

W-5103 and W-5104 High Hazard Projects



**WILMINGTON MPO
TAC PRESENTATION
MARCH 30, 2010**

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Division 3**

Highway Safety Improvement Program (HSIP)



- HSIP was established by SAFETEA-LU as a core Federal-Aid program. The ultimate goal is to reduce the number of traffic crashes, injuries and fatalities by reducing the potential for and the severity of these incidents on the public roadways.
- HSIP using at least a 5-year crash data to identify potential hazardous locations, using several warrants for intersections (frontal impacts, last year increase, chronic crossing patterns, etc.) and section of roadway with minimal number of crashes and crashes per mile as compared to similar roadway sections.

HSIP Intersections Identified in 2005



US 421 (Carolina Beach Rd)

- Cathay Road (SR 1276)
- (SR 2501)
- Golden Road (SR 1524)
- St. Andrews Drive
(City Street)
- Horn Road (SR 1262)
- Silver Lake Road
(SR 1197)

NC 132 (South College Rd)

- Bragg (City Street)
- Chalmers (City Street)
- Holly Tree (City Street)

Project Timeline



- 2005 – HSIP identifies potential intersection locations. NCDOT decision to look at it as a corridor rather than individual projects. Investigated other intersections along corridor for safety and mobility improvements.
- May 2006 – NCDOT & Wilm MPO staff met to discuss potential treatments at locations along both corridors.
- May 2007 – South College Rd. (NC 132) and Carolina Beach Rd. (US 421) were submitted for potential funding High Hazard Elimination Funds.

High Hazard Elimination Funds



- High Hazard Elimination funding is a federally funded safety program. The projects are prioritized based on a benefit cost analysis from a statewide basis. Potential projects are selected by a Safety Oversight Committee prior to presentation to Board of Transportation.

W-5103 (US 421)

Net Annual Benefit: \$3,878,278.00

Cost: \$1,655,240.47

Benefit/Cost ratio: 7.15 (Avg. Annual Benefit/Total Annual Costs)

W-5104 (NC 132)

Net Annual Benefit: \$2,690,418.00

Cost: \$1,760,838.85

Benefit/Cost ratio: 5.46 (Avg. Annual Benefit/Total Annual Costs)

Project Timeline Continued



- November 2007 – W-5103 (US 421) and W-5104 (NC 132) include in 2008-2015 STIP Draft.
- June 2008 – Board of Transportation adopts 2008-2015 STIP.
- September 22, 2009 – W-5103 Citizens Information Workshop.
- February 2010 – W-5103 (US 421) was awarded to Cape Fear Paving. Date of Availability – March 1, 2010. Contract Completion Date – July 1, 2012.
- October 19, 2010 – W-5104 Citizens Information Workshop.
- November 2010 – W-5104 (NC 132) was awarded to Cape Fear Paving. Date of Availability – December 27, 2010. Contract Completion Date – December 1, 2011.

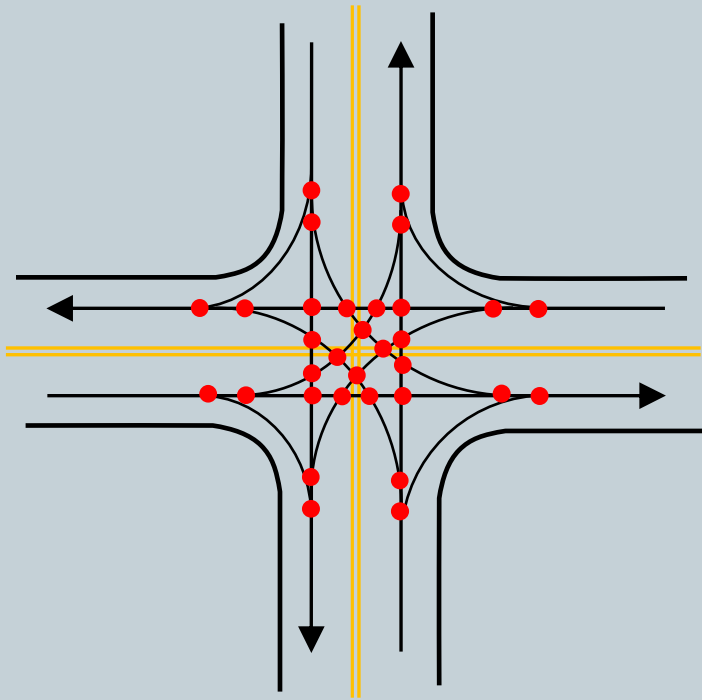
How is Safety Improved and Mobility Preserved?



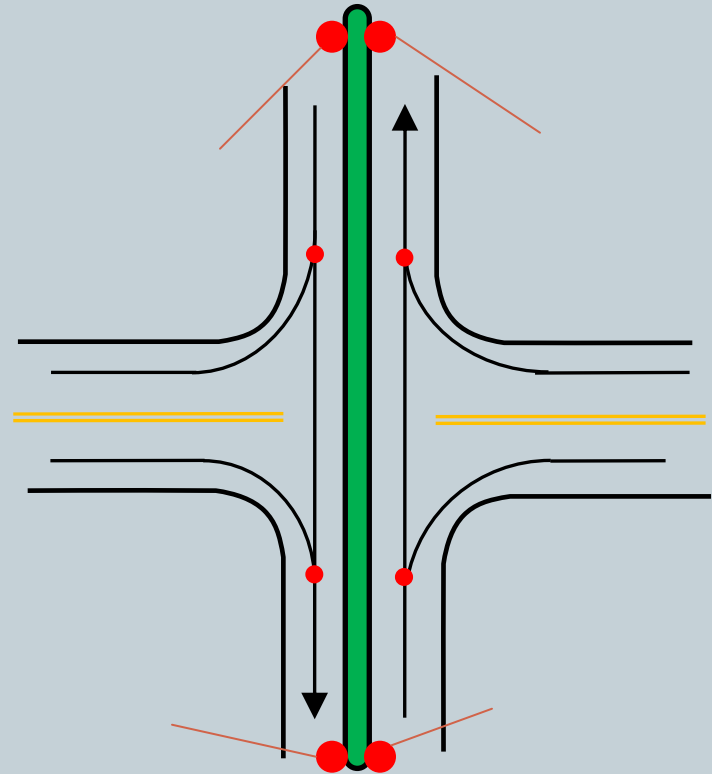
- Removing left turn movements within these corridors reduces the number of conflict points at each intersection.
- Reduced conflict points has shown reduction of current and potential crashes and a reduction in the severity of those crashes along similarly modified corridors.
- Reduction of median sections and eliminating left turn movements preserves and/or recaptures vehicle movement along the corridor and will minimize congestion. Corridors still need interconnectivity between businesses and subdivisions to provide movements removed.

Conflict Points

Full Movement Intersection – 32 Points



Median Closure w/ U-turn Movements – 6 Points



W-5103 (Carolina Beach Road)



Types of Improvements:

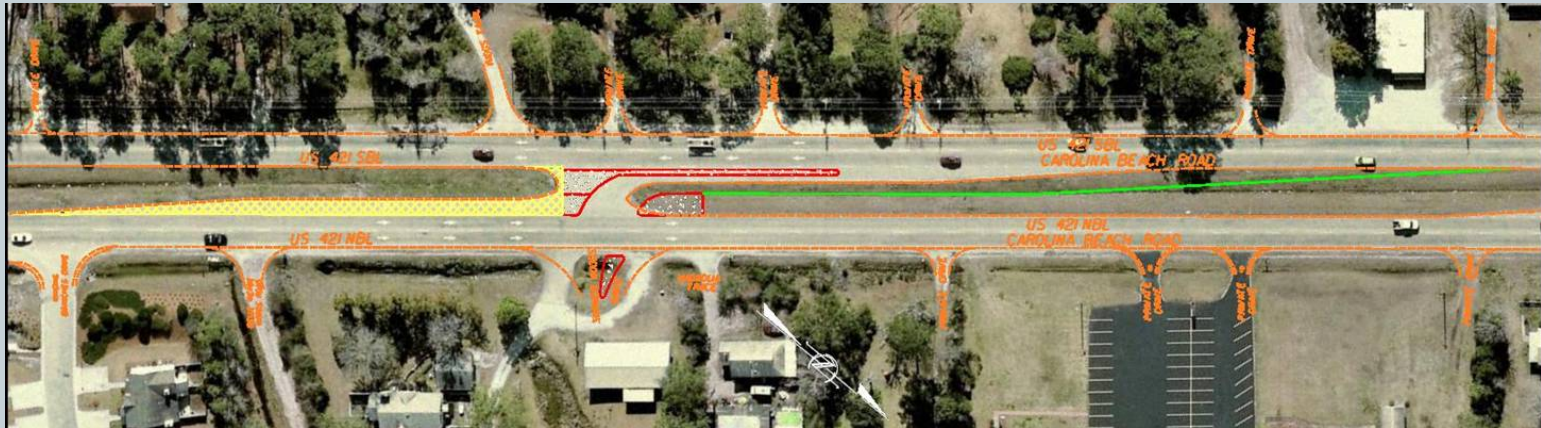
- Median Closures
- Directional Leftovers
- Directional Crossovers
- New Signals

Median Closure Locations on US 421 (Carolina Beach Road)



- Bozeman Road & Lehigh Road (SR 1258)
- Service Road (SR 2501) (Rucker Johns, Alford Seafood, Etc.)
- ~1000' north of Antionette Drive (SR 1247)
- Archmill Way (Private Street)

Directional Leftover Locations on US 421 (Carolina Beach Road)



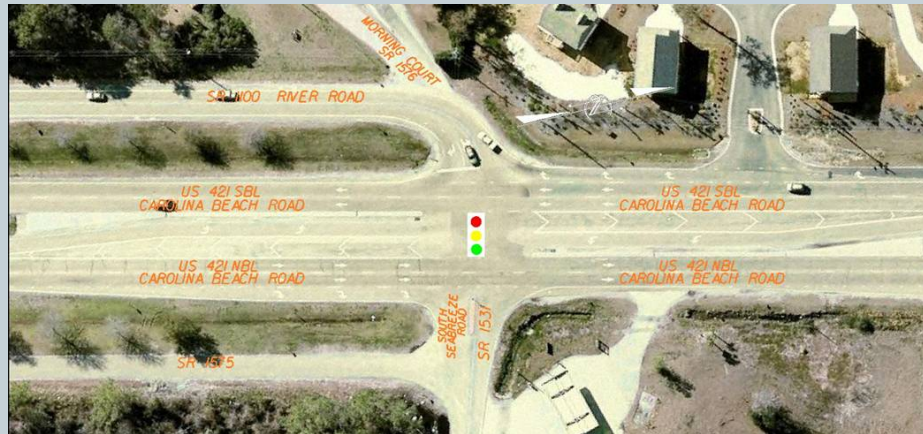
- St. Vincent Drive/Cape Fear Baptist Church (Private Drive)
- Horn Road (SR 1262)
- Summer Woods Drive (City Street)

Directional Crossover Locations on US 421 (Carolina Beach Road)



- Cobia Lane (City Street)
- Burnett Road (SR 1527)
- New crossover ~300' N of Randor Rd. & Inlet Acres Dr.
- Southern Charm (SR 2364)
- Immaculate Conception Catholic Church
- Myrtle Grove First Born Church
- ~500' N of Sago Bay Dr. (SR 2400)
- South Ridge Boulevard (City Street)
- New crossover ~500' S of Archill Way (City Street)
- St. Andrews Dr. (City Street)
- McCarley Boulevard (City Street) & Codington Elem

New Signal Locations on US 421 (Carolina Beach Road)



- River Road (SR 1100) & South Seabreeze Road (SR 1531)



- Silver Lake Road (SR 1197) & Shade Tree Lane (SR 2361)

W-5104 (South College Road)



Types of Improvements:

- Median Closures
- Directional Leftovers
- Directional Crossovers

Median Closure Locations on NC 132 (South College Road)



- Weybridge Lane (SR 1770)
- Tall Tree Lane (Private Street)
- Satara Drive (SR 2315)
- Chalmers Drive (City Street)
- Bentley Drive (City Street)

Directional Leftover Locations on NC 132 (South College Road)



- ~800' N of Monkey Junction (AutoZone Driveway)
- Hidden Valley Road (SR 1704)
- Lansdowne Road (SR 1592)
- ~1300' N of 17th Street Extension (Ace Hardw/Cust Home Furn)

Directional Crossover Locations on NC 132 (South College Road)



- Greenbriar Road (SR 1698) & Church
- Wedgefield Drive (SR 2538) & Abaco Lane/Tropic Ct (SR 2531)
- Mohican Trail (SR 1565) & Jasmine Cove Way (SR 1565)
- New crossover at Sub-Station (near Tesla Park Drive)
- Wickslow Drive (Governor's Square Apartments)
- Greenhowe Drive (City Street)

W-5103 and W-5104 High Hazard Projects



- Both projects were developed to reduce the number and severity of traffic crashes, injuries and fatalities on Carolina Beach Road and South College Road.
- Also by reduction of median sections and eliminating left turn movements preserves and/or recaptures vehicle movement (mobility) and will minimize congestion.

W-5103 and W-5104 High Hazard Projects



QUESTIONS