GREENVILLE AVENUE (US 11) CORRIDOR IMPROVEMENT STUDY

Public Information Meeting

October 23, 2019
VDOT STARS PROGRAM OVERVIEW

- Strategically Targeted Affordable Roadway Solutions
- Safety and Operational Focus
- Multi-modal Considerations (Pedestrian, Transit, Bicycles)
- Collaborative Study Team
- Funding Application Ready Recommendations (Smart Scale)
PURPOSE OF TODAY’S PUBLIC INFORMATION MEETING

- Share Identified Needs of the Corridor
- Have we Captured All Needs of Corridor Users?
- Present Corridor Recommendations for Public Feedback
- Incorporate Public Feedback to Finalize Study for Locality Consideration of Adoption
STUDY CORRIDOR

Legend
- Project Study Area
- Project Extension

GREENVILLE AVENUE (US 11) CORRIDOR IMPROVEMENT STUDY

<table>
<thead>
<tr>
<th>Intersection No.</th>
<th>Description</th>
<th>Control Type</th>
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<tbody>
<tr>
<td>1</td>
<td>US 11 at Rolling Thunder Lane</td>
<td>Unsignalized</td>
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<tr>
<td>2</td>
<td>US 11 at SB Route 262 Ramps</td>
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<td>3</td>
<td>US 11 at NB Route 262 Off-Ramp</td>
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<tr>
<td>4</td>
<td>US 11 Fronterr Drive</td>
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<tr>
<td>5</td>
<td>US 11 at Orchard Hill Circle</td>
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<tr>
<td>6</td>
<td>US 11 at Barterbrook Road</td>
<td>Signalized</td>
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<tr>
<td>7</td>
<td>US 11 at Statler Boulevard</td>
<td>Signalized</td>
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<tr>
<td>8</td>
<td>US 11 at Ritchie Boulevard</td>
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<tr>
<td>9</td>
<td>US 11 at Gay Street</td>
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<tr>
<td>10</td>
<td>US 11 at Hampton Street</td>
<td>Signalized</td>
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<tr>
<td>11</td>
<td>US 11 at Richmond Road</td>
<td>Signalized</td>
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<tr>
<td>12</td>
<td>US 11 at Commerce Road</td>
<td>Signalized</td>
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NEEDS OF THE CORRIDOR – VEHICLE OPERATIONS

- PM Peak Hour = Highest volumes in both directions
- Unacceptable conditions limited to the Richmond Ave and Commerce Rd intersections and individual movements at unsignalized intersections (Ritchie Blvd)
- Traffic volumes reduce considerably at Statler Blvd (Daily traffic = 16,000 to south, 10,000 to north)

- 215 total crashes
- 3/4th of the study segment has PSI
- Intersections within top 100 PSI:
  - US 11 at Commerce Road (Rank: 17)
  - US 11 at Barterbrook Road (Rank: 36)
  - US 11 at Richmond Avenue (Rank: 42)
- Angle collision - 47%
- 55% crashes – from 12 PM to 6 PM
- One crash related to fatality
- One crash involved pedestrian

Potential for Safety Improvement:
Greater the Difference, Higher the PSI Rank

Expected # of Crashes Based on Roadway Characteristics
Experienced # of Crashes
**Needs of the Corridor – Conflict Points**

- Corridor Wide Entrance Spacing Deficiency
- More Entrances Results in more Conflict Points / Crash Potential
- Reducing Conflict Point Can Result in Enhanced Safety / Better Corridor Progression

**VDOT Standards / Best Practices:**

565’ min. spacing between full access entrances along a Principal Arterial posted at 35-45 mph
NEEDS OF THE CORRIDOR – CONFLICT POINTS

- Conflict Points – Full Median Opening

- Diverging/Merging
- Crossing

32 TOTAL CONFLICT POINTS
NEEDS OF THE CORRIDOR – CONFLICT POINTS

- Conflict Points – Directional Median Opening (68% Reduction)

- Diverging/Merging
- Crossing

10 TOTAL CONFLICT POINTS
NEEDS OF THE CORRIDOR – CONFLICT POINTS

- Conflict Points – Right-In/Right-Out Driveway (88% reduction)
ADDITIONAL NEEDS OF THE CORRIDOR

- Improve existing non-motorized accommodations (ADA sidewalk requirements, improve transit stops)
- Expand the non-motorized network (bicycle facilities, pedestrian crossings)
- Aesthetic improvements (corridor serves as a city gateway)
RECOMMENDATION DEVELOPMENT CONSIDERATIONS

- Reducing Conflict Points (Focusing on Intersections)
- Maintaining Access along Corridor
- Accommodating all Users of the Corridor
- Opportunities for Corridor Gateway Treatments
CORRIDOR WIDE RECOMMENDATIONS

- Pedestrian Improvements
- Signal Operation Improvements
- Recommend Access Improvements as the Corridor Redevelops in the Future
- Transit Service Improvements (shelters, benches, adjustments to stop locations based on evaluation)
US 11 FROM BETSY BELL ROAD TO AMHERST ROAD
Issues and Proposed Improvements

Existing Issues
- Total of 13 crashes
- 1 pedestrian crash involving an injury
- 6 angle crashes due to closely spaced driveways
- Rear-end crashes at the Betsy Bell Road intersection
- Total of 10 crashes
- 6 injury crashes
- 69% rear-end crashes at US 11 northbound approach at the Amherst Road intersection

Existing Issue
Pedestrian Crossing at Midblock

Conceptual Design
- Install a 6500 median along US 11 between Betsy Bell Road and Driscoll Street.
- Install a marked crosswalk along US 11 with a pedestrian refuge in the median.
- Install rectangular rapid flashing beacon.

Proposed Improvement
- Remove stop bar at the northbound approach.
- Install Do Not Block the box pavement marking.
- Provide separate storage for southbound left turn.
- Add a sidewalk on the east side of US 11 between Amherst Road and Market Boulevard.
- Pavement marking changes have recently been implemented by the city.

Midblock Crosswalk with a Pedestrian Refuge and Rectangular Rapid Flashing Beacon

GREENVILLE AVENUE between STATLER BOULEVARD and RITCHIE BOULEVARD

- Provide New Sidewalk to complete gap in the existing Sidewalk Network
- New Pavement Markings to Improve Intersection Safety at Amherst Rd (COMPLETED)

GREENVILLE AVENUE

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US 11 - Greenville Avenue STARS Study
City of Staunton and Augusta County
Conceptual Rendering of Long-Term Recommendations (Road Diet)

GREENVILLE AVENUE between GAY STREET and HAMPTON STREET

Existing Typical Roadway Section

Proposed Road Diet Typical Roadway Section

- Provide Pedestrian Crosswalks and Signal Heads to existing Traffic Signal
- Provide Bi-Directional Buffered Bicycle Lanes on Greenville Ave (Ritchie Blvd to Richmond Rd)
- Provide southbound Greenville Ave Right Turn Lane onto Hampton St
- Provide new Median within Functional Areas of existing intersections to enhance safety
- Implement “Road Diet” 3-Lane Road Section (Ritchie Blvd to Richmond Rd)
- Provide ADA Compliant Curb Ramps and Crosswalks with upgrading pedestrian signage (RRFB to be considered at this crossing)

US 11 - Greenville Avenue STARS Study
City of Staunton and Augusta County
NEXT STEPS

- Review Public Feedback with Study Team
- Incorporate Public Comments and Finalize Study
- Present the completed Study to Staunton City Council and Augusta County Board of Supervisors for consideration of adoption
- Localities can utilize Study Recommendations to submit project applications for state funding consideration
For more information visit VDOT’s Study Page:
https://www.virginiadot.org/projects/staunton/greenville_avenue_corridor_improvement_study.asp

Contact Adam Campbell with additional questions and comments:
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