT, 4050 Legato Road, Suite 400, Fairfax VA 22033-2895
4. Fill out comment sheet and hand it in tonight

**FCDOT is requesting comments related to tonight's meeting be submitted by October 7, 2019**



## Public Comment/Questions?







## Construction

- County and Contractor will coordinate with property owners well in advance.
- Work hours are set by VDOT and Fairfax County
  - **Night work is likely**
- Contractor must maintain pedestrian and vehicular traffic and signals during construction.
- No lane closures will be allowed during peak travel hours.

