

Short Pump Area Interchange Access Report

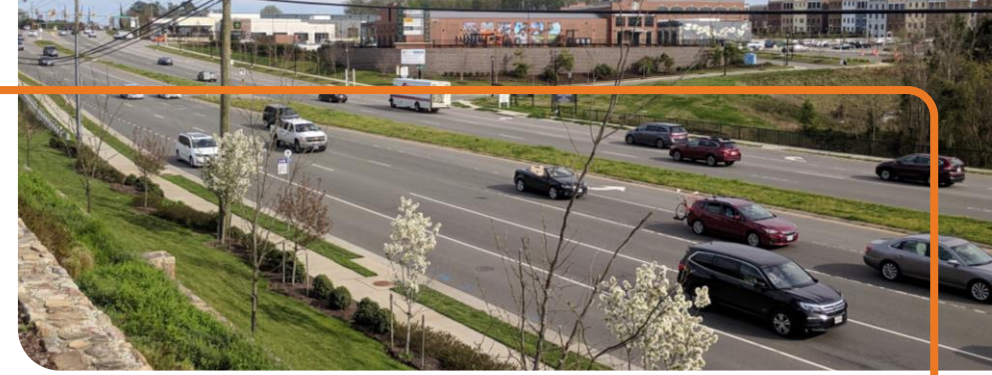
Board of Supervisor Update – May 2023

PREPARED FOR:



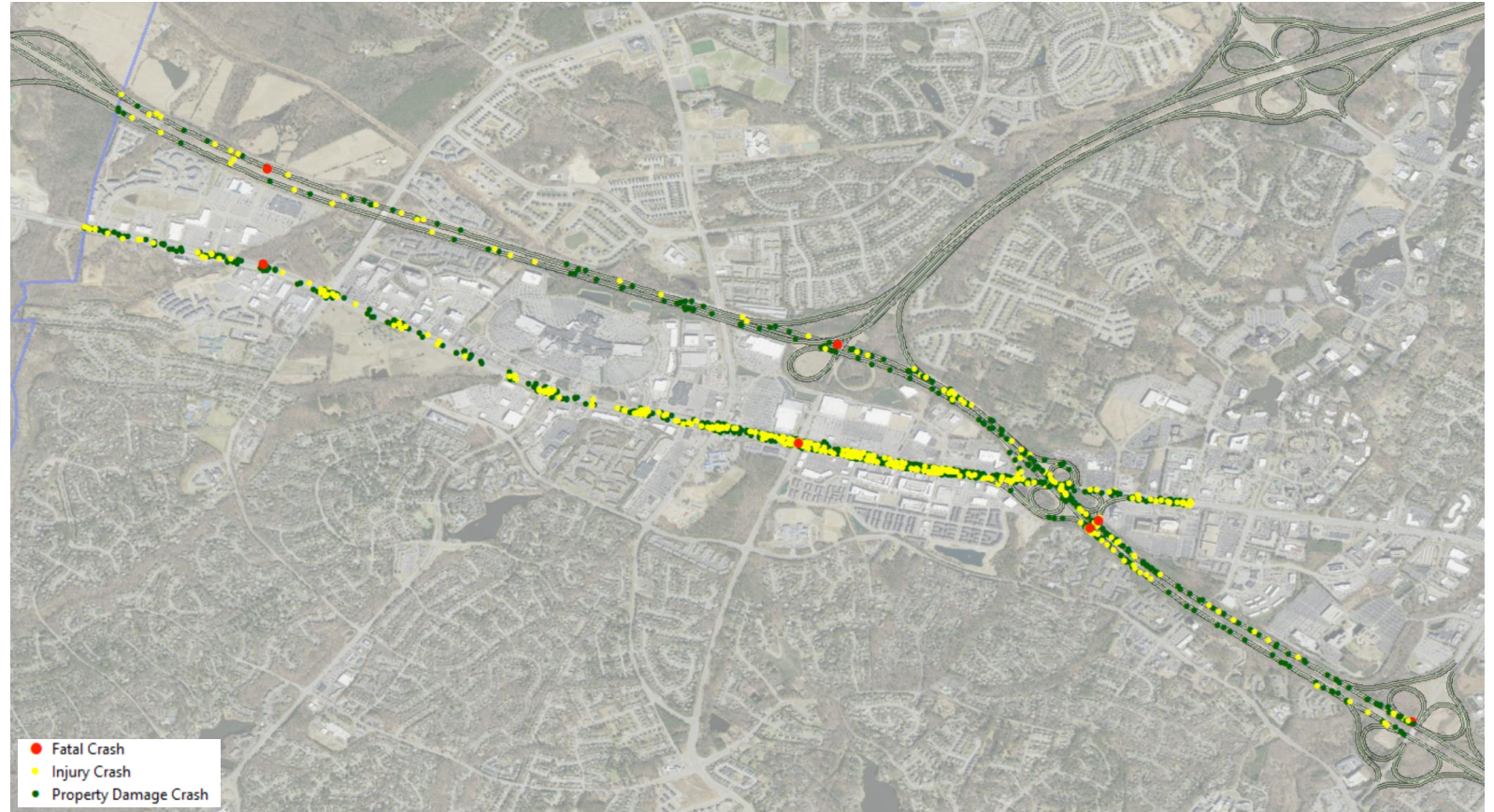
PREPARED BY:

Kimley»»Horn
Expect More. Experience Better.



Short Pump Safety Issues

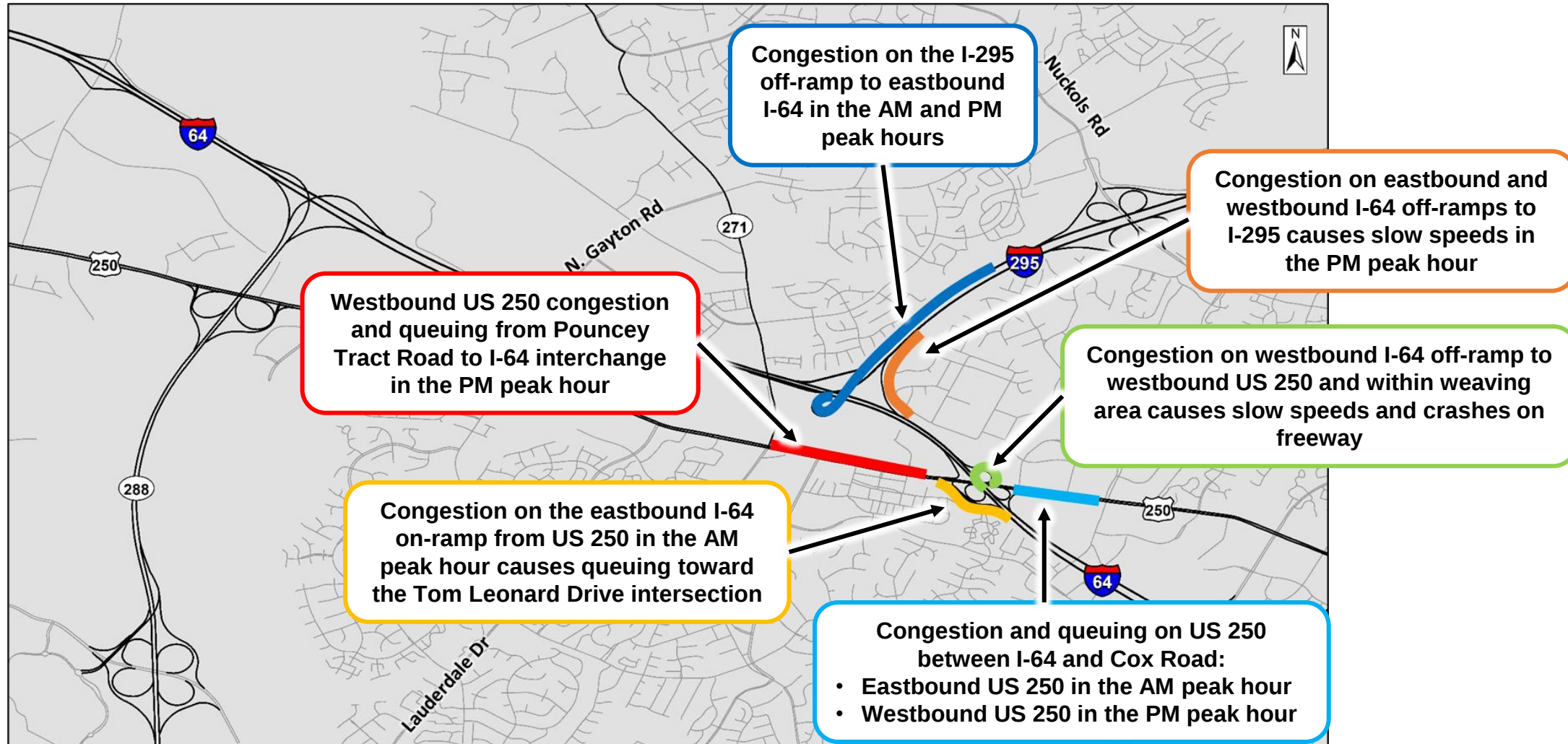
- Jan. 17, 2017 – October 26, 2022
 - 1,851 reportable crashes
 - 7 fatal crashes
 - 492 crashes causing injury
 - 9,514 calls for service



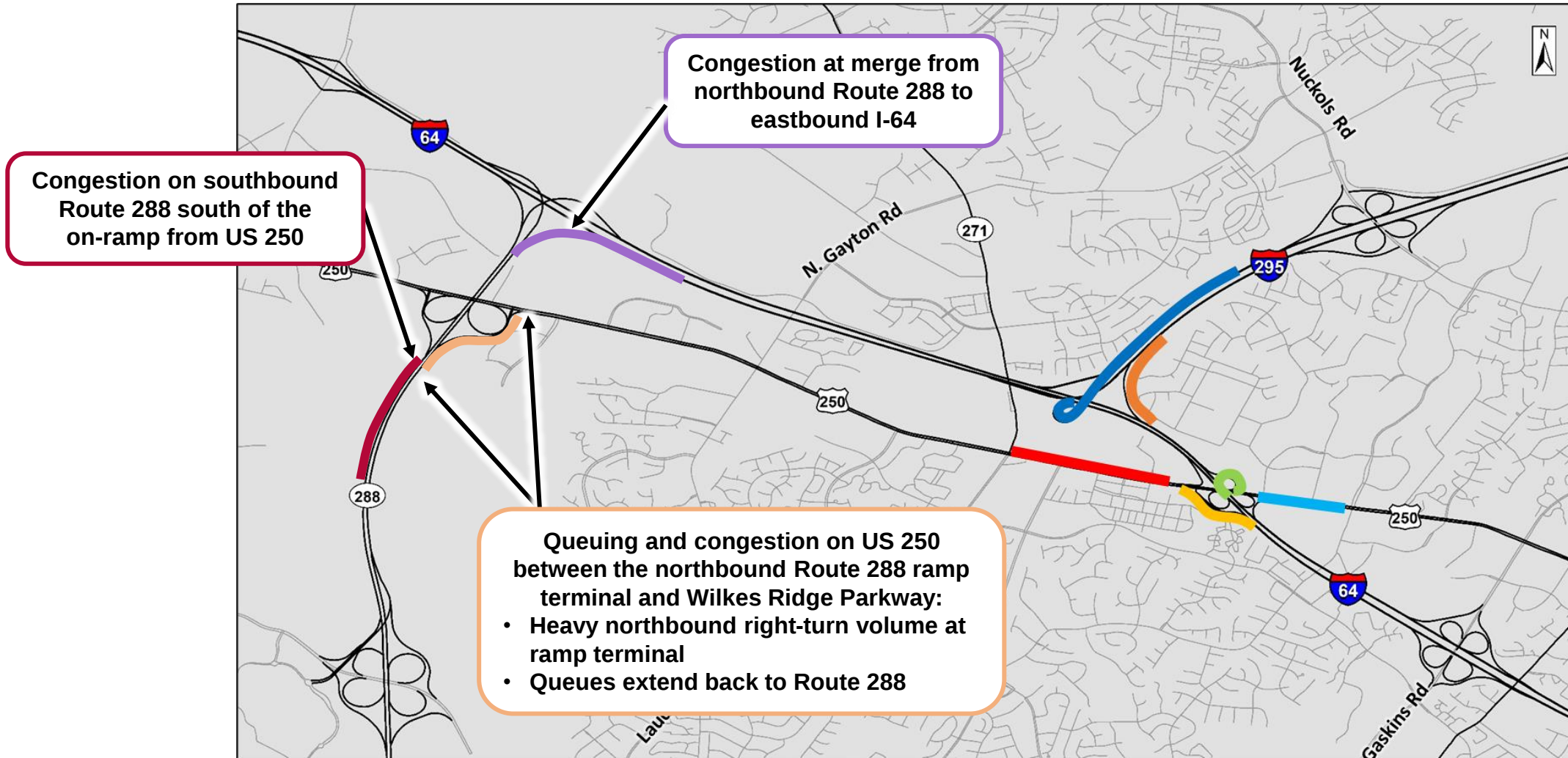
Problem Statement

- Westbound I-64 approaching the Short Pump area experiences recurring congestion and a pattern of rear end crashes during the PM peak hour
- US 250 between Lauderdale Drive and Cox Road experiences recurring congestion and is highly ranked within Richmond District for roadways in need of safety improvements
- I-64 and Route 288 are projected to experience significant growth in the future that will:
 - Worsen existing issues
 - Cause other roadways to reach/exceed capacity

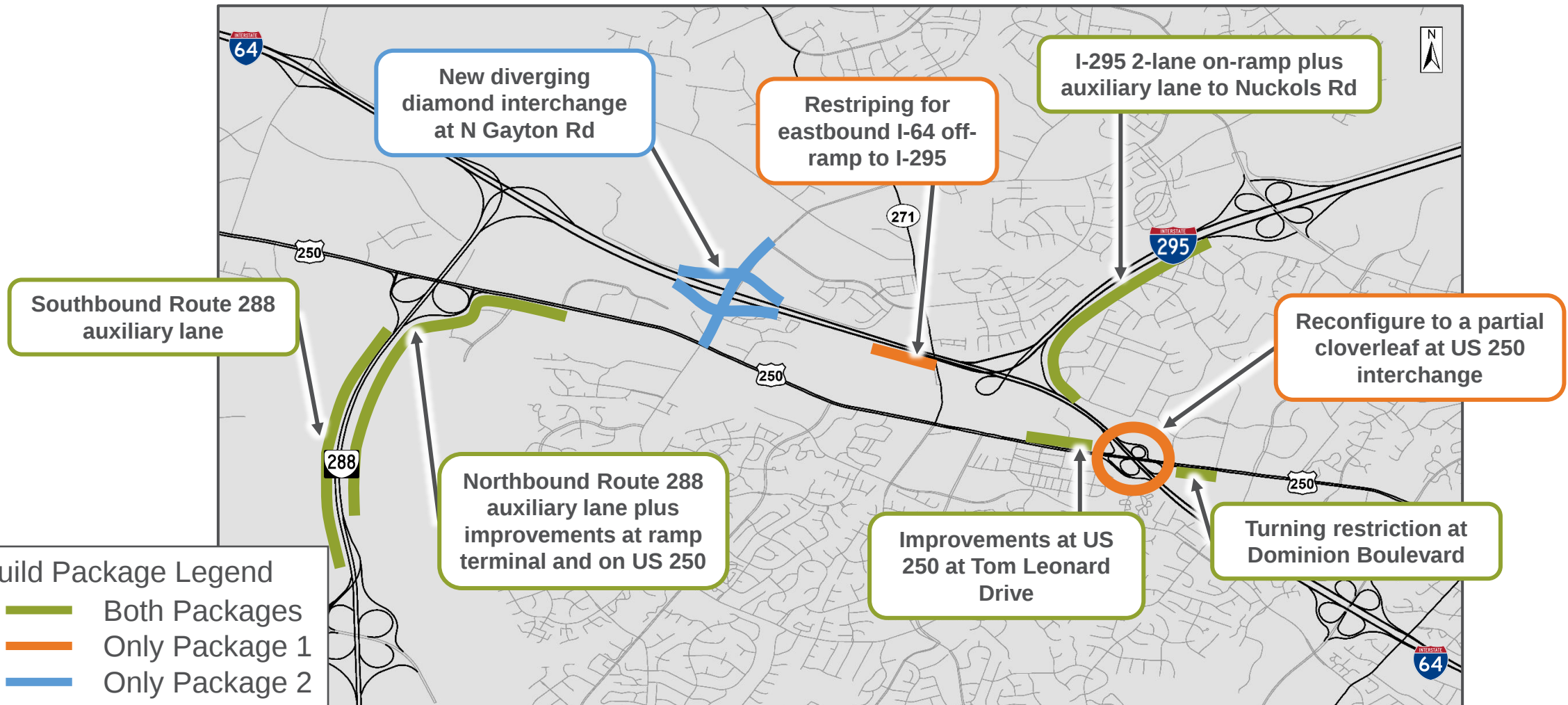
Review of Key Existing Conditions Issues



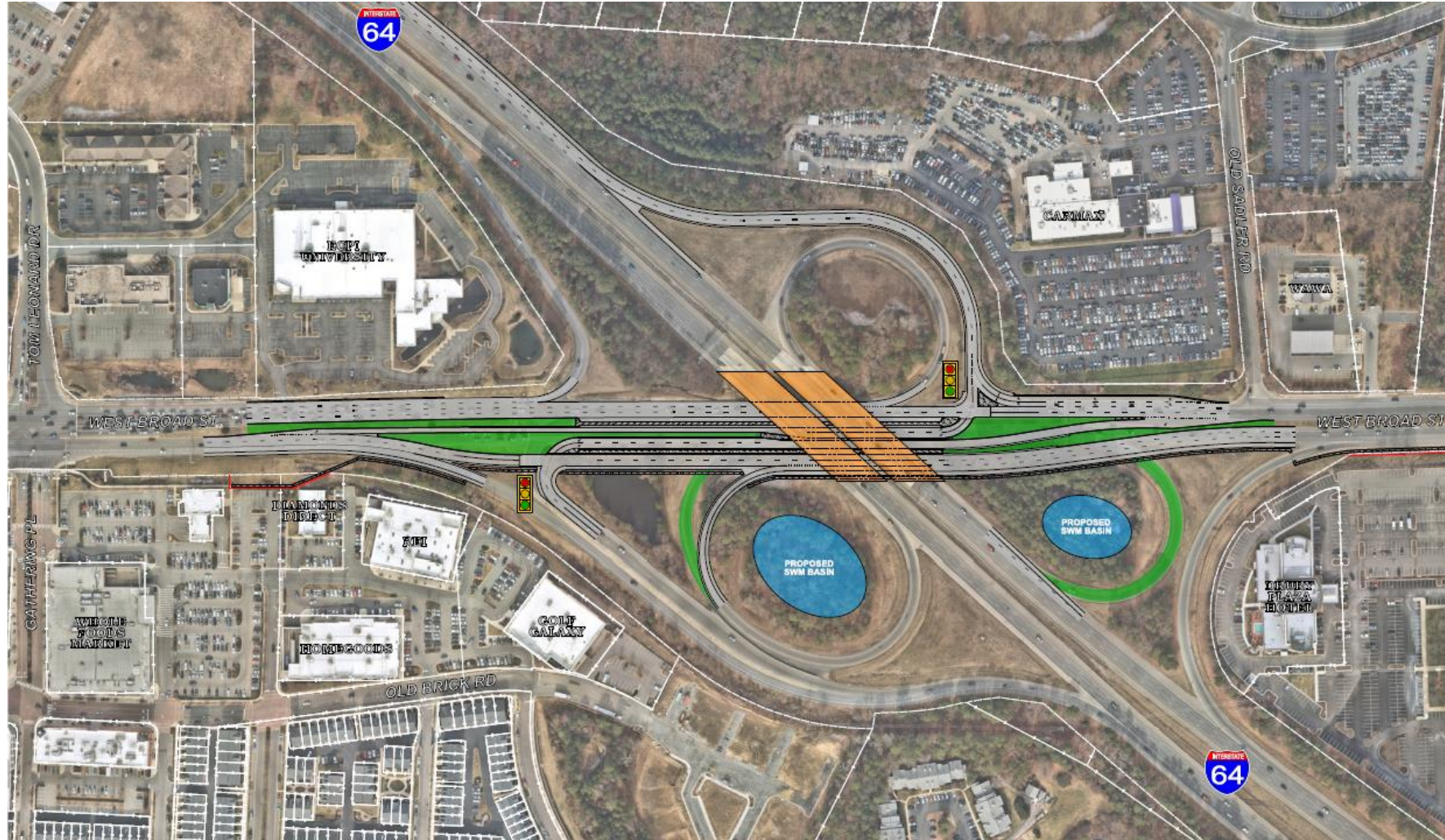
Review of Key Future Conditions Issues



Build Package Components



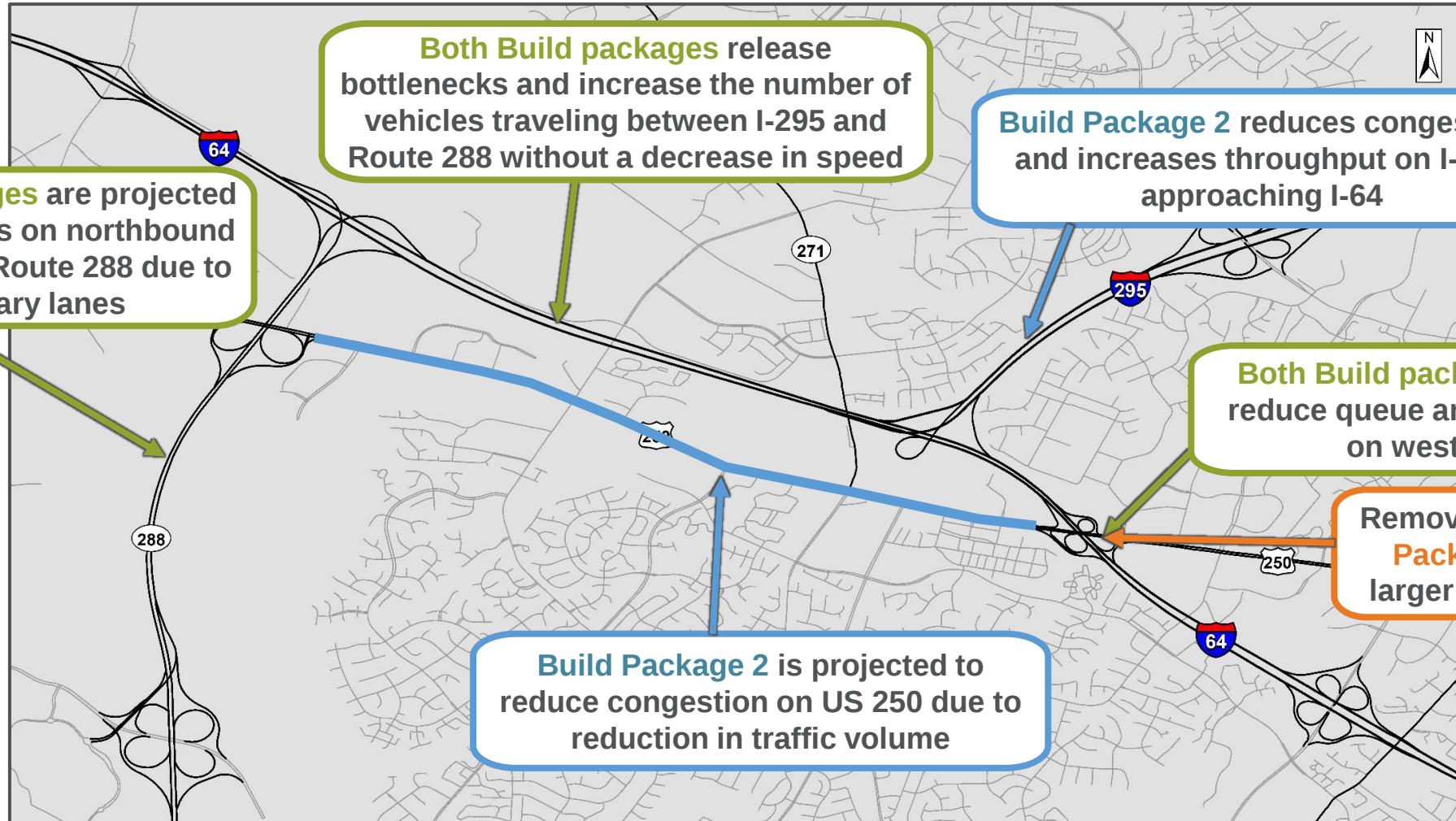
Build Package 1 (Reconfigure US 250 to a Partial Cloverleaf)



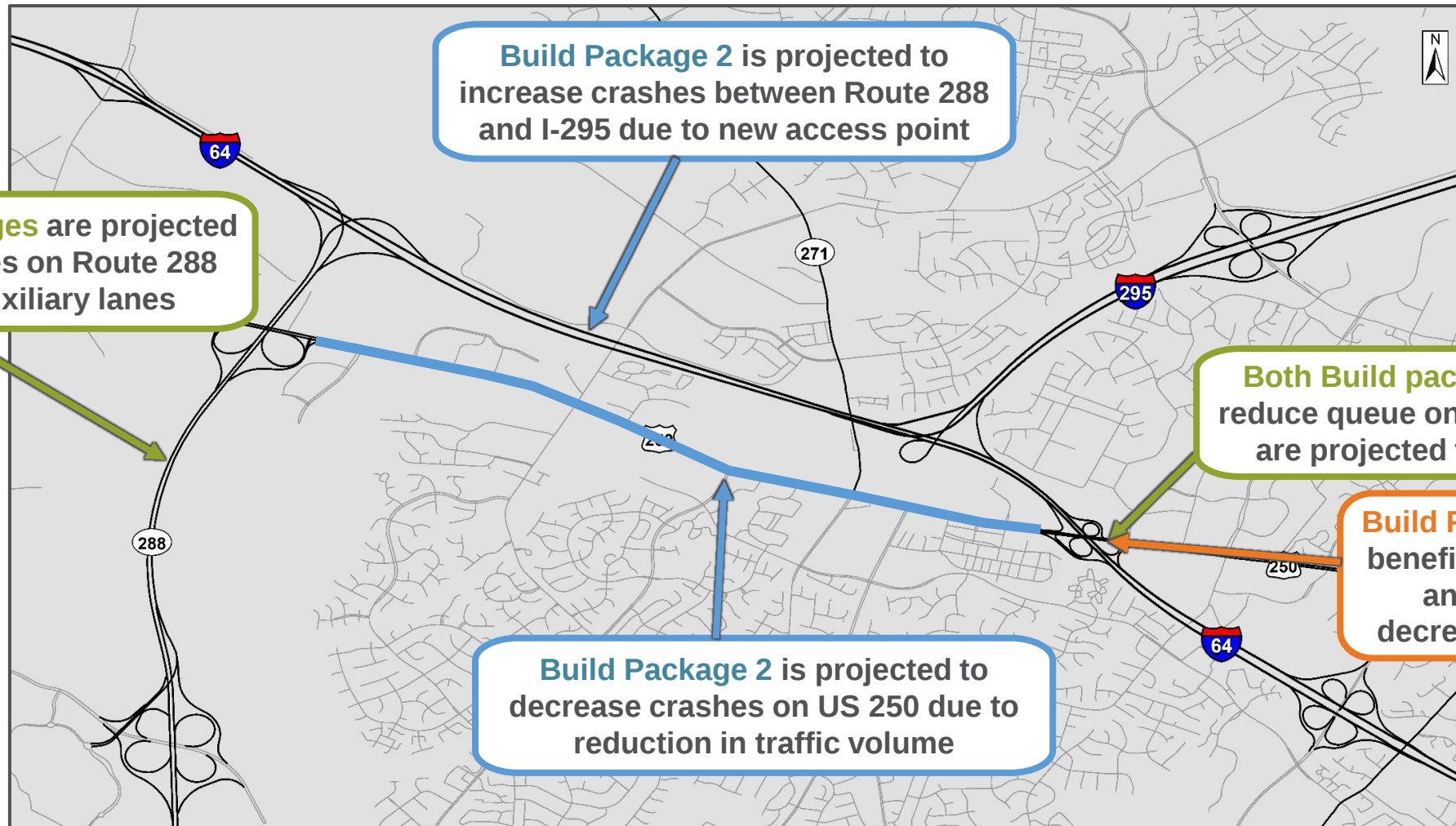
Build Package 2 (Diverging Diamond at N Gayton Road)



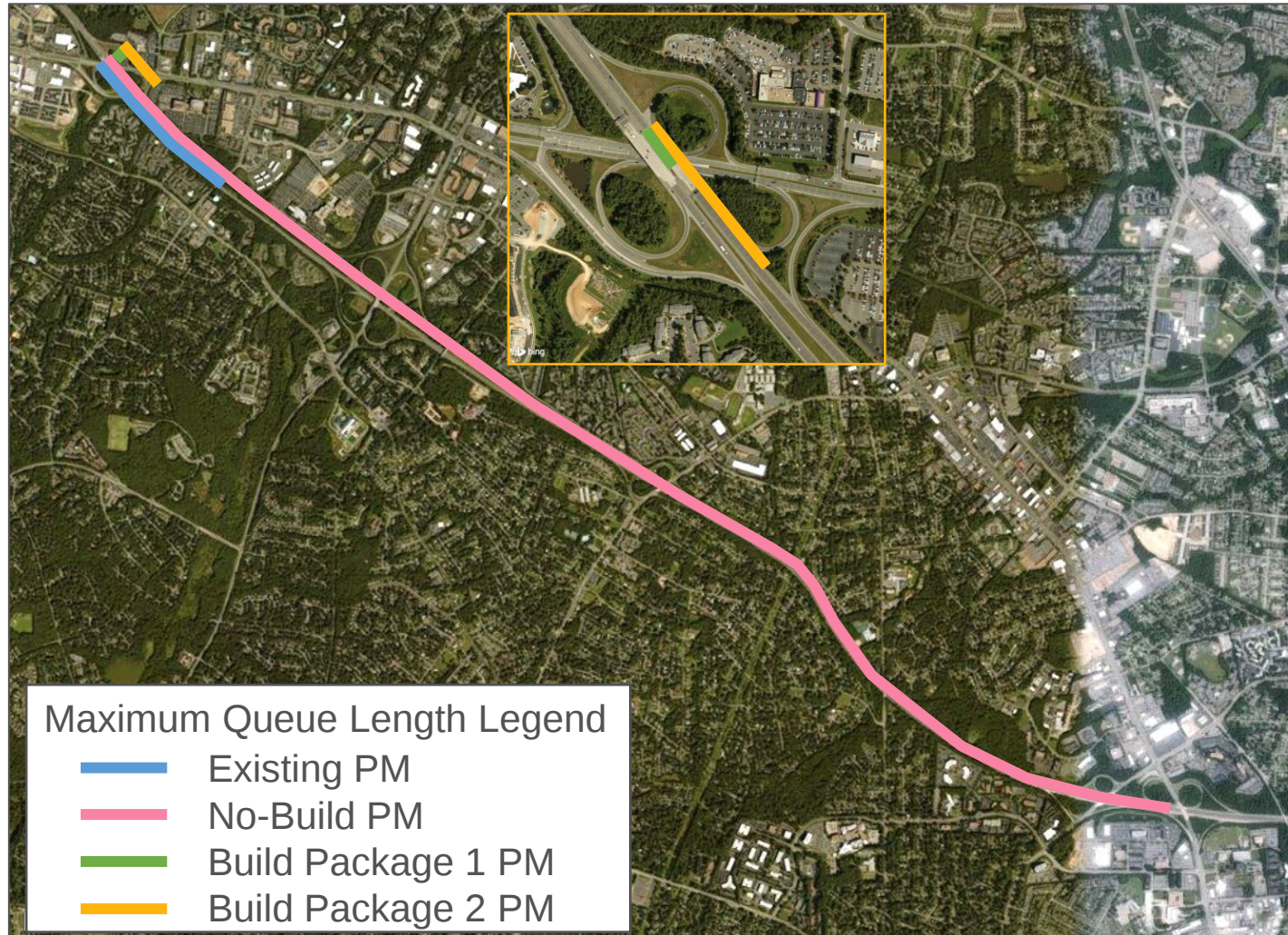
Build Package Operational Comparison



Build Package Safety Comparison



Projected Reduction in Maximum Queue



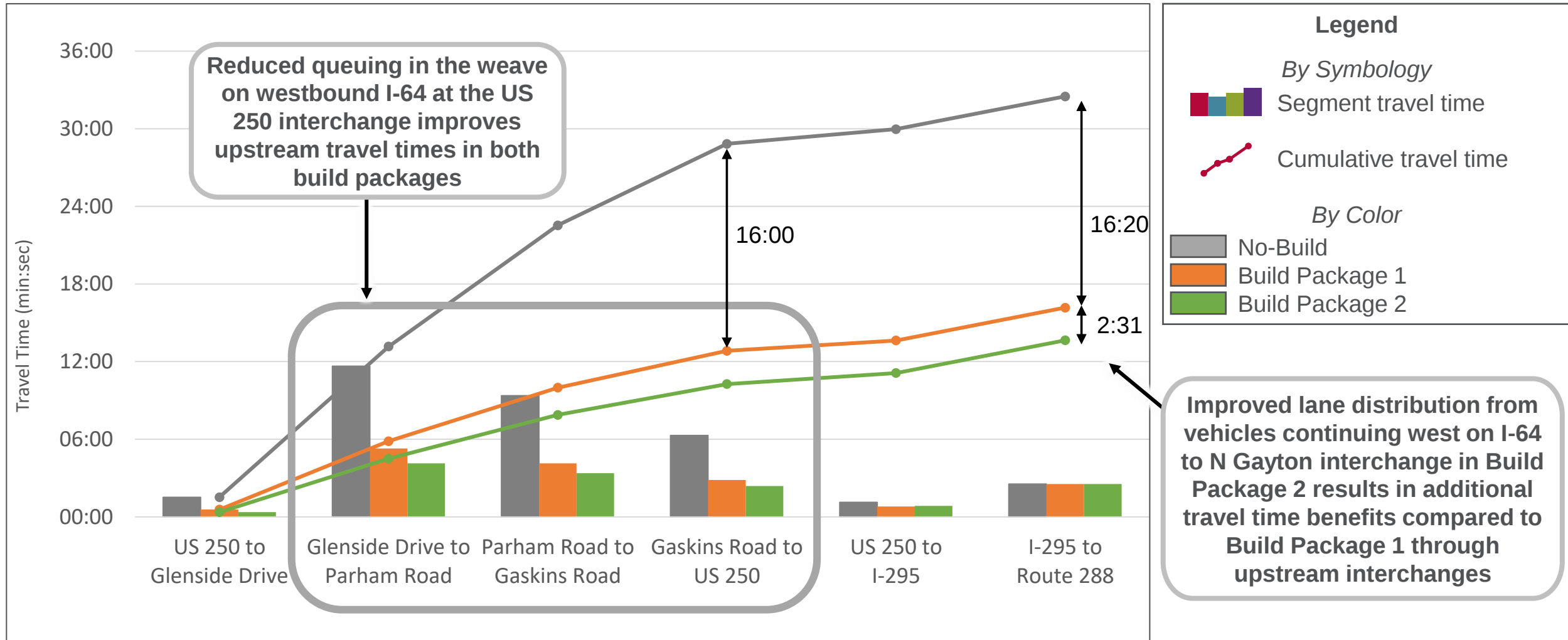
PM Peak Hour

Scenario	Year	Maximum Queue Length (ft)
Existing	2019	3,510
No-Build	2046	27,200
Build Package 1	2046	230
Build Package 2	2046	1,000

Build packages are projected to:

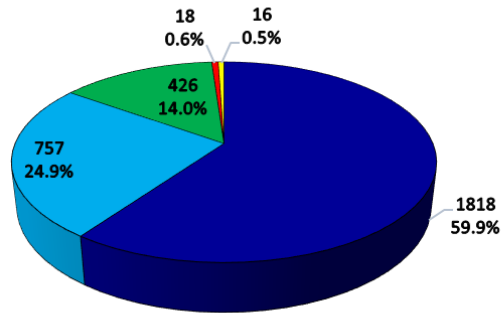
- Limit congestion on westbound US 250 from backing up to interstate
- Remove weave or reduce friction associated with vehicles weaving and changing lanes in advance of weave

Westbound I-64 2046 PM Travel Time



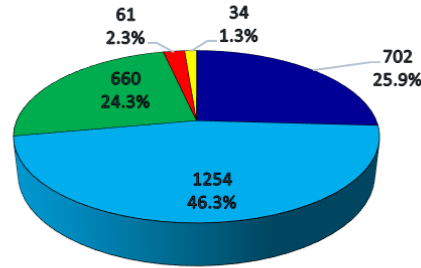
Public Priorities

Transportation Priority: Traffic Congestion



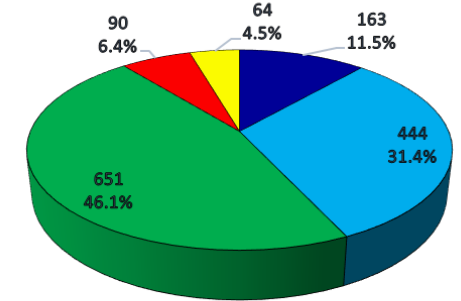
Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Safety/Vehicle Crashes



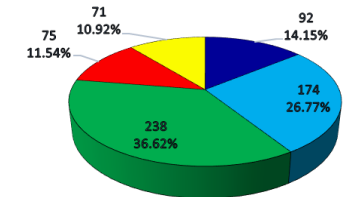
Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Traffic Speed



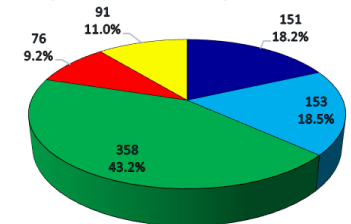
Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Transit Accessibility



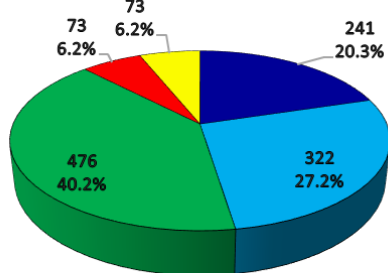
Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Environment



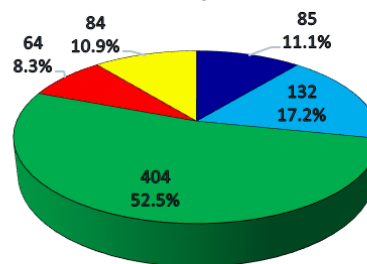
Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Bicycle & Pedestrian Safety



Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

Transportation Priority: Economic Development

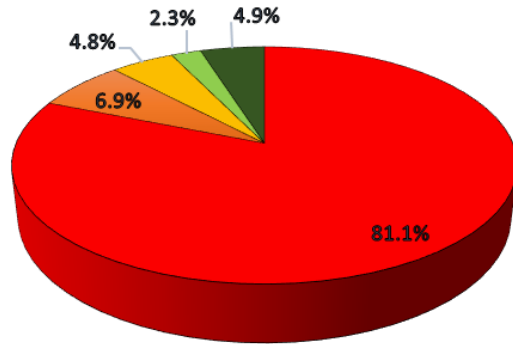


Ranked 1 (top) Ranked 2 Ranked 3 Ranked 4 Ranked 5

- 3610 Survey Responses
- 6285 Visitors

Public Alternative Rankings

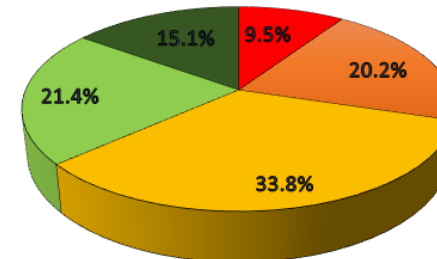
Option 1 (No Build)



1 Star 2 Stars 3 Stars 4 Stars 5 Stars

Option 2

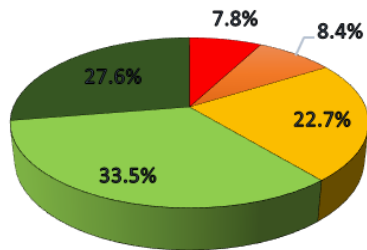
I-64 & US 250 Interchange Improvements



1 Star 2 Stars 3 Stars 4 Stars 5 Stars

Option 3:

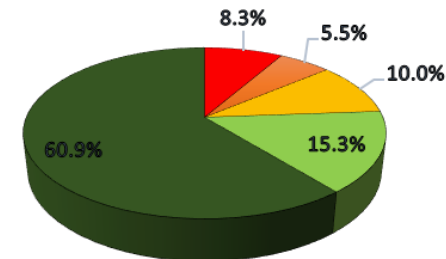
I-64 & N. Gayton Rd. Interchange Improvements



1 Star 2 Stars 3 Stars 4 Stars 5 Stars

Option 4:

I-64/US 250 & I-64/N. Gayton Rd. Interchange Improvements



1 Star 2 Stars 3 Stars 4 Stars 5 Stars

Study Progress

- Henrico County supported moving forward with the N. Gayton DDI, I-64 and US 250 Parclo, and improvements common to both Build Packages as the preferred alternative with a phased approach to implementation that prioritizes the new interchange.
- VDOT recommended approval to FHWA
- Waiting on FHWA Decision
 - Received and addressed FHWA comments
- Funding is in place to start design and environmental study upon FHWA approval