Route 50 Traffic Calming

- Rural and Village Landscape
  - Project Needs: Traffic calming in Historic Area
  - Location: Loudoun and Fauquier County, Virginia
  - Size: 20-mile corridor with 3 historic villages
  - Cost: 41.6 million

- Status:
  - Upperville - Bidding Phase
  - Gilberts Corner - Utility (Detail/Build)
  - Aldie - Utility
  - All others through Preliminary Design

- Main CSS Elements: just insert traffic calming measures into historic villages and landscapes
CSS Approach

• Carefully inserting traffic calming measures into an historic village context
• Start with existing condition as the tie in point and adapt the design to fit
• Can’t apply a “typical section”
CSS Approach

• What makes this a CSS project as opposed to the traditional format?
CSS Approach

• Carefully insert traffic calming measures with minimal disruption to existing historic fabric of villages
Historic Sites and Districts

Upperville Historic District
Middleburg Historic District
Alfred Historic District
Johnston-Mays Barry

Legend:
- Historic Districts
- Civil War Battle Sites
- Historic Structures

Scale: 1 mile
Mercer's Home

Aldie was the home of Charles Fenton Mercer (born 1776, died 1856), liberal statesman. Mercer was a congressman (1817-1839) and a member of the Virginia constitutional convention of 1829-30, in which he advocated manhood suffrage. His attempt in 1817 to establish a free school system in Virginia nearly succeeded. He was a leading advocate of the colonization of free blacks in Liberia.
The Community Vision

The citizens defined a vision for the future of the Rural Route 50 Corridor as:

*a scenic, unique, rural community in an historical, agricultural, quiet, and natural setting.*

This Vision Statement was developed as a means to guide and assess land use planning and transportation decisions for the next 100 years, with the idea that any proposal for change should be measured against it, or in terms of its potential to fulfill, or destroy, the vision.
• Stakeholders
  – Did the initial vision and design concept with Ian Lockwood
A TRAFFIC CALMING PLAN FOR VIRGINIA'S RURAL ROUTE 50 CORRIDOR

Fauquier and Loudoun Counties
Including Aldie, Middleburg and Upperville

ROUTE 50 CORRIDOR COALITION / 1996
Zone 3: Enter Town
• 10’ travel lanes
• 2’ paver at edge of travel lane
• “Streetscape” elements added

Zone 2: Announce Town
• 11’ travel lanes
• 1’ paver at edge of travel lane
• Rural landscape treatment

Zone 1: Reduce Speeds
• 12’ travel lanes
• Textured pavement
• Rural landscape treatment
Community Entrances
Route 50
Traffic Calming Measures
Transportation Need

• Need to be fulfilled
Compatibility with Historic Context

Major issues:
• Design Criteria and Guidelines
• Matching edge conditions
• Materials - reducing visual contrast

Overcoming obstacles:
Walk through with VDOT staff, designers, construction managers, and Citizen Task Force members
Matching Edge Conditions
Aldie Stone Wall
Recommended protection measures for existing stone wall at Sta. 983+41 Left to Sta. 983+89 Left

Top: Sta. 983+75
Bottom: Sta. 983+50

scale: 1" = 10'

Note: Sketches at left based on cross sections received by LKLA in Dec 2004 from Lochner
Materials

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<thead>
<tr>
<th>Material</th>
<th>Requirements</th>
<th>Ideas</th>
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<tr>
<td>CURBS (FLUSH &amp; BARRIER) &amp; VALLEY GUTTERS</td>
<td>- New concrete curb (flush &amp; barrier) should look aged - Options to cut and install look of newly poured concrete: 1. Use exposed aggregate concrete (minimally exposed) 2. Use color additive in concrete pigment or emulsified carbon black 3. Use clear curing compound</td>
<td>B CURBS &amp; GUTTERS The</td>
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<tr>
<td>SIDEWALKS</td>
<td>- Color &amp; texture to be in keeping with existing sidewalks</td>
<td>C SIDEWALKS Material Options: 1. Concrete a. Pigment &amp; texture to simulate green stone b. Scan design plans to form stamp patterns (see scoring patterns 1 and 2 at right) c. Sandblast finish for color appearance d. Coordinate pigment with concrete pavers to ensure harmonious color blend 2. Brick</td>
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<tr>
<td>DETECTABLE PAVERS</td>
<td>- Concrete pavers - Heritage Holland Stone ADA detectable paver - Color must contrast crosswalk and sidewalks - Detectable warning domes must meet ADA requirements - Use regional manufacturer such as Pavestone, Inc. in Hagerstown, MD (concrete materials will be closer to what’s found in project area)</td>
<td>D DETECTABLE PAVERS Paver: Detectable Holland Stone Color: Charcoal Pattern: Harrington or Basketweave</td>
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<tr>
<td>TAPERS</td>
<td>- Rough texture for visual and audible contrast to asphalt road surface</td>
<td>E TAPERS Option 1 Concrete Pavers: Holland Stone, Heritage Series Charcoal &amp; Charcoal color blend Color: Charcoal Pattern: Running bond Option 2 Textured resin based compound (not enforceable) Texture &amp; color TBD (See Tapers row E, Option 2 above for images)</td>
</tr>
<tr>
<td>WARNING STRIPS</td>
<td>- Color &amp; texture to contrast asphalt road surface</td>
<td>F WARNING STRIPS Option 1 Concrete Pavers: Holland Stone, Heritage Series Color: Buff or Dwarler (select for best contrast with asphalt road) Pattern: Running Bond Perpendicular to Direction of Travel</td>
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<td><strong>STRUCTURES</strong></td>
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| **BRICK ENTRANCE PIERS** | • Brick Bond to match existing brick structures  
• Select mix of brick colors in proportions to match existing brick structures | ![BRICK ENTRANCE PIERS](image) |
| **ENTRANCE SIGNS** | • Incorporate new Aldie signs into entrance features | ![ENTRANCE SIGNS](image) |
| **STONE ENTRANCE WALLS** | • Material: Field stone or quarried stone (not cut) to match existing stone structures in village  
• Use regional or local stone supplier to more closely match local field stone and greenstone geology  
• Dry stack or mortared construction (not too “perfect”) | ![STONE ENTRANCE PIERS & ENTRANCE WALLS](image) |
| **FIXTURES** | | |
| **BOLLARDS** | • Design to reflect village character  
• Black in color  
• Use breakaway mounting when in clearance  
(breakaway footing detail to be determined)  
• Design options:  
  1. Wooden bollard to resemble fence posts  
  2. Steel or cast iron bollard (like Maglin 650 at right); can be customized to match light post | ![BOLLARDS](image) |
| **LIGHT FIXTURES** | • Simple, clean lines for luminaire and pole  
• Luminaire and posts to be black in color  
• Posts to be steel or cast iron  
• Luminaire must be “cut-off” fixture to minimize night sky pollution  
• Avoid over-lighting to maintain village character  
• Use approximately 10’ pole height to maintain village feel | ![LIGHT FIXTURES](image) |
Compatibility with Human Environment

- Transition from a rural highway to a village street
- Preservation of rural character
- Pedestrian safety
- Preservation of yards, sidewalks, entrances, etc.
Transportation Success

- Gilberts Corner triad - roundabouts to improve level of service at a fraction of the cost
Gilberts Corner

NEW MOUNTAIN ROAD & ROUTE 15

Tree symbol key
- Existing tree
- Proposed tree

Plan view of New Mountain Road intersection

Plan view of Route 15 intersection

View of Route 50 at the Route 15 intersection looking east

Route 50 and Route 15 network

At New Mountain Road looking east
Facility as a Community Asset

• Importance of Facility to Community
  – Primary travel route for visitors to the Mosby Heritage Area
  – Village character important to overall quality of life
Accomplishments & Shortcomings

• Community was driving factor in initiating the project, funding the project, and developing the design
• VDOT staff/project manager supportive in Preliminary Design
• When project manager was promoted, details began to fall apart and momentum was lost
CSS Bottomline

• Ten year battle with VDOT
• Project success rests with ability of VDOT and construction manager to follow through with agreements
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