



NORTH CAROLINA
Department of Transportation

Town of Hillsborough Board of Commissioners Work Session

STIP Project No. U-5845 (South Churton Street Widening)
From I-40 to Orange Grove Road in Hillsborough
October 12, 2026

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

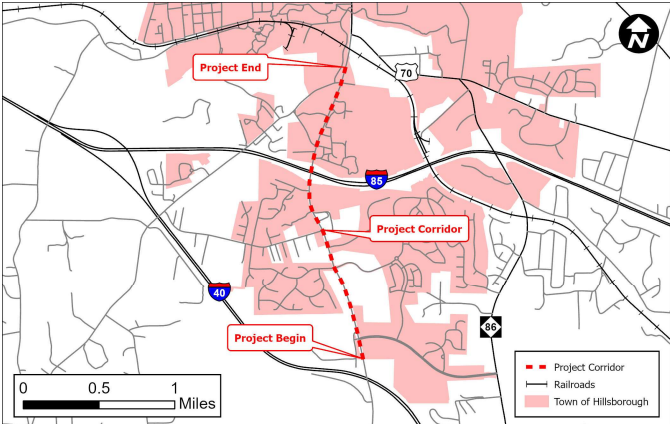
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Project Overview

Vicinity Map



- Widen South Churton Street for approximately 2.0 miles from I-40 to Orange Grove Road
- Construct a multiuse path along the east side of the corridor
- Construct a sidewalk along the west side of the corridor
- Construct additional turn lanes and Passenger Vehicle U-turn options along South Churton Street to reduce conflict points along the corridor.

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Purpose and Need

Congestion and Traffic Operations

Purpose: Improve traffic operations and relieve congestion along South Churton Street between downtown Hillsborough and I-40 with a goal of achieving acceptable traffic operations, generally LOS D or better, during the average annual weekday peak period in the design year.

Need: South Churton Street serves as a major north-south corridor connecting I-40, I-85, residential neighborhoods, commercial areas, and downtown Hillsborough. Existing congestion and delay occur during peak travel periods and are projected to worsen by the design year, with multiple intersections operating at LOS E or F under the 2050 No-Build scenario.

Safety, Travel Reliability, and Multi-Modal Connectivity

Purpose: Improve corridor safety and travel reliability while supporting multimodal mobility for all users.

Need: Frequent queuing and peak-period slowdowns reduce travel reliability along the corridor. In addition, gaps in pedestrian and bicycle facilities limit multimodal connectivity and mobility options for users traveling between residential areas, commercial centers, and downtown Hillsborough.

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Project History

2019-2024: Town Led Evaluation and Concept Development

- Town of Hillsborough evaluated Project alternatives while NCDOT had put the project on hold
- Robust Public Engagement Process
- June 2024 – Town's *South Churton Street Multimodal Corridor Study*

2024–Present: NCDOT Re-engagement and Evaluation of Town-Endorsed Concepts

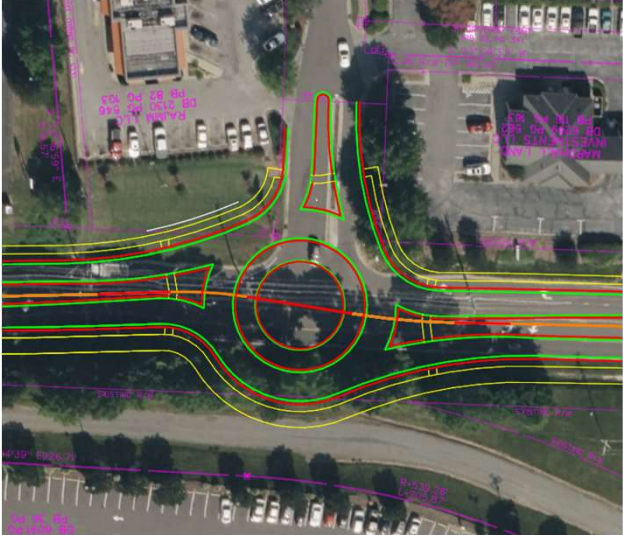
- June 2024 – NCDOT, Town of Hillsborough, and Kimley-Horn Project Coordination Meeting
- June 2024 thru May 2025: NCDOT and Kimley-Horn Traffic Study and Design Development
- May 2025 – NCDOT, Town of Hillsborough, and Kimley-Horn Updated Design Meeting
- May 2025 thru July 2026: NCDOT and Kimley-Horn Traffic Re-evaluation and Design revisions
- July 2026 – NCDOT, Town of Hillsborough, and Kimley-Horn Final Updated Design Meeting

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Design Iteration No. 1 and Traffic Study



- Evaluated Town study feasibility with new traffic projections (2050)
- 4 lanes with 23' median from I-40 to Mayo Street
- 2 lanes with 17.5' median from Mayo Street to Orange Grove Road
- Single lane roundabout at John Earl

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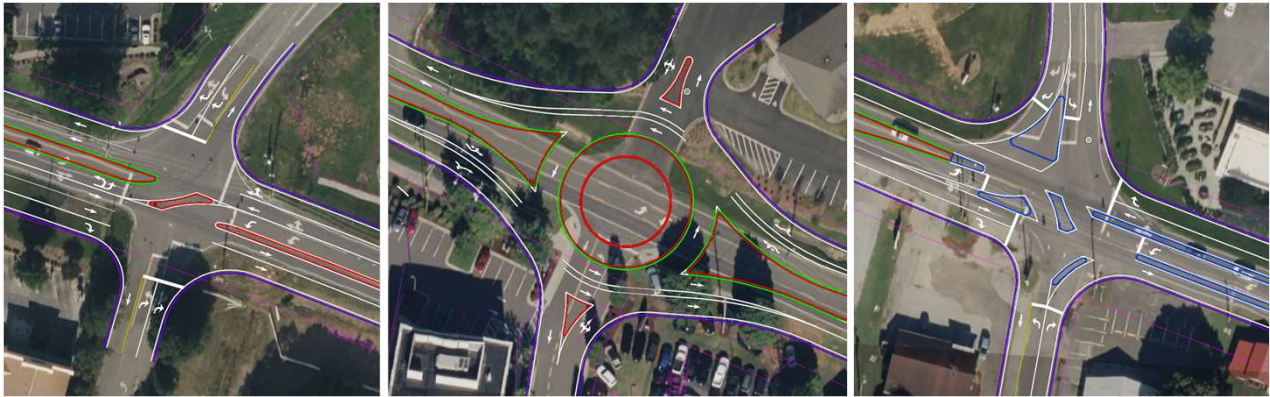
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Design Iteration No. 2 and Traffic Study

Mayo Street Reduced Conflict Intersection

First Horizon Bank Roundabout

Orange Grove Road Thru-Cut



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Current Corridor Design Approach

Speed Limits

- 45 mph from I-40 to Cates Creek Parkway/Lafayette Drive
- 35 mph from Cates Creek Parkway to Orange Grove Road

Travel Lanes

- 11-foot lanes for most of the corridor

Intersections

- Existing Signalized intersections Improved
- Left-turn access provided only at major intersections and driveways for safety

Drainage and Hydrology

- Stormwater Control Measure (SCM) feasibility and location studied
- Stormwater design not finalized and will continue to be developed.

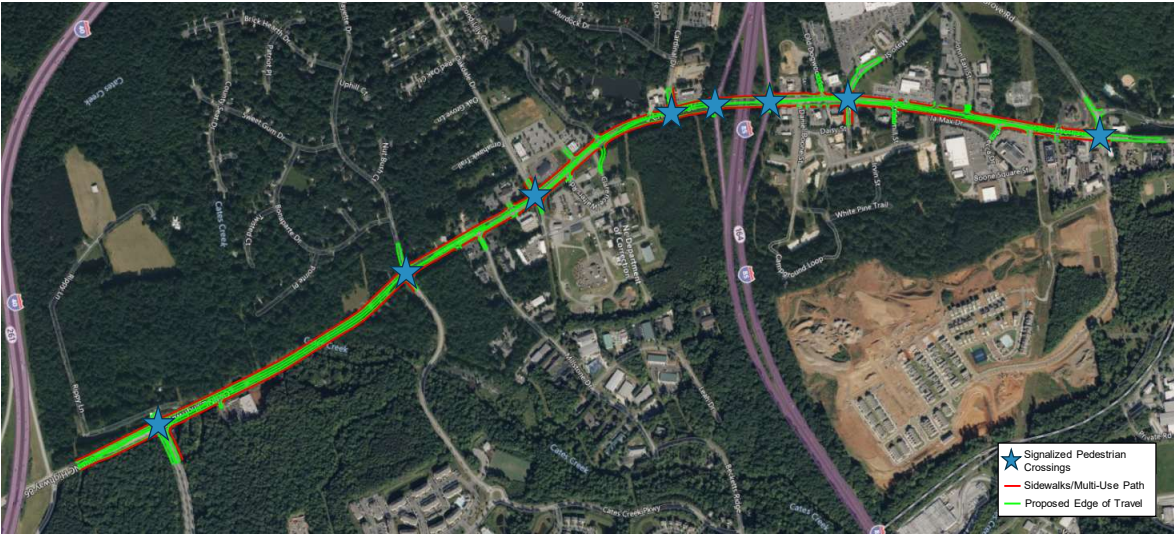
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Bicycle/Pedestrian Travel



★ Signalized Pedestrian Crossings

— Sidewalks/Multi-Use Path

— Proposed Edge of Travel

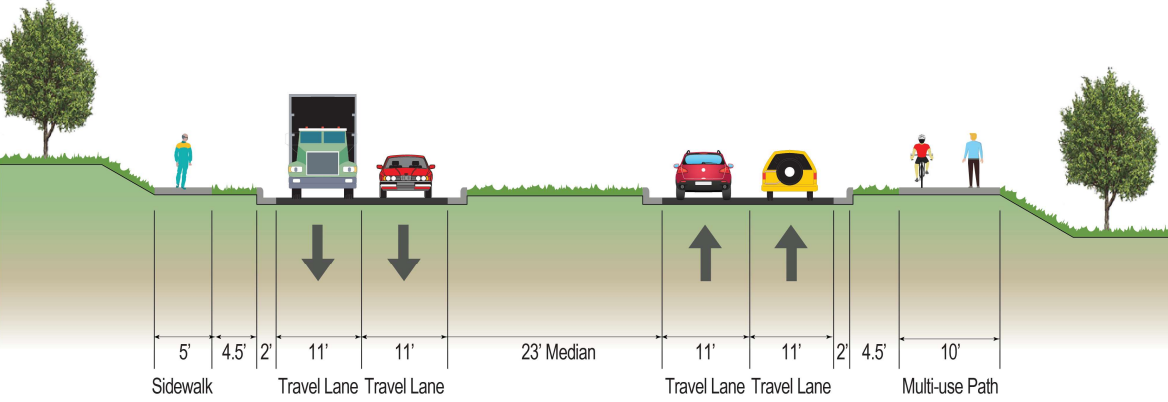
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South Churton Street Typical Section



5' 4.5' 2' 11' 11' 23' Median 11' 11' 2' 4.5' 10'

Sidewalk Travel Lane Travel Lane Travel Lane Travel Lane Multi-use Path

Across the majority of the corridor, South Churton Street will be widened to a 4-lane median divided roadway with curb and gutter, a 5-foot sidewalk on the west side, and a 10-foot multiuse path on the east side.

Median breaks will be provided for some left-turn movements, along with Passenger Car U-turns at signalized intersections, maintaining access to all properties along the corridor.

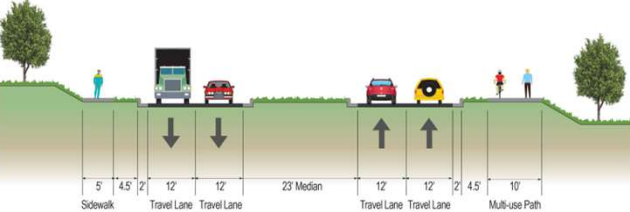
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Additional Typical Sections

South Churton Street from I-40 to Cates Creek Parkway/Lafayette Drive

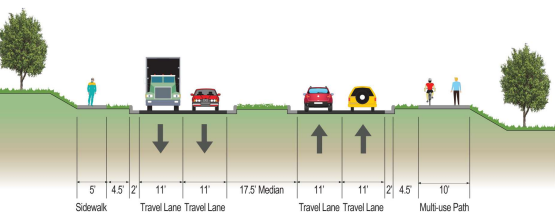


5' 4.5' 2' 12' 12' 23' Median 12' 12' 2' 4.5' 10'

Sidewalk Travel Lane Travel Lane Travel Lane Travel Lane Multi-use Path

- The current speed limit is 45 in this section of the corridor and that speed limit will be maintained in design.
- The design speed limit will be kept at 45.
- Lane widths are proposed to be 12-foot wide to comply with NCDOT requirements based on speed limits
- U-5845 project limits begin where the I-40 widening ends along Old NC 86

South Churton Street from Mayo Street to Orange Grove Road



5' 4.5' 2' 11' 11' 17.5' Median 11' 11' 2' 4.5' 10'

Sidewalk Travel Lane Travel Lane Travel Lane Travel Lane Multi-use Path

- The current speed limit is 35 in this section of the corridor and that speed limit will be maintained in design.
- Character of the corridor changes past Mayo Street
- Lane widths kept at 11-foot wide
- Project widening limits will end before the rail bridge.

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Intersection Improvements (Waterstone Drive)

- Maintaining existing movements
- Improving intersection geometry
- Adding marking of passenger vehicle u-turn opportunity
- Adding fully signalized pedestrian crossings and pavement marking

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Intersection Improvements (Cates Creek Pkwy/Lafayette Dr)

- New signalized intersection
- Passenger vehicle U-turns provided along S. Churton Street for North/South connectivity
- Signalized pedestrian crossings at each leg

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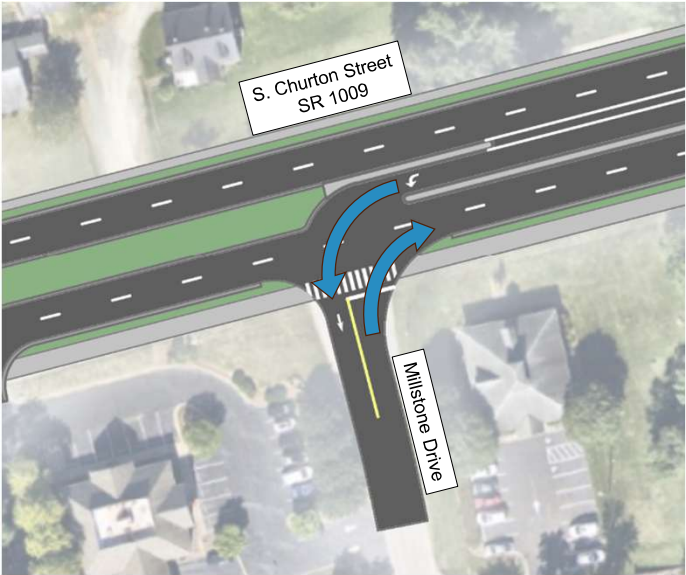
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Intersection Improvements (Millstone Dr)

• Directional Crossover provided for access to businesses

• Non-signalized intersection

• Hi-vis pedestrian crossing markings provided



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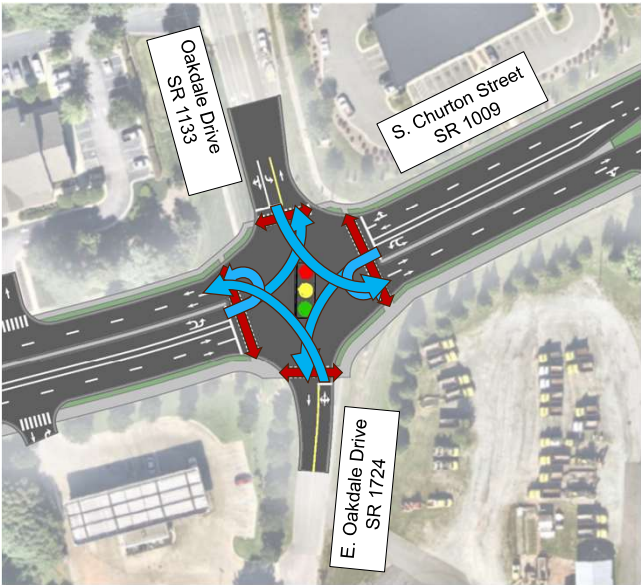
Intersection Improvements (Oakdale Dr/East Oakdale Dr)

• Maintaining existing movements

• Improving intersection geometry

• Adding passenger vehicle U-turn opportunities

• Adding fully signalized pedestrian crossings and pavement markings



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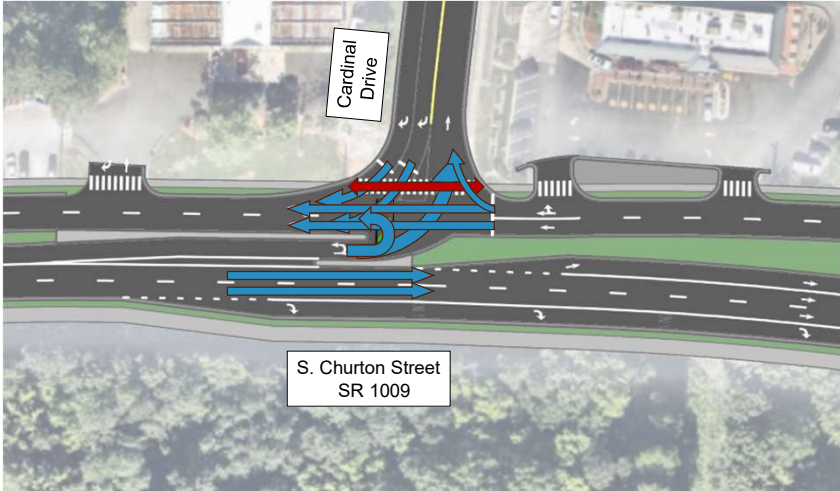
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Intersection Improvements (Cardinal Dr)

- Revising existing intersection to a signalized directional crossover.
- Required to accommodate traffic projections for the interchange
- Dual right turns out of Cardinal Drive.
- Signalized pedestrian crossing S. Churton Street provided just North at the interchange with refuge.



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Interchange Improvements at I-85

I-0305B and U-5845 Project Coordination

Interchange design by NCDOT STIP Project I-0305B

- Evaluated 3 interchange alternatives
 - Tight Diamond Interchange (TDI)
 - Diverging Diamond Interchange(DDI)
 - Single Point Urban Interchange (SPUI)
- Study Results
 - Tight Diamond Interchange Selected
 - Fewer property impacts
 - Safety of pedestrians and cyclist
 - Acceptable traffic operation



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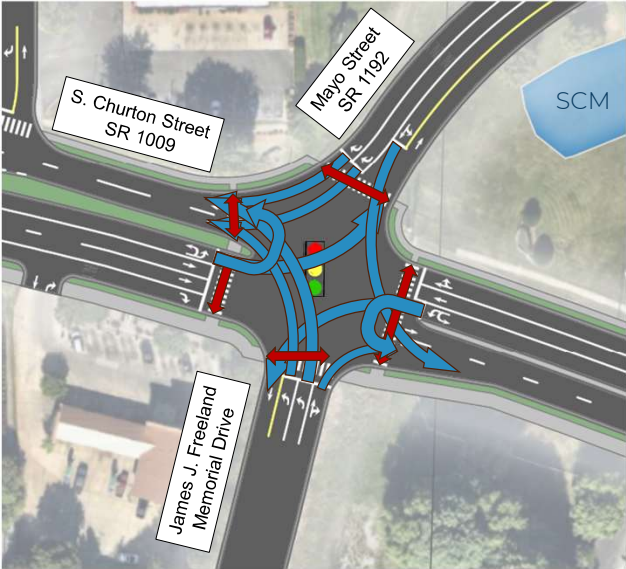
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Intersection Improvements (Mayo St/James J. Freeland Memorial Dr)

- Addition of traffic movements to the existing signal.
- Daniel Boone Redevelopment Traffic Impact Analysis requirement.
- Passenger U-turns provided along S. Churton Street.
- Fully Signalized pedestrian crossings.
- Pedestrian refuge provided for additional safety.
- Potential Stormwater Control Measure (SCM) Location along Mayo Street.



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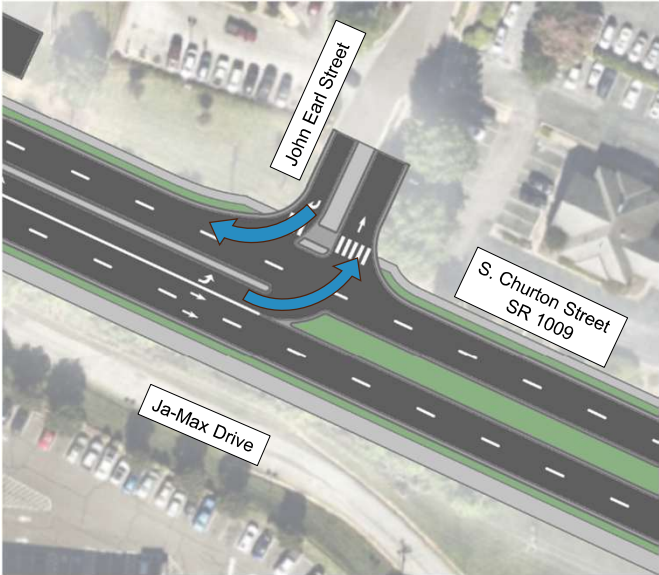
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Intersection Improvements (John Earl St)

- Directional Crossover provided for access to businesses
- Non-signalized intersection
- Hi-vis pedestrian crossing markings provided



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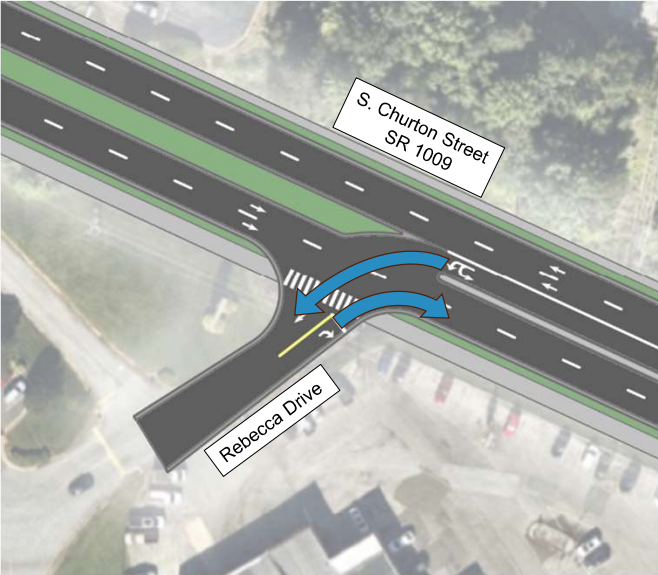
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Intersection Improvements (Rebecca Dr)

- Directional Crossover provided for access to businesses
- Non-signalized intersection
- Hi-vis pedestrian crossing markings provided

* Potential future signalized intersection discussed at this location pending future development plans



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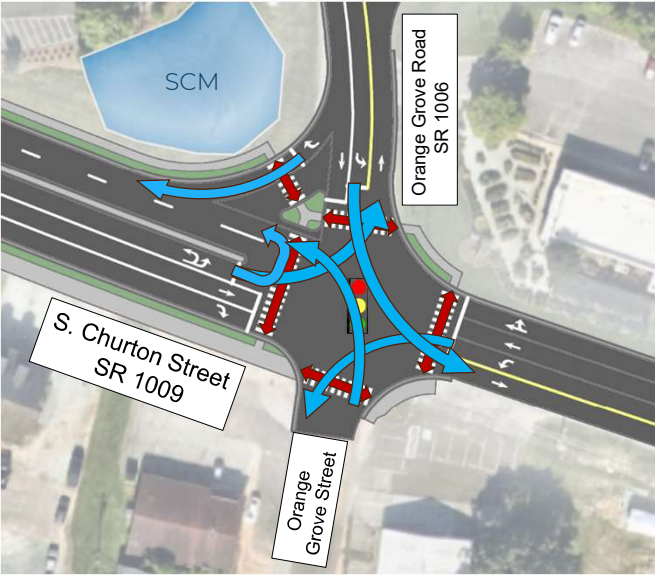
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Intersection Improvements (Orange Grove Rd)

- Addition of traffic movements to the existing signal.
- Tying to proposed Colins Ridge widening of Orange Grove Street.
- Passenger U-turns provided along S. Churton Street.
- Fully Signalized pedestrian crossings.
- Connectivity to future multimodal designs
 - Ridgwalk Greenway
 - Sidewalk along Orange Grove Street
- Pedestrian refuge provided for additional safety.
- Potential Stormwater Control Measure (SCM) Location



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Project Schedule



Project Funding



Milestone	Date
Federal Environmental Document	Summer 2027
Right of Way Acquisition Begins	Summer 2029
Utility Relocation Begins	Winter 2031
Construction Begins	Summer 2033

	Estimated Amount
Property Acquisition	\$19,700,000
Utility Relocation	\$7,200,000
Construction Costs	\$50,500,000
Total Cost	\$77,400,000

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