**Route 58 West Access Management Study**

**STUDY OVERVIEW**

**WHY IS ROUTE 58 WEST BEING STUDIED?**

US Route 58 is a key corridor for freight movement and long distance east-west trips across Virginia. It also provides access to adjacent residential and commercial properties.

**WHAT ARE THE ISSUES?**

The 11-mile study corridor extends from Piedmont Drive in the City of Danville to Long Circle in the Brosville area.

The corridor’s crash history shows a prevalence of rear-end and angle crashes at intersections and driveways, which often result in injuries.

The spacing of median openings is deficient along most of the corridor compared to VDOT’s access spacing requirements.

**WHAT WILL THIS STUDY DO?**

The Route 58 West Access Management Study will identify optimal access spacing to maintain roadway capacity, minimize crash potential, and ensure reliable travel times for the movement of people and goods.

The Route 58 West Access Management Study is funded by the Danville Metropolitan Planning Organization in partnership with the City of Danville, Pittsylvania County, and the Virginia Department of Transportation.

**ROUTE 58 WEST STUDY CORRIDOR.** The study corridor is the 11-mile portion of US Route 58 between Piedmont Drive in the City of Danville to Long Circle in the Brosville area of Pittsylvania County.
CRASH HISTORY

Between 2013 and 2018, 426 crashes occurred throughout the 11-mile study corridor. Angle crashes are the most prevalent crash type, followed by off-road fixed object and rear-end crashes.

Angle crashes and rear-end crashes together represent 50 percent of all crashes that occurred in the corridor, and 56 percent of all crashes that resulted in injury. The majority of these angle and rear-end crashes occur at median breaks.

FATAL CRASHES

Three fatal crashes occurred in the study corridor between 2013 and 2018. One of these fatal crashes resulted in a pedestrian fatality.

PEDESTRIAN INJURY CRASHES

Five crashes resulting in pedestrian injuries occurred between 2013 and 2018.

POTENTIAL FOR SAFETY IMPROVEMENT

Many of the intersections and road segments have potential for safety improvement, which means the crash rate is higher than expected for a road of its size, volume, and speed. Locations with the highest potential for safety improvement include:

- US 58 at Whispering Pines Road
- US 58 between James Road and Cambridge Road
- US 58 between Barrett Road and Ingram Road

CRASHES IN THE ROUTE 58 WEST STUDY CORRIDOR. Between 2013 and 2018, 426 crashes occurred in the study corridor. Angle crashes are the most prevalent crash type, followed by off-road fixed object and rear-end crashes.
WHAT IS ACCESS MANAGEMENT?
Roads with frequent median openings and entrances have higher crash rates compared to similar roads with fewer access points. Access management is a set of techniques that state and local governments use to control access to highways and major arterials. Controlling access points makes roads safer by reducing the potential for crashes. It also manages congestion and improves capacity.

TYPES OF ACCESS POINTS
There are different types of access points. The number of conflict points represents the different ways in which crashes could occur.

- **Full direction median openings** have no turn restrictions. This type of access point has 32 conflict points.
- **Directional median openings** have turn restrictions. A Restricted Crossing U-Turn (RCUT) is one type of directional median opening that requires side-street traffic to turn right. This type of access point has 10 conflict points.
- **Right-in/right-out entrances** have a median separator that only allow right turns into and out of the side-street or entrance. This type of access point has 4 conflict points.

Fewer conflict points means there is less potential for crashes to occur. Converting a full direction median opening to a directional median opening reduces the number of conflict points by 69 percent, minimizing the potential for crashes.

Consolidating or closing entrances that are close together also reduces the number of conflict points, and is another way to minimize crash potential.

ACCESS SPACING REQUIREMENTS
VDOT requires minimum spacing between access points to safely balance providing access and maintaining traffic flow based on a roadway’s functional classification and posted speed limit. On arterial roadways like US Route 58, VDOT requires 305 feet between entrances and 1,050 feet between full direction median openings when the speed limit is 50 mph or higher.

ACCESS SPACING DEFICIENCIES
Several segments of the study corridor do not meet VDOT’s spacing requirements. In most of the Route 58 West study corridor, there is a correlation between access spacing deficiencies and the locations of rear-end and angle crashes.
Traffic Operations Analysis

TRAFFIC ANALYSIS RESULTS

In general, traffic on US Route 58 operates at an acceptable level of service. The only location where traffic on US Route 58 experiences more than 20 seconds of delay is at the intersection of Berry Hill Road.

The only potentially problematic delays in this corridor occur from the stop-controlled side-streets, most notably at Stony Mill Road and Pine Lake Road. Although a few injury crashes have occurred at these locations, neither of these intersections are identified as having potential for safety improvement.

In the future, it will be harder for vehicles waiting to turn onto US 58 to find a gap. By 2045, vehicles waiting to turn onto US 58 from Stony Mill Road and Pine Lake Road will experience delays over 50 seconds in both AM and PM peak hours.

The volumes on the stop-controlled side-streets are low, and are unlikely to warrant a traffic signal by 2045.
Recommendations from Previous Studies

2008 U.S. Route 58 West (Riverside Drive) Access Management Study

The City of Danville conducted an access management study for the eastern portion of the US 58 study corridor within the Danville City limits in 2008 that identified existing crossover spacing deficiencies, locations for future crossovers and right-in/right-out entrances, recommendations for lengthening turn lanes and tapers at intersections, and areas with redundant entrances that could be consolidated.

The 2008 study identified several locations where the median crossover spacing does not meet recommended guidelines:

- Avalon Drive
- Kaywood Lane
- Westover Baptist Church
- Oak Lane
- Cambridge Road
- Wyndover Drive

RECOMMENDATIONS FROM THE 2008 U.S. ROUTE 58 WEST ACCESS MANAGEMENT STUDY. The recommendations from the 2008 study are shown on top of current access spacing deficiencies.

Closing Redundant Commercial Business Entrances

The 2008 study identified redundant entrances and recommended closing them if possible, at the following locations:

- Wrenn-Yeatts Funeral Home at Kaywood Lane
- Commercial and residential properties at Church Avenue
- Commercial properties at Ingram Road and Spring Avenue

Closing Residential Entrances

The 2008 study also recommended closing a residential entrance on the south side of US 58 just west of the intersection of Parkway Dr (if alternate access from Parkway Dr would be provided).
Recommendations from Previous Studies

The 2012 Route 58 West Access Management Study and Plan

The Danville-Pittsylvania Area MPO conducted an access management study for the western portion of the US 58 study corridor in Pittsylvania County in 2012. The 2012 study identifies median crossovers that do not meet VDOT’s access spacing standards and proposes locations for future shared-use full access driveways.

There are 27 median openings in this portion of the corridor. All 27 existing median openings are currently full access.

Recommendations for Converting and Closing Median Openings

The 2012 study recommends keeping 10 of the 27 median openings as full access, shown in green in the map to the right.

The 2012 study recommends converting 7 of the 27 median openings to directional openings, shown in blue.

The 2012 study identifies the remaining 10 existing median openings that do not meet spacing standards, shown in red.

Three segments of the proposed median openings from the 2012 study do not meet current VDOT standards, shown with a yellow outline.

Recommendations for New Median Openings

The 2012 study recommends installing a new median opening in two locations:

- A new full access median opening at Foxwood Place between Horseshoe Road and Pine Lake Drive/Pineview Road
- A new directional median opening at the 58 West Auto Auction west of Stony Mill Road

This excerpt from the 2012 study shows several modifications near the Brosville Elementary School. The 2012 study recommends restricting crossover access at the Brosville Elementary School west entrance, installing an eastbound left turn lane at the east entrance, closing the crossovers east of Brosville Elementary and west of Rockwood Drive.
Route 58 West Access Management Study

Current Access Spacing

- Deficient Length
- Signalized Intersection

Spacing from Unsignalized Intersections & Full Median Crossovers (1320’ required where speed limit is > 50 mph)

Spacing from Start or End of Ramp Terminal to the First Full Access Median Crossover (1320’ required)