

# US 60 CORRIDOR STUDY

## EXECUTIVE SUMMARY

The Virginia Department of Transportation (VDOT) studied the US 60 Corridor as part of a larger effort to evaluate key arterials throughout the state for operational and safety improvements. The study area encompasses a 103-mile corridor traversing Powhatan, Cumberland, Nelson, Appomattox, Buckingham, and Amherst Counties. The portion of the study corridor in Powhatan County between US 522 (Maidens Road) and the Chesterfield County Line has also been designated as part of VDOT's Arterial Preservation Network, which denotes corridors of statewide importance for operational and safety enhancements. This study also fulfills a request from Senator Emmett Hanger, Jr. (letter to VDOT Commissioner, dated June 16, 2019) to perform an evaluation of the study corridor with respect to impacts of the proposed Green Ridge Landfill in Cumberland County.

The study identified existing conditions along the corridor through data analysis and field investigations. Roadway and intersection configurations, deficiencies including sight distance and grade issues, unique roadway features, and traffic operations were documented. A crash analysis was conducted using the most recent five years of data to determine predominant crash types, severity, and location. Rear-end type crashes were more prevalent in the eastern end of the corridor, indicative of stop-and-go conditions, while lane departure crashes were more prevalent in the western end of the corridor, indicative of geometric deficiencies.

Existing Peak Hour traffic volumes and turning movement counts were collected at 12 study intersections. An analysis of operations revealed that most study intersections currently operate at an acceptable level of service with the exception of the intersection of US 60 – Dorset Road intersection and the US 60 – Maidens Road/Emmanuel Church Road intersection.

As this corridor is anticipated for future residential and commercial growth, socioeconomic data growth rates were sourced from the regional and statewide travel demand models and verified with the local governments along the study corridor. These growth rates were then applied to develop future traffic volumes for the study horizon year of 2045. The application and analysis of these future traffic volumes resulted in unacceptable levels of service at the intersections of US 60 with Jude's Ferry Road, New Dorset Road, Dorset Road, and Maidens Road/Emmanuel Church Road.

Ultimately, detailed recommendations were developed for nine study intersections. Although many study intersections operated with acceptable delay in the future, recommendations were provided at these locations to improve safety based on the crash history. Recommendations frequently included the development of innovative intersections which provide safety and operational improvements through the separation of turning and through movements. Additional corridor recommendations included:

- Removing an existing crossover (based on inadequate spacing or grade)
- Upgrading an existing crossover to meet VDOT standards
- Converting an existing crossover to directional median to allow only certain movements
- Improving shoulder widths to meet VDOT requirements
- Installation of safety countermeasure, including rumble strips, signage, and beacons

## Summary of US 60 Corridor Study Intersection Recommendations

Location	Recommendation	Benefit
<b>Powhatan County</b>		
<b>US 60 and S Creek One</b>	Reconfigure to a Thru-cut intersection at time of development	Operations, Safety
<b>US 60 and Batterson Road (East)/Urbine Road</b>	Modify crossover to permit Eastbound and Westbound left turns from US 60 only	Safety
<b>US 60 at Judes Ferry Road and New Dorset Road</b>	Convert both intersections to Restricted Crossing U-Turns	Operations, Safety
<b>US 60 at Batterson Road and Dorset Road</b>	Batterson Rd intersection to be reconfigured to allow only Eastbound left-turns and U-turns with Dorset Rd intersection reconfigured as Restricted Crossing U-Turn with dual Northbound right-turn lanes	Operations, Safety
<b>US 60 and Red Lane</b>	Reconfigure to a Continuous Green-T	Operations, Safety
<b>US 60 and Maidens Road/Emmanuel Church Road (US 522)</b>	Reconfigure to a Quadrant Roadway intersection with a roundabout and Continuous Green-T	Operations, Safety
<b>Cumberland County</b>		
<b>US 60 and Northfield Road/Cartersville Road</b>	Remove dual Northbound and Southbound approaches and realign to be perpendicular; add a Westbound right-turn lane	Operations, Safety
<b>Buckingham County</b>		
<b>US 60 and US 15</b>	Reconfigure as a single-lane roundabout with a free-flow Southbound right-turn lane	Operations, Safety
<b>Amherst County</b>		
<b>US 60 and US 29</b>	Reconfigure US 60 to a single through-lane in each direction with left-turn lanes to interchange ramps	Safety

In response to the request from Senator Hanger and citizen concerns regarding the proposed Green Ridge Landfill in Cumberland County, a number of actions were taken as part of this study. In order to affirm the findings of the Traffic Impact Analysis (TIA) conducted by Davenport, traffic counts were conducted at landfills operating at a similar capacity as that proposed for Green Ridge. The collected counts confirmed that traffic estimates provided in the TIA were within reason. The traffic estimates and increase in heavy vehicles identified from the TIA were considered in the US 60 analysis.

A Roadway Safety Audit was conducted for the two-lane portion of US 60 from US 522 to the proposed Green Ridge landfill entrance location. This analysis included the collection of additional traffic counts, review of crash data, and an in-depth field review inclusive of a video survey to identify safety concerns. This effort identified corridor-wide recommendations to include safety edges, rumble strips, and wider shoulders to address roadway departures. Additional recommendations included a continuous center left-turn lane section in the Bell Road area, westbound right-turn lane at Old Tavern Road, and wider shoulders in the Ballsville Road Area. Increased coordination with Powhatan County school transportation and emergency response providers was conducted as part of this effort to ensure any concerns from these public safety providers were addressed.