How we got here...

Route 42 – Town of Woodstock

• Provides direct connectivity between Woodstock / US 11 and the Interstate 81 corridor - “Town Gateway”

• Commercial corridor serving local, regional, and interstate users

• Has experienced periods of significant development over the past 20 years

• Increase in traffic due to development growth may result in negative operational and safety impacts to the corridor
• 2007 Small Urban Area Transportation Study identified the need and recommended a separate Route 42 corridor study

• VDOT STARS program identified the Route 42 corridor as a study candidate in 2016
Corridor Traffic Volumes

Traffic Data

Route 42 Corridor Study Town of Woodstock
Future potential growth...

Potential for 10,000 + additional trips on Route 42 *

* Based on ITE Trip Generation Rates and assumptions from previously submitted TIA studies
Roadway Characteristics

• Functional Classification - Route 42 is classified as a Major Collector facility

• Intended to provide a balance between access and mobility

• Intersection and entrance spacing and design becomes critical in maintaining efficient and safe roadway operations
Roadway Characteristics

Route 42 – 35 mph, major collector, 1-mile segment

- VDOT and national best practice standards recommend the following intersection / entrance spacing scenarios:
  1) 7-8 signalized / unsignalized intersections, 6 full access entrances
  2) 4-5 signalized / unsignalized intersections, 9 full access entrances

Approximately 14 total intersections / entrances

- Existing Route 42 study area:
  6 signalized, 2 unsignalized intersections, 21 full access and 3 partial access entrances = 32 total intersections / entrances

Each full access intersection / entrance contains 32 separate conflict points
Crash Data

Crash History Exhibit
2012 - 2016

Route 42 Corridor Study
Town of Woodstock
Crash Data

Crash Location and Type Exhibit
2012 - 2016

Route 42 Corridor Study
Town of Woodstock
VDOT STARS Data

Corridor L — Route 42/Route 7 — Route 42: 270.85 – 271.63; Route 7: NIP 0.00 – 0.29, From Home Avenue to S Water Street (Route 8)

| Corridor Length (mi) | 1.26 |
| CoSS Corridor | No |
| Urban or Rural | Urban Cluster |
| SYIP Project/HB2 Project/SMART SCALE | No |

2011-2015 Crashes: 200

- Max PSI Segment Rank: 155
- Max PSI Intersection Rank: 2

V/C Ratio (2015/2030): 0.38/0.63

Max TTI Percentile (2015 AM/PM Weekday): 0.91/0.98

Max TTI Percentile (2015 AM/PM Weekend): 0.83/0.93

Duration of Congestion (Hours): 0

PSI = Potential for Safety Improvement

Location Map - Staunton District
Town of Woodstock

VDOT Projects
SYIP
Segments Funded
HB2
Intersections
Not Funded
SMART SCALE
Not Funded
Funded
Access Management

Coordinated planning and design of access between roadways and land development to preserve the safety and efficiency of travel.

Consolidation of access points and a reduction of conflicting turning movements results in:

- Enhanced safety
- Better traffic operations (capacity and speed)
- Opportunity for pedestrian / bicycle improvements
- Opportunity for aesthetic / gateway improvements
Access Management

More *conflicts* means more *crashes*

Full Access, 4-leg Intersection = 32 conflict points

Left turn movements result in a higher percentage of severe injury crashes
Access Management

Woodstock Route 42 Potential Corridor Treatments

Access Management

- Closely spaced and poorly defined entrances can slow traffic flow and decrease safety for all road users.
- Access management means coordinating planning and design of access between roadways and land development to preserve the safety and efficiency of travel.

What We Want to Avoid:

- Widening to add capacity results in:
  - Significant property and utility impacts resulting in higher costs.
  - Full access movements increase in difficulty, adding to safety concerns.
  - Further deterioration to lose "gateway" sense of corridor.

Safety and efficiency can be improved using access management techniques as an alternative to traditional widening:

- Connect Adjacent Developments to Reduce Conflict Points
- Push Entrances Away from Intersection to Avoid Conflicts with Queued Vehicles
- Utilize Roundabouts to Reduce Conflict Points and Accommodate U-Turn Movements
- Partial Access Intersections to Reduce Conflict Points
- Reduce Left Turn Movements with Medians

Pedestrian & Bicycle Accommodations

Bicycle Facilities
- On-Road Bicycle Lanes
- Off-Road Shared Use Path

Bicycle Facilities
- Limit Pedestrian & Bicycle Conflicts at Entrances
- Improve ADA Sidewalk Network & Buffer Space
- Crosswalk Improvements & Median for Refuge Area

Other Considerations

- Medians and Sidewalk Buffer Space Provides Aesthetic Enhancement Opportunities
- Traffic Signal Timing Evaluation
**Access Management**

### Woodstock Route 42 Potential Corridor Treatments

#### Roundabout
- 75% reduction in intersection conflict points over a traditional 4-leg intersection
- Potential to reduce overall intersection delay with yield vs. stop condition
- Splitter Islands provide refuge islands for improved pedestrian crossings
- Accommodates U-Turn movements related to upstream partial access intersections
- Roundabout center island provides landscaping / aesthetic opportunities
- Roundabouts can be designed to accommodate heavy vehicle movements with truck apron

#### Unsignalized Florida T Intersection
- Project included a shared use path
- Full Access design option for 3-leg intersections with reduced conflict points
- Flexibility to be converted into a future reduced phase signalized intersection

#### Partial Access Reduced Conflict U-Turn Intersection
- Full access intersection becomes a right-in, right-out, left-in intersection, reducing conflict points
- Left-out movements must take a right and perform a U-Turn movement at a downstream intersection
- Shared use path along US 33
Access Management

Do Access Management Projects Harm Business?

Businesses fail at no higher rate on roadways with new access management improvements

Study of Business Turnover
Median reconstruction projects in Orlando metro area

SOURCE: Ivey, Harris and Walls along with David Gwynn, PE, TEI Engineers & Planners
How Do Customers Respond to Access Management?

People shop for value and price, even at businesses considered as “convenience”

People avoid places where left turns are risky

Adapted from:
Public Information Meetings For Access Management Projects
David W. Gwynn, Jr., P.E.
TEI Engineers & Planners
Better traffic flow

Safety

More customers driving by

What Are the Positive Business Impacts?

Source: FLDOT
Goals of a Route 42 Corridor Study

• Collaborative and supported effort between town representatives, corridor stakeholders and VDOT

• Develop a corridor plan that identifies future improvement recommendations that address operational, safety, and gateway treatment needs

• Improvement recommendations will address all users of the corridor, including bicycle and pedestrians

• Supporting study analysis and data can be utilized by the town to prepare and submit applications for transportation funding to implement identified recommendations
Visual Preference and Public Input Survey

We Want Your Feedback!

- Dot Exercise – Place dots on the display boards to indicate corridor treatments you prefer

- Aerial Maps of Corridor – Indicate areas of concern and needs or improvement ideas with comments on provided maps

- Comment Box – We encourage you to fill out the provided comment sheets (place in comment box or send through mail)

- Engage – Share your thoughts with town and VDOT representatives as you review the provided corridor information