

# VA-36/ Winston Churchill Drive - City of Hopewell - Corridor Improvements

18<sup>th</sup> June 2025  
2025 VASITE Annual Meeting, Virginia Beach

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## Safety Moment

- Summer Safety
- Please find helpful information at Johns Hopkins Medicine  
<https://www.hopkinsmedicine.org/health/wellness-and-prevention/summer-safety>
- National Safety Council (NSC)'s free first-aid app  
<https://www.nsc.org/safety-training/first-aid/emergency-medical-response-app>



## Project Pipeline - Acknowledgements

- Liz McAdory

*Richmond District Planning Manager*

*Virginia Department of Transportation (VDOT)*

- Sachin Katkar

*Project Manager – WSP*

- Chad Tucker

*Program Manager*

*Office of Intermodal Planning and Investment (OIP)*

- Kelly E. Davis

*Deputy Director – City of Hopewell, VA*

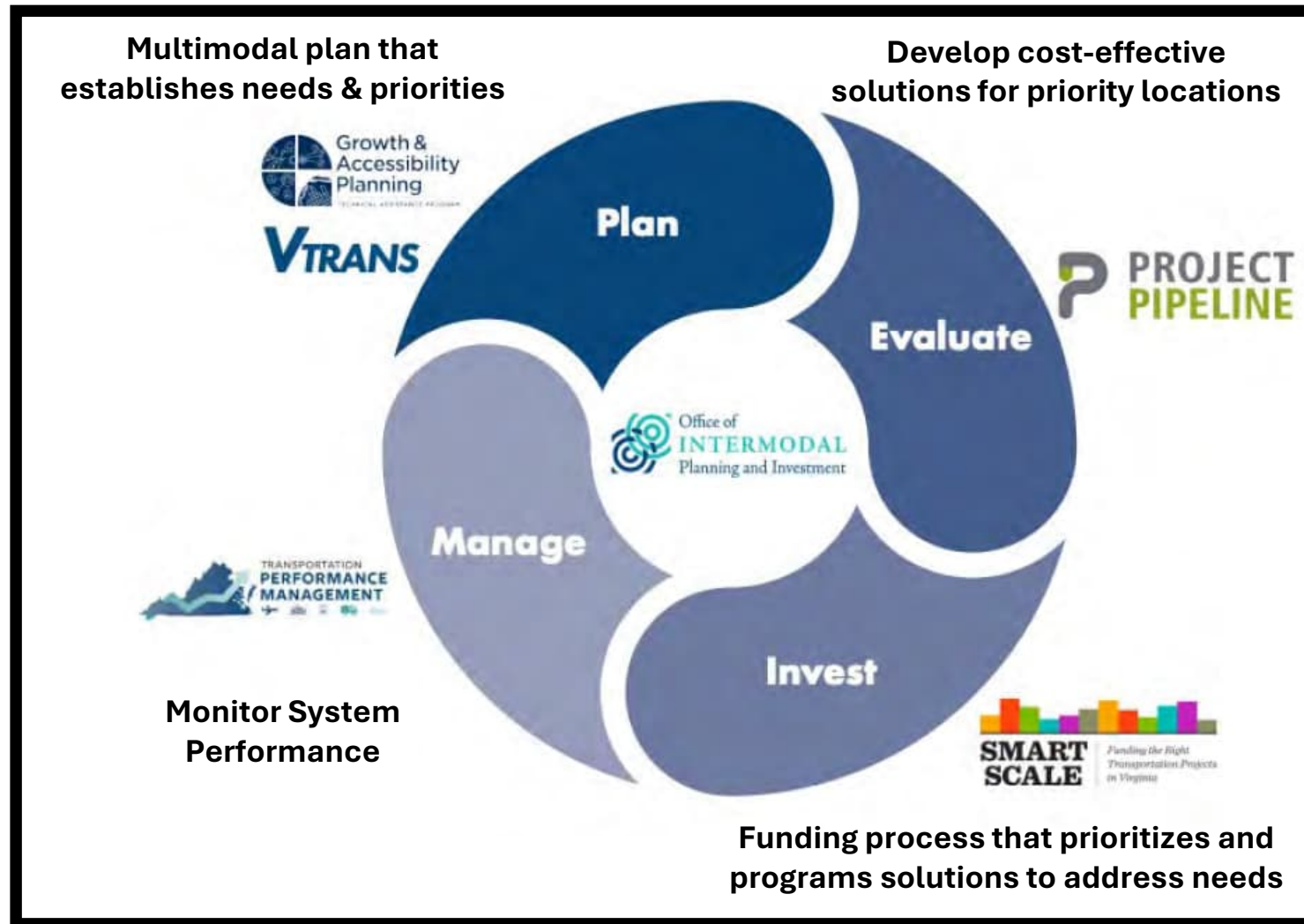
# Agenda

- Project Pipeline
- Study Goals
- Existing Conditions – Deficiencies
  - Safety
  - Operations
  - Field Observations
- Planning-Level Alternatives Screening
  - Preferred Alternative
- Design Development
  - Risks/ Challenges
  - Successful SMART Scale Application

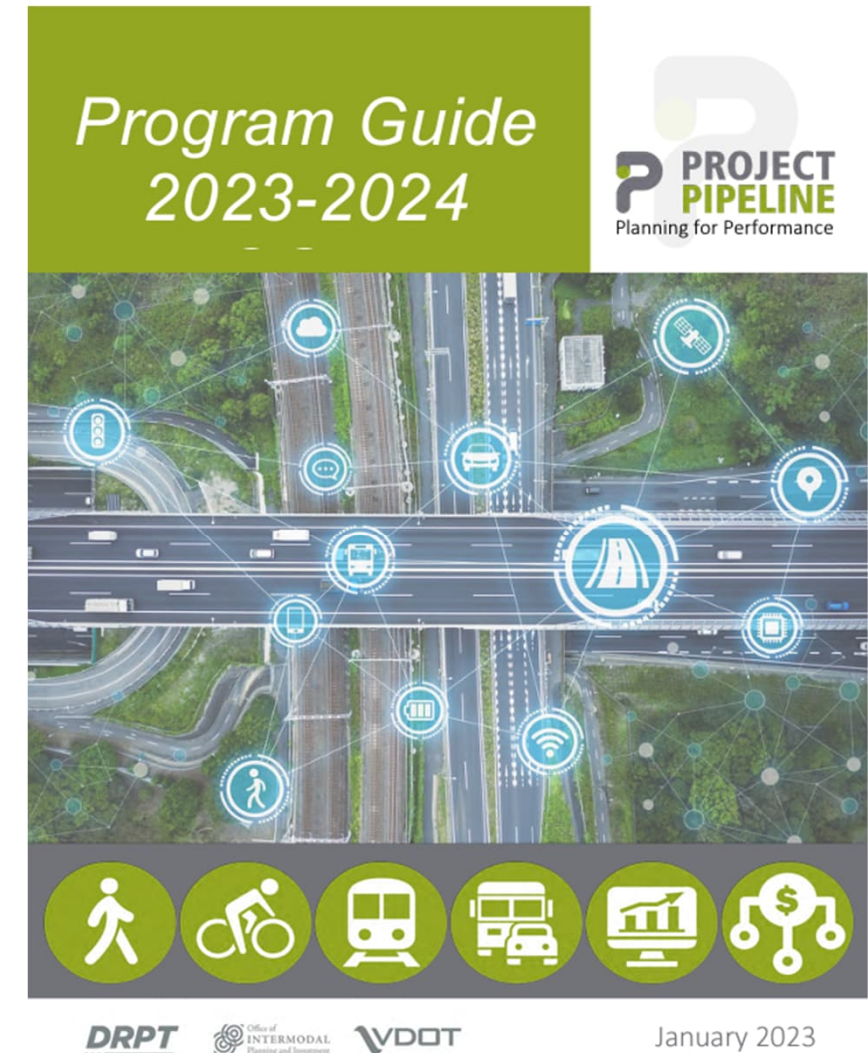


# Project Pipeline

## Purpose & Goals



## Program Guide 2023-24



<https://vapipeline.org/documents/project-pipeline-program-guide.pdf>

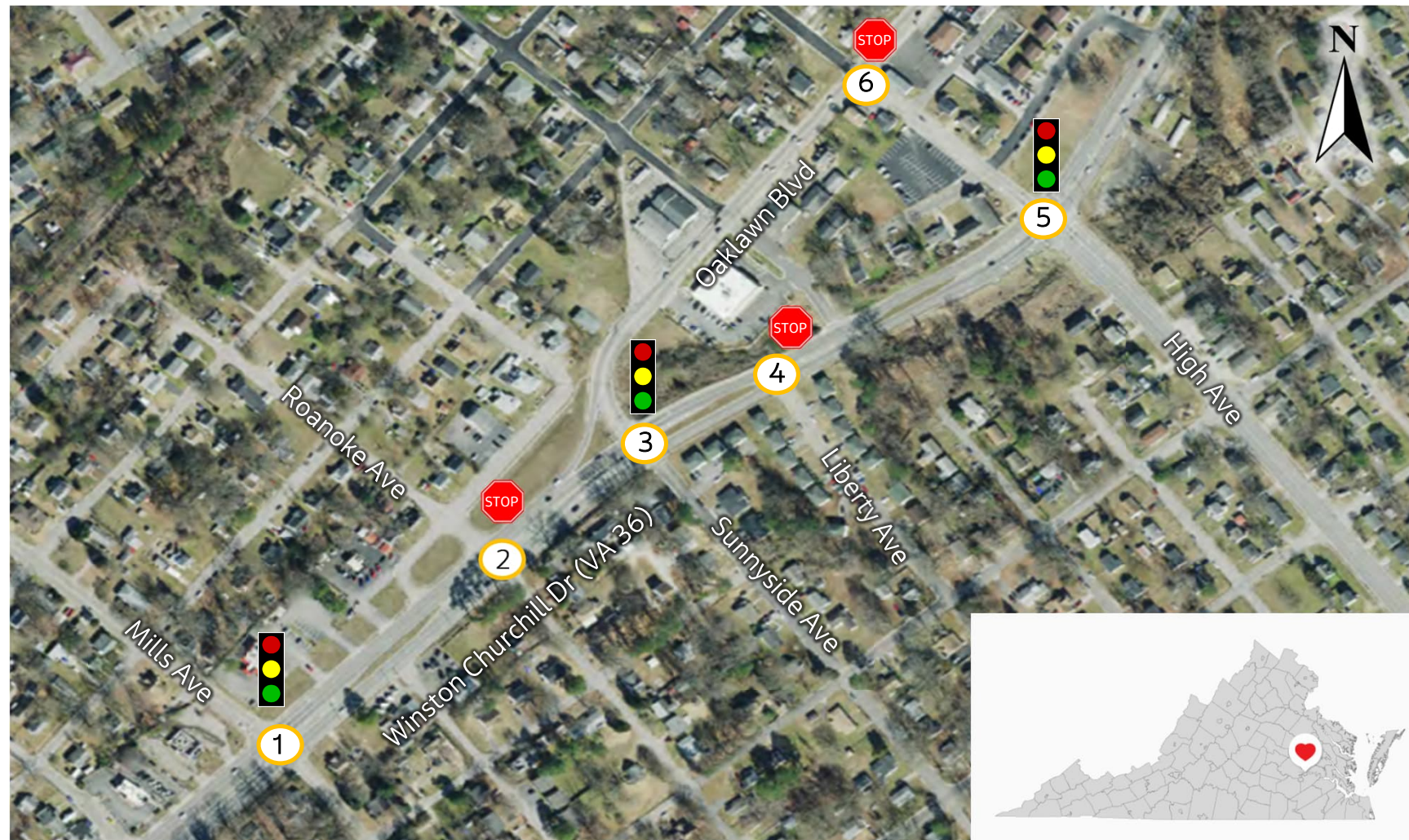


## Study Corridor/Objective

### ■ VA-36 (Winston Churchill Dr.) – City of Hopewell

- Miles Avenue to High Avenue = 0.38 mi
- Other Principal Arterial; 35mph Posted Speed Limit;

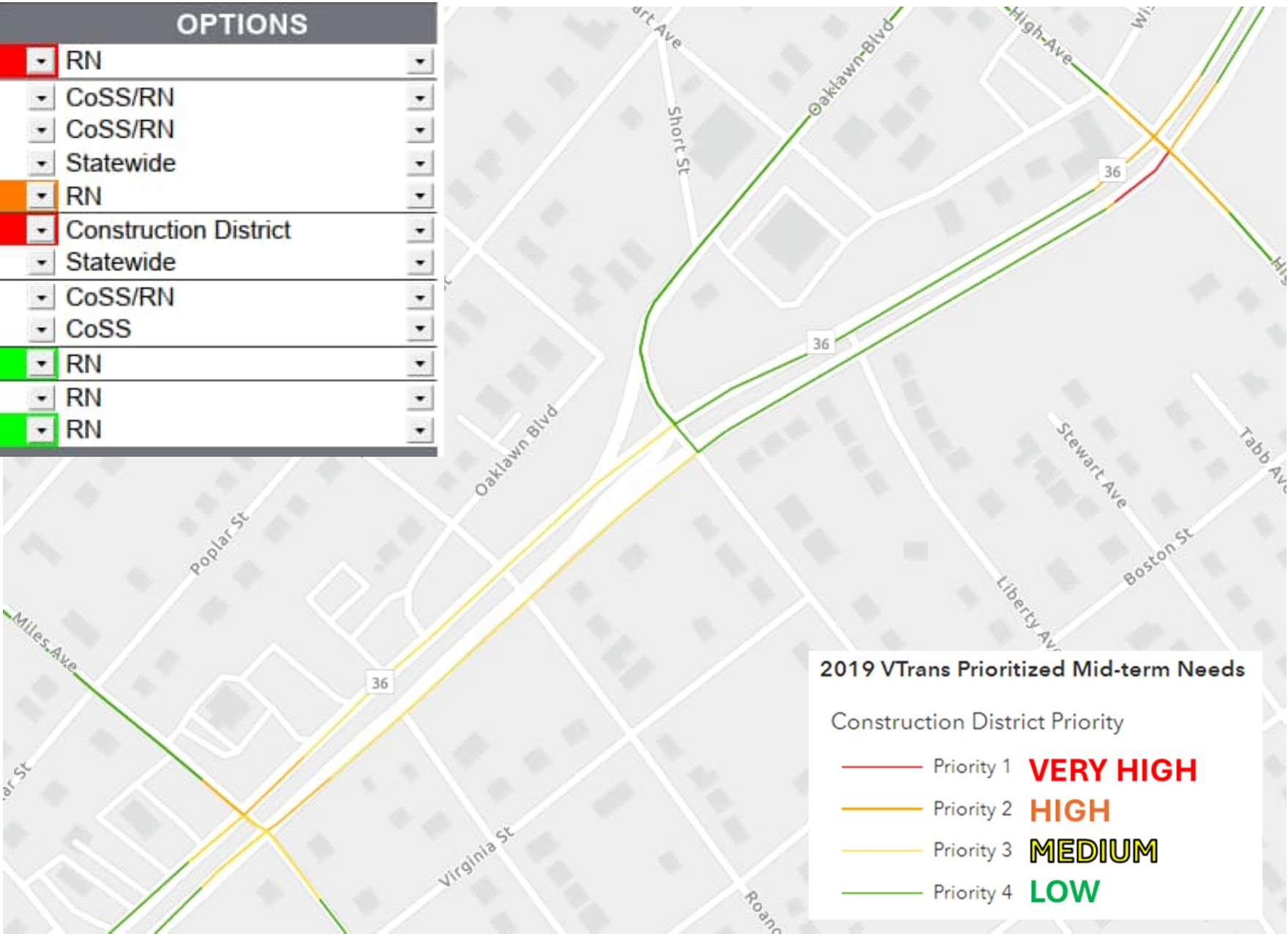
- Phase I consists of the local problem diagnosis and brainstorming of alternatives.
- Phase II includes the alternative evaluation and sketch level analysis.
- Phase III is the investment strategy and cost estimates.





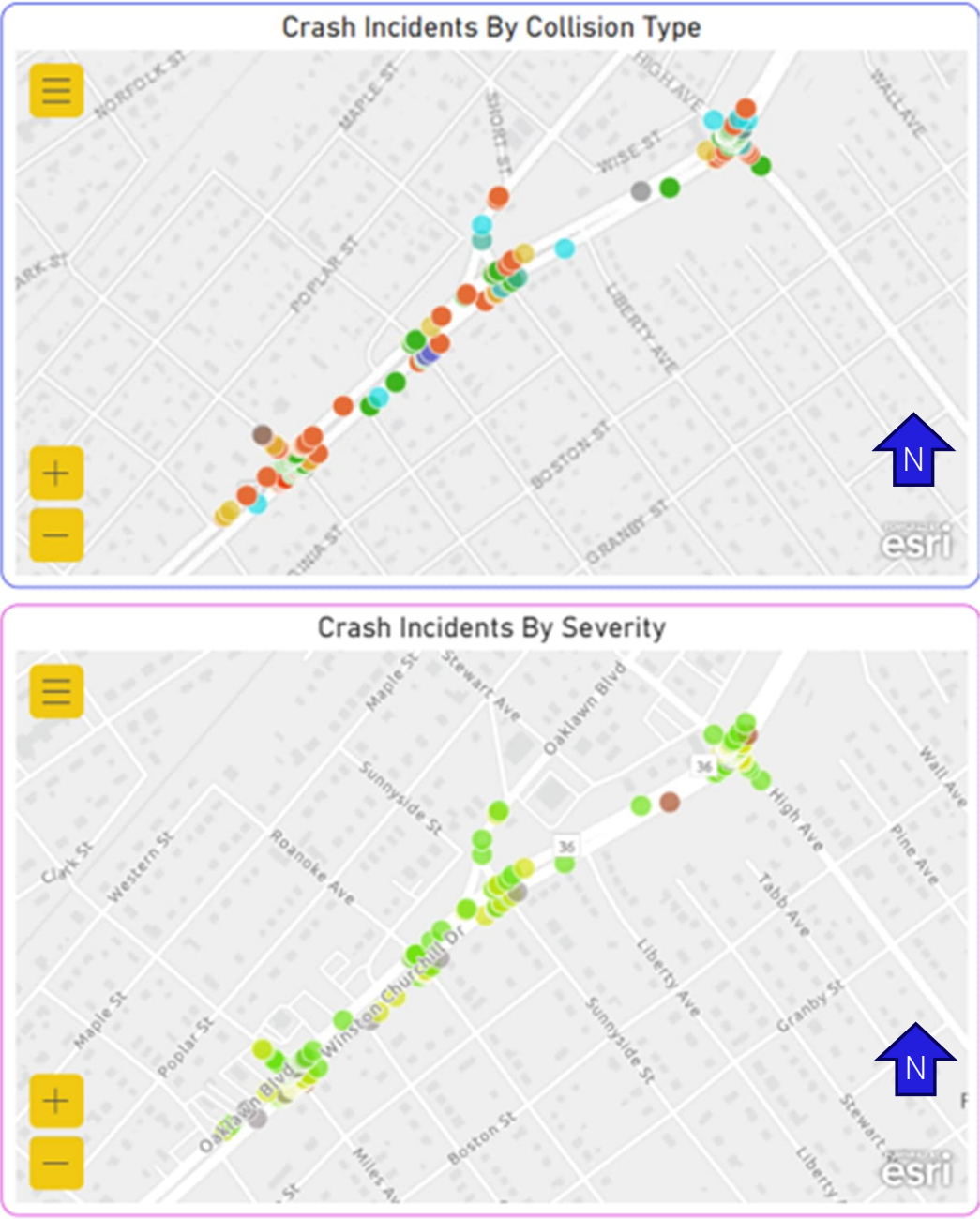
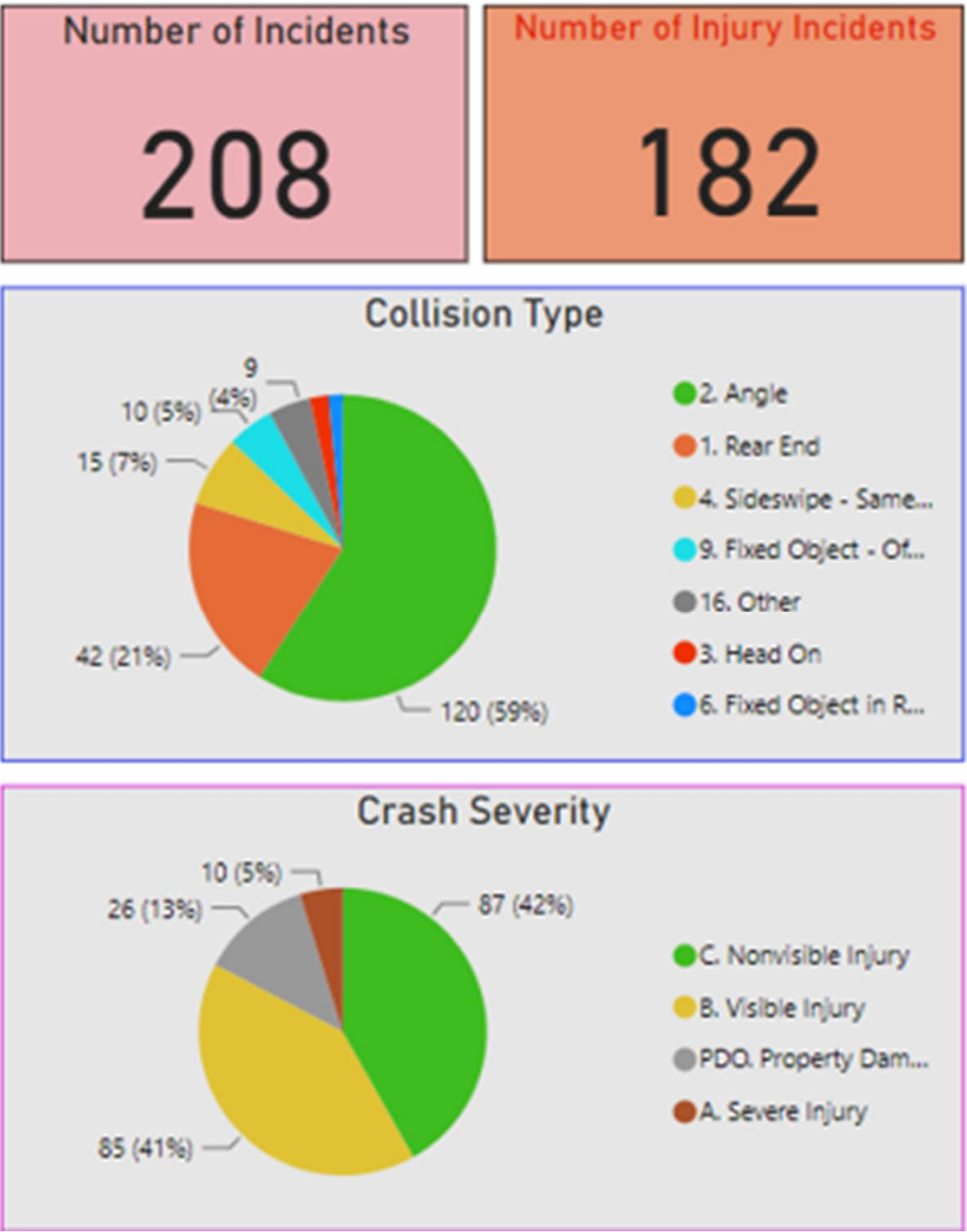
# VTrans Needs - Summary

VTRANS IDENTIFIED NEEDS	PRIORITIES	OPTIONS
Bicycle Access	Very High	RN
Capacity Preservation	None	CoSS/RN
Congestion Mitigation	None	CoSS/RN
IEDA (UDA) Access	None	Statewide
Pedestrian Access	High	RN
Safety Improvement	Very High	Construction District
Pedestrian Safety Improvement	None	Statewide
Reliability	None	CoSS/RN
Rail On-time Performance	None	CoSS
Transit Access	Low	RN
Transit Access for Equity Emphasis Areas	None	RN
Transportation Demand Management	Low	RN



<https://vtrans.virginia.gov/interactvtrans/map-explorer>

# Safety Analysis – Crash Summary



Study Intersections

	Crash Severity				
	A	B	C	O	Total
High Avenue	5	39	30	11	85
Miles Avenue	5	27	33	8	73
Oaklawn Blvd/Sunnyside Ave	0	8	10	2	20
Roanoke Avenue	0	6	9	4	19
Liberty Avenue	0	0	2	0	2

*\*Top 100 "Potential Safety Improvement" (PSI) Intersections*

- 8-year crash data (2015-2022)
- No Fatal crashes
- 88% of crashes resulted in injuries
- 59% Angle crashes
- 21% Rear End Crashes
- 7% Sideswipe – Same Dir.
- 34% nighttime crashes

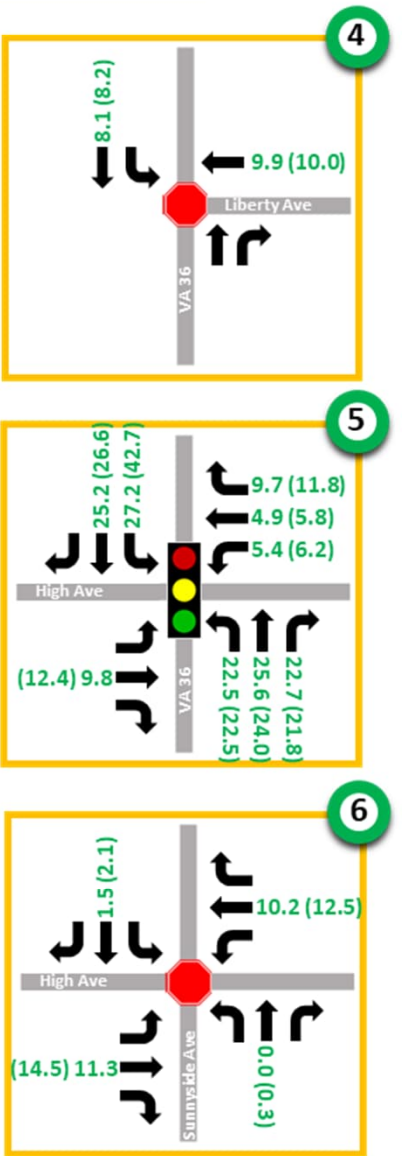
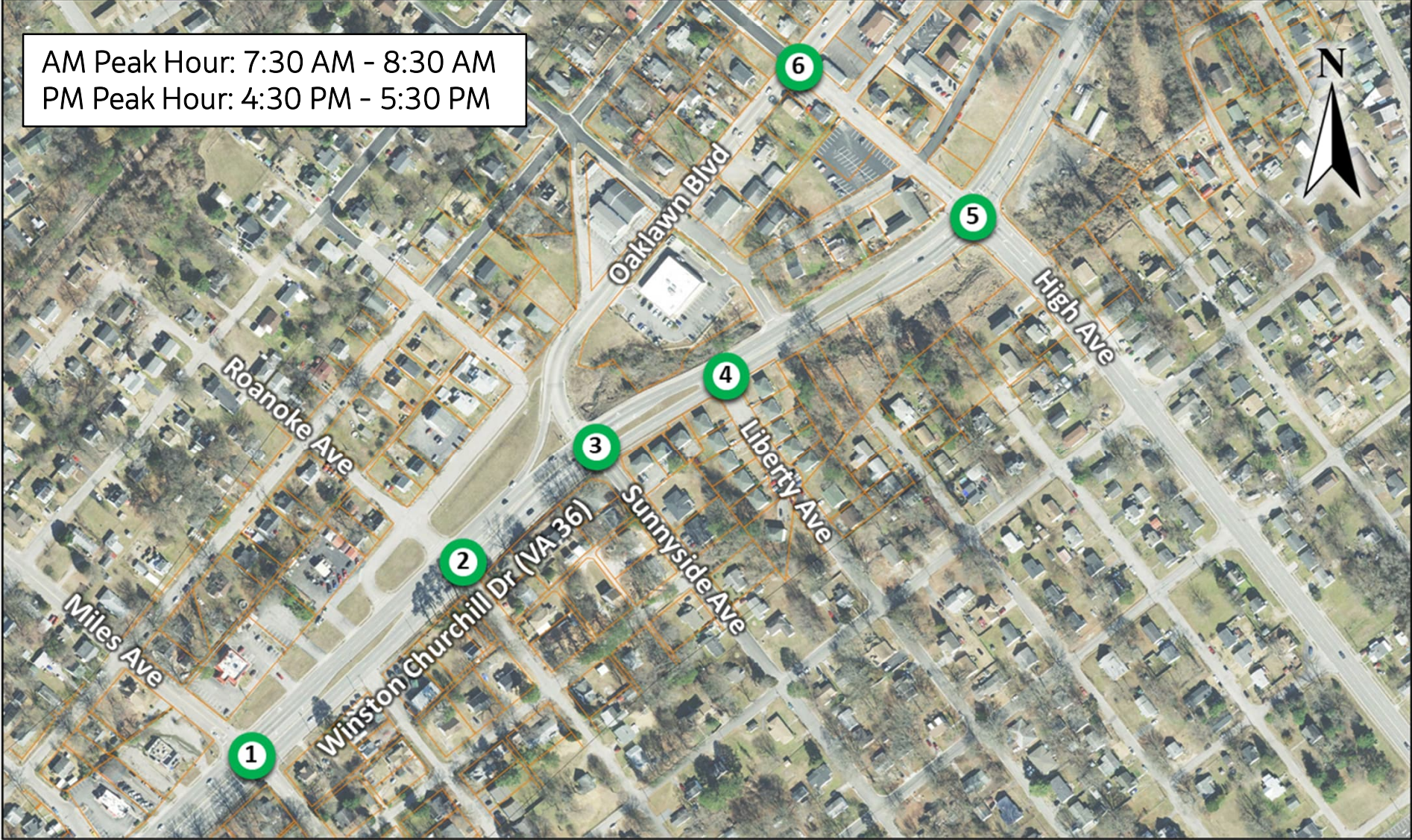
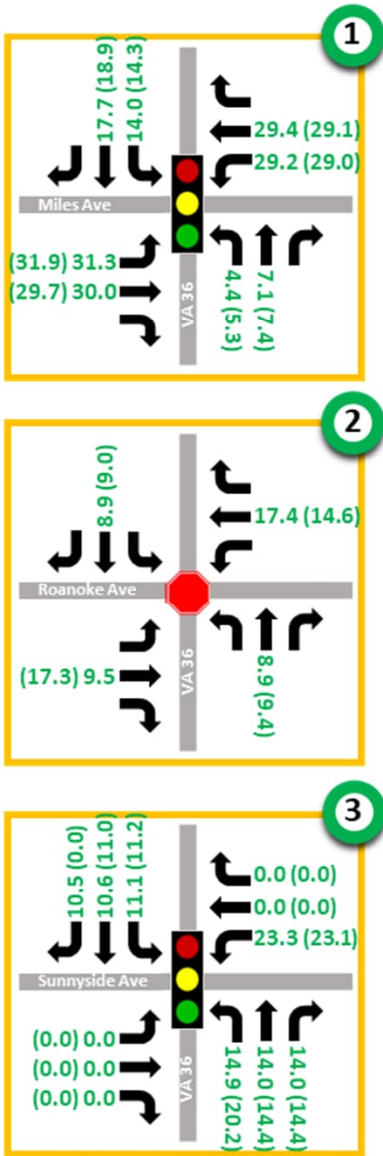


# Operational Analysis – Synchro Results

## Operations Results

- LOS A (AM and PM) at Winston Churchill Drive / Roanoke Avenue and Liberty Avenue, and Oaklawn Boulevard / High Avenue
- LOS B (AM and PM) at Winston Churchill Drive / Miles Avenue and Sunnyside Avenue
- LOS C (AM and PM) at Winston Churchill Drive / High Avenue

### LEGEND



Year 2023 EXISTING AM (PM) Peak Hour Delay and LOS



# Field Observations/ Public Input Survey 1

## Highlights of Field Observations

- Lack of crosswalks across Winston Churchill Drive at Miles Avenue forces people to cross at unmarked locations
- Lane drop along EB between Roanoke Avenue and Sunnyside Avenue
- Potential drive-way consolidation on northside of Winston Churchill Drive at Miles Avenue
- Bike lanes along Winston Churchill Drive would connect existing bike lanes along Miles Avenue and High Avenue

## Phase 1 Survey – March 20, 2014, through April 11, 2024

### Highlights of Phase 1 Survey Results

- Red Light running / Speeding issues / Difficulty making Left-turns –
- Pedestrian crossings/signals
- Bus stop Improvements
- Bicycle Lanes / Shared-use paths

# Planning Level Alternatives Screening – iCAP Analysis

Location		Option 1	Option 2	Option 3
Intersection 1: VA 36 (Winston Churchill Drive) at Miles Avenue		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> <li>Enhanced intersection lighting</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 2: VA 36 (Winston Churchill Drive) at Roanoke Avenue		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks for Roanoke Avenue (east and west legs)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Same as Option 1
Intersection 3: VA 36 (Winston Churchill Drive) at Sunnyside Lane		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> <li>Enhanced intersection lighting</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 4: VA 36 (Winston Churchill Drive) at Liberty Avenue		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks on Liberty Avenue (east leg)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Same as Option 1
Intersection 5: VA 36 (Winston Churchill Drive) at High Avenue		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 6: Oaklawn Blvd at High Avenue		<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks on Oaklawn Blvd (north and south legs)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Roundabout

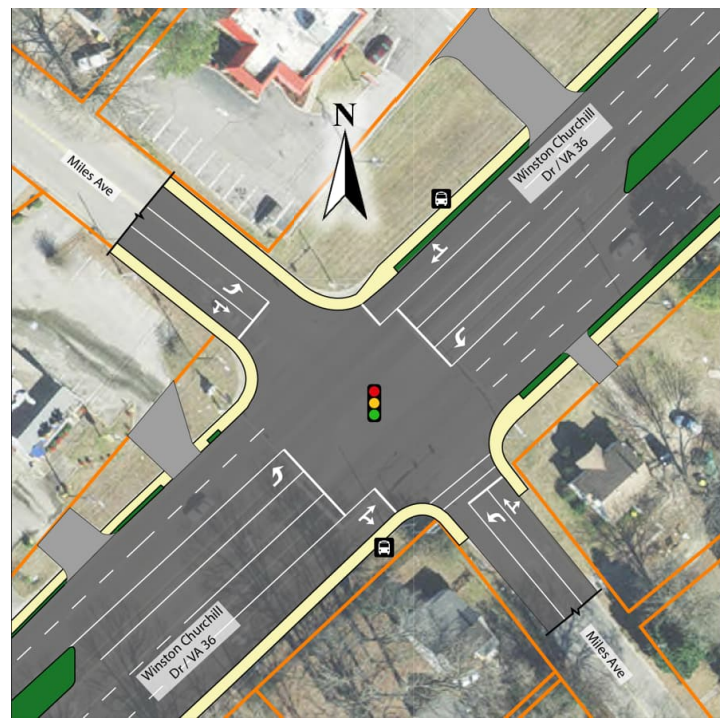


# #1. VA36/ Winston Churchill Drive at Miles Avenue

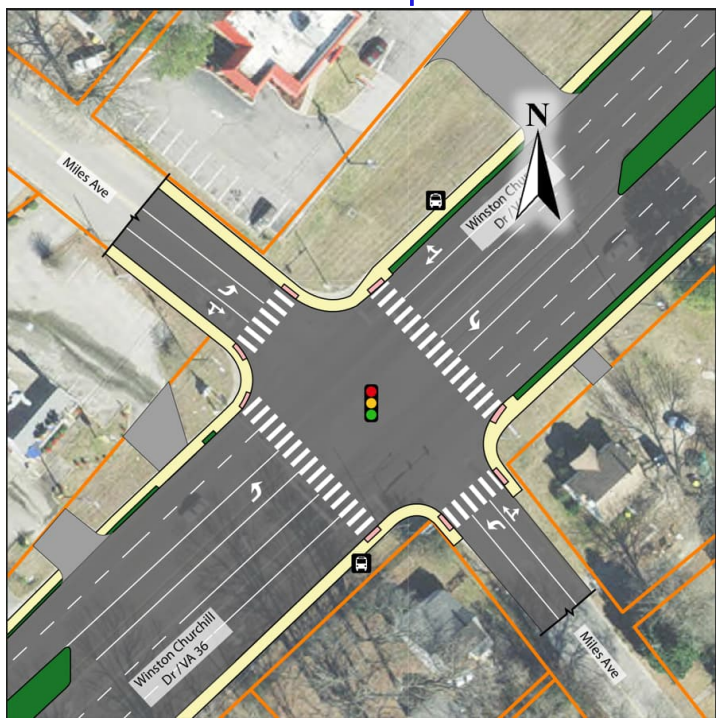
Conventional Improvements

Median U-Turn

Roundabout



No-Build



Option 1

- Signal Timing Improvements
  - ☐ Splits optimization
- Pedestrian Safety
  - ☐ Crosswalks with Ped push-buttons
  - ☐ Enhanced Intersection Lighting



Option 2

- Conflict Points
  - ☐ No Build: 48
  - ☐ Partial Median U-Turn: 28
- Signal Timing
  - ☐ Eliminated left-turns for Winston Churchill Drive approaches
  - ☐ Reallocates green time from left turn phases to through movements



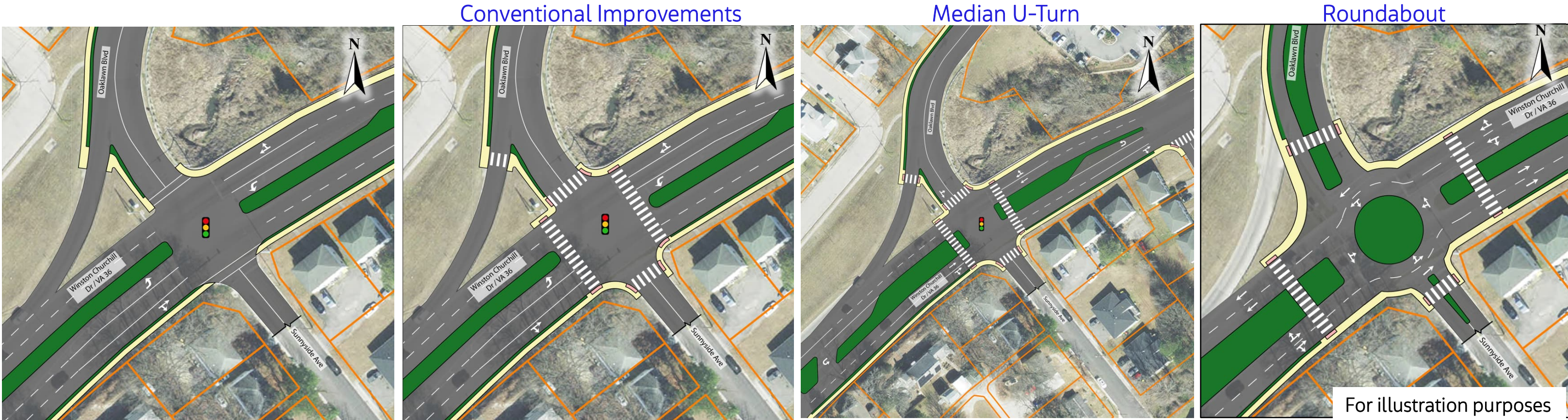
Option 3

- Conflict Points
  - ☐ No Build: 48
  - ☐ Roundabout: 8
- Pedestrian Safety
  - ☐ Crosswalks provided on all legs
- 65% crash reduction

For illustration purposes only



# #3. VA 36/ Winston Churchill at Oaklawn Boulevard/ Sunnyside Avenue



No-Build

Option 1

- Signal Timing Improvements
  - ☐ Splits optimization
- Pedestrian Safety
  - ☐ Crosswalks with Ped push-buttons
  - ☐ Intersection Lighting

Option 2

- Conflict Points
  - ☐ No Build: 48
  - ☐ Partial Median U-Turn: 28
- Signal Timing
  - ☐ Eliminated left-turns for Winston Churchill Drive
  - ☐ Reallocates green time from left turn phases to through movements

Roundabout

- Conflict Points
  - ☐ No Build: 48
  - ☐ Roundabout: 8
- Pedestrian Safety
  - ☐ Crosswalks provided on all legs
  - ☐ 65% crash reduction

For illustration purposes only



# #5. VA 36/ Winston Churchill High Avenue

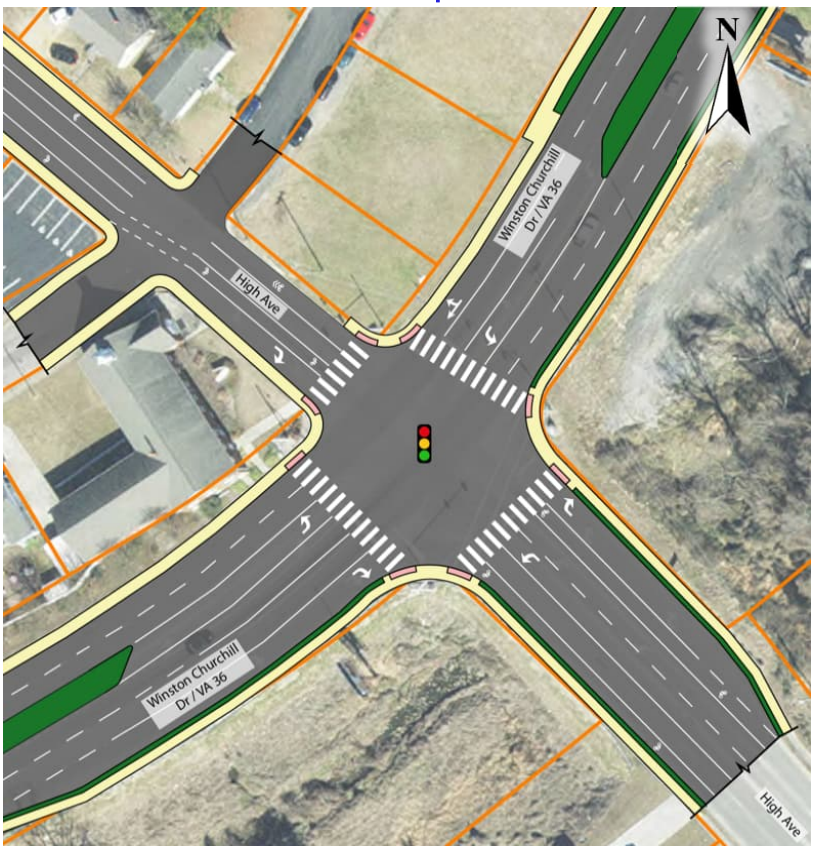
Conventional Improvements

Median U-Turn

Roundabout



No-Build



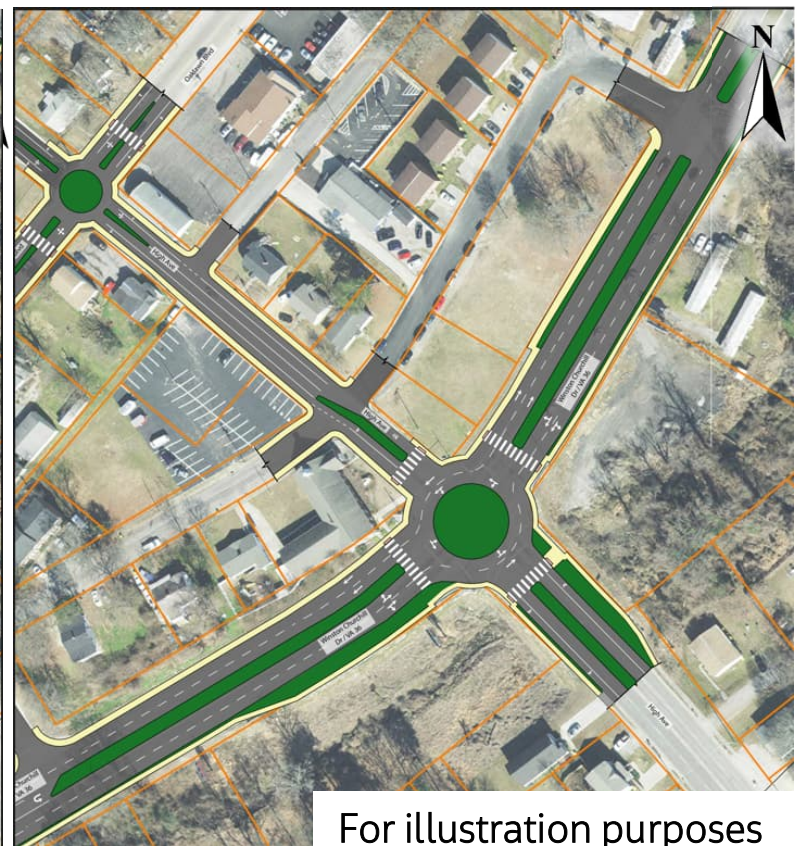
Option 1

- Signal Timing Improvements
  - ☐ Splits optimization
- Pedestrian Safety
  - ☐ Crosswalks with Ped push-buttons



Option 2

- Conflict Points
  - ☐ No Build: 48
  - ☐ Partial Median U-Turn: 28
- Signal Timing
  - ☐ Eliminated left-turns for Winston Churchill Drive
  - ☐ Reallocates green time from left turn phases to through movements









For illustration purposes only

- Conflict Points
  - ☐ No Build: 48
  - ☐ Roundabout: 8
- Pedestrian Safety
  - ☐ Crosswalks provided on all legs
  - ☐ 65% crash reduction

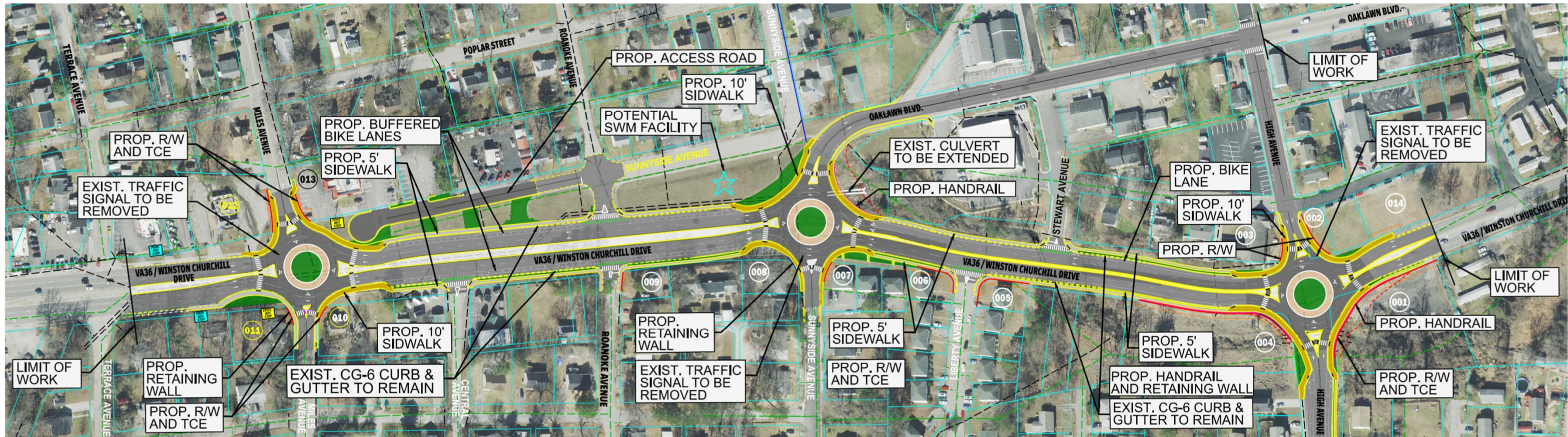


# Planning Level Alternatives Screening – Summary

Location	Option 1	Option 2	Option 3
Intersection 1:  VA 36 (Winston Churchill Drive) at Miles Avenue	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> <li>Enhanced intersection lighting</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 2:  VA 36 (Winston Churchill Drive) at Roanoke Avenue	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks for Roanoke Avenue (east and west legs)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Same as Option 1
Intersection 3:  VA 36 (Winston Churchill Drive) at Sunnyside Lane	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> <li>Enhanced intersection lighting</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 4:  VA 36 (Winston Churchill Drive) at Liberty Avenue	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks on Liberty Avenue (east leg)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Same as Option 1
Intersection 5:  VA 36 (Winston Churchill Drive) at High Avenue	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Signal Timing Improvements</li> <li>Crosswalks on all approaches</li> <li>Pedestrian push buttons and pedestrian intervals</li> </ul>	Median U-Turn along Winston Churchill Drive (NB/SB) only	Roundabout
Intersection 6:  Oaklawn Blvd at High Avenue	<b>Conventional Improvements</b> <ul style="list-style-type: none"> <li>Crosswalks on Oaklawn Blvd (north and south legs)</li> <li>Enhanced intersection lighting</li> </ul>	Same as Option 1	Roundabout



# Preferred Alternative



## Intersection Improvements:

- Roundabout: 2 approaching lanes along Winston Churchill Drive /1 approaching lane along minor street
- Conventional Intersection Improvements: Crosswalks on minor street and intersection lighting

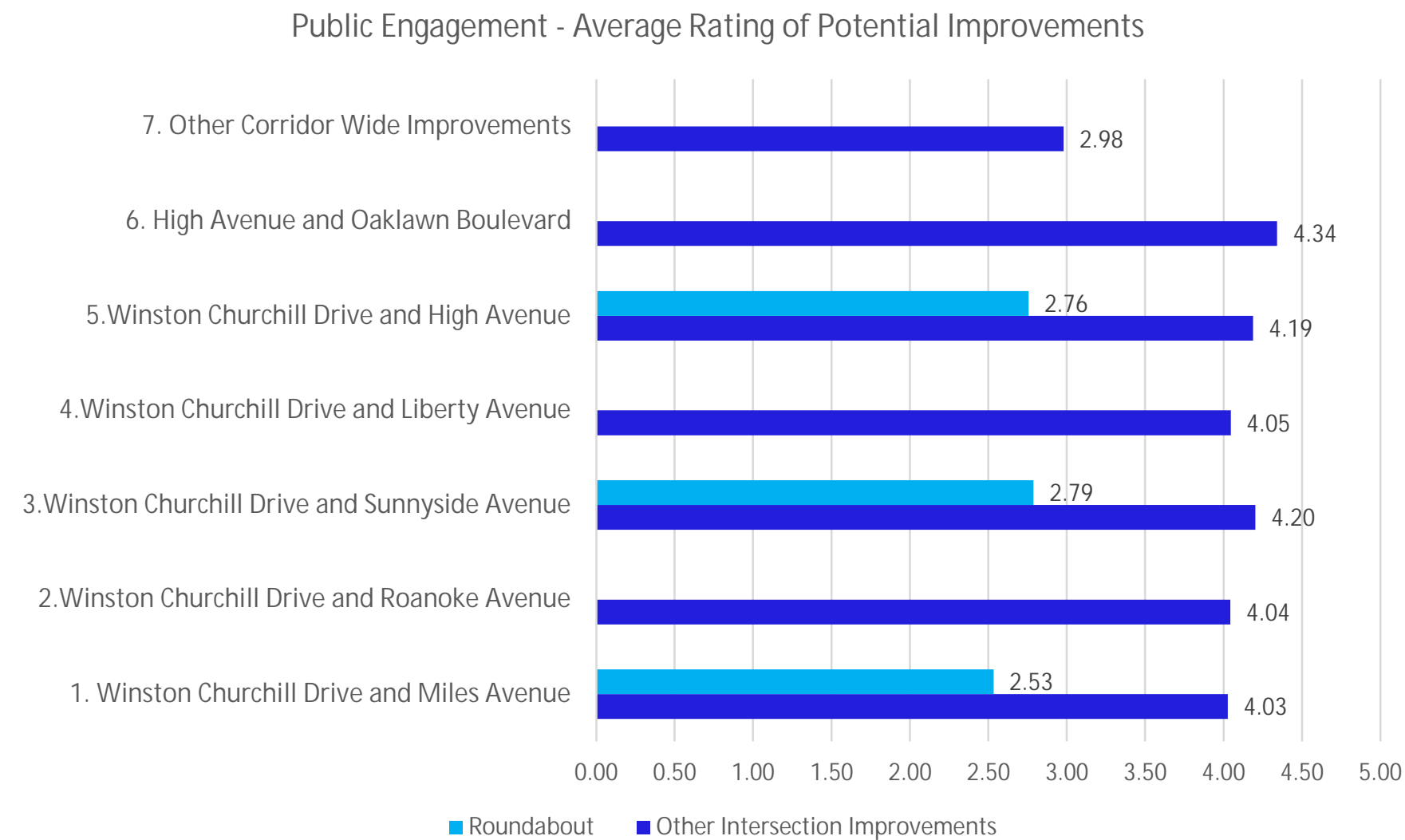
## Other Corridor-Wide Improvements

- ❑ Access Management - Driveway consolidation - extended Sunnyside Avenue with a cul-de-sac; #4: Liberty Avenue – Right-in/right-out
- ❑ Multimodal Focus - Buffered and designated bike lanes

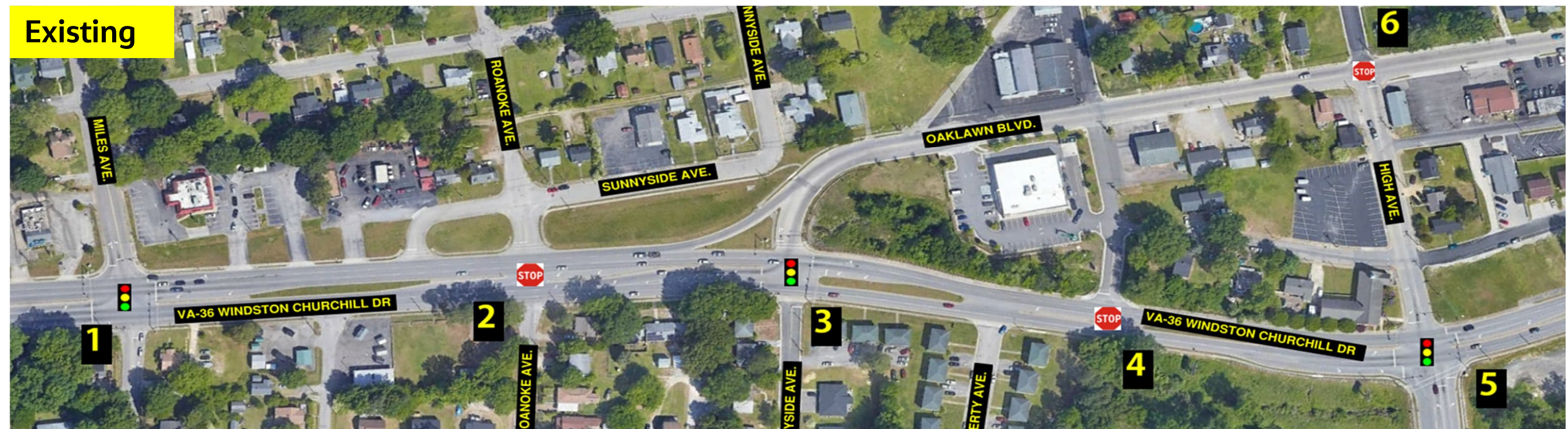


# Public Input Survey

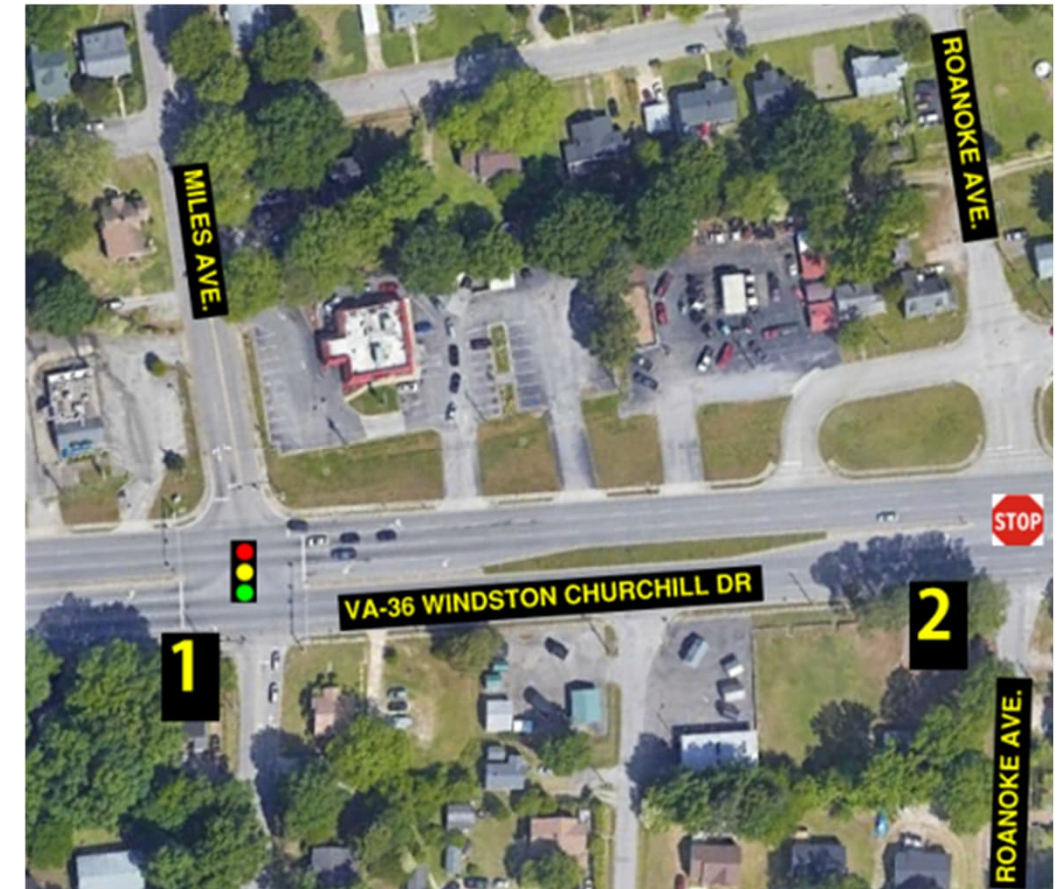
Phase 2 Survey – March 20, 2014, through April 11, 2024







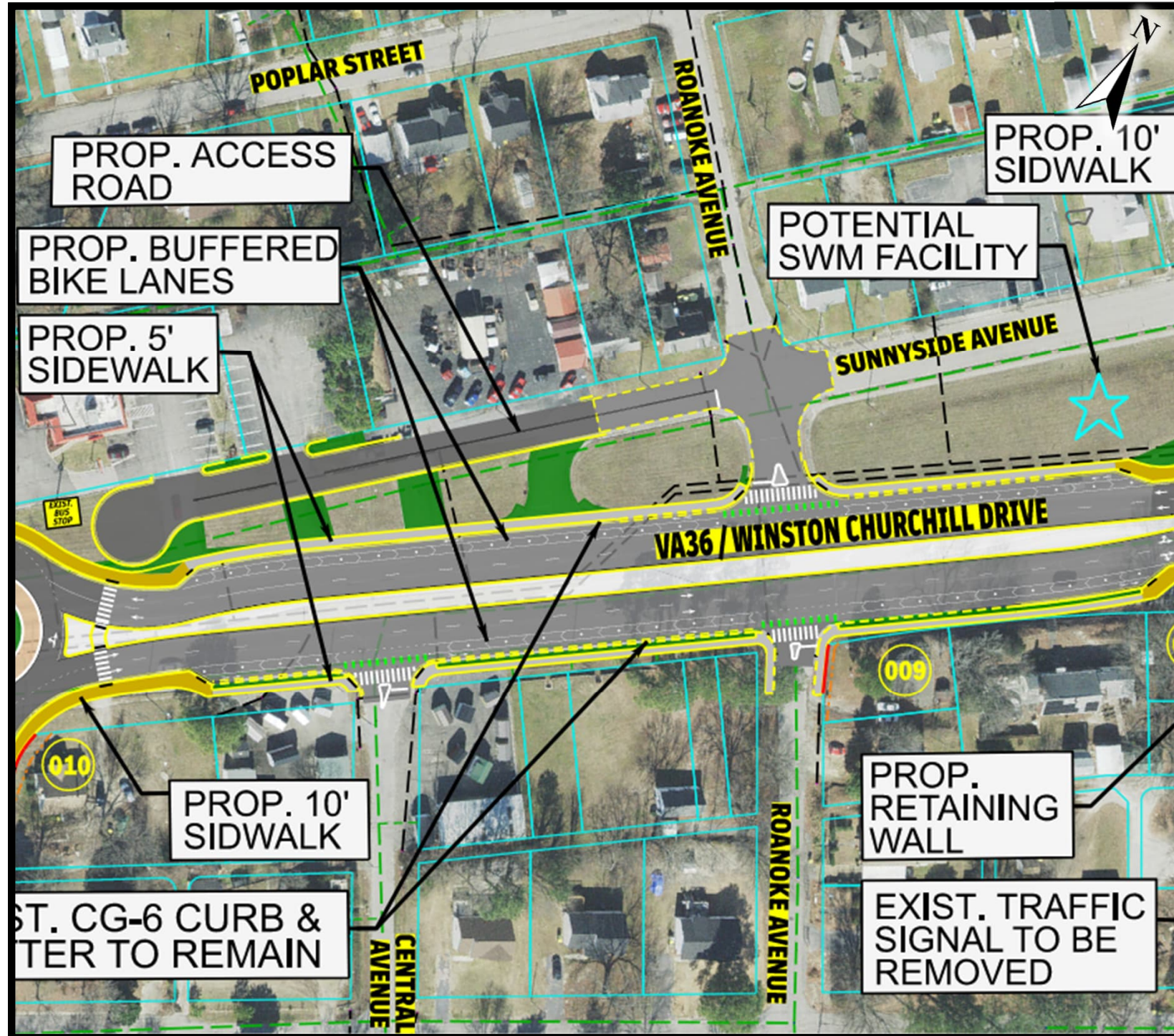




- **Add a new roundabout**
  - ❑ Remove left turns / Reduced conflict
- **Pedestrian Safety**
  - ❑ New sidewalk & Crosswalks on all legs
- **Improved Intersection Lighting**
- **Add Bike Lanes**
- **Bus Stop Relocation**
- **Utility Relocation**



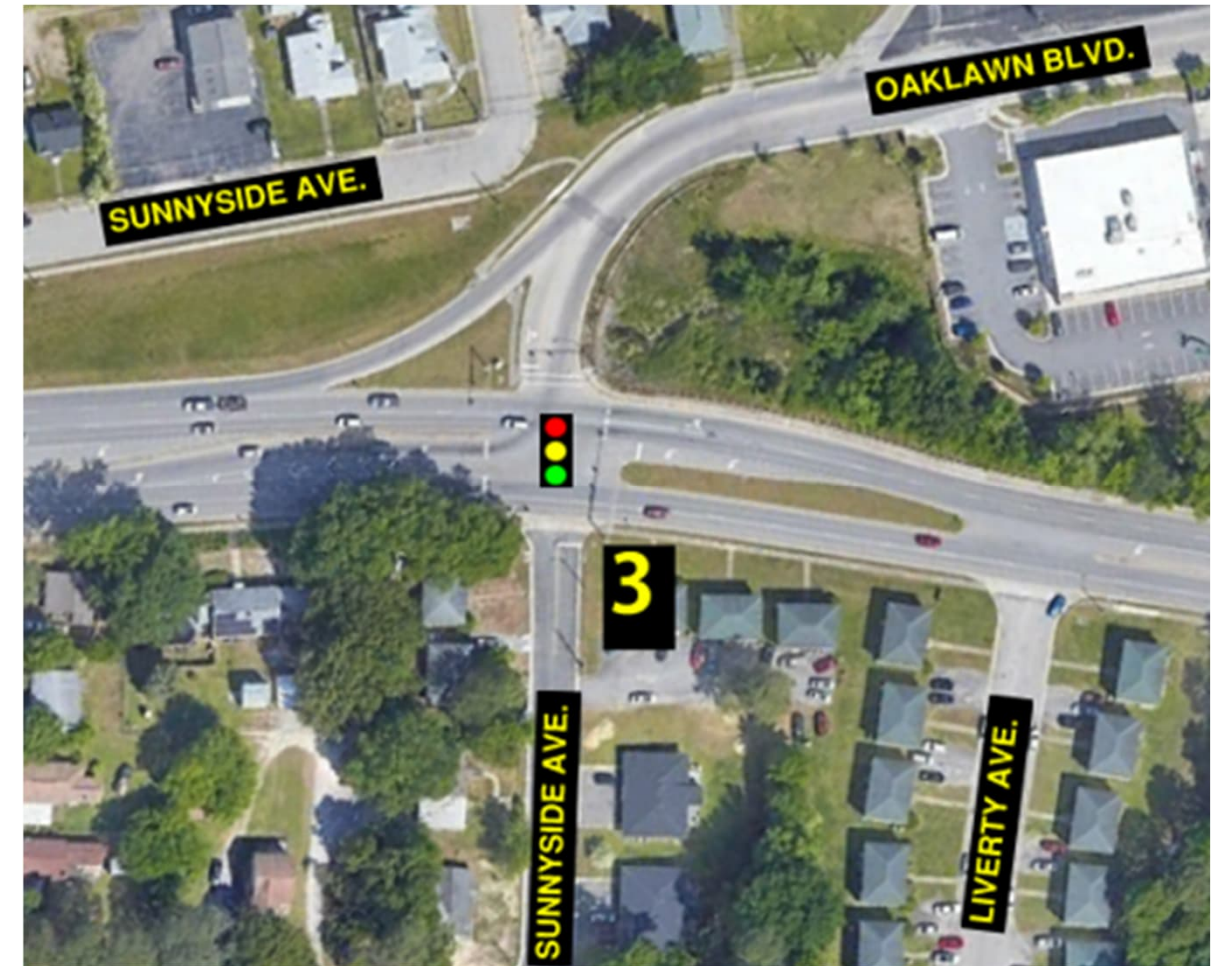
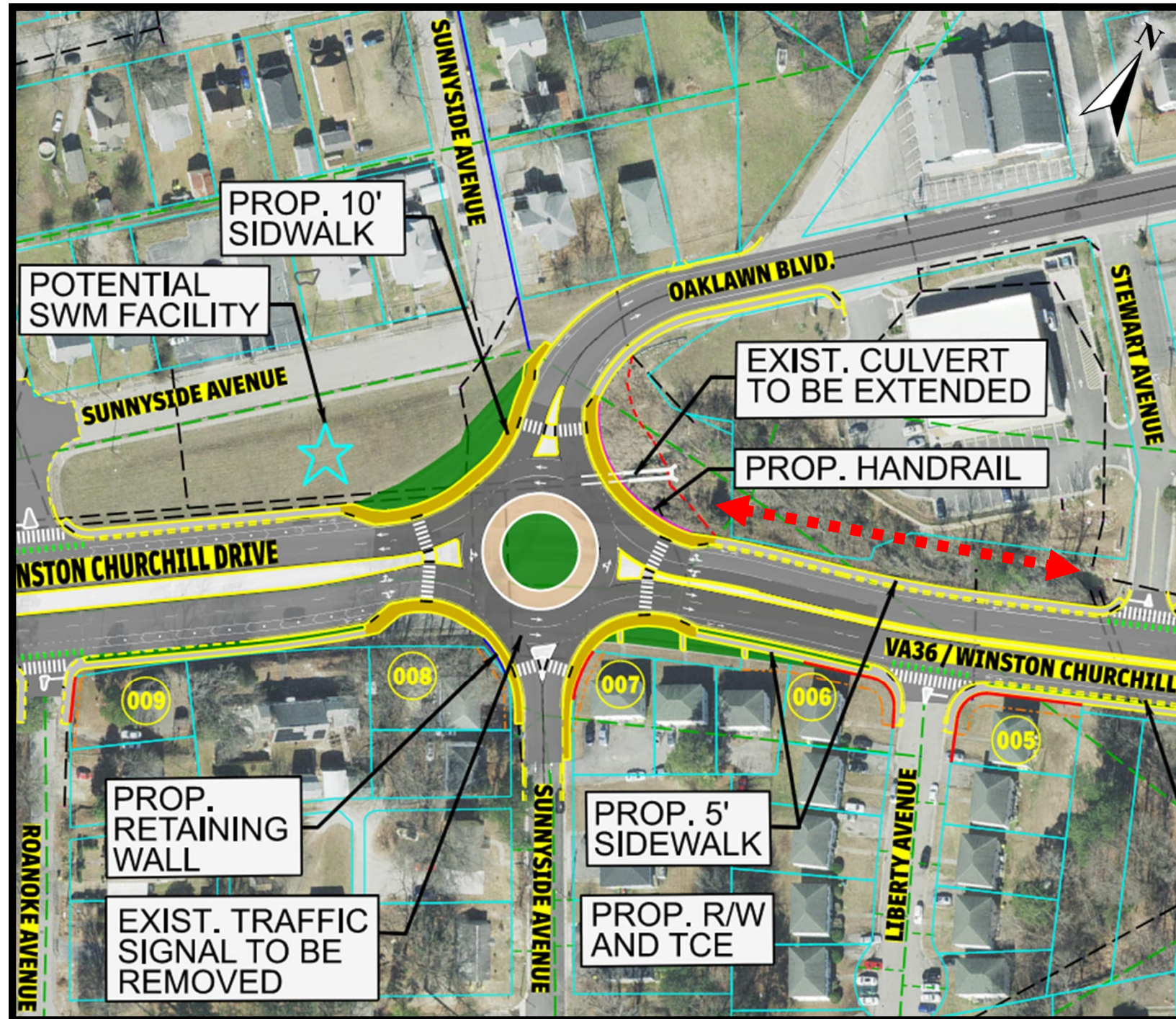
## #2: VA-36 & Roanoke Avenue



- **Right-in / Right-Out - Removed Left Turns**
- **Pedestrian Safety**
  - ☐ Crosswalks provided on all legs
  - ☐ Sidewalk upgrades
- **Improved Intersection Lighting**
- **Add Bike Lanes**



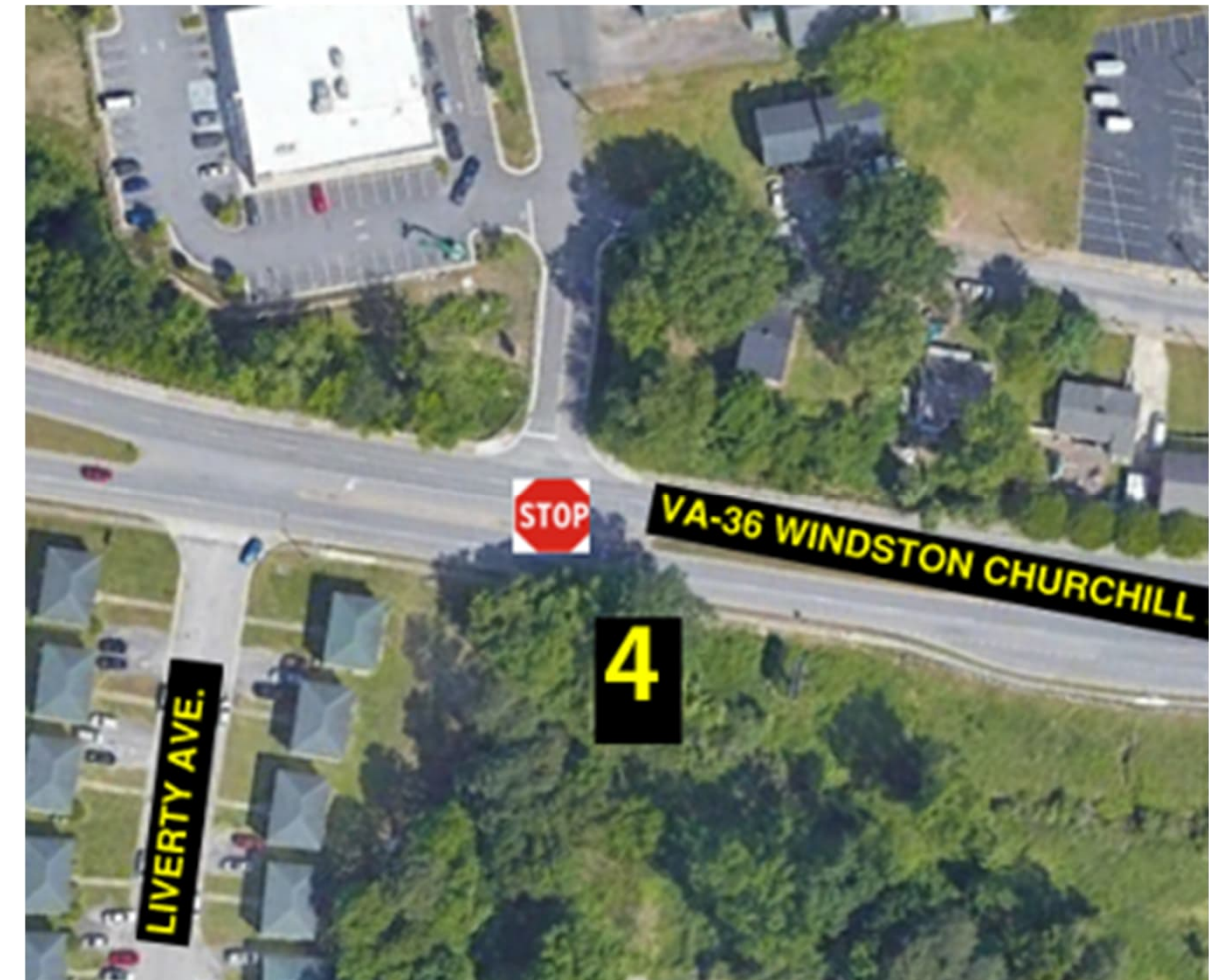
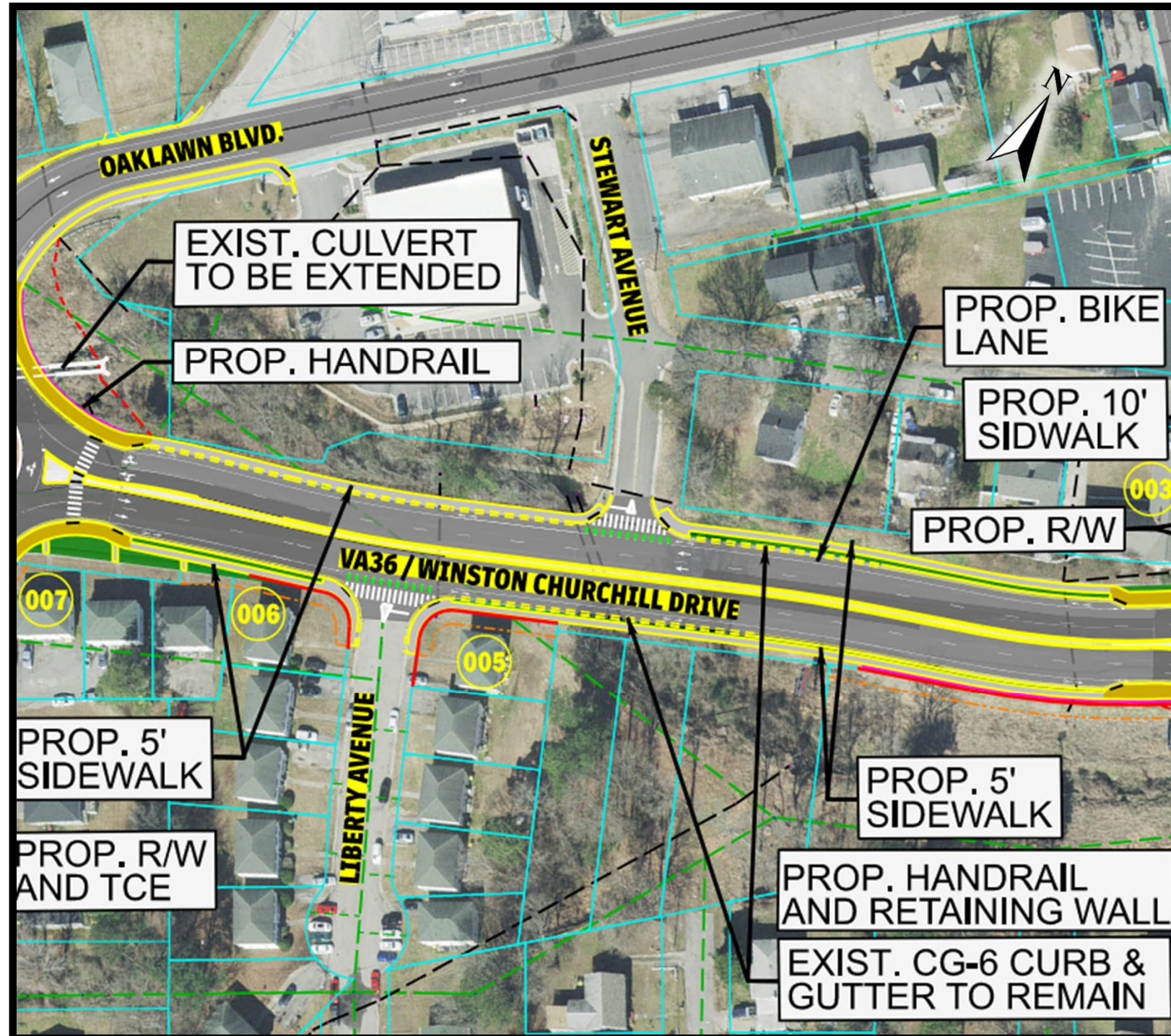
## #3: VA-36 & Oaklawn Boulevard/Sunnyside Avenue



- **Add a new roundabout**
  - Remove left turns / Reduced conflict
- **Pedestrian Improvements for Safety**
  - New sidewalk & Crosswalks on all legs
- **Improved Intersection Lighting**
- **Add Bike Lanes**



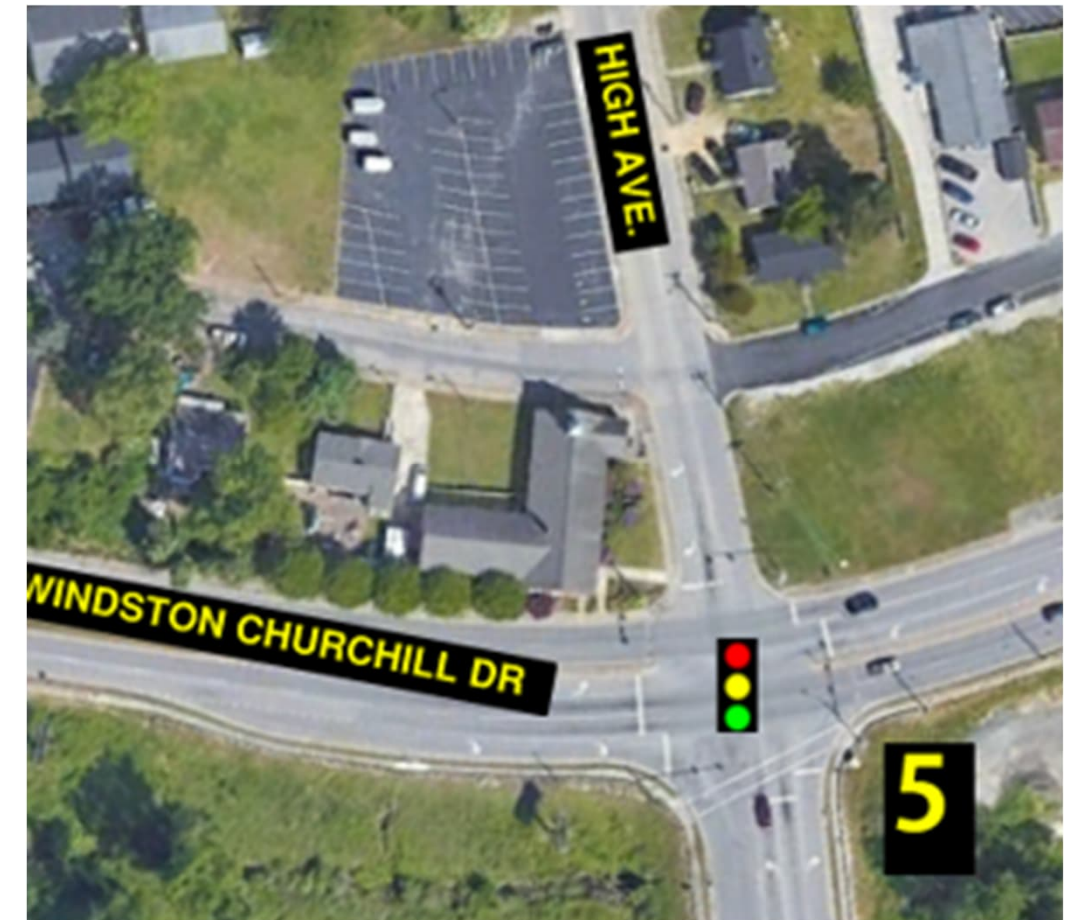
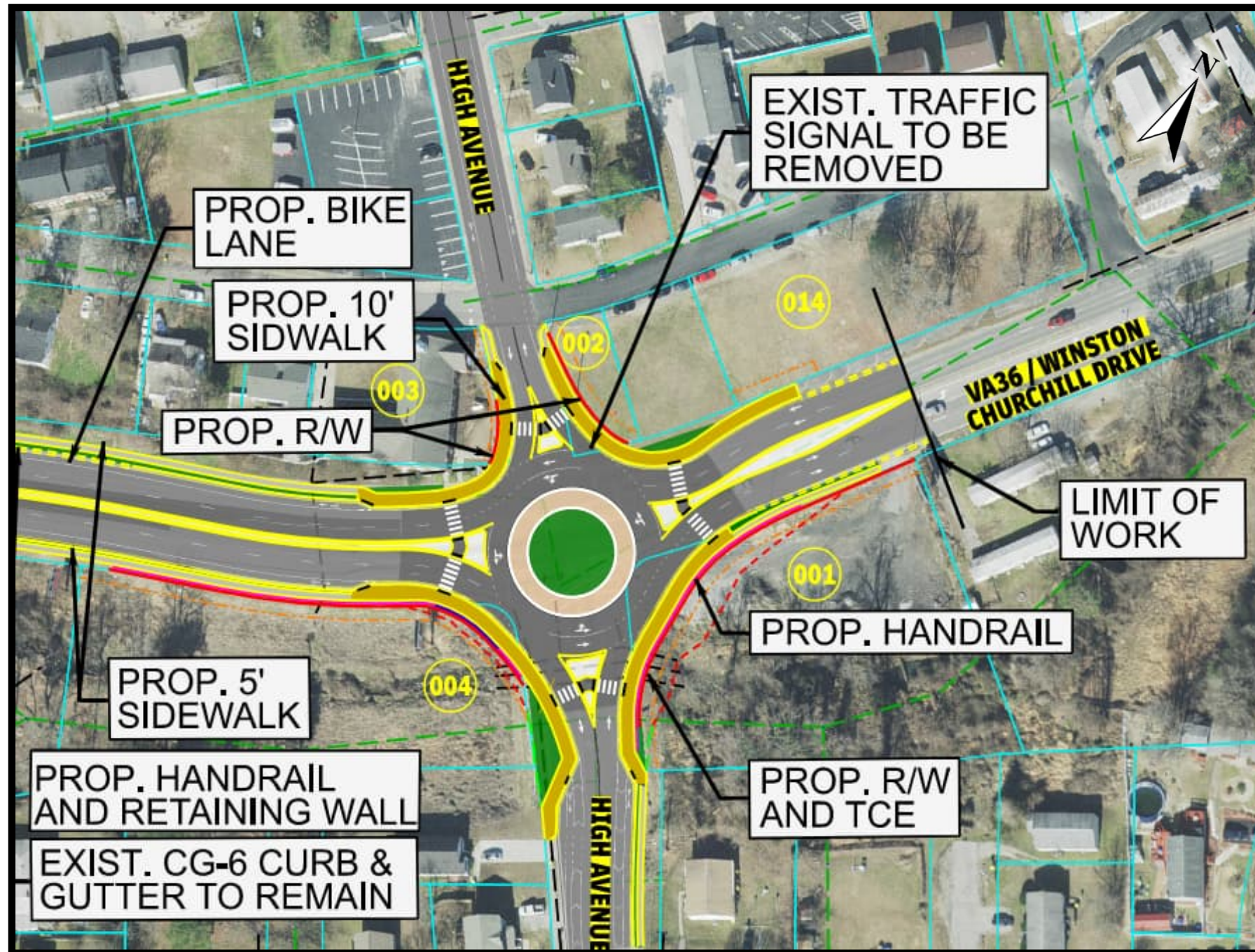
## #4: VA-36 & Liberty Avenue/Stewart Avenue



- Right-in / Right-Out - Removed Left Turns
- Pedestrian Safety
  - High Visibility Crosswalks
- Improved Intersection Lighting
- Designated Bike Lanes



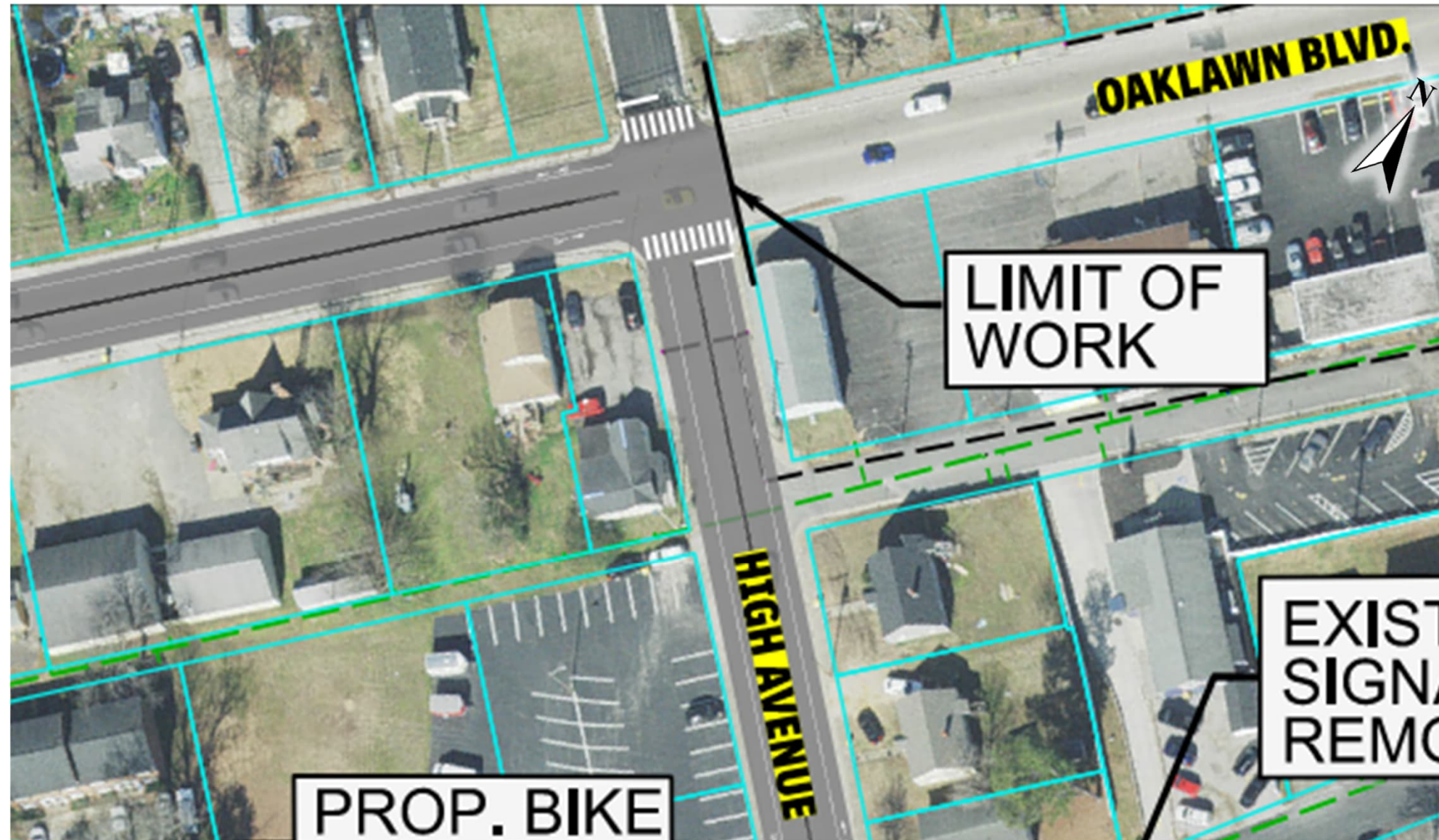
## #5: VA-36 & High Avenue



- **Add a new roundabout**
  - ☐ Remove left turns / Reduced conflict
- **Pedestrian Improvements for Safety**
  - ☐ New sidewalk & Crosswalks on all legs
- **Right of way impacts on church**
- **Improved Intersection Lighting**
- **Designated Bike Lanes**



## #6: Oaklawn Boulevard & High Avenue

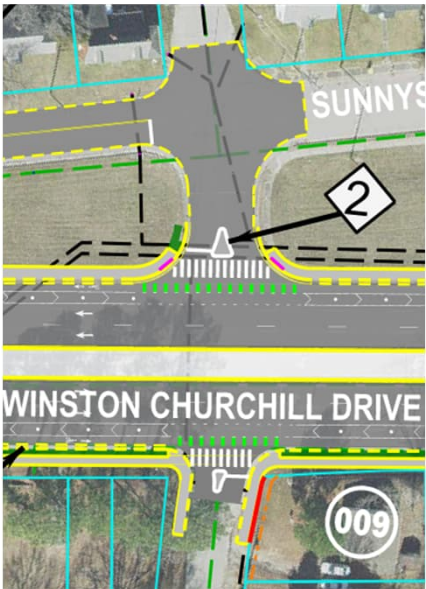


- **Pedestrian/Bike Safety**
  - High visibility crosswalks
  - New ADA ramps
- **Maintain Bike Lanes**
- **Improved Intersection Lighting**



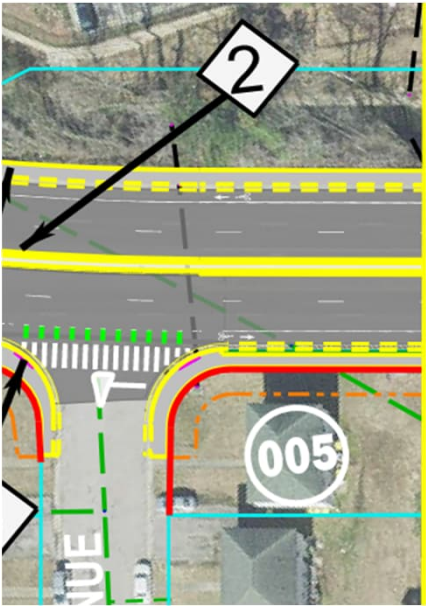
# Typical Sections

Designated Bike Lanes with Buffer



- Adding Bike lanes
- Eliminate left turns
- Upgrade Sidewalks/ADA Ramps along corridor
- Lighting Improvements

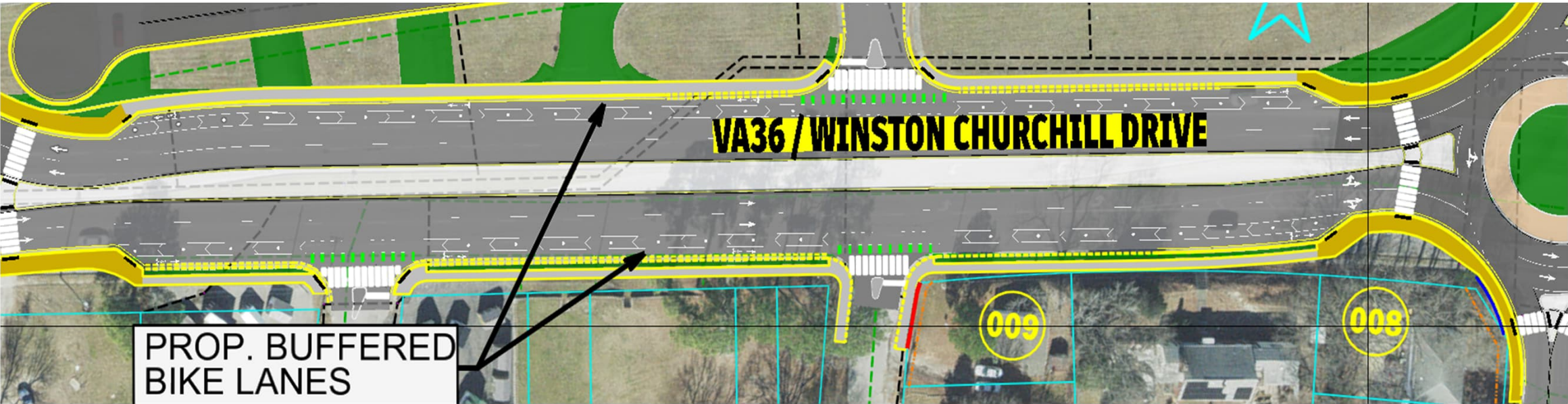
Designated Bike Lanes with No Buffer





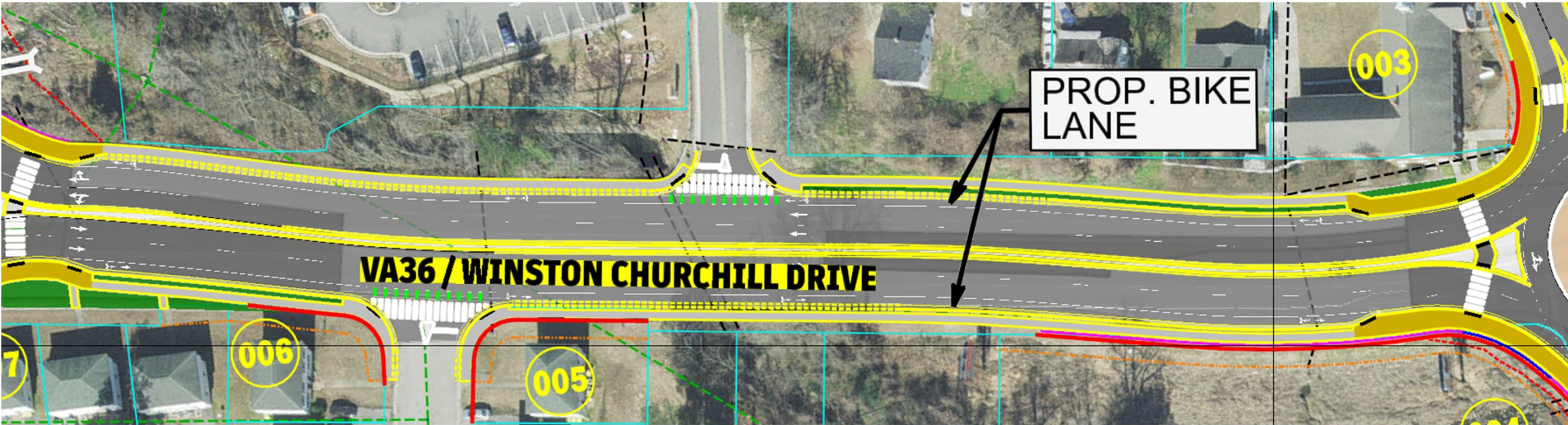
# Bike and Pedestrian Infrastructure

Designated Bike Lanes with Buffer



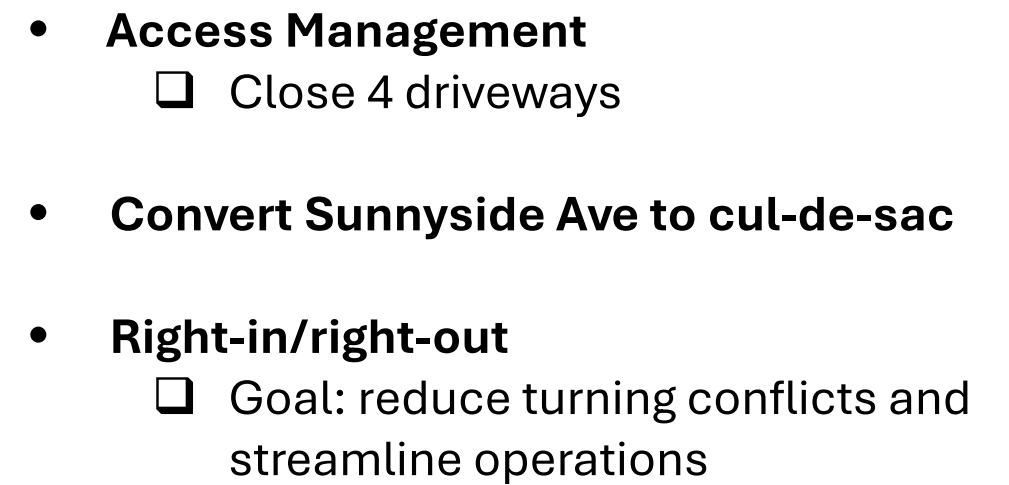
- **Buffered bike lanes**
  - From Miles Avenue and Sunnyside Avenue
- **Bike lanes**
  - with no buffers elsewhere along the corridor.

Designated Bike Lanes with No Buffer



- **Safe Bike Transition into roundabout**









- Was a SMART SCALE Round 6 Application and successfully selected for **Funding** as one of the top-scoring corridor projects in its class



# Questions ??

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Challenging today.  
Reinventing tomorrow.



# Thank you

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