

VDOT Culpeper District Project Pipeline

Albemarle County

August 4th, 2020

Agenda

1. **Introductions / Goal of Today's Meeting**
2. **VDOT Project Pipeline**
3. **Study Scope**
4. **Work Performed to Date**
5. **Discussion**
6. **Next Steps**

Goal of today's meeting is to:

- Explain the Project Pipeline
- Provide an overview of work completed to date
- Gather Stakeholder comments and discuss focus areas

Statewide Initiative to focus on solutions to the identified VTrans Mid-Term needs with a Performance Based Planning Approach

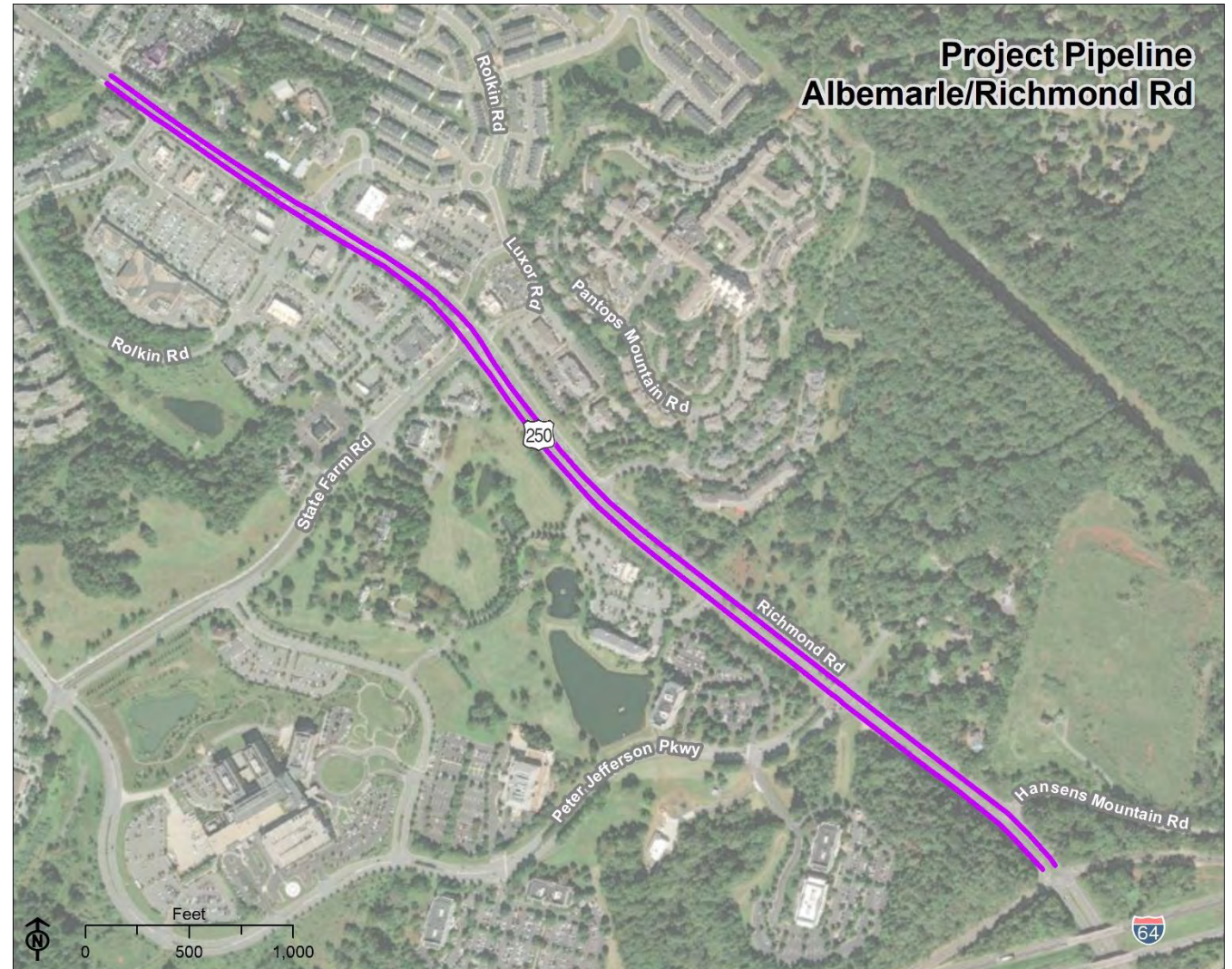
- Three-phase process to assess network needs, develop solutions, and identify funding sources
- **First Phase: Initial analysis to diagnose needs**
 - Inputs: Traffic volumes, crash data, site visits, stakeholder input, etc.
 - Outcome: Existing conditions and preliminary alternatives
- **Second Phase: Refine and perform alternative analyses**
 - Inputs: First phase data, future volumes, land-use, stakeholder input, public outreach etc.
 - Outcome: Future conditions and preferred alternative selection
- **Third Phase: Detailed concepts and estimates of preferred alternative**
 - Inputs: Design standards, Location & Design, Environmental, ROW, and Utilities
 - Outcome: Final concepts and estimates and application for funding (SMART SCALE, RS, TAP, Regional Funding Etc.)

Overview:

- Corridor congestion and safety performance analysis
- Assess VTrans Mid-Term Needs
- Develop preliminary alternatives based on existing conditions

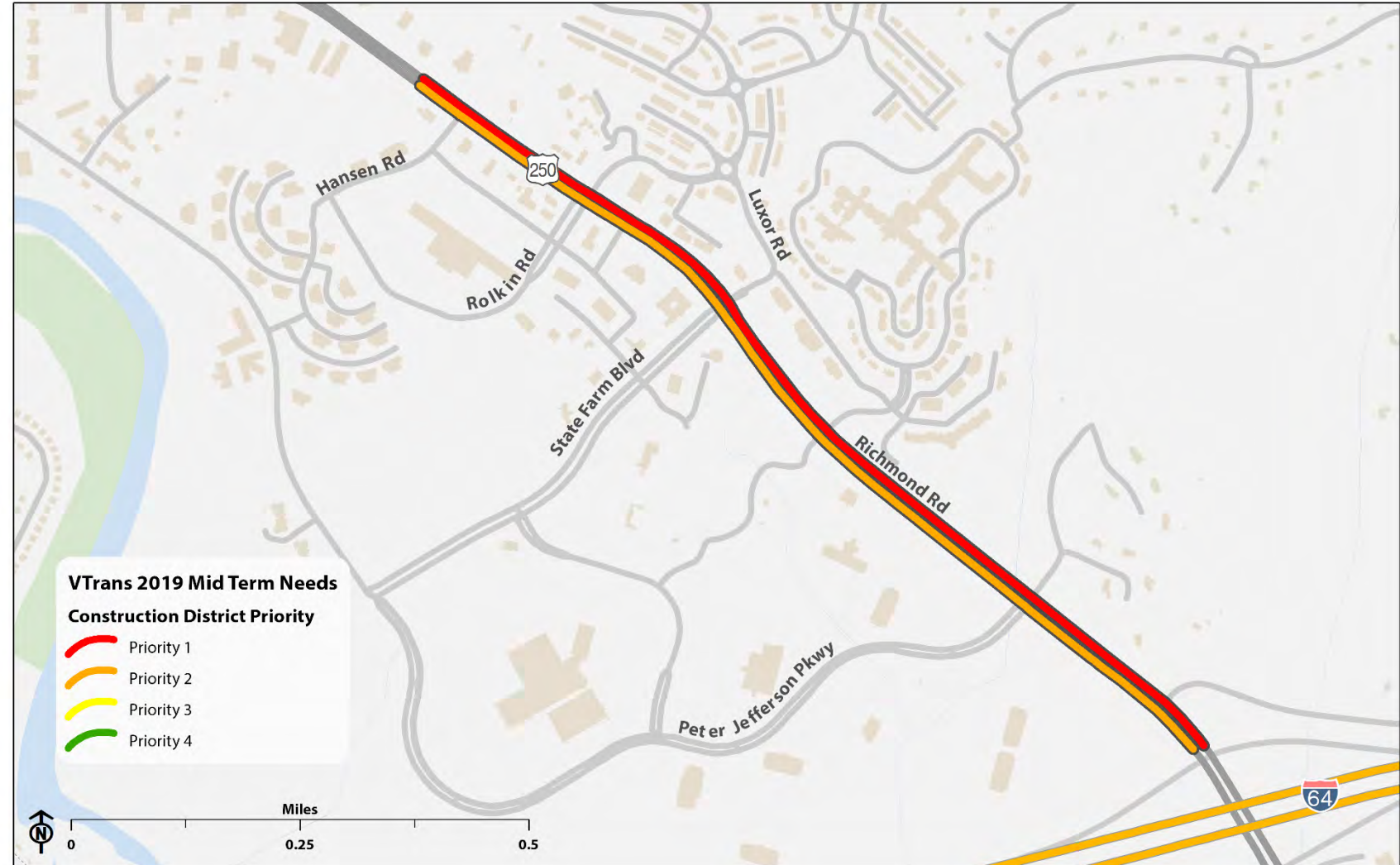
Study Intersections:

- US 250/Hansen Road
- US 250/Rolkin Road
- US 250/State Farm Blvd
- US 250/Pantops Mountain Road
- US 250/Hilton Crossover
- US 250/Peter Jefferson Pkwy
- US 250/Hansens Mountain Road



- VTrans needs review
- Site Visit
- Crash data analysis
- Bike/Ped accommodations review and assessment
- Literature Review: Studies, Comprehensive Plans, planned projects
- Traffic counts (on-going)

- Priority 1 / 2 Corridor
- Priority is determined by but not limited to:
 - Volumes, crash data, travel times, land use, reliability, etc.
- Urban Development Area



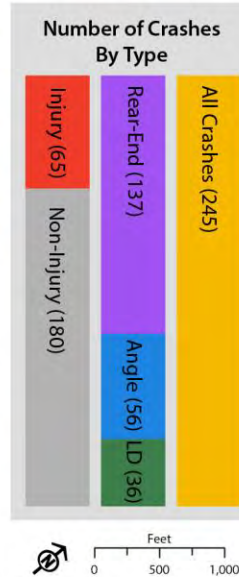
Safety Summary

Total Crashes and Safety Needs

- Safety need between Hansen and Rolkin Road (PSI Rank 17)
- Safety need between Pantops Mountain Rd and Peter Jefferson Pkwy (PSI Rank 13)
- High concentration of angle and injury related crashes at State Farm Blvd and Hilton Crossover
- Rear-end crashes related to congestion. May be somewhat mitigated by Traffic Signal Synchronization and future Diverging Diamond at interchange

Albemarle/Richmond Rd Crash Density

All Crashes



Rear-End Crashes



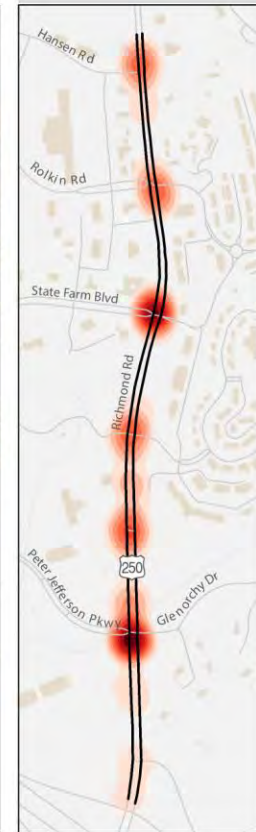
Angle Crashes



Lane Departure Crashes



Injury Crashes



Crashes weighted based on crash severity SMART SCALE KABCO Scale

KABCO	Description	Weight
K	Fatal	85
A	Suspected Serious Injury	85
B	Suspected Minor Injury	10
C	Possible Injury	5
O	Property Damage Only	1

Crashes grouped based on functional area of intersection

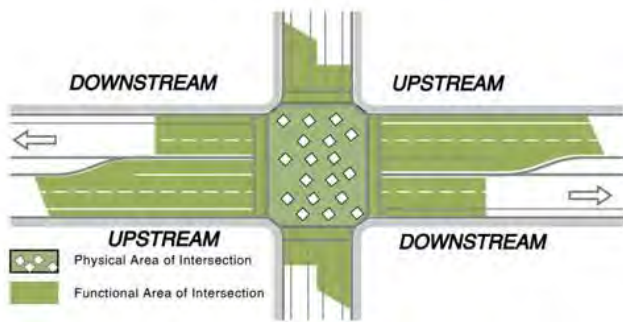
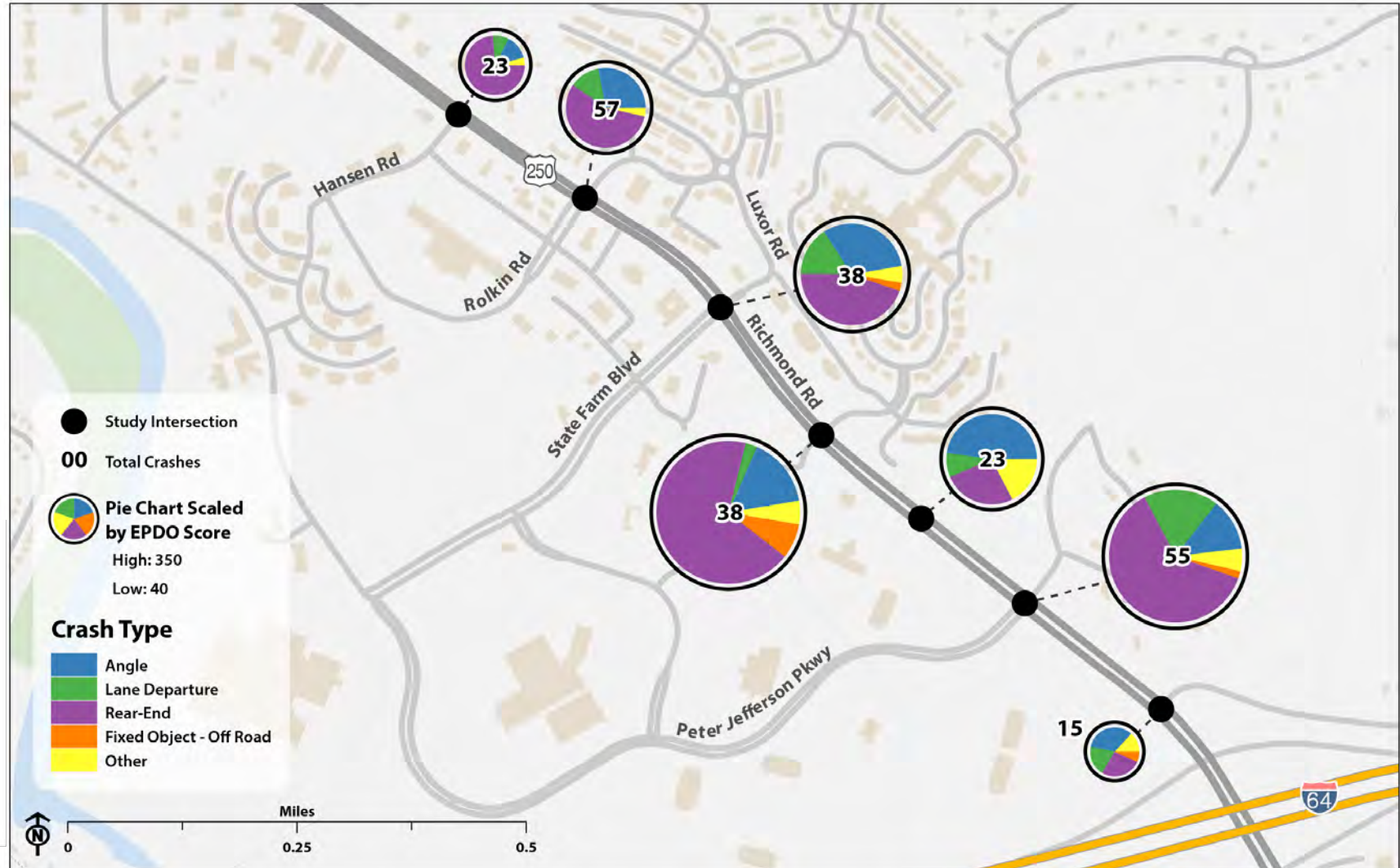


Figure 1: Functional and Physical Areas of an Intersection



Pedestrian Safety Action Plan (PSAP) 2.0

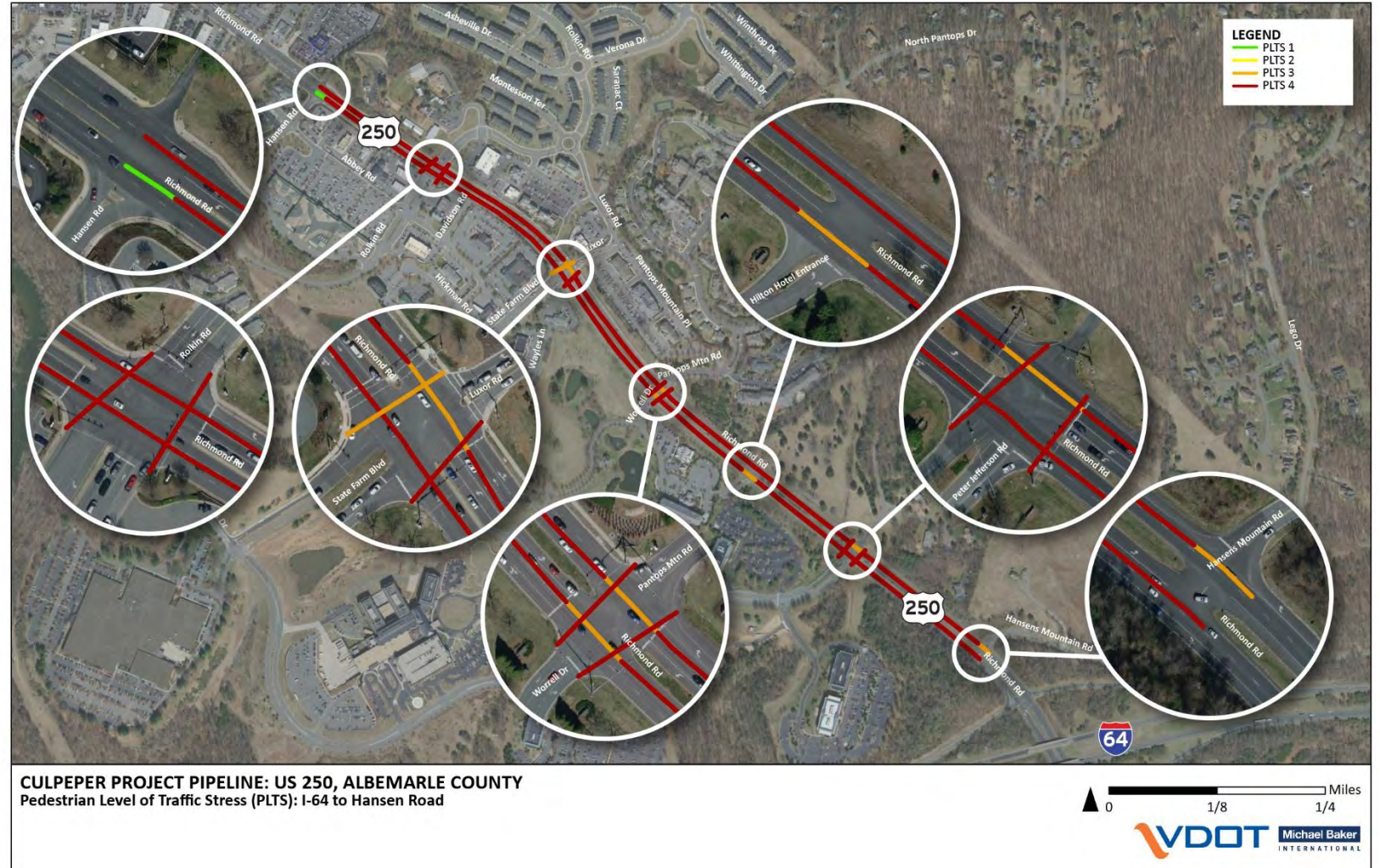
- Priority 2 (Top 1%) corridor
- Ped Fatality near Hansen Rd (2014)
- Ped Injury near Hilton Crossover (2014)

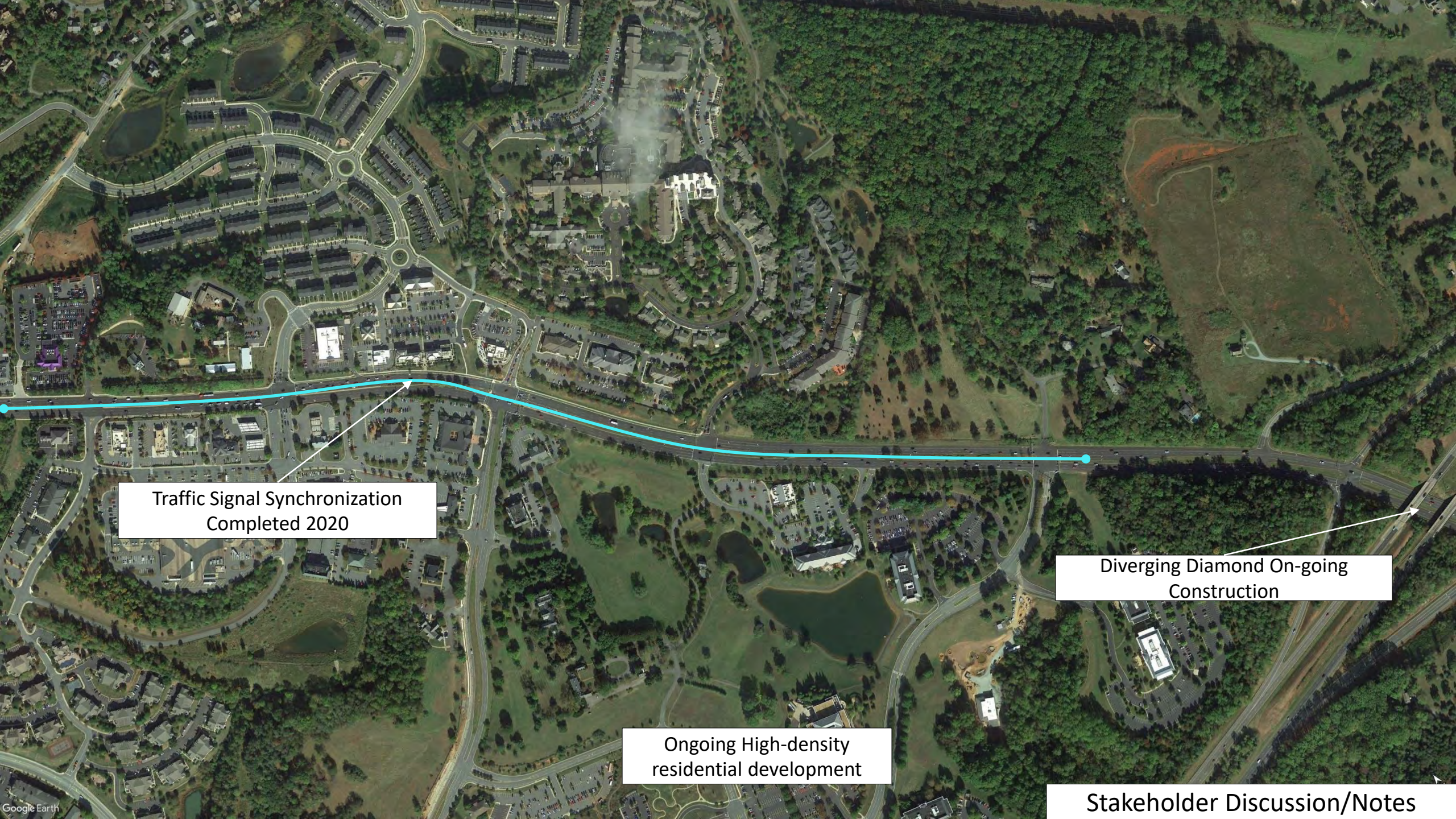
Identified VTrans Needs

- UDA – Bike/Ped Infrastructure
- UDA – Transit

Bike/Ped Facilities Overview

- Westbound US 250
 - 50% Sidewalk Coverage
 - 100% with <5' Buffer
- Eastbound US 250
 - 15% Sidewalk Coverage
 - 100% with <5' Buffer
- Intersections
 - 4 Signalized Crossings
 - 100'+ Crossing Distance on US 250
 - Refuges provided at State Farm Blvd
 - Most don't have pedestrian signal equipment





Traffic Signal Synchronization
Completed 2020

Diverging Diamond On-going
Construction

Ongoing High-density
residential development

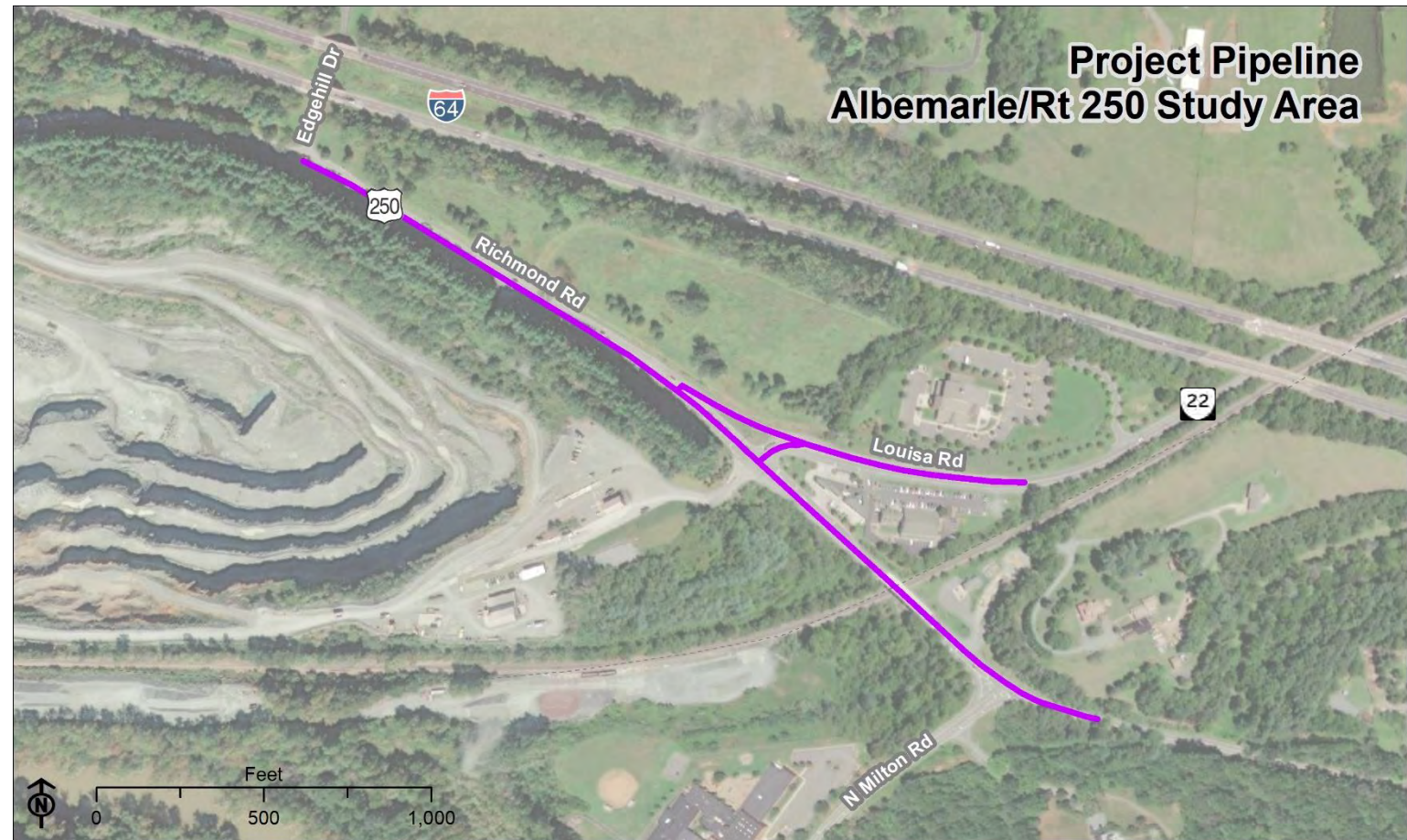
Stakeholder Discussion/Notes

Overview:

- Corridor congestion and safety performance analysis
- Assess VTrans Mid-Term Needs
- Develop preliminary alternatives based on existing conditions

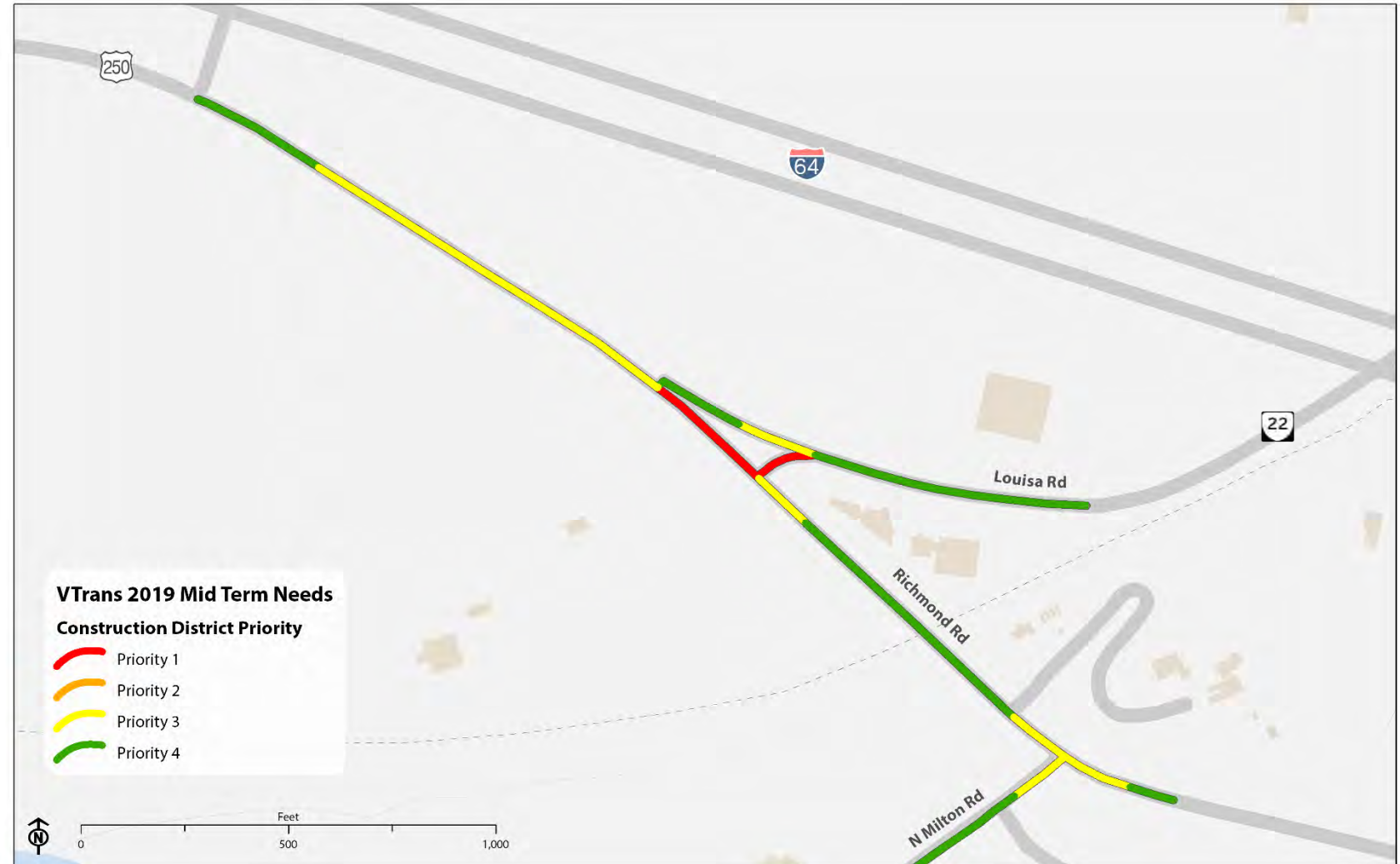
Study Intersections:

- US 250/Route 22 (Louisa Road)
 - Includes Slip Lane from Route 22 onto US 250 Westbound
- US 250/N Milton Road



- VTrans needs review
- Site Visit
- Crash data analysis
- Bike/Ped accommodations review and assessment
- Literature Review: Studies, Comprehensive Plans, planned projects
- Traffic counts (on-going)

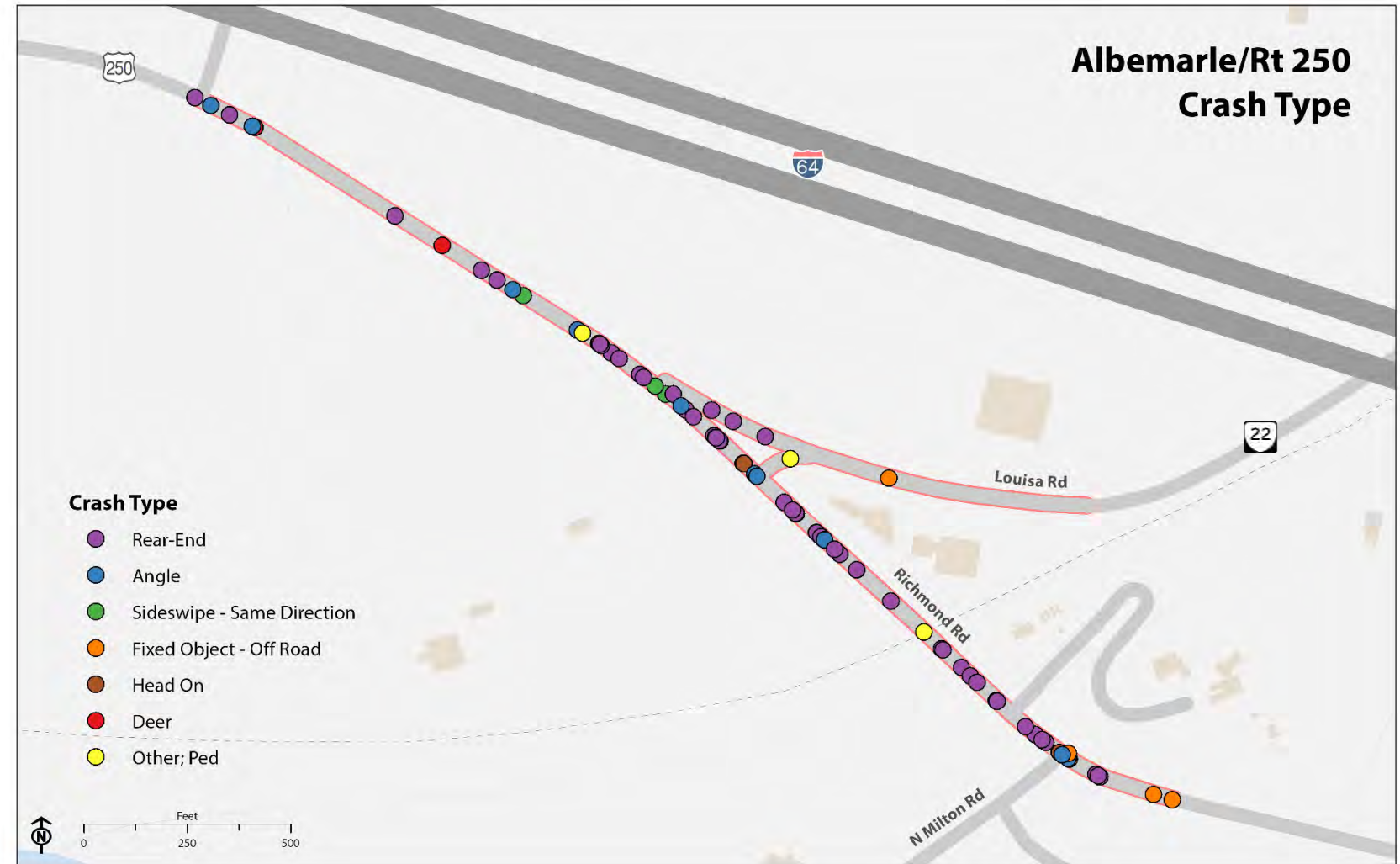
- US 250 and Route 22 a Priority 1 / 2 intersection
- Priority is determined by but not limited to:
 - Volumes, crash data, travel times, land use, reliability, etc.
- Identified Safety Needs at both intersections



Safety Summary

Total Crashes and Safety Needs

- Safety need at US 250 and Route 22 (PSI Rank 7)
- Rear-end crashes due to stop-and-go traffic caused from both traffic signals
- Most severe crashes associated with rear-ends traveling eastbound on US 250
 - Majority occur between 3:30 PM and 5:30 PM



Crashes weighted based on crash severity SMART SCALE KABCO Scale

KABCO	Description	Weight
K	Fatal	85
A	Suspected Serious Injury	85
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Crashes grouped based on functional area of intersection

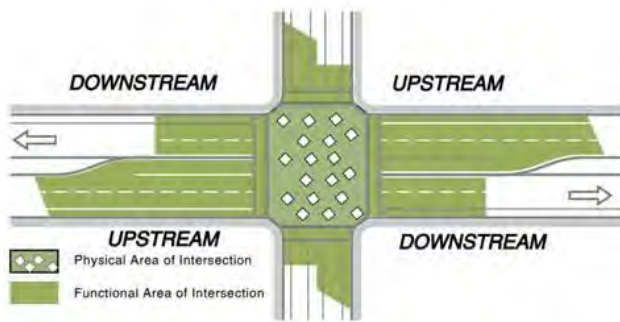
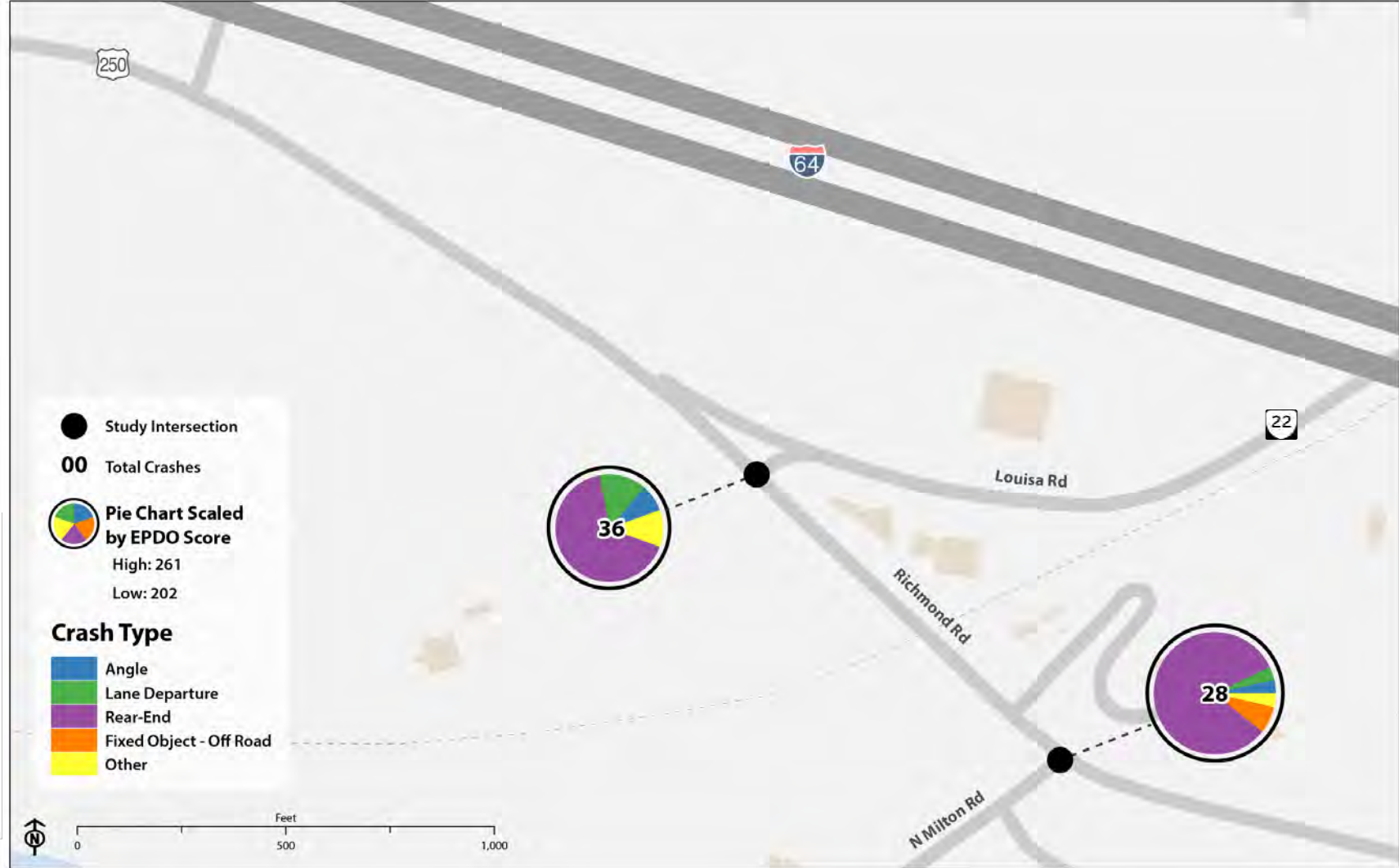
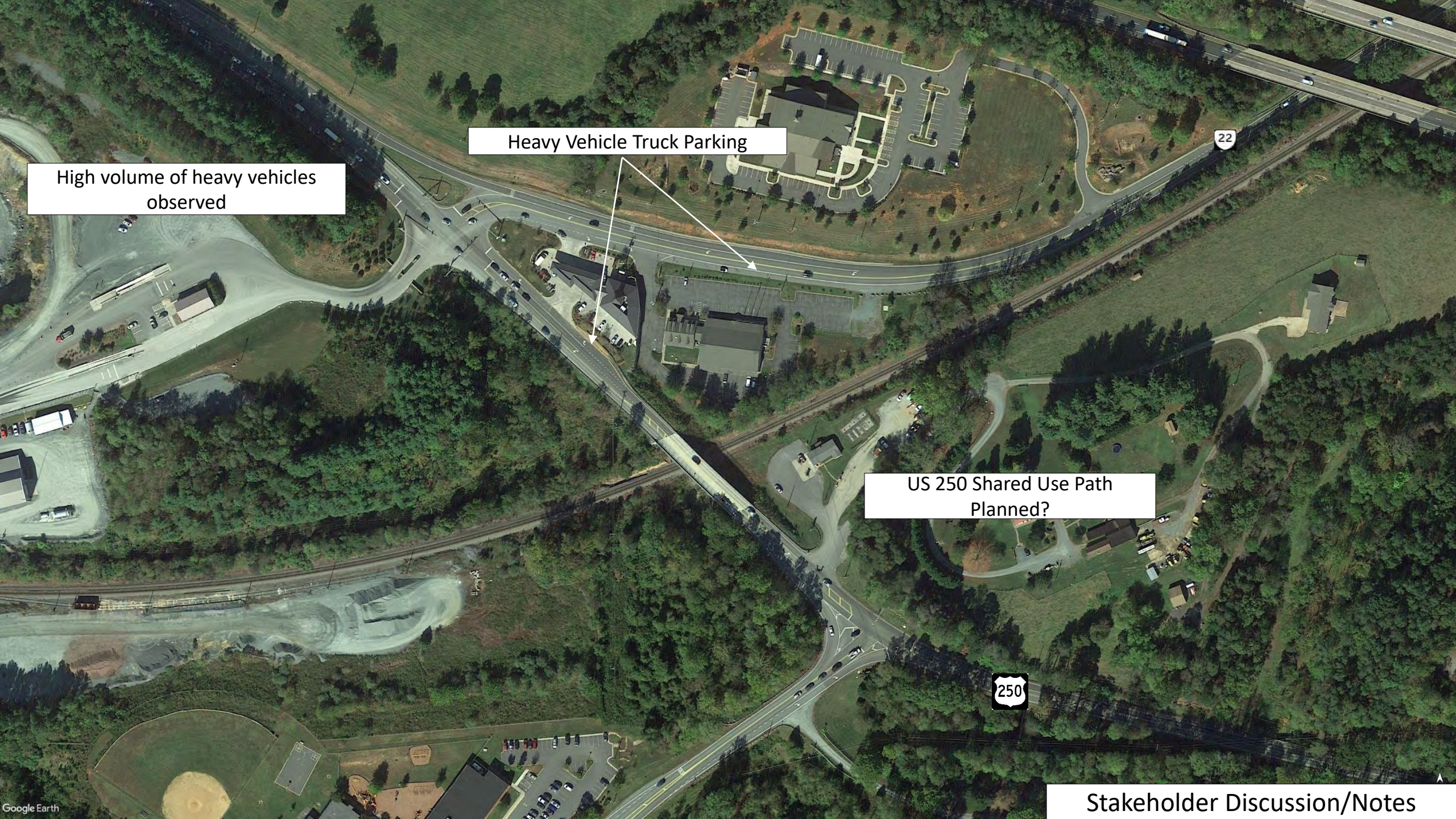


Figure 1: Functional and Physical Areas of an Intersection





High volume of heavy vehicles observed

Heavy Vehicle Truck Parking

US 250 Shared Use Path Planned?

- Finalize crash analysis
- Process traffic counts
- Perform existing condition analysis
- Develop preliminary alternatives
- September stakeholder meeting

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