EASTERN SHORE RAIL TO TRAIL STUDY
Stakeholder Meeting

John Bolecek, AICP (VDOT)
Chris Daily, PE (VHB)
Meeting Agenda

Introductions

Study Progress
- Smart Scale Pre-Applications
- Field Work
- Cost Estimating

Project Schedule

Public Outreach
- MetroQuest Survey
- Public Meetings

Stakeholder Updates

Discussion Opportunity
Eastern Shore Trail Study

- Rail to Trail opportunity
  - Study requested by A-NPDC
- Eastern Shore Railroad Corridor
  - Former Bay Coast Railway
  - 49.1 miles from Cape Charles to Hallwood
  - Primarily flat and straight
  - 66’ right of way
- Connection between communities, businesses, state and federal parks, and other amenities
STUDY PROGRESS

Eastern Shore Rail to Trail Study
Study Goals

**Phase 1 Goals**

1) **Discuss known and potential considerations for the shared-use path development**
2) **Develop the Framework Document**
Technical Work Group Roles

- Accomack and Northampton Counties
  - Attend meetings, provide input, brief respective boards and towns, seek funding;

- A-NPDC
  - Secure locations for internal and public meetings, attend meetings, provide input, brief respective board and towns, seek funding, provide geospatial and other data;

- VDOT Hampton Roads
  - Attend meetings, provide input, provide data and opinions from VDOT District as needed; and

- Canonie Railroad
  - Provide survey and other data, utility information, environmental information, work with DHRT/VBF to seek STB extension, keep stakeholder group informed on STB actions, communicate decisions that affect the planning and engineering study like utilities decisions for broadband, natural gas, and sewer.
Study Work Group Roles

- **Dahlgren Heritage Rail Trail / Virginia Bicycle Federation**
  - Work with Canonie Railroad to file extension with STB, keep stakeholder group informed on STB actions;

- **Department of Environmental Quality**
  - Provide information on grants, provide available environmental data, answer questions about environmental issues;

- **Department of Rail and Public Transportation**
  - Handle state related questions regarding the Surface Transportation Board and other railroad issues, provide available data;

- **Hampton Roads Sanitation District**
  - Keep study team apprised on pipeline compatibility and provide any utility data as available;
  and

- **Department of Conservation and Recreation**
  - Coordinate on how this trail will connect to other regional trail systems, how the rail trail fits within the Virginia Outdoors Plan, and provide guidance on operations and maintenance.
Study Goals

Phase 2 Goals

1) Determine feasibility of a shared-use path within the abandoned railroad right of way
2) Develop a strategy to segment portions of the shared-use path and optimize funding opportunities
3) Develop one or more SMART SCALE applications for Round 4
4) Evaluate alternative management structures for the new shared-use path
5) Determine cost estimates for shared-use path construction
Task Progress

Existing Conditions Analysis

Public Outreach

Final Cost Estimation

Technical Report

Identify Alternative Alignments

Final Alignment and Phasing

Implementation Alternatives

Online Study Map
Data Collection Items

- **Environmental Data**
  - Wetlands
  - Topography

- **Cultural Data**
  - Park and Recreation Facilities
    - Historic Assets
  - Population Data
  - Conservation Lands

- **Traffic Data**
  - Road Crossing Locations
  - Speed Limit and AADT of Road Crossing Locations

- **Utility Data**
  - Known Utility Locations
  - Future Utility Possibilities

- **Land Use Data**
  - Right of Way
  - Surrounding Land Uses
  - Future Developments
  - Pedestrian Generators
  - Possible Development Locations
  - Transit Stop Locations and Ridership
  - School and Residential Locations

- **Other studies**
  - Comprehensive Plans
  - Bike/Pedestrian Plans
  - Previous studies in the vicinity
  - Previous plans within the vicinity to verify ROW and Utilities
Field Work – Drone Photos
Field Work – On-Ground
Distance to Route 13

- Between 18’ and 70’ adjacent to the roadway, typically 30’+
Road Crossings

• **56 Crossings**
  • 5 at signalized intersections
  • **Typically 2-lane crossings**
    • One 4-lane crossing
    • Three 3-lane crossings
  • **Typically low volume**
    • Route 13 crossing – 13,000 vehicles/day
    • All other crossings < 2,500 vehicles/day
  • **Range of speeds**
    • Typically controlled approaches
    • Few midblock crossings
Road Crossing Opportunities

Table 2. Recommendations for Considering Marked Crosswalks and Other Needed Pedestrian Improvements Across Uncontrolled Approaches

<table>
<thead>
<tr>
<th>Roadway Configuration</th>
<th>1,000 to 9,999 VPD</th>
<th>10,000 to 12,999 VPD</th>
<th>13,000 to 15,999 VPD</th>
<th>More than 16,000 VPD</th>
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</thead>
<tbody>
<tr>
<td>2 Lanes (2 lanes oneway street or bi-lane oneway street)</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<tr>
<td>3 Lanes with median OR 2 Lanes with median island</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<td>4 Lanes (center turn lane)</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<td>5 Lanes (two-way street with oneway median)</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<td>6 Lanes (two-way street with oneway median)</td>
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<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<tr>
<td>7 Lanes (center turn lane)</td>
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<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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<td>8 Lanes (two-way street with oneway median)</td>
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<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
<td>A/B/B/A/B/A/B/B/B/B/B/C</td>
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Source: Guidance for Installation of Pedestrian Crosswalks on Michigan State Trunkline Highways (Michigan Department of Transportation, 2014)

Table 1. Application of pedestrian crash countermeasures by roadway feature.

<table>
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<tr>
<th>Posted Speed Limit and AADT</th>
<th>2 Lanes (1 lane in each direction)</th>
<th>3 Lanes with raised median (1 lane in each direction)</th>
<th>4 Lanes with raised median (1 lane in each direction with a two-way left-turn lane)</th>
<th>4 Lanes with raised median (2 or more lanes in each direction)</th>
</tr>
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<tr>
<td>AADT &lt;9,000</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<td>35 mph</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>40 mph</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<td>45 mph</td>
<td>6</td>
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Given the set of conditions in a cell,
- Signifies that the countermeasure is a candidate treatment at a marked and uncontrolled crossing location.
- Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked and uncontrolled crossing location.
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- Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked and uncontrolled crossing location.

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1. High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2. Raised crosswalk
3. Advance Yield Here To (Stop Here For) Pedestrians signs and yield (stop) line
4. In-Street Pedestrian Crossing sign
5. Curb extension
6. Pedestrian refuge island
7. Rectangular Rapid-Flash Beacon (RRFB)**
8. Road Diet
9. Pedestrian Hybrid Beacon (PHB)**
Road Crossing Opportunities

High-visibility crosswalk (includes continental crosswalks)
Marked crosswalks that use high-visibility surface markings to indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians. Crosswalks are often installed at signalized intersections and other selected locations with appropriate levels of pedestrian and vehicle traffic.

CRF: 19% to 40%
Situation: Visibility
MUTCD Reference: VA MUTCD 2011 Section 3B.1B

Rectangular Rapid Flashing Beacon (RRFB)
The RRFB is a high-frequency blinking pedestrian warning sign that is used in tandem with a pedestrian cross sign. The flashing pattern can be activated with pushbuttons or automated pedestrian detection (e.g., video or infrared), and should be unlit when not activated.

CRF: 47%
Situation: Midblock crossings
MUTCD Reference: IA-21

Pedestrian Hybrid Beacon (PHB)
A beacon that is used to warn and control traffic at unsignalized marked crosswalks. Key design components of PHBs include: overhead beacons with circular yellow signal indication centered below two horizontally aligned circular red signals facing both directions on the major street; overhead signs labeled “CROSSWALK STOP ON RED” to indicate that the location is associated with a pedestrian crosswalk; a marked crosswalk; countdown pedestrian signal heads; and pedestrian pushbuttons.

CRF: 18% to 37%
Situation: Midblock crossings
MUTCD Reference: MUTCD Section 4F

Pedestrian warning signs
Highly visible signs that indicate the presence of pedestrian crossings to motorists. Pedestrian warning signs should be used in combination with marked crosswalks at signalized and unsignalized crosswalk locations.

CRF: 4% to 15%
Situation: Awareness of crossing
MUTCD Reference: VA MUTCD 2011 Section 2C.50 and 7B

Pedestrian countdown signal
A pedestrian signal head that begins a visible and potentially audible countdown at the beginning of the walk phase or at the beginning of the clearance (i.e., DON'T WALK) interval. The incorporation of a pedestrian countdown signal provides pedestrians with information that has been demonstrated to reduce pedestrian crossings when only a few seconds remain.

CRF: 55% to 70%
Situation: Signalized crossings
MUTCD Reference: MUTCD Section 4E

Transverse rumble strips
A pavement treatment for motorists where either grooves into the surface or strips of material above the surface alert drivers of an area to reduce speed. A vehicle passing over the rumble strips produces noise and vibration and alerts the driver to a potentially hazardous situation.

CRF: 24%
Situation: Speed reduction
MUTCD Reference: MUTCD Section 3J-02
Task Progress

Existing Conditions Analysis

Public Outreach

Final Cost Estimation

Technical Report

Identify Alternative Alignments

Final Alignment and Phasing

Implementation Alternatives

Online Study Map

Virginia Department of Transportation
SMART SCALE Pre-Applications

- 3 Submitted
  - Cape Charles
  - Onley
  - Accomack
- Under Review
  - Full Applications Due August 3, 2020
Town of Cape Charles

- Connects Mason Avenue to Food Lion Shopping Center
  - 3.1 Miles
- Park and Ride Lot
- Ped/Bike Upgrades on Mason Avenue
- Preliminary Cost Estimate
  - $2,522,000
  - Submitted as $3,049,200
Town of Onley

- Madison Avenue to Savage Street
  - 1.5 Miles
- Uses existing VDOT Right of Way
- Pedestrian Upgrades to the Signalize Intersections
- Preliminary Cost Estimate
  - $1,141,000
  - Submitted as $1,379,000
Accomack County

• Eastern Shore Community College to Bloxom
  • 15.5 Miles
• Uses existing VDOT Right of Way
• Pedestrian Upgrades to the Signalized Intersections
• Preliminary Cost Estimate
  • $ 11,794,000
  • Submitted as $ 14,247,800
Preliminary Cost Estimates

- Compared Estimates from Previous Rail to Trail Projects
- Performed Preliminary Per-Mile Cost Estimate Build Up
  - One estimate assumes construction on existing rail bed
  - One estimate assumes construction of new trail off the rail bed
Task Progress

- Developed draft Metro Quest online survey
- Virtual public meeting
Future Tasks

- Determine the final alignment of the trail
  - Including stub locations and trail heads
  - Develop guidelines for amenity placement
Future Tasks

- **Refine existing per-mile cost developed**
  - Determine preliminary engineering, construction, utility, and maintenance costs
  - Develop cost estimate for additional included treatments, such as road crossings

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**Existing Conditions Analysis**

**Public Outreach**

**Final Cost Estimation**

**Technical Report**

- **Identify Alternative Alignments**
- **Final Alignment and Phasing**
- **Implementation Alternatives**
- **Online Study Map**
Future Tasks

- Identify considerations for management agencies
- Identify potential funding sources
  - Submit 3 full SMART SCALE Applications if Pre-Applications are accepted.
Future Tasks

- Technical Report
- Concept Sheets for Recommended Alignment
- Typical Sections
- Map Segment Summary Packages

Existing Conditions Analysis

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Online Study Map

Virginia Department of Transportation
Example Deliverables

Birthplace of America Trail Study
A Study to Connect the Virginia Capital Trail to the Hampton Roads Region

Adopted by the HRTPO Board on July 20, 2017 (Updated on October 10, 2017)

Technical Report
Example Deliverables

Concept Sheets

Ashland to Petersburg Trail Study
Preferred Corridor
Sheet 46 of 54

Virginia Department of Transportation
Ashland to Petersburg Trail Study
Project Number: 8014414.121, VCP: 14674
Example Deliverables

Typical Sections

Ashland to Petersburg Trail Study
Typical Sections A, B, C, D

Virginia Department of Transportation
Ashland to Petersburg Trail Study
Project Number: 000-601-001, VPO-114714

Notes:
1. Clearing can be 2.5 m. within right-of-way.
2. A design waiver will be required when the width of the SLIP is located on a structure is less than 108, the buffer width is less than 98, and/or the clearance to lateral obstructions is less than 98.
3. A design waiver will be required when the buffer width is less than 98.

VDOT Virginia Department of Transportation
Example Deliverables

Map Segment Summary Package
Future Tasks

- GIS-Based interactive study map
- Showing alignment, phasing, and cost estimate

Existing Conditions Analysis

Public Outreach

Final Cost Estimation

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Identify Alternative Alignments

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Online Study Map

Virginia Department of Transportation
PROJECT SCHEDULE

Eastern Shore Rail to Trail Study
Proposed Tasks and Schedule

- **Existing Conditions Analysis**: May 2020
- **Public Outreach**: May 2020
- **Identify Alternative Alignments**: June 2020
- **Final Alignment and Phasing**: July 2020
- **Final Cost Estimation**: July 2020
- **Implementation Alternatives**: August 2020
- **Technical Report**: October 2020
- **Online Study Map**: October 2020

**Stakeholder Meetings**:
- May 2020
- July 2020
- October 2020

Virginia Department of Transportation
## Proposed Tasks and Schedule

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<td>Task 2.1 - Existing Conditions Analysis</td>
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<td>Task 2.4 - Final Alignment and Phasing</td>
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<td>Task 2.6 - Phasing and Implementation of Alternatives</td>
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Project: Eastern Shore Rail to Trail Study  
Date: Mon 4/6/20
PUBLIC OUTREACH

Eastern Shore Rail to Trail Study
Task Progress

- Existing Conditions Analysis
- Public Outreach
- Final Cost Estimation
- Technical Report
- Identify Alternative Alignments
- Final Alignment and Phasing
- Implementation Alternatives
- Online Study Map
MetroQuest Survey

Eastern Shore Rail Trail Study

Provide Your Input!
The Eastern Shore Rail to Trail Study will assess the feasibility of converting the former Bay Coast Railroad into a shared use path connecting communities along the Eastern Shore of Virginia.

Study Area Map

The study area extends approximately 50 miles between the Town of Cape Charles and the Town of Hallwood on Virginia’s Eastern Shore.
STAKEHOLDER UPDATES

Eastern Shore Rail to Trail Study
Stakeholders

Northampton County
Accomack County
Accomack-Northampton Planning District Commission
Accomack-Northampton Transportation District Commission
Town of Cape Charles
Virginia Commonwealth Transportation Board, At-Large Rural
Canonie Atlantic Company
Virginia Bicycling Federation

The Nature Conservancy
Virginia Department of Conservation and Recreation
Virginia Department of Transportation
U.S. Fish and Wildlife Service
Virginia Department of Environmental Quality
Hampton Roads Sanitation District
Virginia Department of Rail and Public Transportation
Dahlgren Railroad Heritage Trail Alliance
DISCUSSION OPPORTUNITY

Eastern Shore Rail to Trail Study
Utility Considerations

- Broadband (Existing in some parts)
- Natural Gas (Future Possibility)
- Sewer (Planned – HRSD)
  - Should not preclude co-alignment within 66’ ROW

- Benefits of Shared ROW
  - Efficient use of ROW
  - Makes utility space more functional and visually attractive
  - Uninterrupted access to utility for maintenance
  - Simplifies easement coordination to one agency, not multiple property owners

Virginia Department of Transportation
https://www.traillink.com/trail/a-train-rail-trail/
https://www.atlasobscura.com
Next Steps

- MetroQuest Survey Deployment
- Preliminary Environmental
- Sketch-Level Concept and Planning-Level Cost
- Preparing for Public Meeting
Contact Information

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(571) 389-8121