



Virginia's Route 50 Traffic Calming Project

**A Study in Context-Sensitive
Enhancement**

Fauquier and Loudoun Counties, VA

**The Virginia Department of
Transportation**

H.W. Lochner, Inc.

Glatting Jackson Kercher

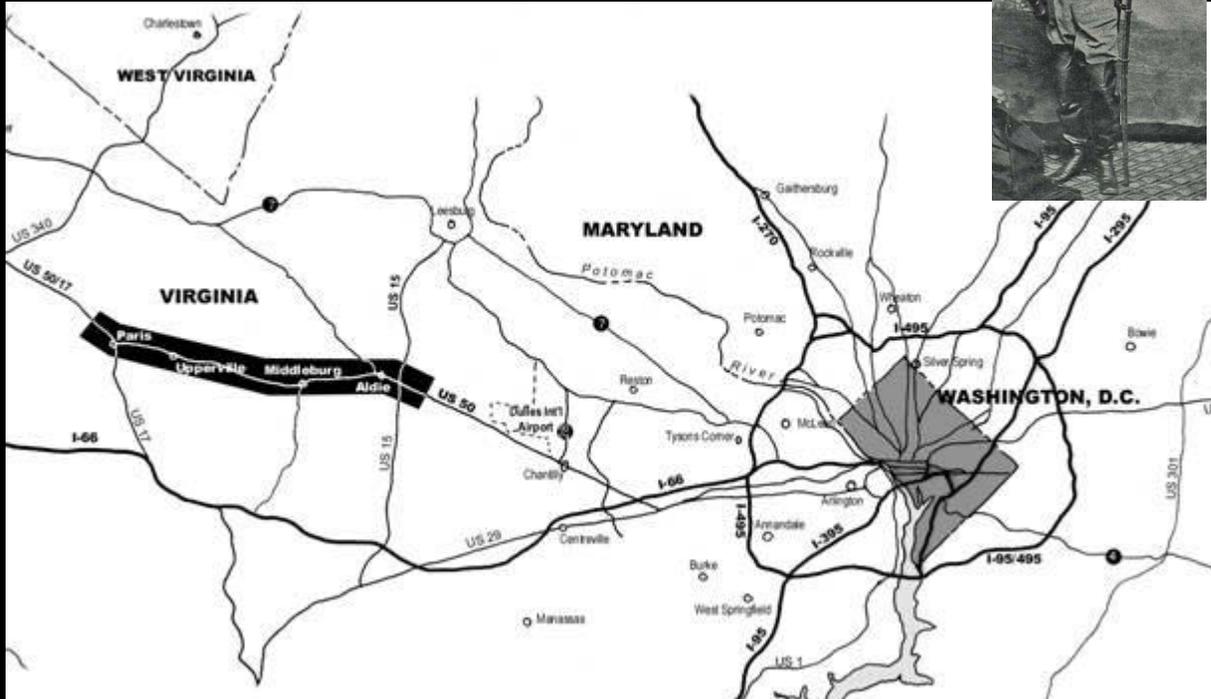
Anglin Lopez Rinehart, Inc.

Lardner/Klein Landscape Architects

Maral S. Kalbian, Architectural
Historian

Alternative Street Design

Regional Context



Preserving the character of the area while responsibly accommodating travel demands requires a unique approach and set of solutions.

- Located west of Washington D.C. Metropolitan Area
- Commuters from areas west of study corridor continue to increase peak-hour volumes along Route 50.

Project History



Virginia Department of Transportation

We Keep Virginia Moving

- Countywide Comprehensive Plan calls for widening
- VDOT developed a preliminary design to widen Route 50 to four lanes in the late 1970's
- Bypasses proposed around Aldie & Middleburg.
- Widening plans updated in early 1990's

Project History

Vision Statement:
A scenic, unique, rural
community in an historical,
agricultural, quiet, and
natural setting.

1996: The Route 50
Corridor Coalition
developed a vision for the
corridor as well as a
preliminary traffic calming
plan for Aldie, Middleburg,
and Upperville.



Project History

The Route 50 Corridor Coalition researched Traffic Calming and raised funds to hire Ian Lockwood.



Workshops were held in three communities, with participation by more than 700 citizens.

Project History



Virginia Department of Transportation

We Keep Virginia Moving

1998: Corridor plan used to secure funding for design & construction of rural traffic calming demonstration project.

- \$13 million in TEA-21 Federal Demonstration Funds
- \$3.25 million in matching VDOT funding

Public Involvement

Unprecedented level of public involvement

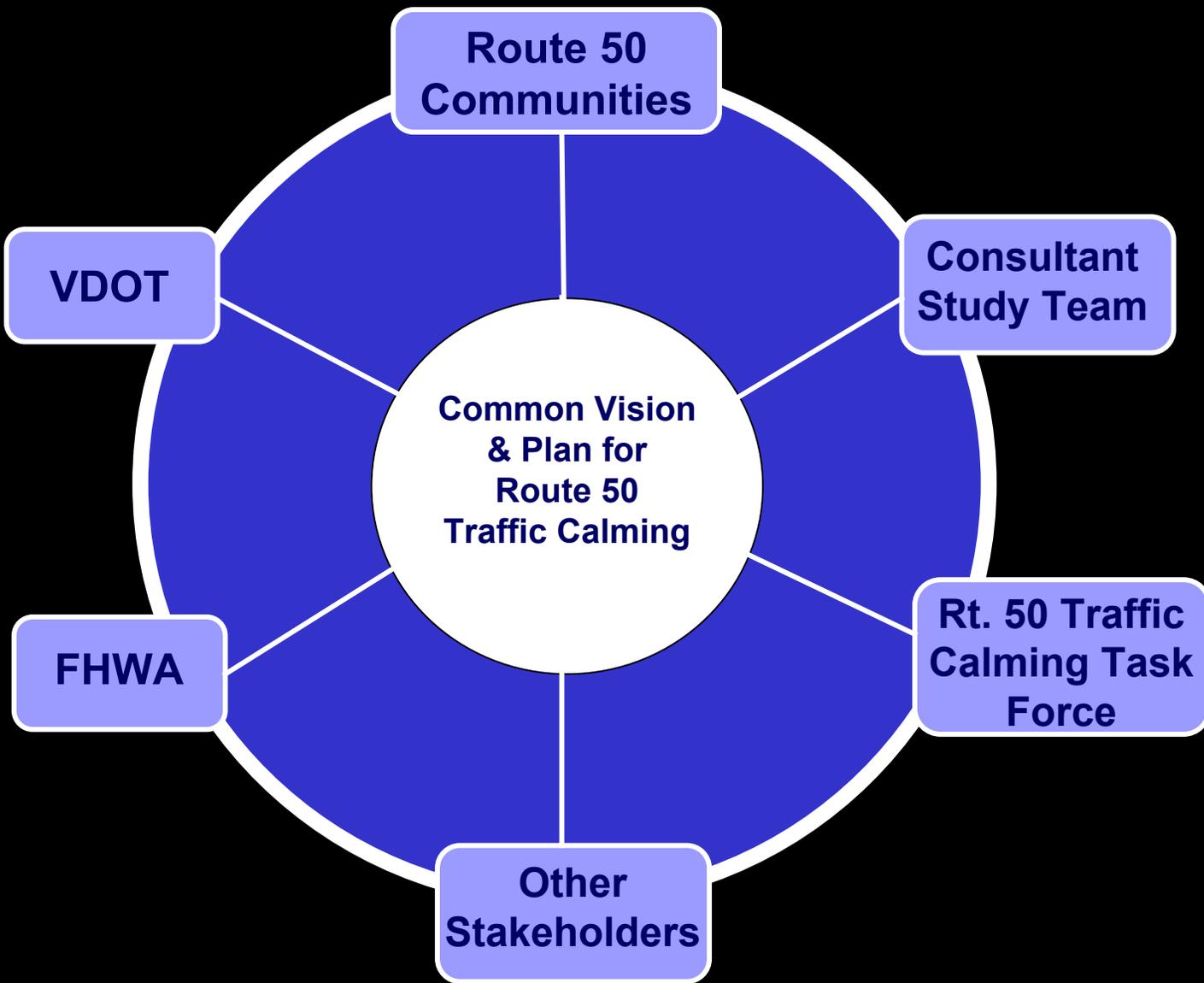
- Task Force appointed by Virginia Secretary of Transportation permitted to participate in consultant procurement
- Task Force involved in developing scope of work
- Task Force involved in selection process for the consultant design team

Public Involvement



- Design charrettes held
- Stakeholder meetings conducted
- Citizen Involvement meeting held
- Use of renderings
- Monthly Task Force Meetings

Public Involvement



Project Purpose



- Enhance motorist and pedestrian safety through traffic calming measures
- Preserve the rural and historical character of the roadway and surroundings

What is Traffic Calming?



- The redesign or reconstruction of roadways and roadsides to physically and mentally encourage "calmer" (slower) traffic speeds.
- Goal: To improve pedestrian & motorist safety
- Can be tied to corridor preservation & enhancements.

The Context

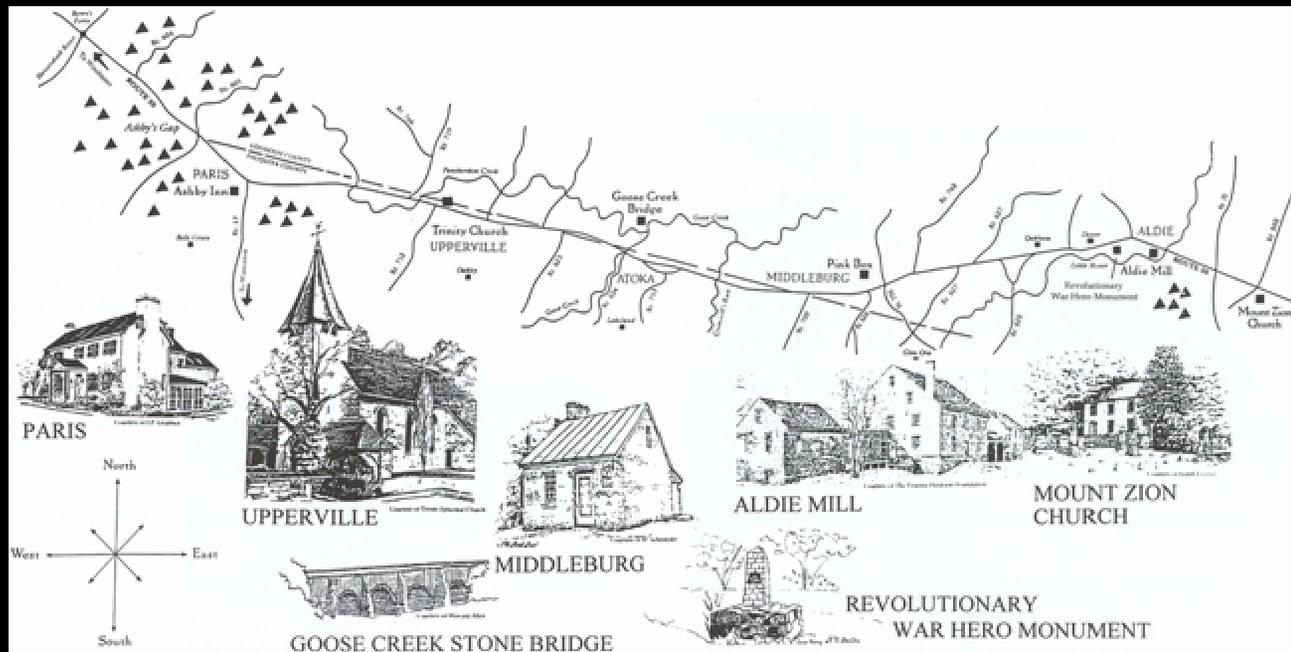


Figure published in *A Traffic Calming Plan for Virginia's Rural Route 50 Corridor*

Virginia's Route 50 Corridor is a vibrant agricultural and equestrian community and a living link to this nation's past.

The Context



Upperville



Aldie



Middleburg

Historic Sites and Districts



The Upperville Colt and Horse Show
Is America's oldest, dating to 1853

The Aldie Mill in one of the historic
districts



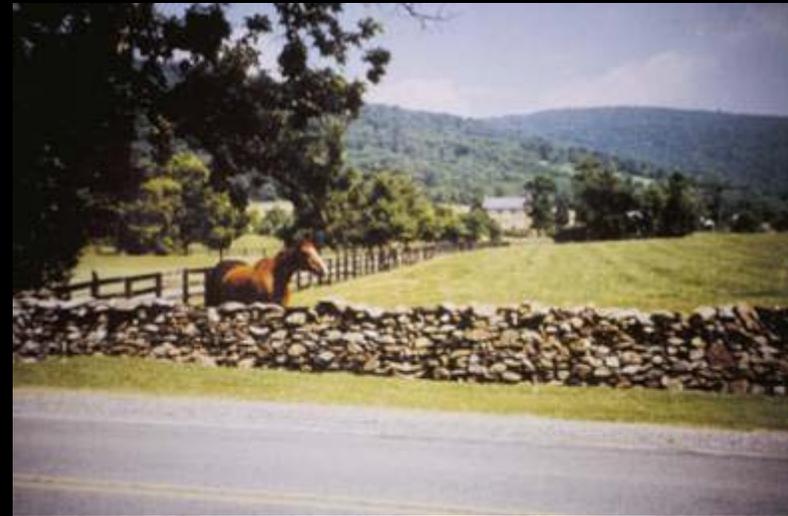
The Context



Historic Sites



Farms



Equestrian Facilities

Historic Sites & Districts



- Route 50--instrumental in nation's westward expansion
- important travelway during Civil War--site of battles know collectively as the Prelude to Gettysburg
- historic preservation a major concern of citizens

Roadway Characteristics

Project Length: +/- 20 miles

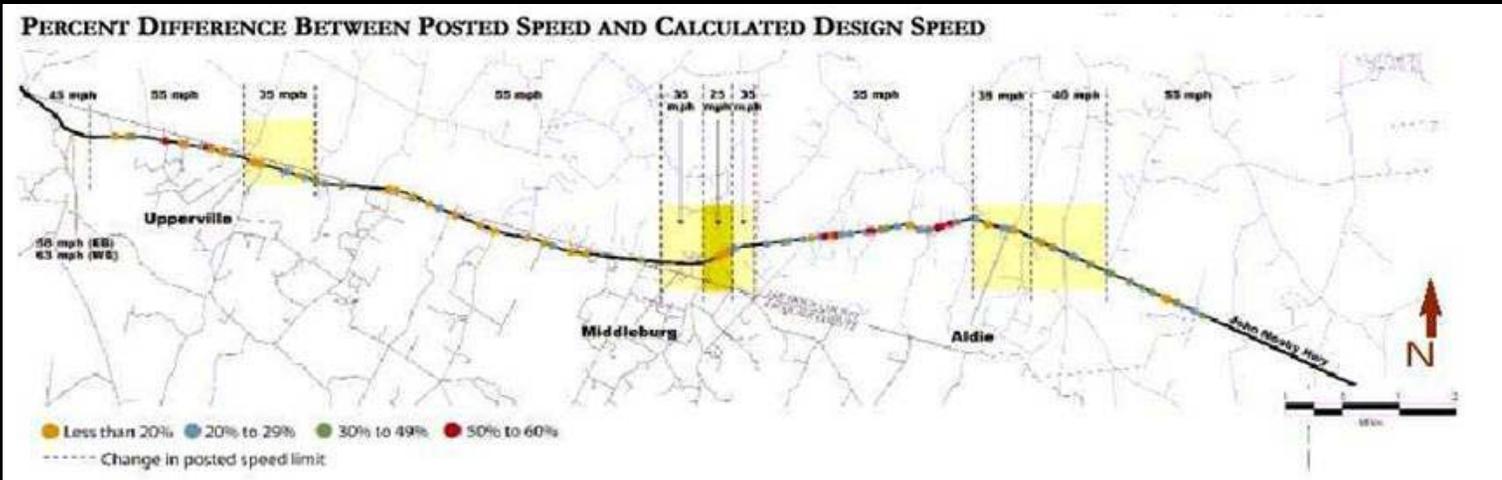
Functional Classification: Minor Arterial

AADT (2001): +/- 10,000

Percent Heavy Vehicles: +/- 5%



Roadway Characteristics



- Worked “backward” from existing road characteristics to calculate design speeds
- Many portions of roadway do not support posted speed
- Travel speeds coupled with existing profile result in high accident rates
- Travel speeds exceed posted speeds in many areas.

Design

The multi-disciplinary design team applied knowledge of the area, public input, and technical analysis to develop a Traffic Calming Plan that supports the vision of the community.

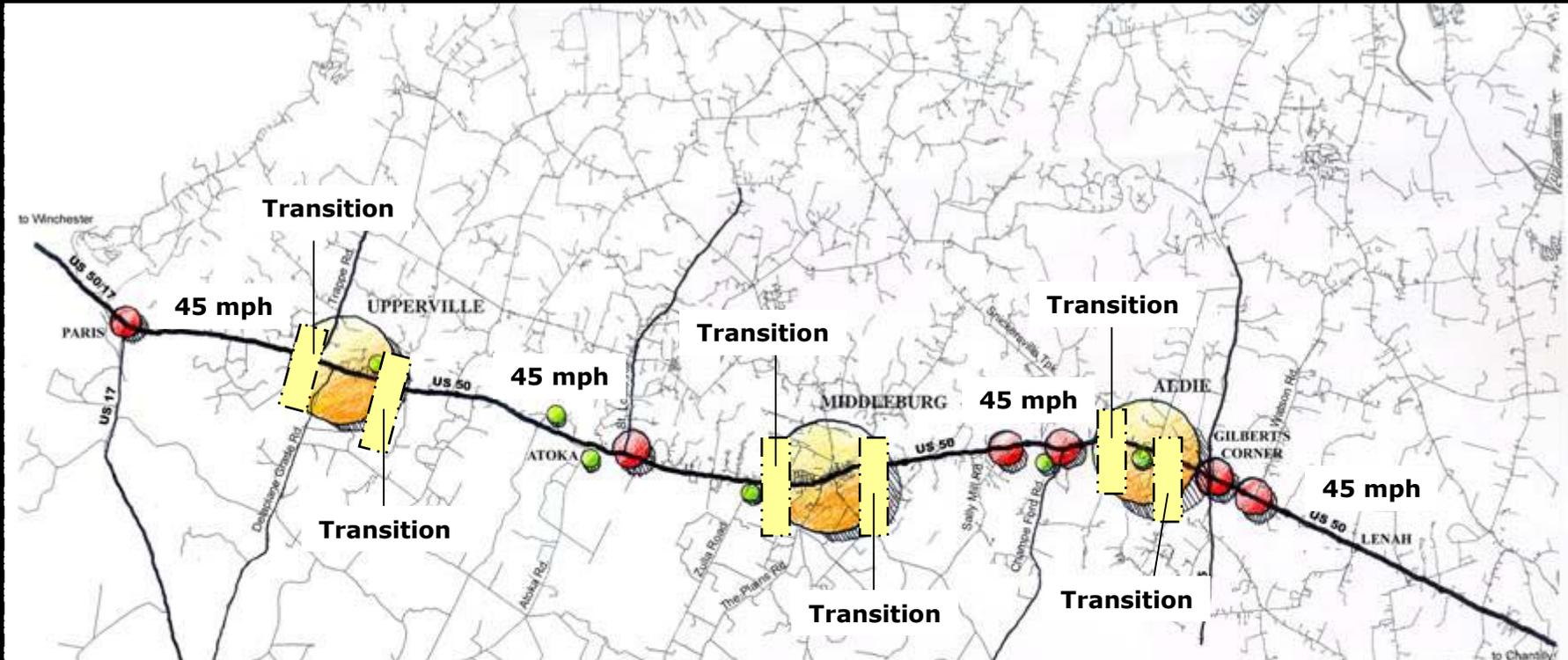


Realignment of Route 50 through Aldie



Entrance Feature, Upperville

Design



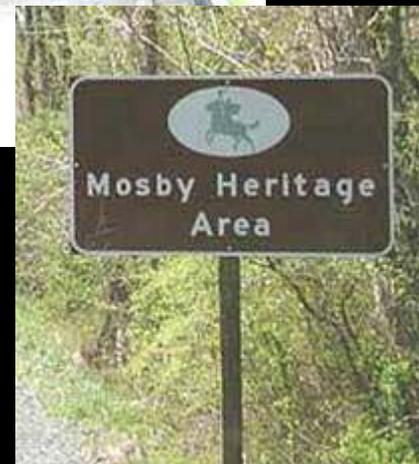
Three Design Areas:

- Rural Areas 45 mph posted speed
- Transition Areas 35 mph posted speed
- Towns 25 mph posted speed

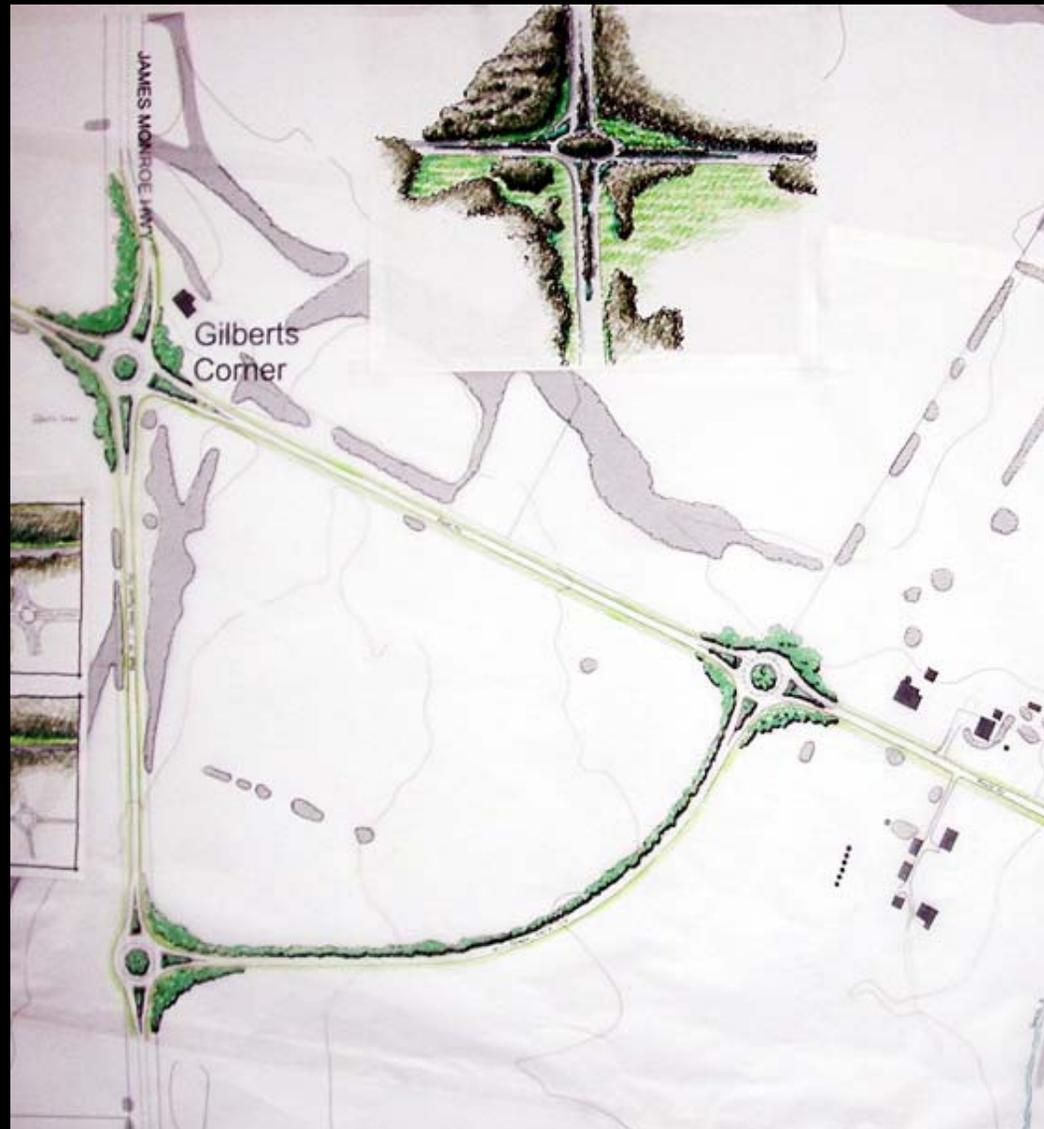
Rural Traffic Calming Measures



Corridor Entrance Features



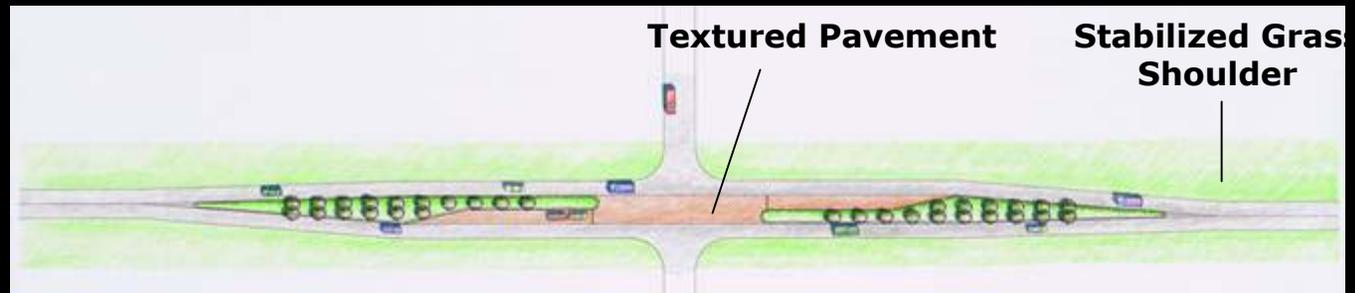
Rural Traffic Calming Measures



Roundabouts

Rural Traffic Calming Measures

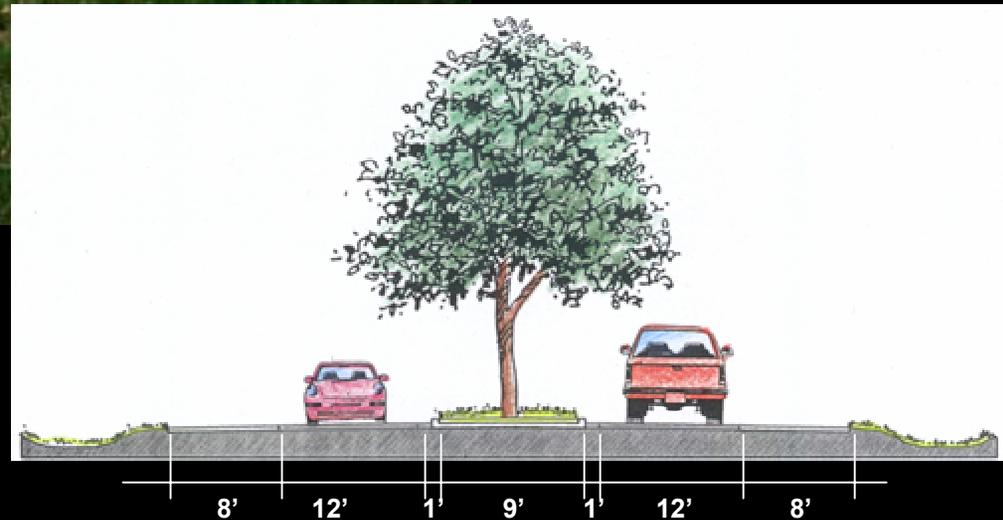
Wide Splitter Island



Rural Traffic Calming Measures



Narrow Splitter
Island



Transition Areas

Zone 1: Reduce Speeds

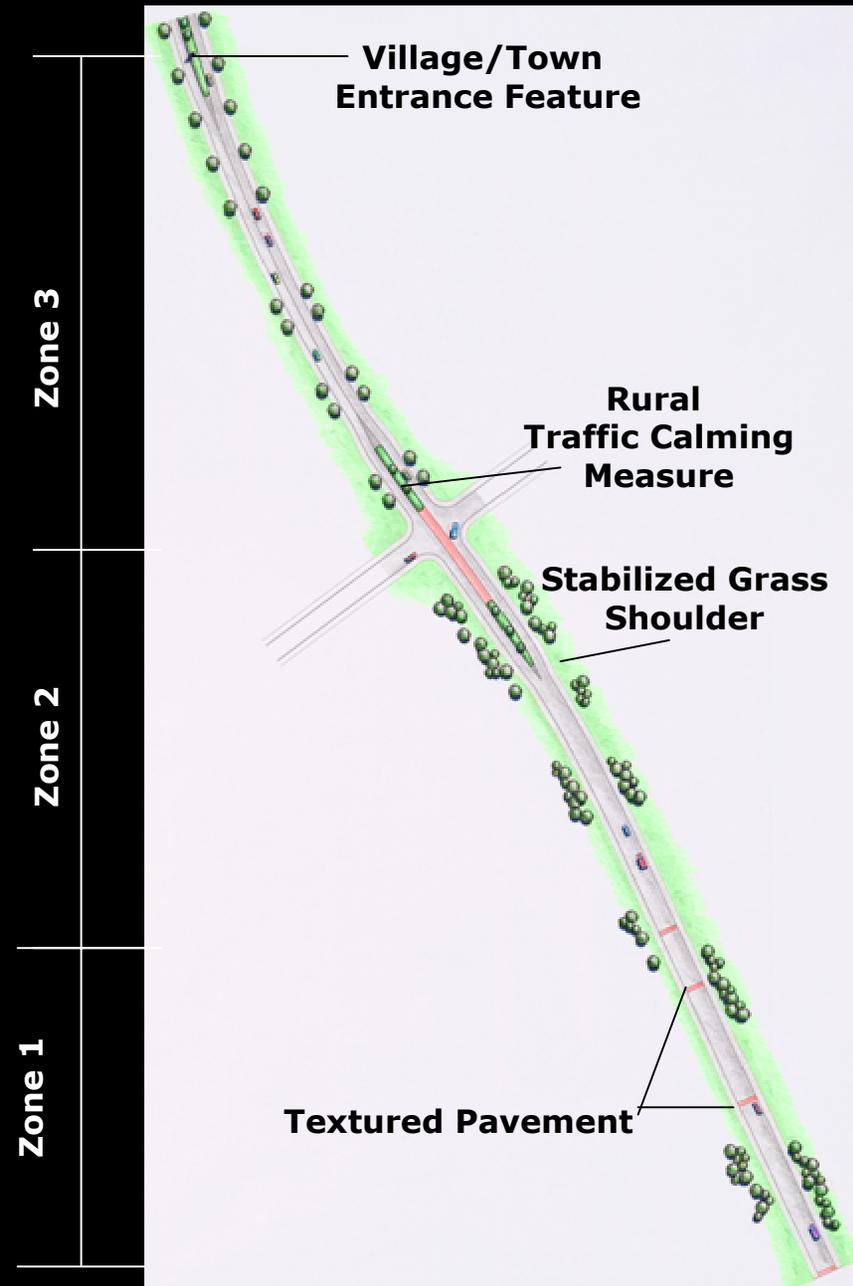
- 12' travel lanes
- Textured pavement
- Rural landscaping treatment

Zone 2: Announce Town

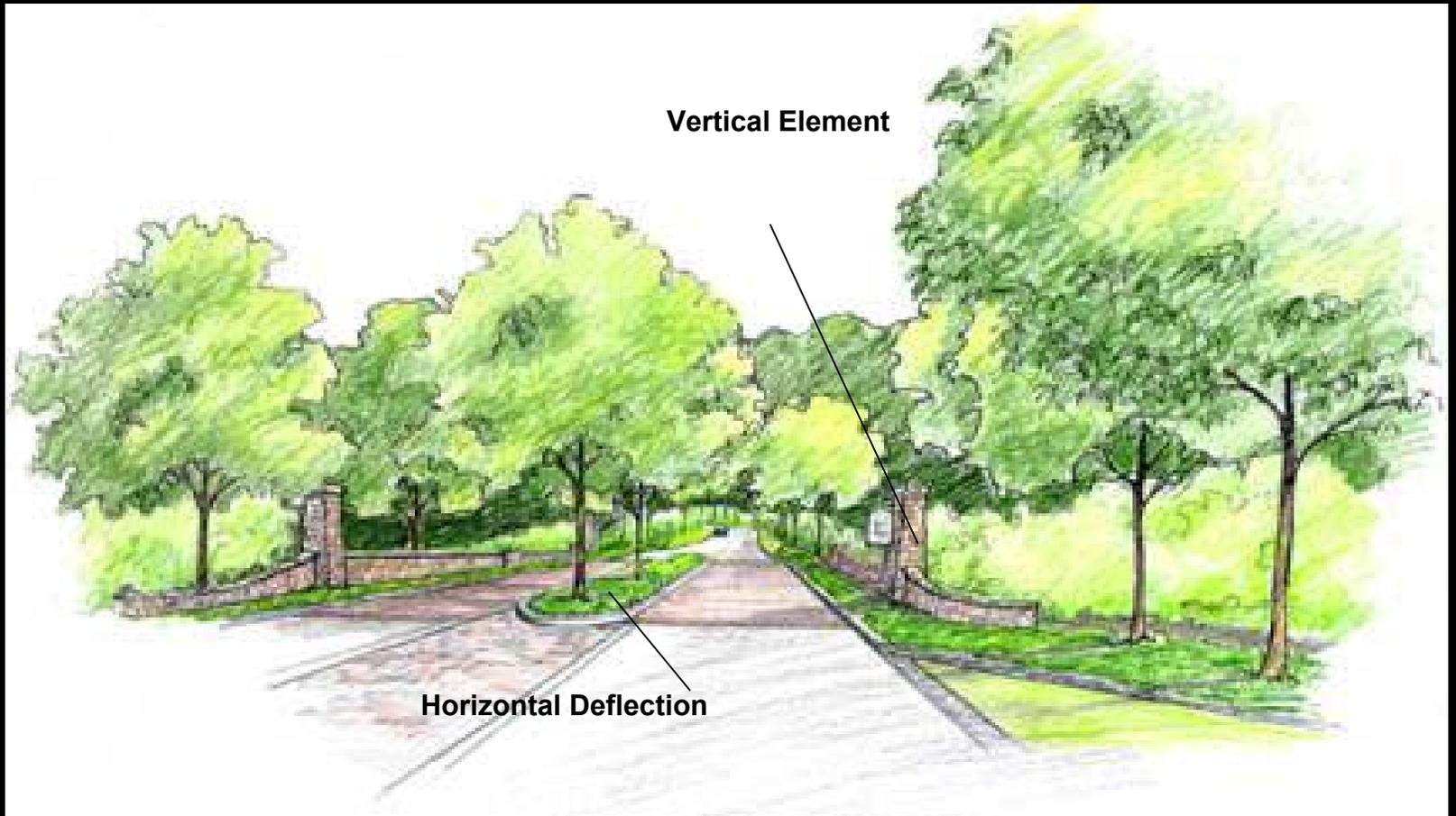
- 11' travel lanes
- 1' paver at edge of travel lane
- Rural landscaping treatment

Zone 3: Enter Town

- 10' travel lanes
- 2' paver at edge of travel lane
- More structured landscaping



Transition Areas



Town Traffic Calming Measures

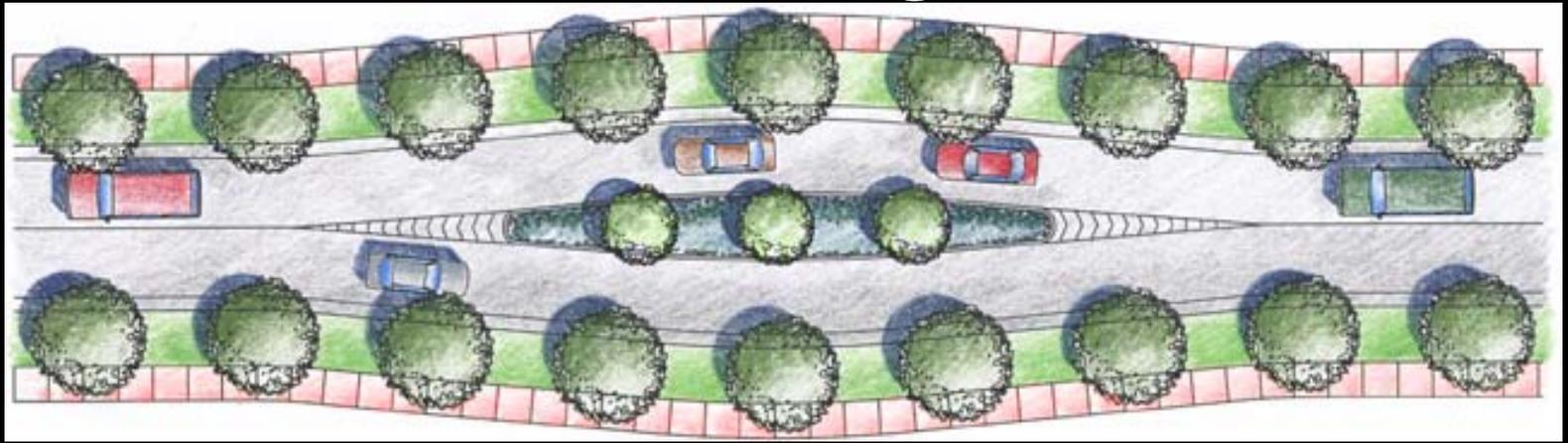
Entrance Features



Streetscape Improvements



Town Traffic Calming Measures

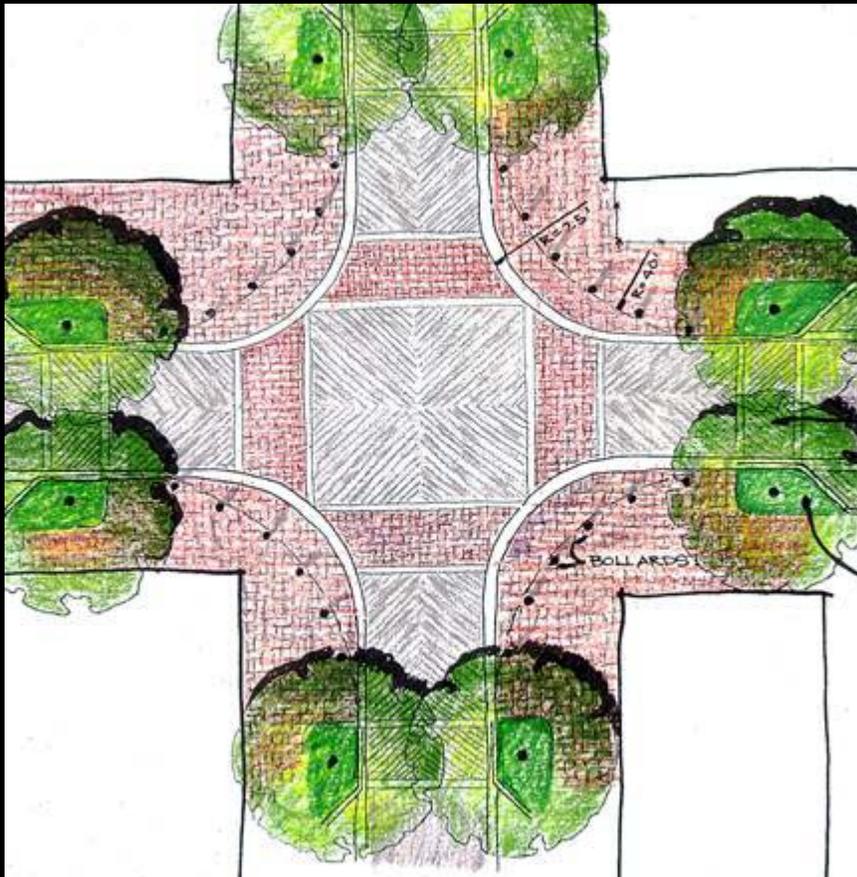


In-Town
Splitter Island

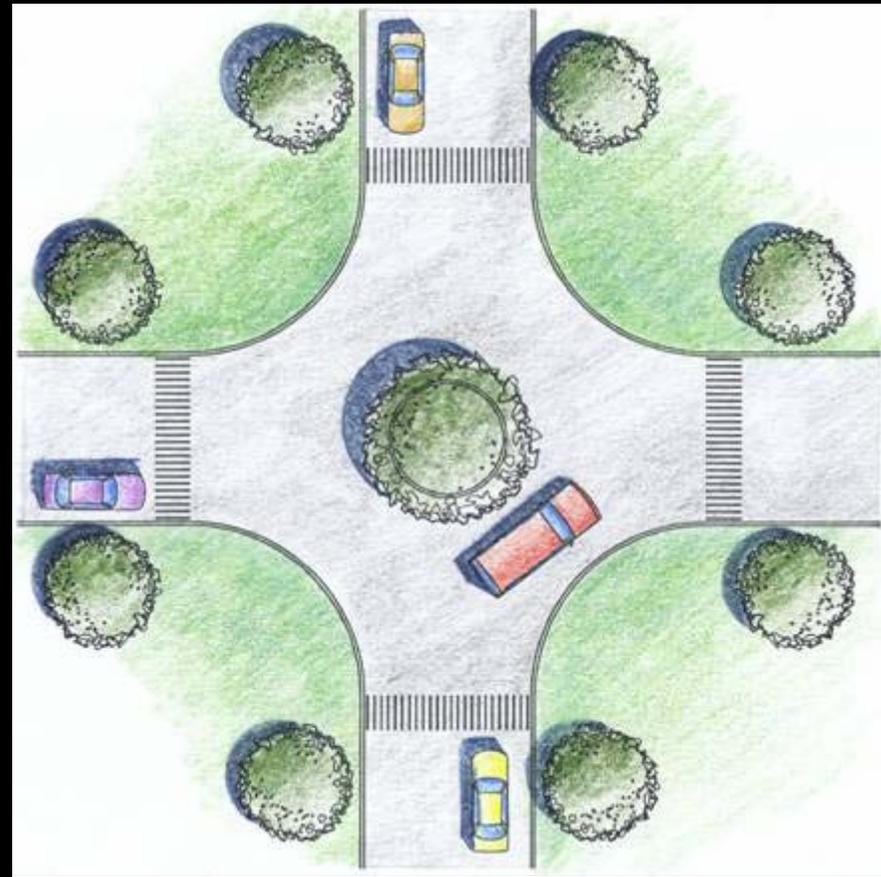


Town Traffic Calming Measures

Raised Intersection



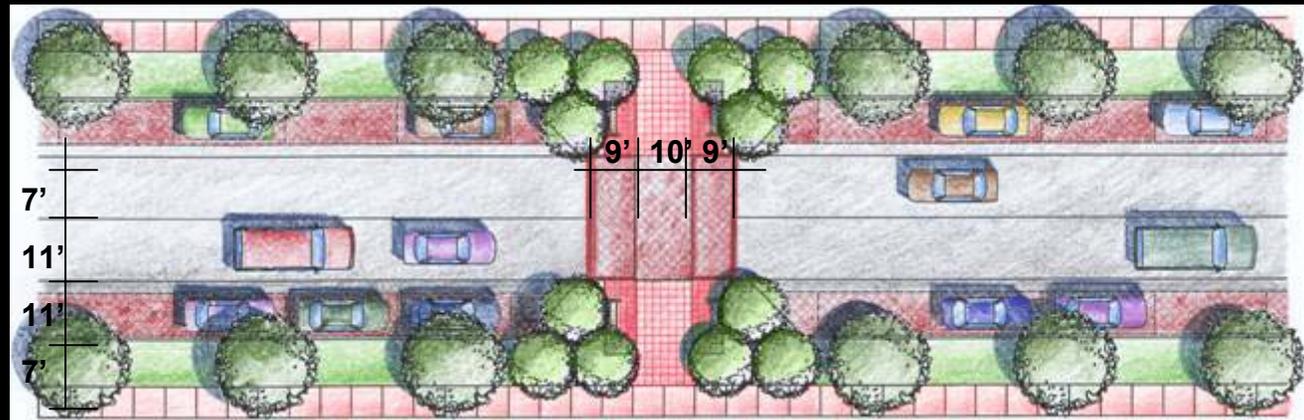
Mini-Circle



Town Traffic Calming Measures

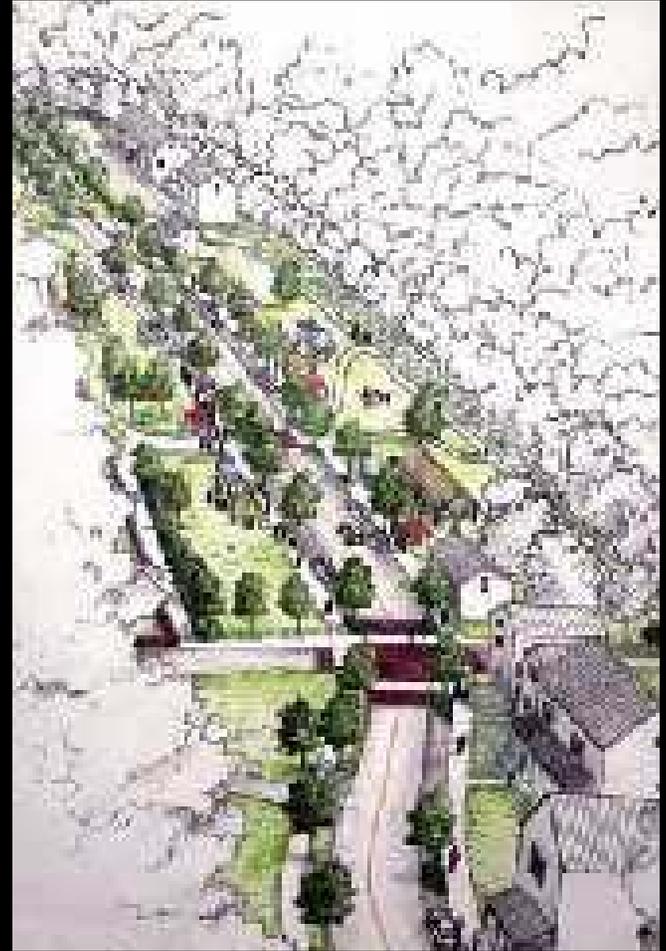


Speed Table



Re-alignment in Aldie

- Coordination with Department of Historic Resources led to re-defining the historic district
- Develop a “town” feeling



Lessons Learned



- Involve citizens early
- Ask Bigger Questions
- Be Flexible
- Use Interdisciplinary Approach
- Engineering Conceptual designs can be difficult!

For more information contact Jan Vaughan, VDOT Project Manager at 703-383-2184 or Karl Kratzer, H. W. Lochner Project Manager at 804-935-7162