

WELCOME

I-395 SEMINARY ROAD RAMP – TRAFFIC ANALYSIS FOR THE CONVERSION FROM HOV TO HOT

Goals of tonight's meeting



To provide information and gain public input:

- Traffic analysis findings
- Safety findings



Opportunities to provide formal comment for the public record:

- Submit written comments on the comment sheet
- Ask questions following the presentation

Project goals

To develop a transportation solution that:

- ✓ Encourages greater use of existing interstate network and capacity
- ✓ Reduces congestion on the general purpose lanes
- ✓ Improves safety
- ✓ Improves network reliability and provide predictable travel choice

PROJECT BENEFITS

✓ Expanded travel choices

- The Project utilizes existing infrastructure to provide an alternative choice for single or double occupancy vehicles – post-conversion HOV3+ will travel free 24/7
- Analysis shows utilization of the ramp increases when converted from HOV to HOT

✓ Improved safety

- Overall estimated crash rate reduction across general purpose and HOT ramps

✓ Improved reliability

- Reduces congestion on I-395 general purpose lanes
- Increased ability for the interstate network to handle crashes and other congestion events

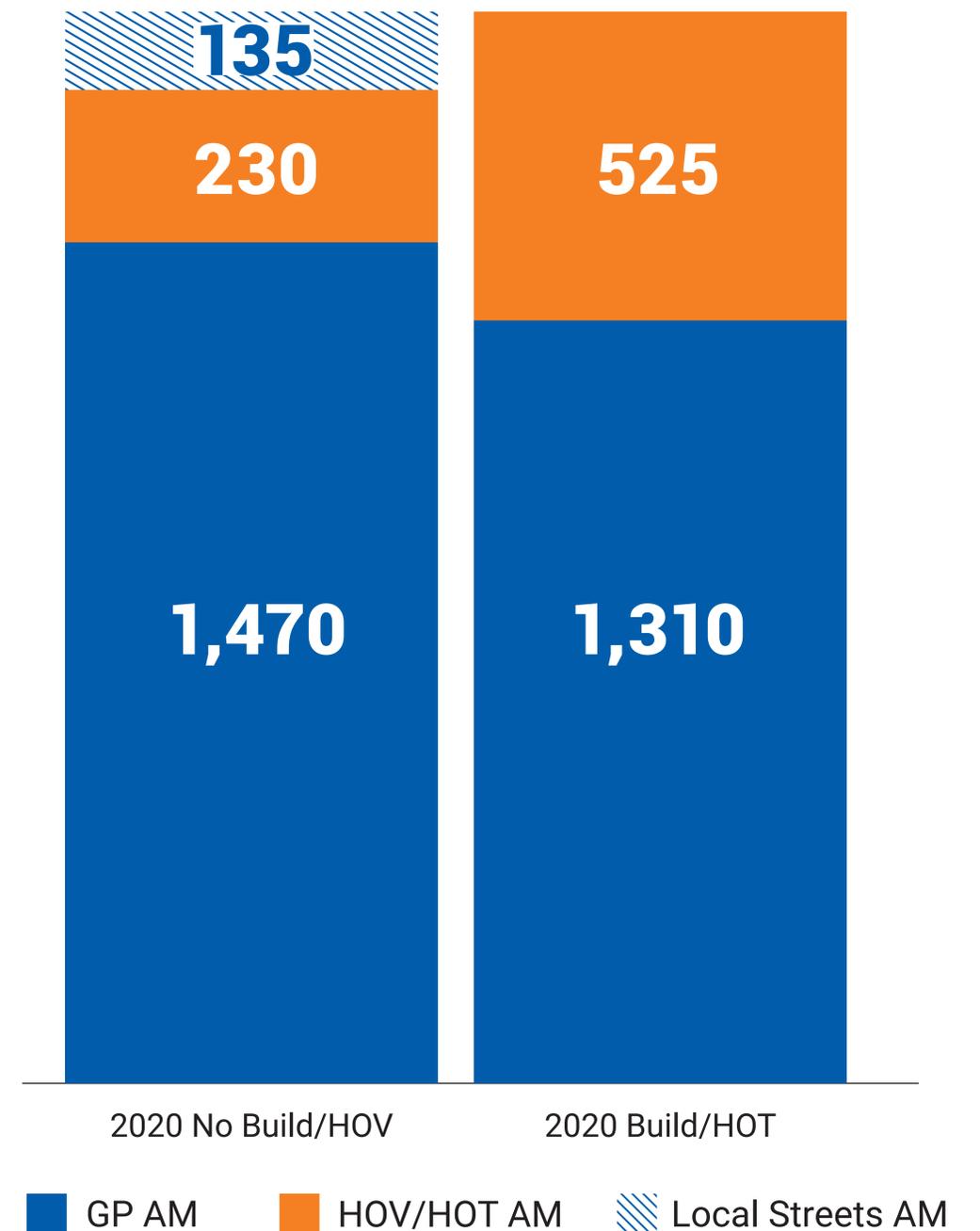
✓ To repurpose underutilized infrastructure

- The ramp is underutilized today, carrying only 49 – 61% of forecasted volumes for 2015

✓ Improved operations on local streets

- The increase in volumes on the HOT ramp exceeds the decrease in volumes on the general purpose lanes, indicating cars are being drawn from local streets to the HOT Lanes (see figure)
- No impact or small reductions in traffic volumes on local streets

Anticipated traffic volumes on the NB ramps during the AM peak period



PROJECT INFORMATION AND SCHEDULE

Existing infrastructure

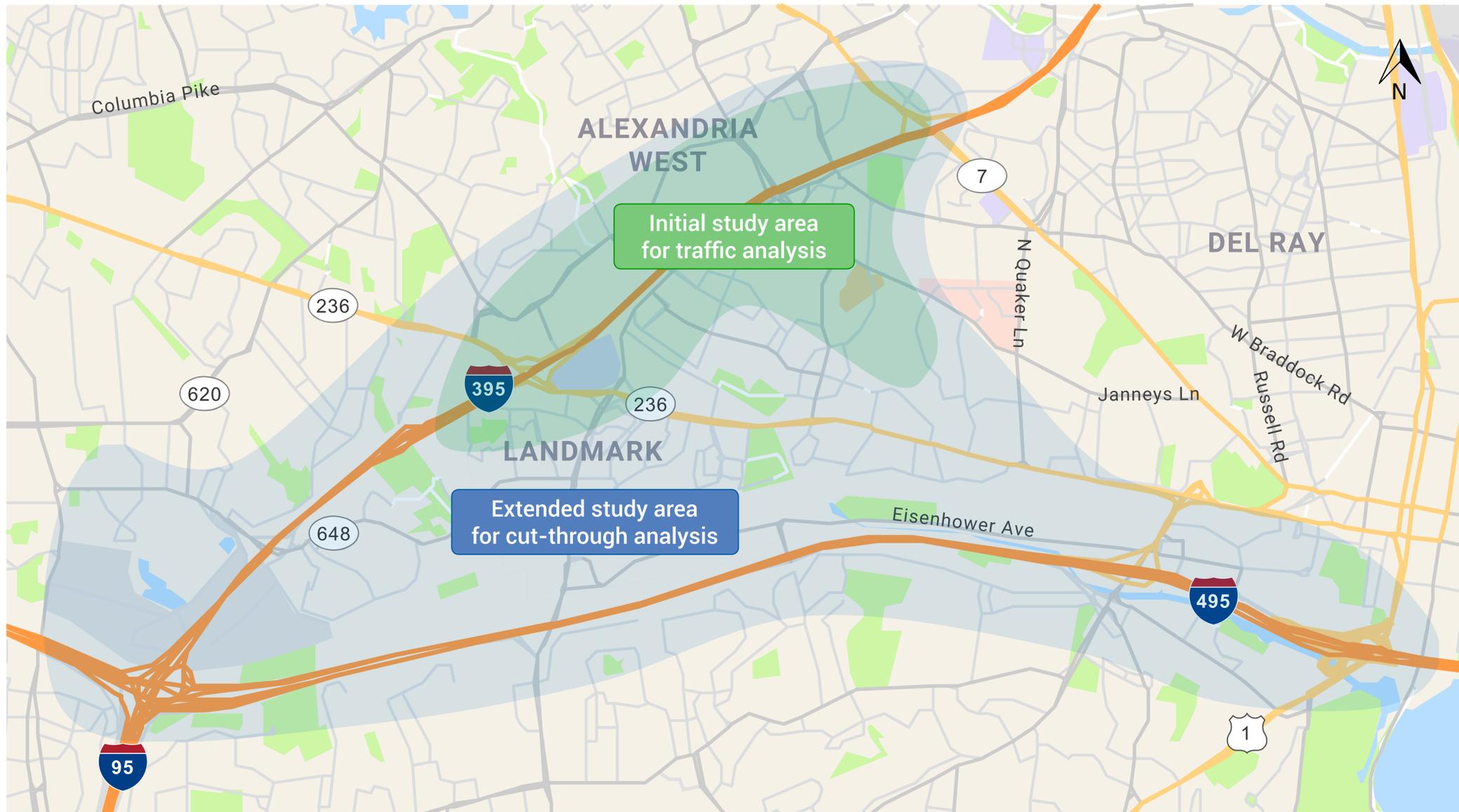
- Ramp constructed by VDOT in 2012, opened in 2016
- No additional civil construction required

Signage and pavement marking changes

- No new signage or digital messaging boards
- Seminary Road: 4 sign removals, 5 sign overlays, 2 sign replacements, and 2 sets of pavement message replacements
- I-395 Northbound General Purpose Lanes: 4 sign removals, 1 sign overlay, 3 sign replacements, and 2 sets of pavement message removals

TASKS	LATE 2019	EARLY 2020	MID 2020
Public meeting	December 9th		
Public comment period closes	December 31st		
Traffic analysis input from the City of Alexandria			
Traffic analysis and NEPA approval from FHWA			
Traffic analysis approval from VDOT			
Target ramp conversion			

STUDY AREA

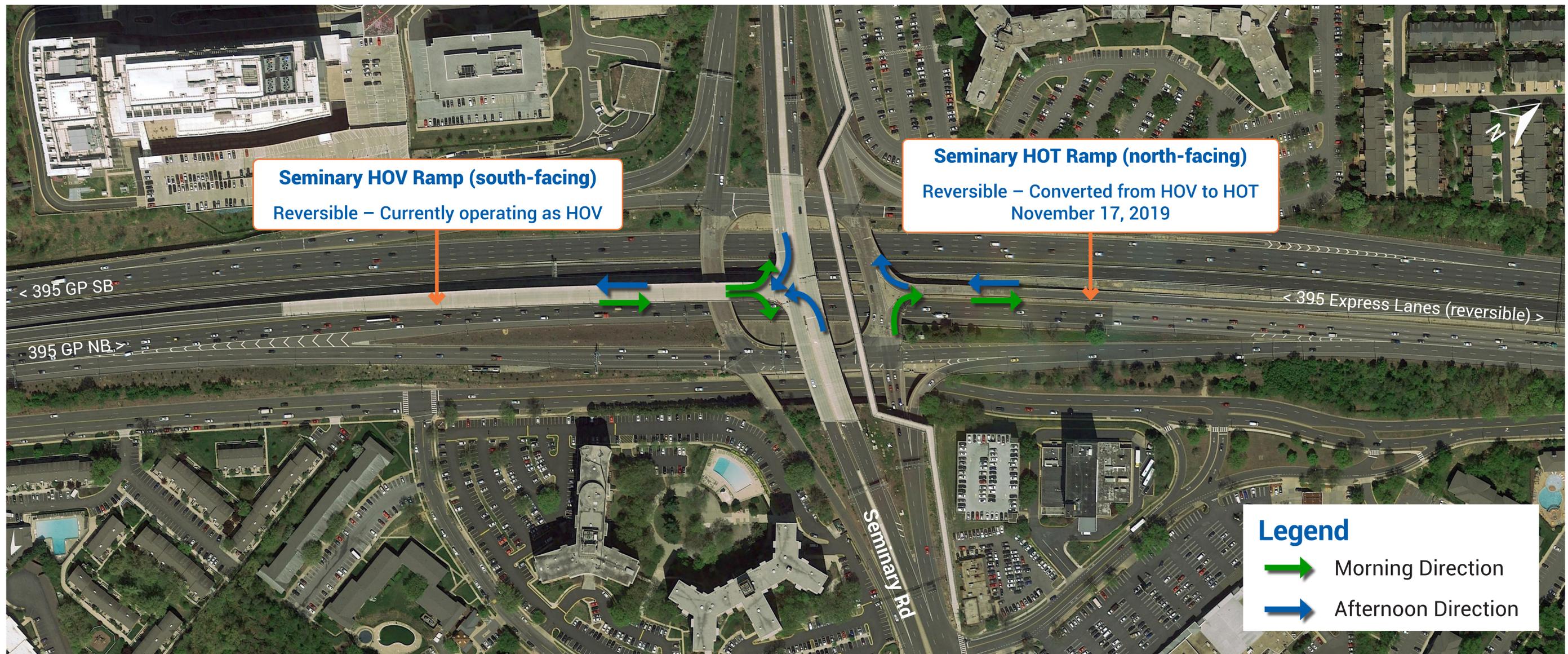


Study area and data collection

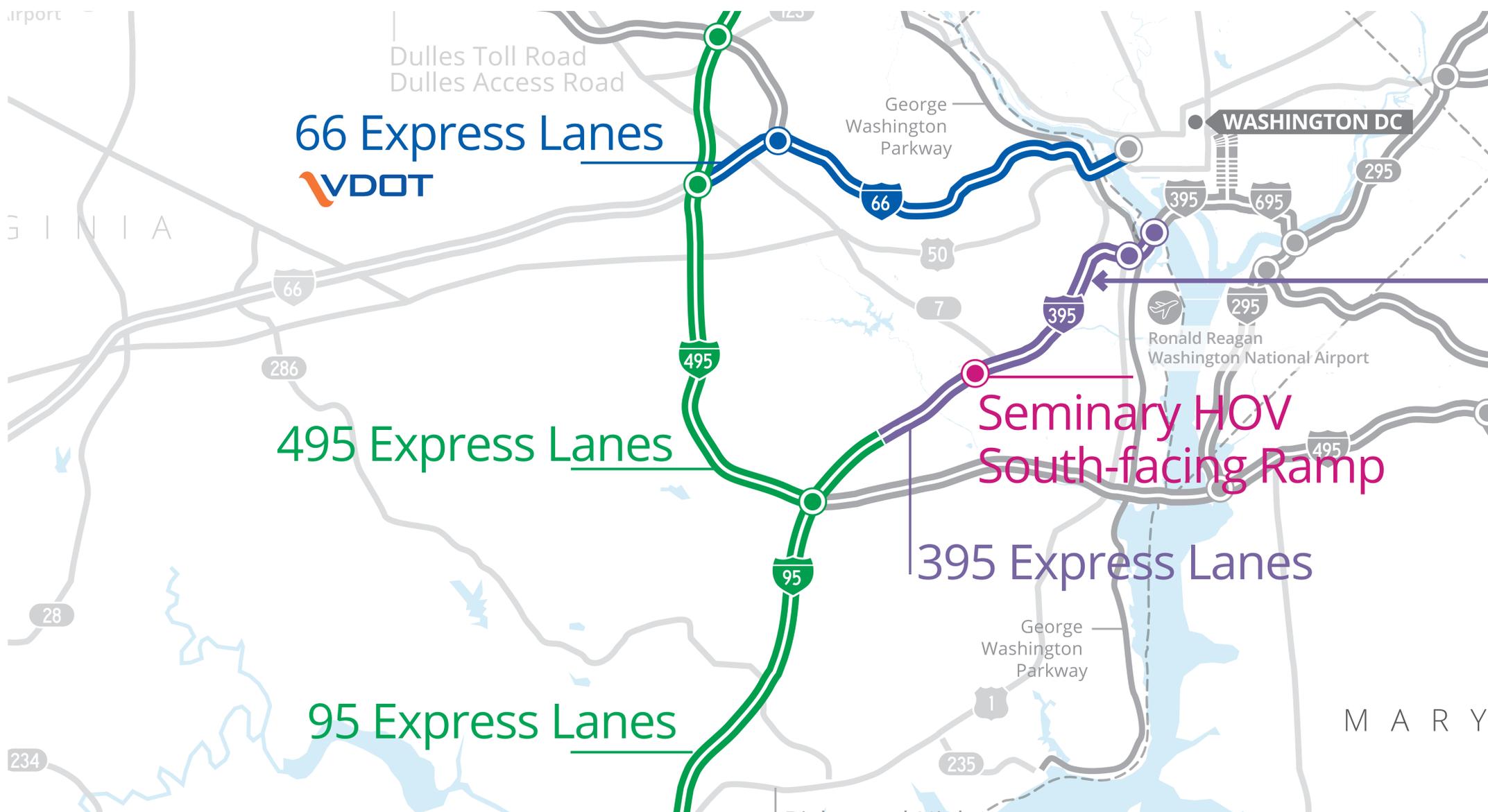
- ✓ Study area limits and intersections were delineated in coordination with VDOT, FHWA, and the City of Alexandria
- ✓ Further traffic counts in a wider area were completed to inform the larger analysis of local streets
- ✓ Data was collected during October and November 2018
- ✓ Automatic traffic recorder and turning movement counts were collected for the study area
- ✓ 70+ intersections were studied

EXISTING CONDITIONS

- Utilizing existing infrastructure
- The ramp is underutilized, and currently carrying only 49-61% of the traffic forecasted for 2015 in the peak hour



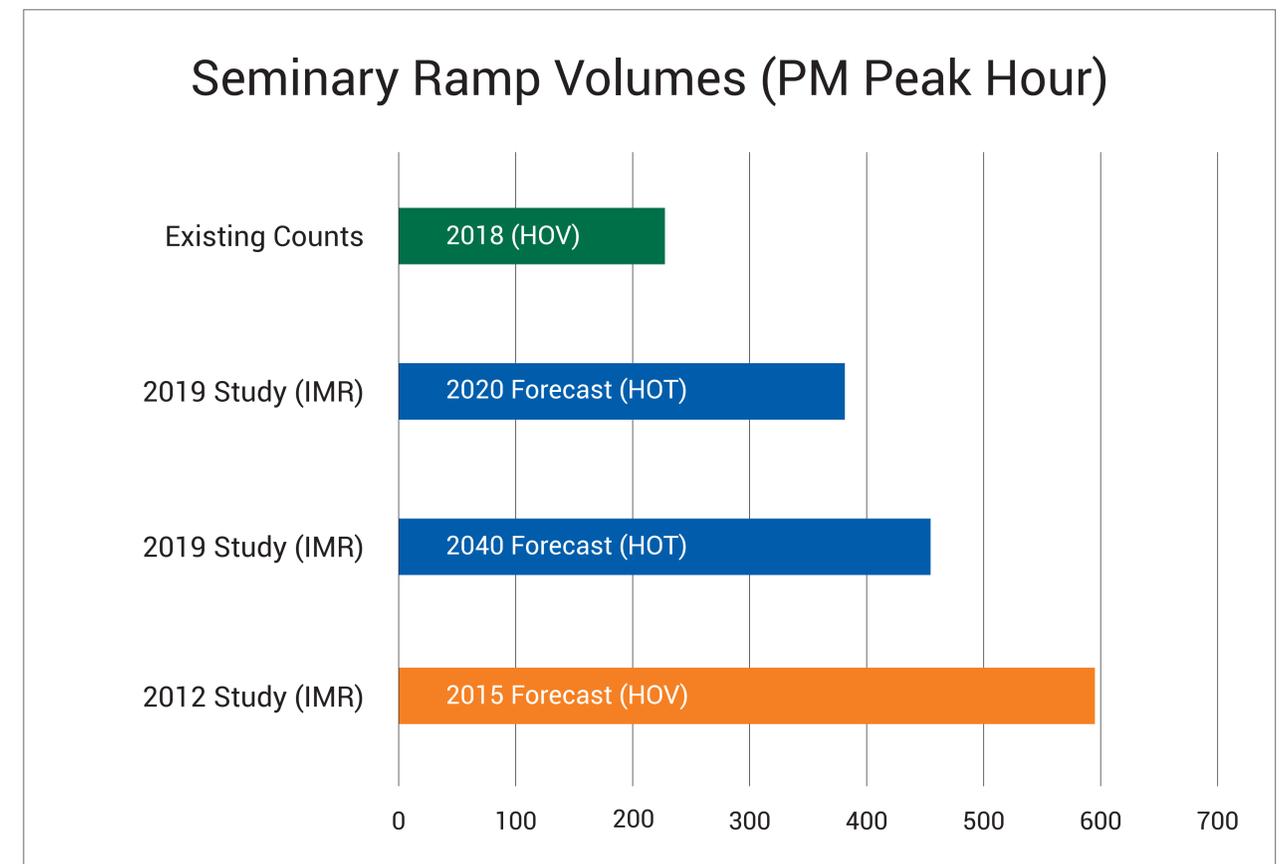
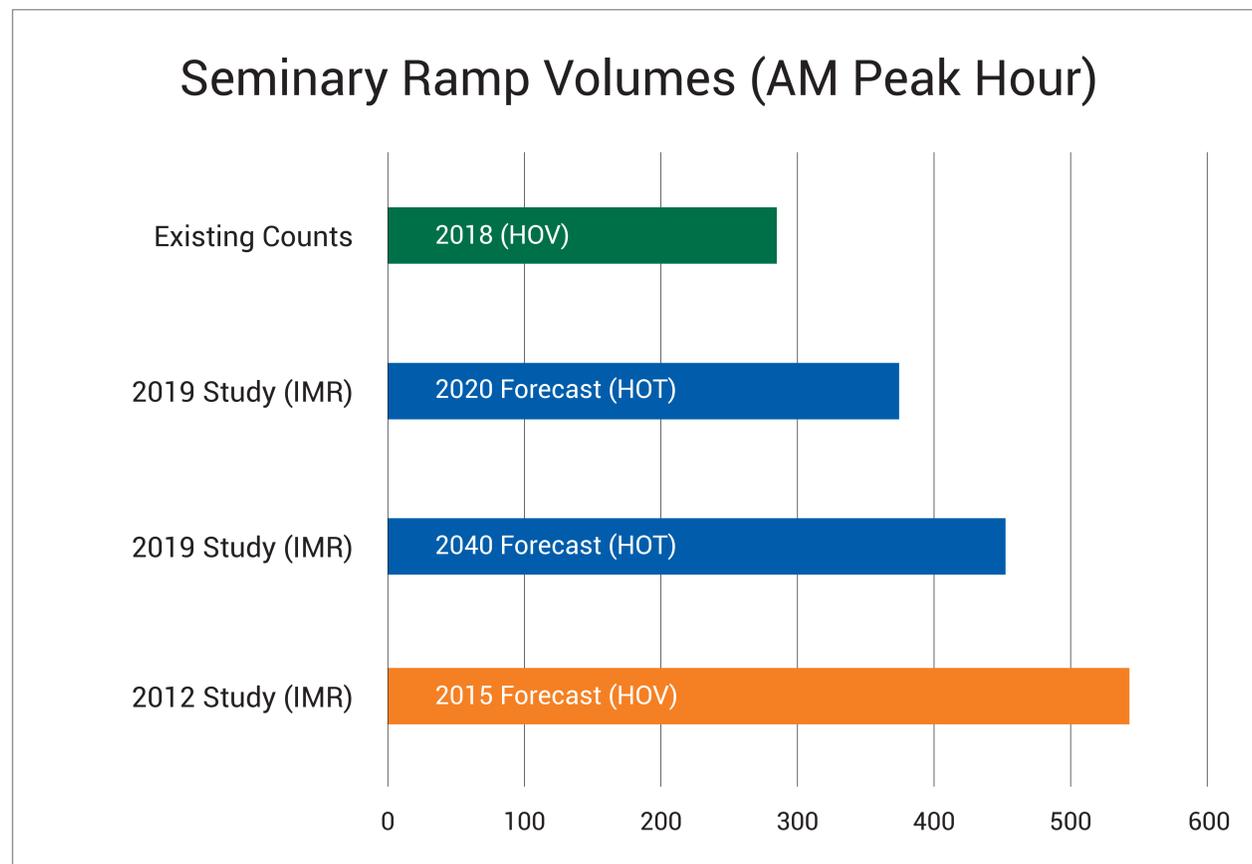
EXPRESS LANES NETWORK



- Opened November 17, 2019
- Extended existing 95 Express lanes from near Edsall Road to the D.C. line
- \$15M annual transit investment
- Reversible in peak direction
- HOV-3+ travel free 24/7 with E-ZPass Flex in HOV ON mode
- The Seminary south-facing HOV ramp is a reversible access point that connects to the 395 Express Lanes

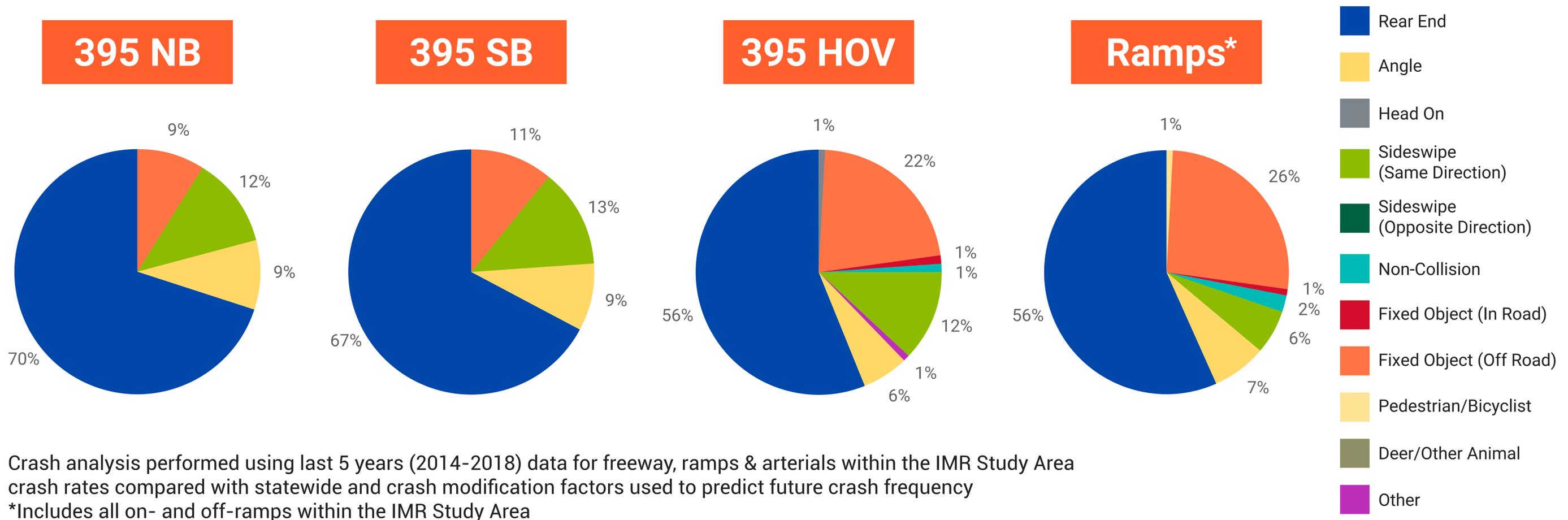
TRAFFIC OPERATIONAL ANALYSIS KEY FINDINGS

- ✓ Traffic volumes from general purpose lanes and local arterials move to the HOT lanes
- ✓ No adverse impacts on intersections in 2020 and 2040
- ✓ No adverse impacts on speeds along local streets in 2020 and 2040
- ✓ Findings do not change materially with and without the road diet along Seminary Road
- ✓ Ramp is underutilized today currently carrying only 49 – 61% of forecasted volumes for 2015
- ✓ Converting to HOT, volumes expected to be lower than original forecasts



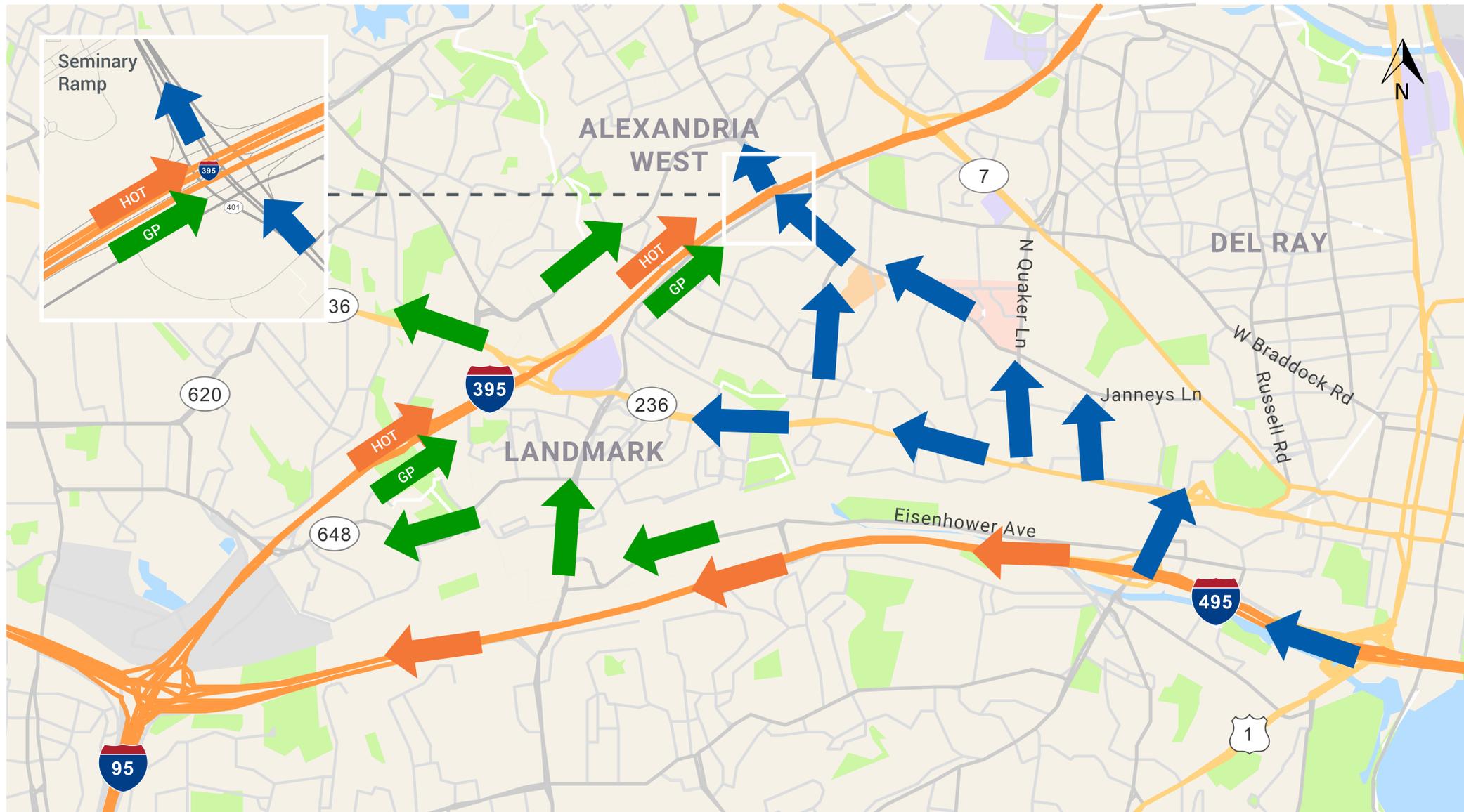
TRAFFIC SAFETY ANALYSIS KEY FINDINGS

- ✓ Based on crash analysis, estimate less than 1 crash per year along the south facing HOV ramp
- ✓ Converting ramp from HOV to HOT increases traffic on HOT ramp and decreases traffic on general purpose (GP) ramp, therefore the estimated crash rate reduction on GP ramp is greater than the crash rate increase on the ramp operating as HOT
- ✓ In summary, estimate a net reduction in crashes on the corridor



EXTENDED STUDY AREA TRAFFIC ANALYSIS

AM PEAK HOUR 2020 – HOV vs. HOT



HOT scenario

- ✓ Increase in HOT ramp volume is greater than the decrease in the general purpose ramp volume
- ✓ Traffic shifts from general purpose lanes to HOT and from local streets to HOT
- ✓ Traffic filters from local streets south of Alexandria to I-495 general purpose lanes

Legend

- Increase
- Decrease
- No Material Change

EXTENDED STUDY AREA TRAFFIC ANALYSIS

PM PEAK HOUR 2020 – HOV vs. HOT



HOT scenario

- ✓ Increase in HOT ramp volume is greater than the decrease in the general purpose ramp volume
- ✓ Traffic shifts from general purpose lanes to HOT and from local streets to HOT
- ✓ Small movement of traffic from local streets to interstate network

Legend

- Increase
- Decrease
- No Material Change