PURPOSE AND NEED

Reduce congestion – Regional travel demand forecasting shows increased traffic volumes and travel demands as population and employment continue to grow within the region.

Provide additional travel choices – Access to high-occupancy travel modes encourages drivers to choose alternatives to single-occupancy travel as well as provide an option to single-occupancy drivers to use the Express Lanes and free up capacity on the general purpose lanes.

Improve travel reliability – Duration and extent of congestion is expected to increase along with population and employment growth resulting in the need for commuters to spend additional time traveling to work.

ENVIRONMENTAL ASSESSMENT

Pursuant to the National Environmental Policy Act of 1969, as amended, and in accordance with FHWA regulations, VDOT prepared an Environmental Assessment to analyze and document the potential social, economic, and environmental effects associated with the proposed transportation improvements for a Build and No-Build scenario of the extension of Express Lanes along I-495 to the George Washington Memorial Parkway in the vicinity of the American Legion Bridge.

Technical Studies Performed:

- Air Quality Analysis
- Alternative Analysis
- Hazardous Materials
- Historic Resources
- Indirect and Cumulative Effects Analysis
- Natural Resources
- Preliminary Noise Analysis
- Socioeconomic and Land Use Analysis
- Traffic Analysis
ENVIROMENTAL IMPACT PROCESS

The National Environmental Policy Act (NEPA) requires:

- Consideration of potential environmental consequences of transportation improvements
- Documentation of the environmental analyses
- Making the information available to the public for comment
ENVIRONMENTAL ANALYSIS PROCESS

**STUDY AREA**
Broad area near a project where study team collects data and develops environmental inventory

**LIMITS OF DISTURBANCE**
Narrower portion of Study Area where construction related activities may occur

**DESIGN FOOTPRINT**
Within the Limits of Disturbance, final design further avoids and minimizes project impacts
### ENVIRONMENTAL ASSESSMENT FINDINGS

<table>
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<tr>
<th>Environmental Resource</th>
<th>Resource Summary</th>
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| Property Impacts                        | 89 properties with potential impacts  
No relocations                                                                              |
| Community Facilities                    | 5 community facilities: Partial property acquisition  
9 existing trail/bicycle facilities: Temporary impacts  
4 proposed trail/bicycle facilities by others: Temporary impacts                           |
| Environmental Justice (Minority/Low-income) | No disproportionately high and adverse effects                                                                                                           |
| Historic Properties                     | Anticipated “No Adverse Effect” determination from the State Historic Preservation Officer (SHPO)                                                  |
| Section 4(f) Protected Properties       | Anticipated de minimis impact finding for Scott’s Run Nature Preserve and the George Washington Memorial Parkway                                         |
| Section 6(f) Protected Properties       | Anticipated impacts to Scott’s Run Nature Preserve                                                                                            |
| Noise – Based on Preliminary Noise Study| 9 existing barriers physically affected will be replaced  
3 of the 9 existing barriers would be lengthened  
1 new barrier determined to be feasible and reasonable                                       |
| Air Quality                             | No adverse impacts to air quality; No violation of the National Ambient Air Quality Standards                                                   |
| Wetlands and Streams                    | Streams: Approximately 13,000 linear feet within the LOD  
(Anticipated 3,000 linear feet of impact)  
Wetlands: Approximately 20 acres within the LOD  
(Anticipated 4.5 acres of impact)                                                        |
| Floodplains                             | Approximately 60 acres of floodplains within the LOD  
No increase in flood levels or probability of flooding expected                              |
| Wooded Areas                            | Approximately 118 acres within the LOD                                                                                                               |
| Wildlife and Habitat                    | Approximately 234 acres within the LOD (Anticipated 66 acres of impact)  
No new habitat fragmentation or elimination of existing passages is anticipated               |
| Threatened and Endangered Species       | Tree clearing could impact potential suitable habitat for three bat species  
Streams and floodplains that contain potential habitat for wood turtles would be impacted    |

*These impacts are based on the proposed Limits of Disturbance (LOD). During final design, efforts will be made to reduce the project footprint and minimize impacts.*
Noise Analysis Process

WE ARE HERE

Identify noise receptors
Perform noise measurements at representative receptors along the corridor
Perform noise modeling
Identify impacts (is noise mitigation warranted?)
Design and assess mitigation (typically noise walls)
Present noise study results and preliminary noise wall locations at public hearings

Final Design

Finalize noise barrier designs once the project has received design approval
Obtain VDOT Chief Engineer approval
Obtain FHWA concurrence
Solicit public input from benefited property owners and renters (voting process)
Incorporate approved noise wall(s) into the final road design construction plans

NEPA and Preliminary Design
Preliminary Noise Analysis Findings

Preliminary noise wall study results:

- 9 existing walls to be replaced at same elevation or higher
- 3 of 9 existing walls lengthened
- 1 new wall

Examples of noise wall locations near Live Oak Drive and George Washington Memorial Parkway

*If you have a noise wall today, you’ll have one in the future*