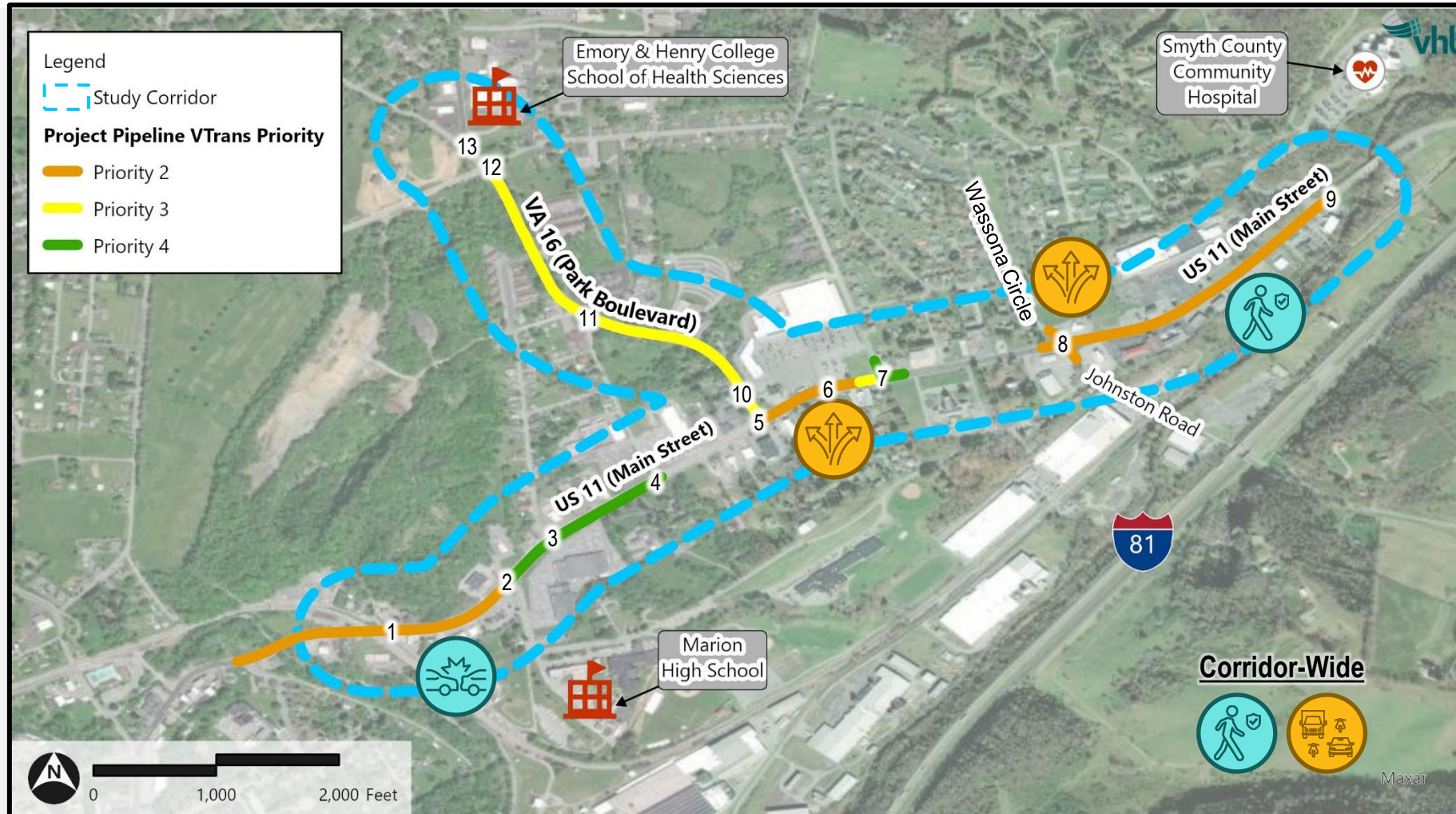


# Project Overview | BR-23-07

US 11 (Main Street) between Holston Street and Medical Park Drive

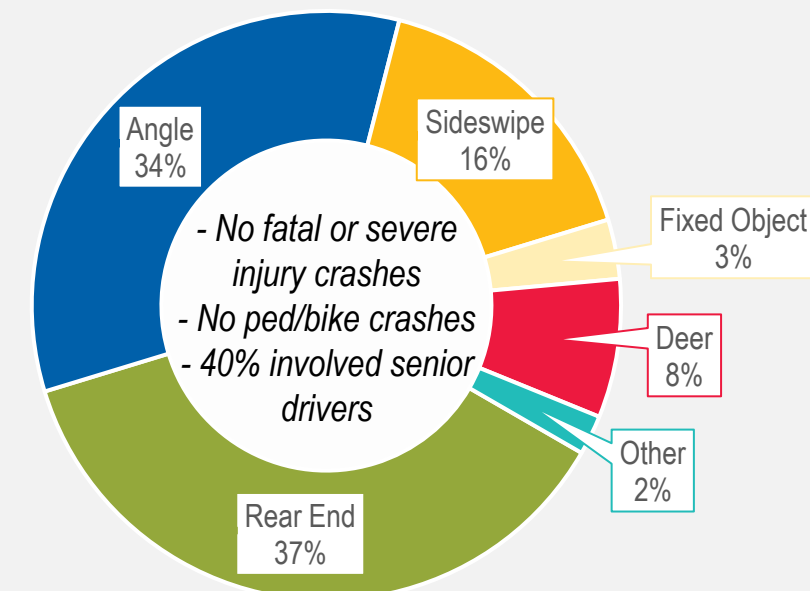
VA 16 (Park Boulevard) between Radio Hill Road and US 11 (Main Street)



## Issues in the Study Area

- Multiple access points create driver confusion and contribute to many crashes along the corridor.**
- US 11 is a parallel corridor to I-81 and serves as a detour for drivers when there is an incident or heavy congestion on I-81.**
- Rear end crash trend related to limited sight distance of queues through the curve.**
- Limited pedestrian crossings across US 11. Sidewalk network ends east of the Wassona Circle and Johnston Road intersection.**

Study Area Crashes (2018 – 2022 Data)  
84 total crashes



## Project Purpose, Goals, & Objectives

Analyze the operational and safety issues identified along US 11 and VA 16.

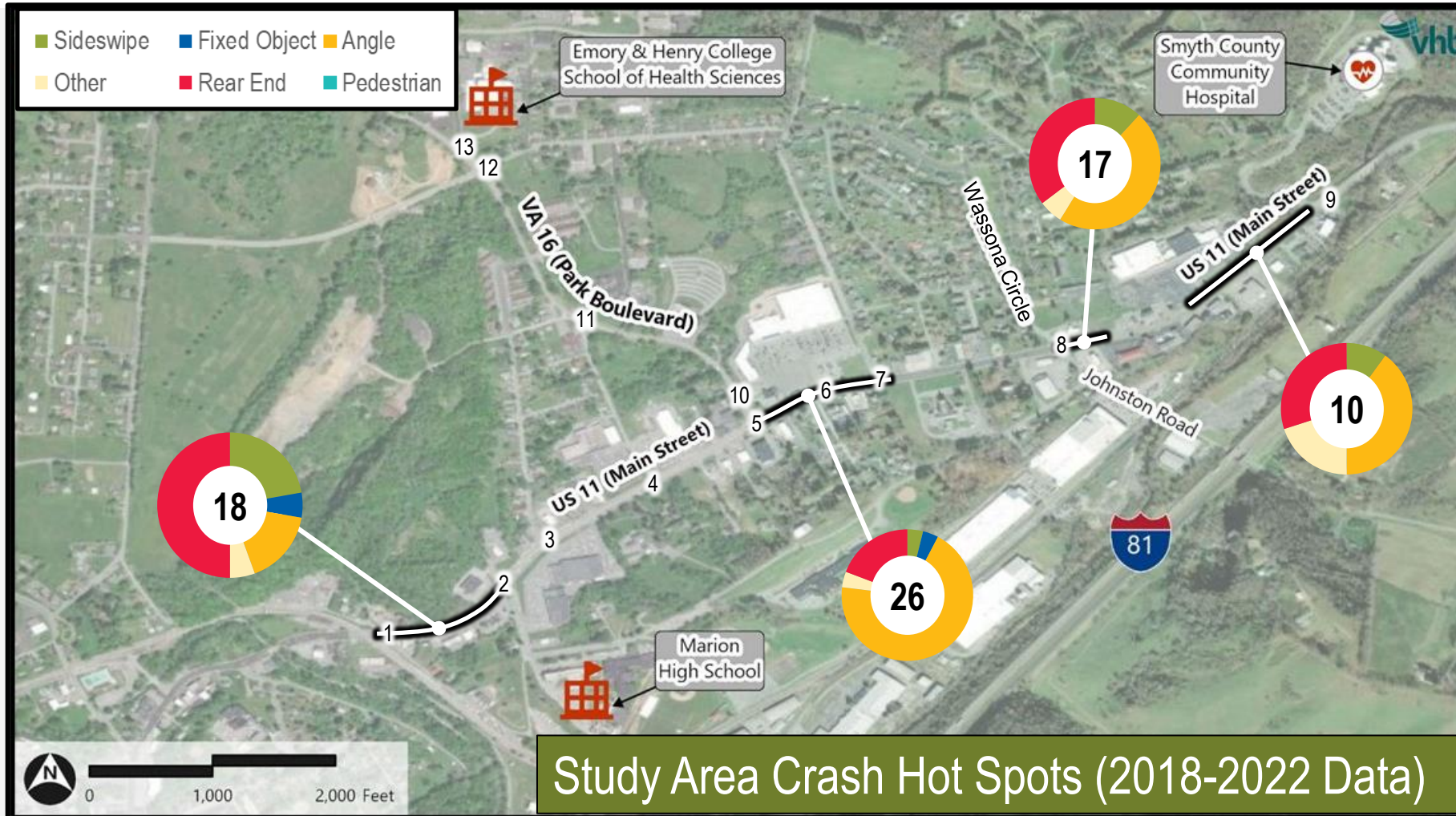
Identify cost-effective preferred improvement alternatives that address the deficient conditions and prioritize safety for vulnerable users.

## Project Fact Sheet

VDOT District	Bristol
Locality	Town of Marion
# of Study Intersections	13
Transit Routes	Mountain Lynx Transit
Functional Classification	US 11 - Urban Minor Arterial VA 16 - Urban Major Collector
Speed Limit	35 MPH

# Safety / Access Needs

## Needs Identification Summary



Study Area Crash Hot Spots (2018-2022 Data)

### Safety Summary

- The safety needs along the corridor are primarily related to the numerous access points. The primary crash pattern involves entering/exiting traffic from the various access points along US 11. Survey respondents indicated confusion with the multiple access points and noted that many access points were difficult to turn out of. Comments specifically cited difficulty turning out of McDonalds, Walmart, and Keller Lane. This finding was corroborated through the safety analysis and field observations.
- Rear end crash pattern between Holston Street and Dabney Drive indicates a sight distance issue of queueing within the horizontal curvature.
- Limited sight distance at 5-leg intersection of Park Boulevard and Groseclose Street and Sayers Street and Terrace Drive. While there are few existing crashes, the conditions indicate a crash risk that will be exacerbated by future volume growth.

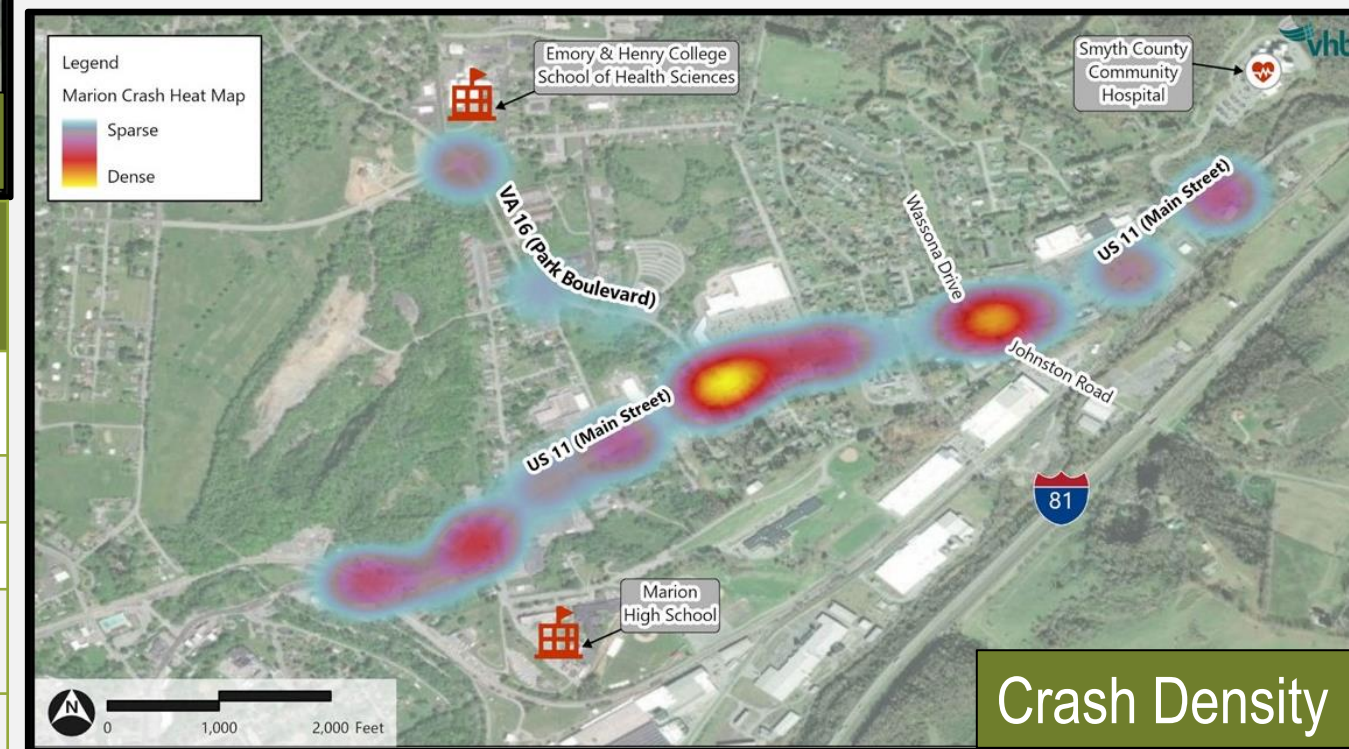
### VTrans Safety / Reliability Needs

NEED	PRIORITY
Reliability	Low
Road Safety	Very High

### VDOT 2018-2022 Crash Data

Hot Spot Intersection / Segment	Crashes by Severity				
	A	B	C	O	Total
Between Holston Street and Dabney Drive	0	8	2	8	18
Park Boulevard to Keller Lane	0	6	3	17	26
Wassona Circle Segment	0	4	4	9	17
Tractor Supply Co Shopping Center to Medical Park Drive	0	3	3	4	10
<b>Total</b>	<b>0</b>	<b>21</b>	<b>12</b>	<b>38</b>	<b>71</b>

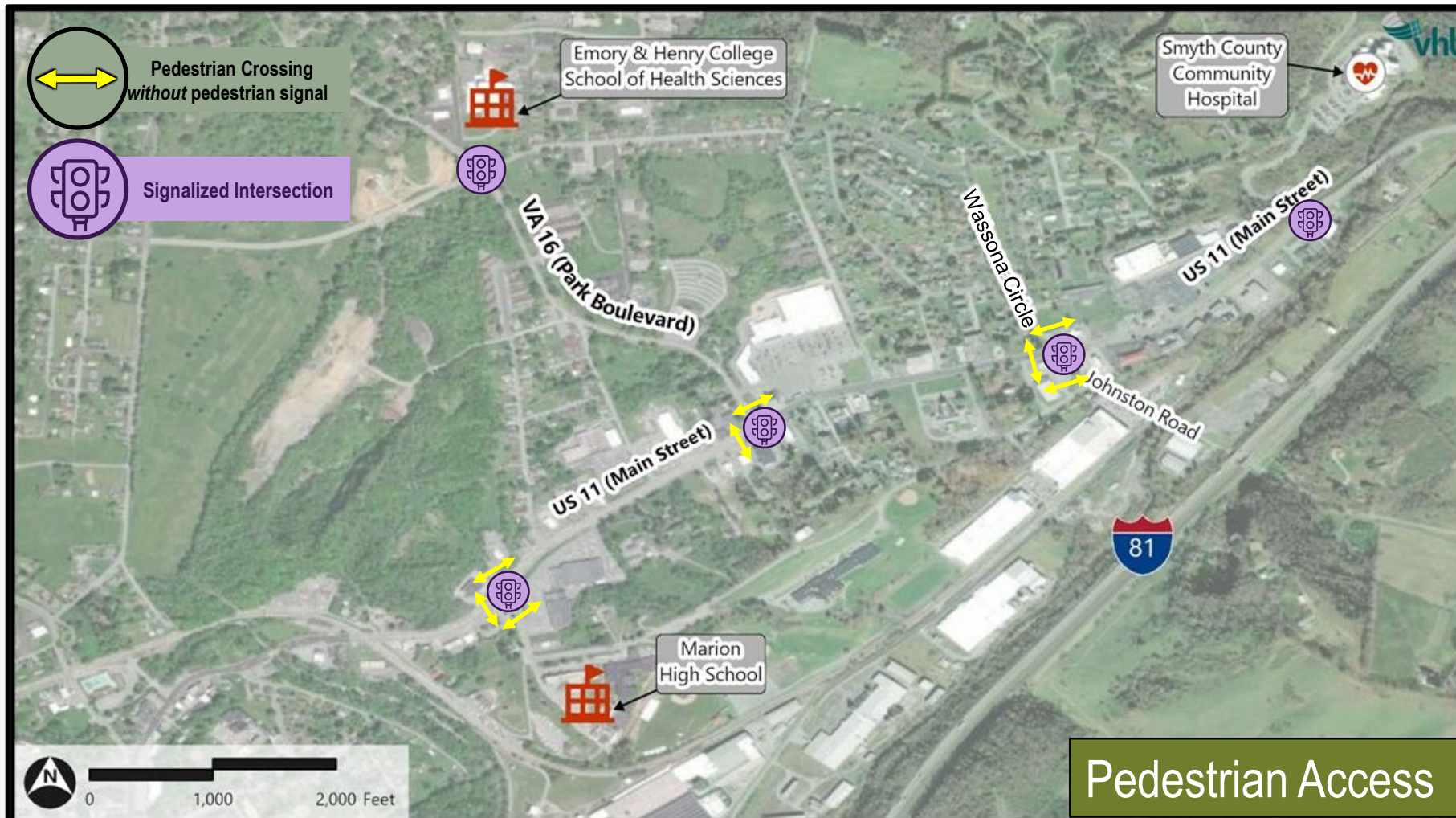
K = Fatal Injury; A = Severe Injury; B = Visible Injury; C = Non-visible Injury; O = Property Damage Only



Crash Density

# Multimodal Needs

## Needs Identification Summary



### Multimodal Summary

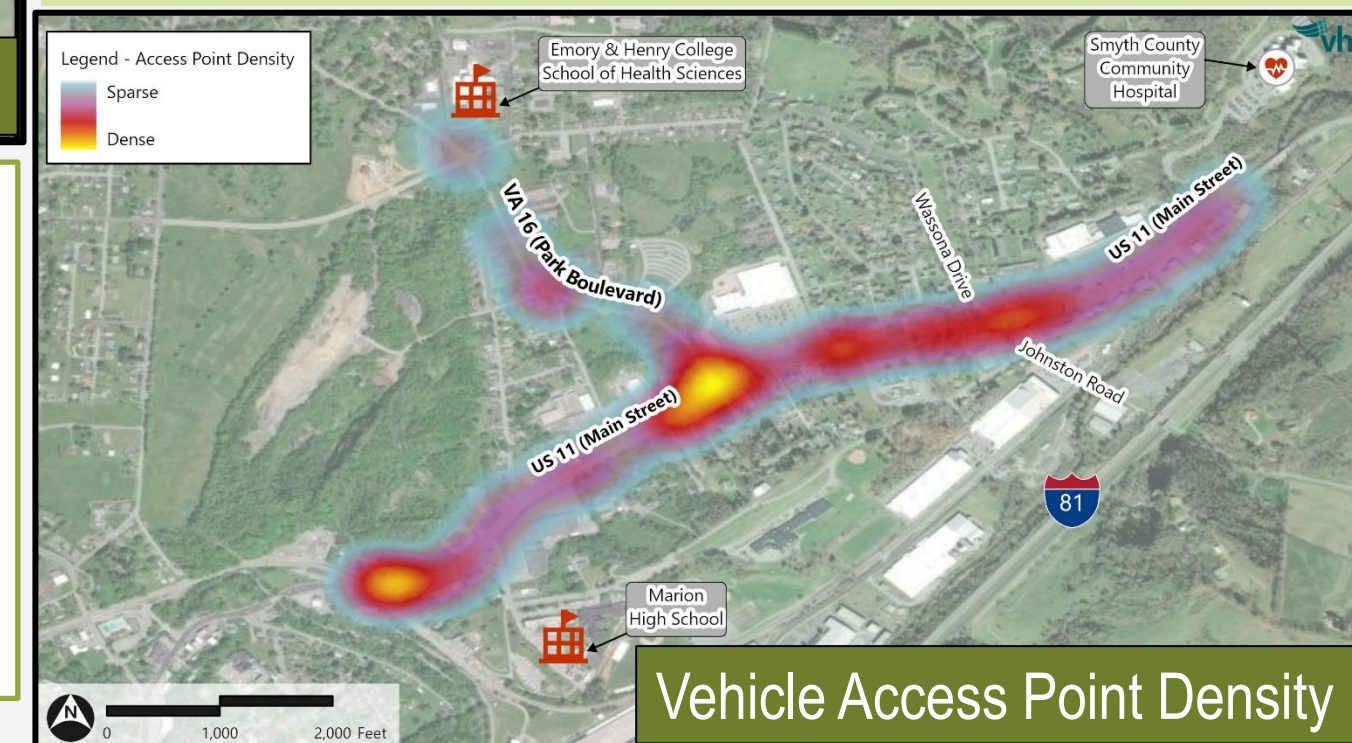
- Pedestrian access is provided at most signalized intersections along the corridor; however, no pedestrian signal heads or phasing is provided.
- A current TAP project is signaling the crossings at the US 11 and VA 16 intersection as well as providing sidewalk on the east side of VA 16.
- Survey respondents indicated a need for additional pedestrian accommodations / improvements to the existing facilities.
- Multiple access points break up pedestrian sidewalks and introduce additional conflicts with vehicles.

### VTrans Access Needs

NEED	PRIORITY
Pedestrian Safety Improvement	No Need
Transportation Demand Management (TDM)	Low

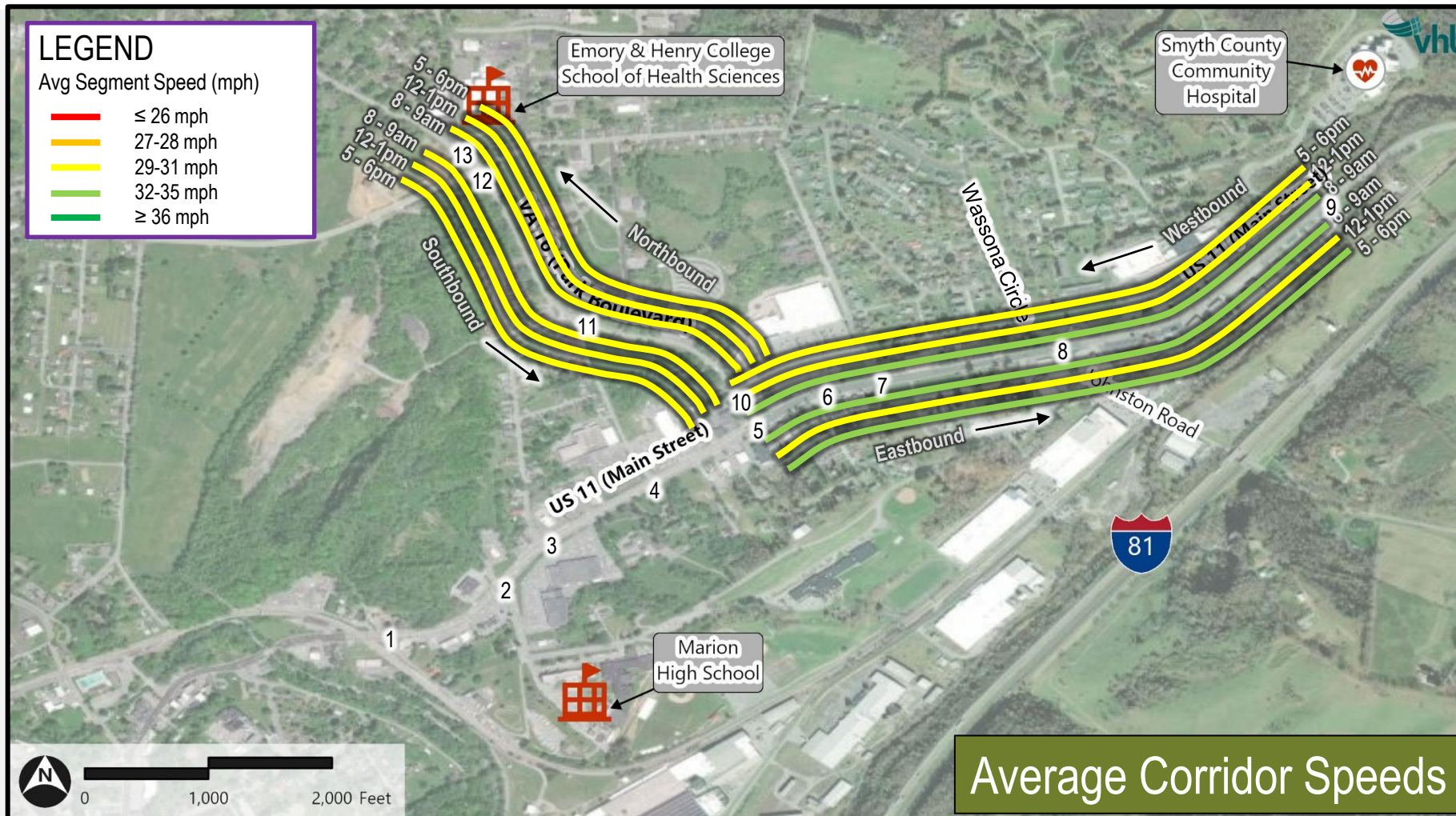
### Existing Transit Service

- Local transit routes serviced by Mountain Lynx Transit.
  - Operate along fixed routes but can deviate off the general route for a requested pick-up/drop-off.
  - Service provided Monday-Friday 8AM-6PM and Saturday 10AM-4PM. Request-based service is provided Monday-Friday only.
  - Primary Marion Town Loop and Summer Express loop are serviced every hour. Other routes are serviced on-demand only.
- No regional connections provided.



# Operations Needs

## Needs Identification Summary



Average Corridor Speeds

### Operations Summary

- Numerous access points contributing to average speeds lower than the speed limit.
- All intersections operate with an acceptable level of service, with the lowest level of service at the intersection of US 11 and Holston Street (LOS C in the AM and LOS D in the PM).

### VTrans Operations Needs

NEED	PRIORITY
Congestion	Low

### Existing Conditions – Synchro Output

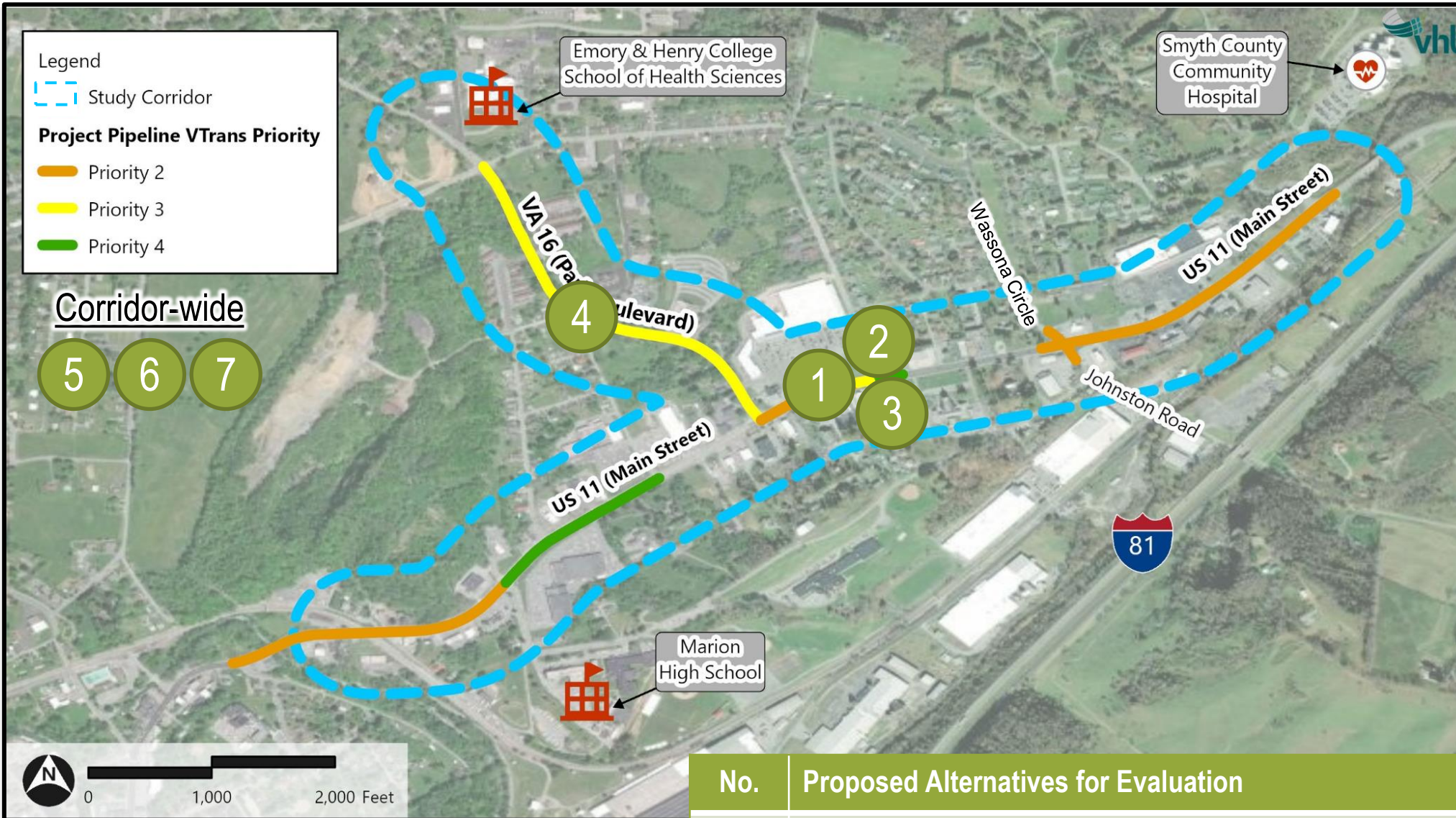
Intersection	Level of Service	
	AM	PM
1. Holston Street and US 11*	C	D
2. Dabny Drive / Windy Drive and US 11	B	B
3. Staley Street and US 11*	A	B
4. Groseclose Street and US 11*	B	B
5. VA 16 and US 11	B	C
6. Copenhaver Street / Walmart Entrance and US 11*	B	C
7. Keller Lane and US 11*	B	B
8. Wassona Circle / Johnston Road and US 11	A	A
9. Medical Park Drive and US 11	A	A
10. VA 16 and Smyth Valley Shopping Center*	A	B
11. VA 16 and Groseclose Street / Sayers Street / Terrace Drive**	A	A
12. VA 16 and Callan Drive / Culbert Drive	B	B
13. VA 16 and Radio Hill Road*	A	B

\*Intersection Level of Service is not calculated for two-way stop control intersection. Level of Service shown is worse of side street approaches.





\*\*Level of service reported by SimTraffic.

# Phase 1 Conclusion | BR-23-07

US 11 (Main Street) between Holston Street and Medical Park Drive  
 VA 16 (Park Boulevard) between Radio Hill Road and US 11 (Main Street)



## Issues in the Study Area

-  Multiple access points create driver confusion and contribute to many crashes along the corridor.
-  US 11 is a parallel corridor to I-81 and serves as a detour for drivers when there is an incident or heavy congestion on I-81.
-  Rear end crash trend related to limited sight distance of queues through the curve.
-  Limited pedestrian crossings across US 11. Sidewalk network ends east of the Wasona Circle and Johnston Road intersection.

No.	Proposed Alternatives for Evaluation	VTrans Needs Addressed
1	Addition of a median with targeted openings and turn lanes	Road Safety
2	Traffic signal at Keller Lane	Road Safety, Congestion
3	Roundabout at Keller Lane	Road Safety, Congestion
4	Intersection reconfiguration at 5-leg intersection of Park Boulevard and Groseclose Street and Sayers Street and Terrace Drive	Road Safety
5	Corridor-wide pedestrian improvements, including signalized crossings and sidewalk extension to hospital	Road Safety
6	Low-cost safety treatments	Road Safety
7	Corridor-wide pedestrian improvements	Transportation Demand Management