VDOT
Virginia Department of Transportation

ARTERIAL
PRESERVATION PROGRAM

Protecting Virginia's Arterial Investments

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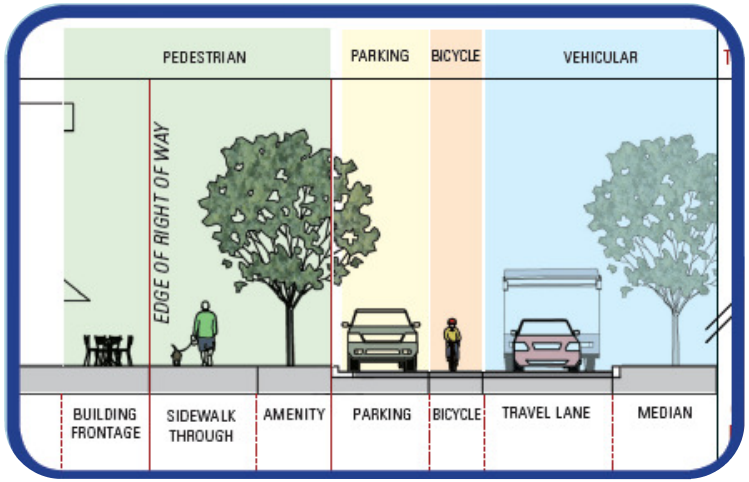
Goals for Critical Arterial Corridors

- **Goal #1** – Discourage signal/access point proliferation on critical arterials of the CoSS
- **Goal #2** – Improve mobility on existing arterials of the CoSS to continue support for economic development

Identifying the Critical Corridors

- **Mobility Preservation** Highway Segments (MPHSs)
  - Critical rural arterials with no parallel Interstate
- **Mobility Enhancement** Highway Segments (MEHSs)
  - Suburban & urban arterial segments of CoSS
  - Need to balance mobility vs. accessibility and "Complete Streets" (transit, bikes, peds, parking)

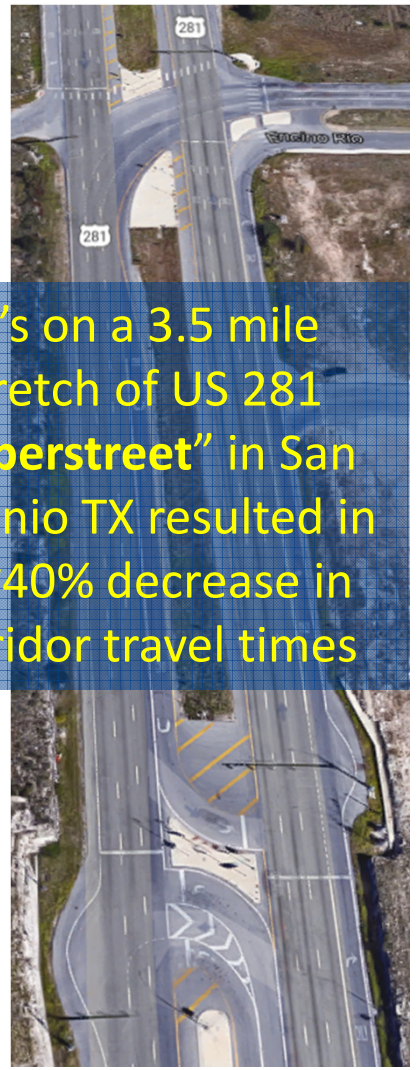


Levels of Authority for Approval

- **Signals**
  - **New signals** on Preservation segments of the CoSS approved by State Traffic Engineer and District Engineer/Administrator
  - **Signal removals** approved by District Traffic Engineer
- **Crossovers**
  - **New crossovers** on highway segments of the CoSS approved by State Location & Design Engineer
  - **Crossover closings** approved by District Engineer/Administrator

Alternative Intersections (AI's)

- **Benefits:**
  - Reduce stops-on-red
  - Potentially significant safety benefits
- "VDOT **Junction Screening Tool**" (VJuST) – new tool that conceptually compares traditional vs. AI concepts



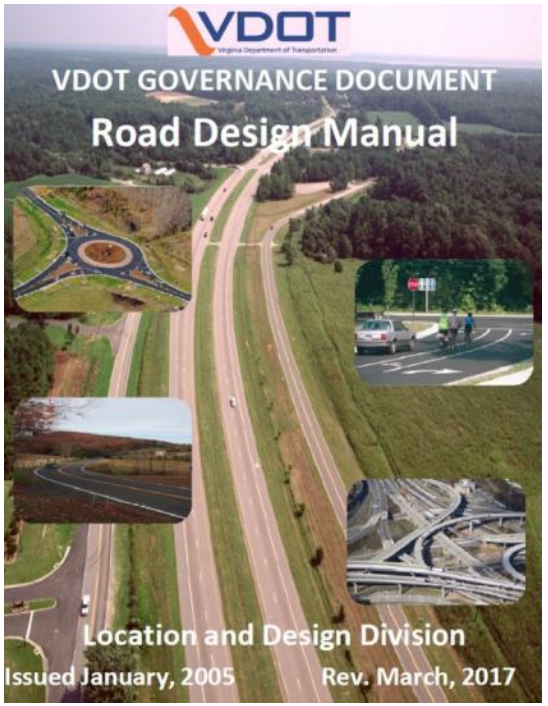
AI's on a 3.5 mile stretch of US 281 "**superstreet**" in San Antonio TX resulted in 34~40% decrease in corridor travel times

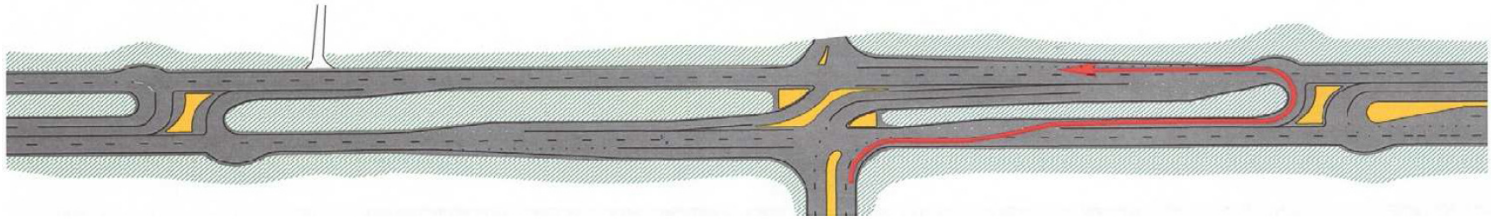
Saluda Food Lion on US 17 – entrances modified in June 2015 to require drivers to make "J-Turns" to enter and exit

Road Design Manual (RDM) Revisions

- Revise policies on Traffic Signal and Crossover location approvals
- Require analysis of AI's or grade-separation in lieu of new signals
- Add Alternative Intersection/ Interchange design guidance
- RDM already incorporated

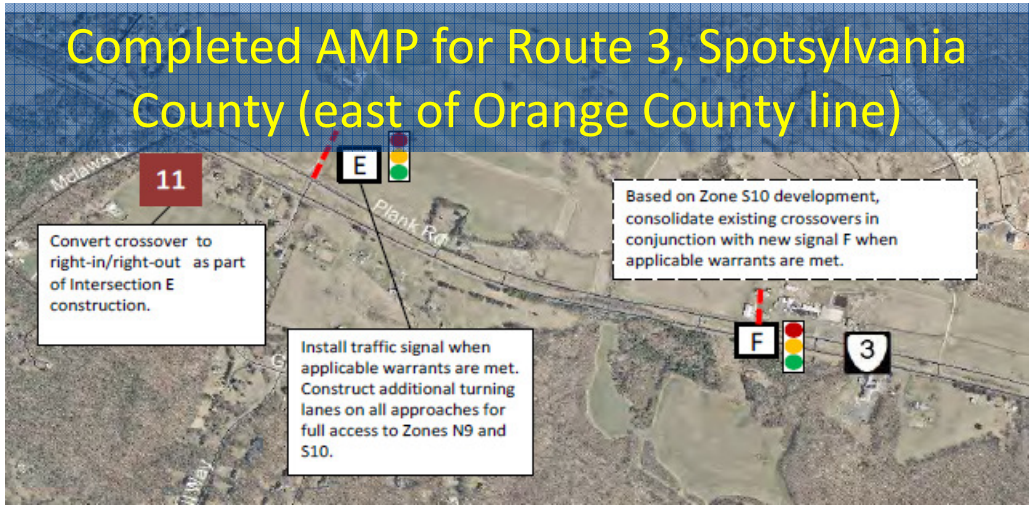
  "Complete Streets" concept for more urban conditions





Arterial Management Plans (AMPs) for Mobility Preservation Highway Segments

- VDOT has completed 3 AMP's; 6 more in progress
- Upcoming I&IM will address Corridor Study process
- I&IM will require that signal removal, median crossover closures, and AI's be considered in AMP's
- AMPs will be coordinated with OIPI



Innovative Strategies For Maximizing Traffic Signal Throughput

Strategy	Benefits	In use in VA?
Advanced Signal Control Technologies	• Real-time monitoring of quality of operations • Facilitate signal optimization • Minimize stops-on-red • Facilitate cross-jurisdictional signal coordination • Prepare for Connected/Autonomous vehicle fleets including freight	✓
Innovative Vehicle Detection	• Delay onset of red when it will help approaching trucks avoid “hard” braking • Delay start of green when a likely red light runner is detected	✓

Next Steps

- Outreach to developer community
- Implementation of policy revisions (Road Design Manual revisions, new I&IMs, etc.)
- Communications materials educating public on benefits of Alternative Intersections
- Training to internal & external designers