Welcome!

This event is a public meeting for the Graves Mill Road Corridor Study.

Project Description

Graves Mill Road, between Gristmill Drive and McConville Road, is an important roadway that serves heavy commuter traffic, while also providing access to commercial interests. Given its proximity to significant development areas, the interchange, and traffic congestion, the Region 2000 Local Government Council and Central Virginia MPO, in partnership with Bedford County and the City of Lynchburg, are undertaking a study to develop a plan to address existing and expected future mobility challenges in the corridor.

Project Purpose

- Investigate existing and future traffic conditions,
- Assess conditions for pedestrians, bicyclists, and users of transit,
- Address safety issues, and
- Develop short and long-term recommendations for implementation.

This Meeting

During today’s meeting, you will have the opportunity to:

- Learn about the study,
- Review information about the corridor, and
- Share comments regarding concerns, opportunities, and improvement ideas.
**Study Corridor: Today**

The Graves Mill Road corridor extends from Gristmill Drive to McConville Road. It is highlighted in yellow in the map below.

Focus Intersections:

1. Gristmill Drive (signalized)
2. Mill Race Drive (signalized)
3. Millside Drive (unsignalized)
4. Old Graves Mill Road (signalized)
5. Creekside Drive (signalized)
6. US501 Southbound interchange ramps (signalized)
7. US501 Northbound interchange ramps (signalized)
8. McConville Road (unsignalized)

Intersections A and B included for traffic operational purposes only.

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**Study Area: 1994**

The area surrounding the study corridor has been the site of significant development activity in recent decades. The image below is an aerial photograph of the study area from 1994.
Safety Conditions

The most recent six (6) years of crash data along Graves Mill Road was collected through the Virginia Department of Transportation's Crash Analysis Tool. This tool was developed in-house by the Highway Safety section for crash analysis purposes. Crashes are complete through December, 2016.
Existing Traffic Conditions

Turning movement counts were collected at the study area intersections during the morning (7:00 – 9:00 AM) and afternoon (4:00 – 6:00 PM) peak periods. From there, the highest hourly volume for the AM and PM was determined for use in the operational assessment. The figure below presents the peak hour traffic data and operational results.
All bus stops along Graves Mill Road generally serve less than 10 riders per day. In summary, sidewalks only exist along the south side of Graves Mill Road from just east of Gristmill Drive to Millrace Drive, then along the north side of Graves Mill Road from Creekside Drive west to Old Graves Milll Road (sidewalk terminates just to the east).
An annual growth rate of 1.25%, plus the addition of trips generated by planned projects, was applied to the existing traffic counts to derive 2040 conditions. The proposed traffic signal expected to serve the Rosedale mixed use development was also included in the analysis.

Note: Intersections A & B are considered for traffic operational purpose only.
What is a **Roundabout**:

- A circular unsignalized intersection where all traffic moves in a counterclockwise direction around a central island.
- Traffic entering the roundabout slows down and yields to traffic already inside the roundabout.
- Roundabouts can be designed with one or more circulating lanes.
- Design options allow for right turns to be channelized to bypass the circulating lanes.

**Benefits of a Roundabout**:

- **Improved safety**: Reduces vehicle crossing path numbers and eliminates the potential for right-angle and head-on crashes.
- **Increased efficiency**: Fewer stops, less delay, and shorter queues for overall improved efficiency.
- **Safer speeds**: Lower vehicle speeds, which gives drivers more time to react.
- **Long-term cost effective**: Lower long-term costs for operations and maintenance.
- **Aesthetics**: Opportunities for landscaping and beautification.

What is a **Continuous Green-T (CGT)**:

- Intersection design where one major street direction of travel (the top side of the “T”) can pass through the intersection without stopping and the opposite major street direction of travel is typically controlled by a traffic signal.
- Left-turn vehicles from the side street use a channelized receiving lane on the major street to merge onto the major street.
- Intersection is typically signalized but can also be designed without a traffic signal.

**Benefits of a CGT**:

- **Improved safety**: Channelization of leftturn vehicles from the side street reduces the potential for angle crashes.
- **Increased efficiency**: Because one direction of travel on the major street is free-flow, more green time can be provided to the other movements, reducing delay at the intersection.
- **Free-flow in one direction**: One direction of travel on the major street never stops, which improves traffic signal synchronization and reduces corridor travel times.
What is a **Diverging Diamond Interchange (DDI):**

- A grade-separated interchange design where arterial traffic crosses to the other side of the roadway between the freeway ramps.
- Vehicles can turn left onto and off freeway ramps without stopping or crossing opposing lanes of traffic.
- Right turns onto and off the freeway ramps occur either before or after the crossover intersections, when traffic is on the “correct” side of the road.
- Both crossover intersections are signalized.
- Interchange can be designed as an overpass or underpass.

**Benefits of a DDI:**

- **Improved safety:** Reduces the number of points where vehicles may cross paths.
- **Increased efficiency:** Crossovers can operate with only two traffic signal phases, which allows the interchange to handle a greater volume of traffic and operate with less delay.
- **Easier access to freeway:** Design allows traffic to enter and exit the freeway without crossing opposing lanes of traffic.
- **Cost effective:** Since there are no left-turn lanes on the arterial, a DDI can have a narrower cross section and may be more cost effective than a retrofit or new interchange construction.

What is a **Restricted Crossing U-Turn (RCUT):**

- Intersection design where all side street movements begin with a right turn.
- Side street left-turn and through vehicles turn right and make a u-turn at a dedicated downstream median opening to complete the desired movement.
- Main intersection and median u-turns can be designed as signalized, stop controlled, or yield controlled.

**Benefits of a RCUT:**

- **Improved safety:** Reduces the number of points where vehicles cross paths and eliminates the potential for head-on crashes.
- **Increased efficiency:** Each direction of the major street can operate independently creating two one-way streets and increasing the overall intersection capacity.
- **Shorter wait times:** Fewer traffic signal phases means less stopping for mainline vehicles and right turns only from the side street vehicles means less time waiting.
- **Cost-effective:** A RCUT can be more cost-effective than adding lanes to improve capacity.