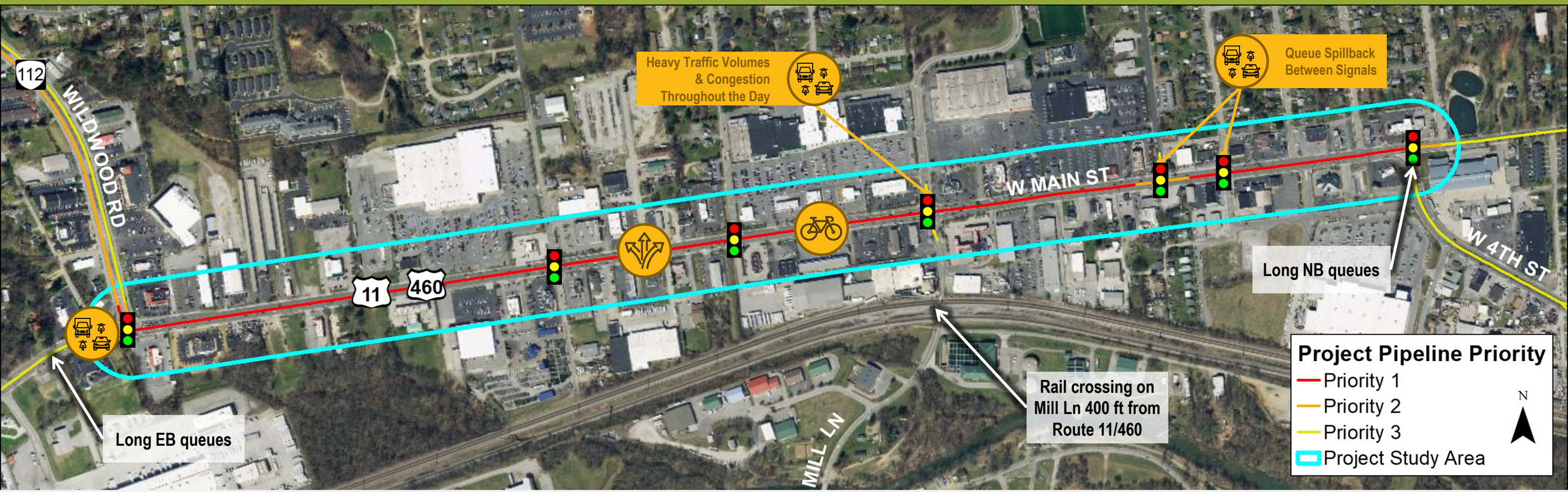
PHASE I - DIAGNOSIS AND PROBLEM IDENTIFICATION

TEAM 1 - TRAFFIC OPERATION AND ACCESSIBILITY NEEDS



Project Purpose, Goals, & Objectives

Analyze the operational and safety issues identified along Route 11/460 (West Main St), with a focus on safety, bicycle & pedestrian access, transit access, TDM, and congestion mitigation.

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

Existing Issues in the Study Area

Access Management concerns along Route 11/460 throughout study area; high density of full access commercial entrances along corridor and adjacent to signalized intersections.

Significant queuing during peak periods for EB Route 11/460 at Wildwood Road; heavy traffic volumes and congestion at Spartan Dr/Mill Ln intersection throughout the day; queue spillback between Goodwin Ave and Bruffey St signalized intersections.

No bicycle facilities along Route 11/460.

VTRANS Needs

NEED	PRIORITY
Safety, Bicycle Access, TDM	Very High
Transit Access	High
Congestion Mitigation, Pedestrian Access	Medium

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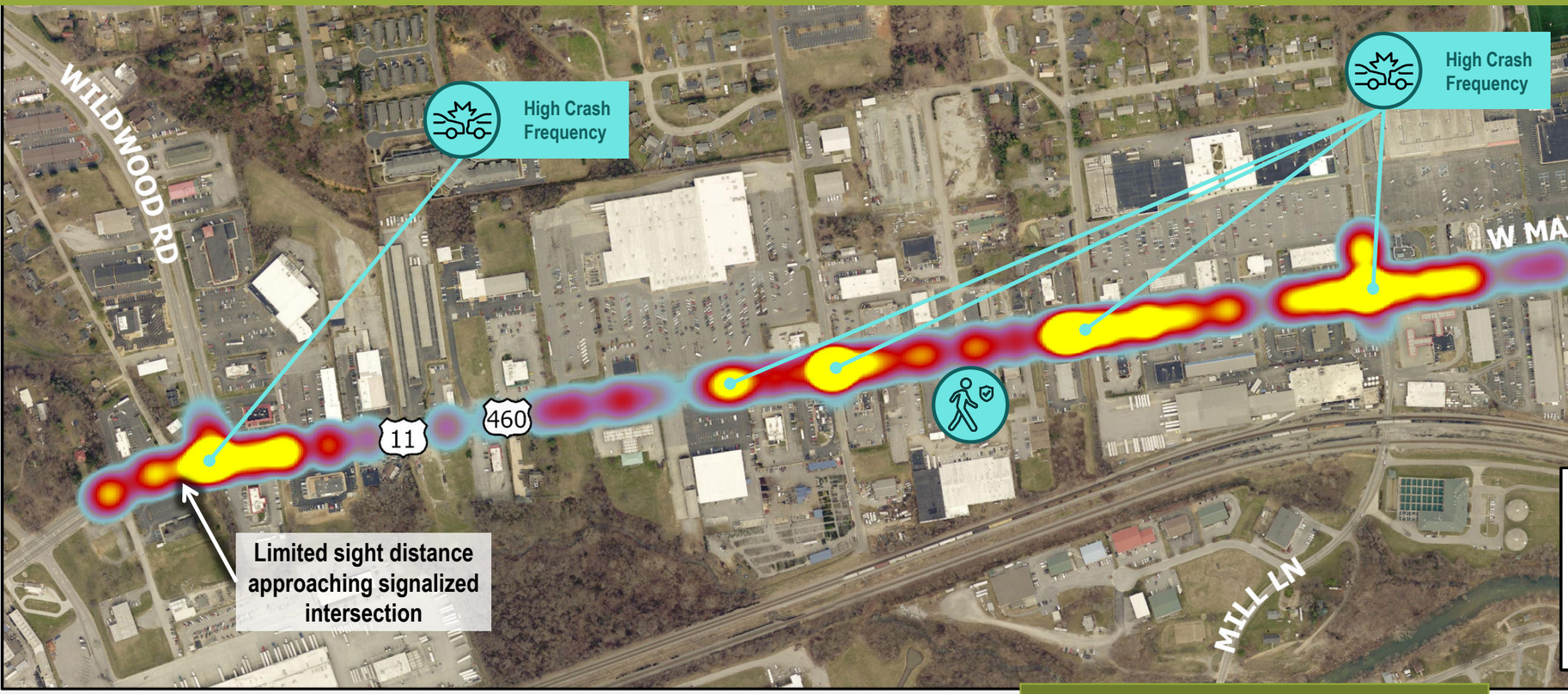
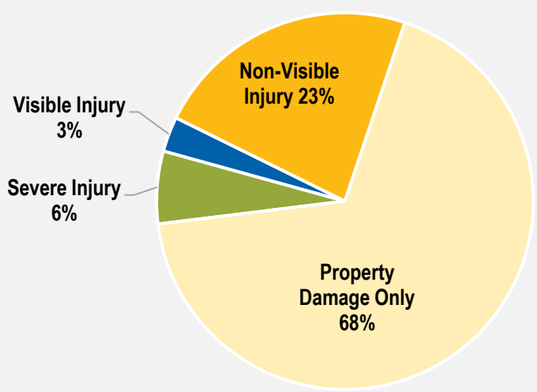
TEAM 2 - TRAFFIC SAFETY AND RELIABILITY NEEDS





VDOT 2015-2019 Crash Data

Intersection with Route 11/460	Crashes by Severity A	B	C	O	Total
Route 112 (Wildwood Rd)	6	2	13	41	**62**
Turner Rd/Hurt Ln	4	0	10	31	**45**
Poplar Ave	1	1	18	20	**40**
Spartan Dr/Mill Ln	4	2	13	48	**67**
Goodwin Ave	0	4	5	18	**27**
Bruffey St	2	1	6	18	**27**
W 4th St	2	0	6	17	**25**
Other Locations	8	3	28	101	**140**
Total	27	13	99	294	**433**

Existing Issues in the Study Area

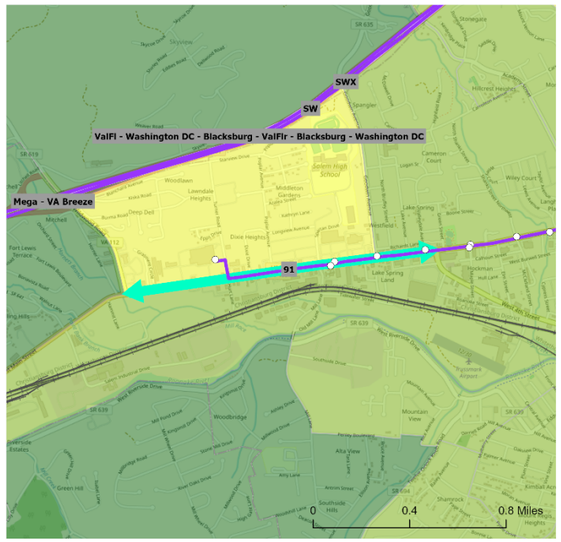
- Significant rear-end and angle crash frequency at all signalized intersections, main Walmart entrance, and other commercial entrances.
- Pedestrian and bicycle crashes at multiple locations along Route 11/460; 8 total, all involving injuries
  - 3 pedestrian crashes
  - 5 bicycle crashes

PHASE I - DIAGNOSIS AND PROBLEM IDENTIFICATION

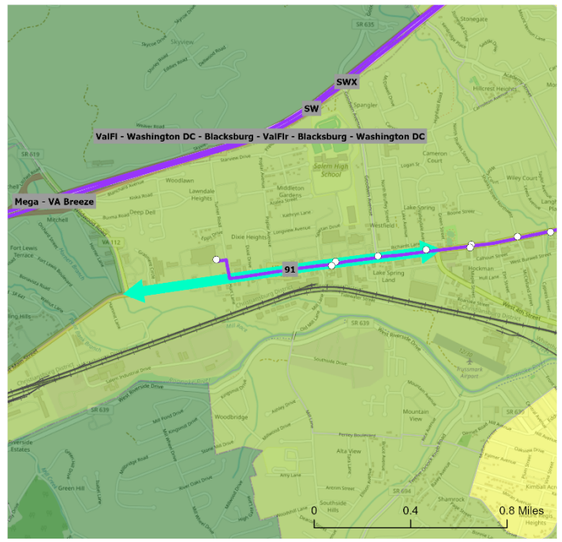
TEAM 3 - TRANSIT AND TDM NEEDS

Existing Conditions

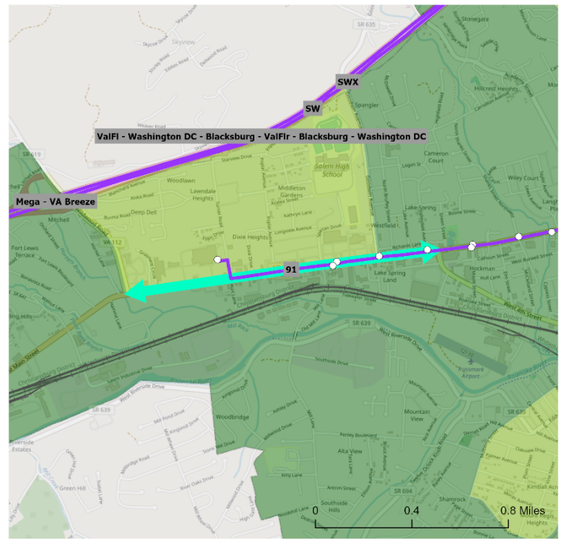
- Rail rights-of-way to south of corridor; one corridor cross street (Mill Ln) crosses at-grade
- RIDE Solutions is the primary commuter assistance provider in region
- Park and ride lot located to the north of I-81 off VA 311 (approximately 3 miles north of study area)
- No bikesharing or e-scooter programs in this area
- Valley Metro 91/92 serves this corridor (M-Sat, 5:30a – 8:30p, 60 min)
- 6 stops, including Walmart; sidewalk access at all stops but no ADA loading pads at stops on street; benches and trash cans at Poplar, Spartan (Kmart), Goodwin, and Valleydale



The All-Day Service Index identifies locations suitable for all-day transit service by combining the results of the Transit-Oriented Population and Non-Work Indices. At both peak and off-peak hours, locations with significant transit-oriented populations are presumed to require connections to and from jobs or non-work-related trip destinations. This results in a propensity index that identifies major origins or destinations for transit trips that would occur throughout the day.



The Peak Index identifies locations suitable for peak-hour service by combining results from the Commuter and Workplace Indices. Locations with significant numbers and densities of commuters are presumed to require connections to and from locations with significant numbers and densities of jobs, especially at peak hours. This results in a propensity index that identifies major origins or destinations for transit trips that would occur during peak hours.



A separate analysis entirely from Transit Propensity, Transit Potential combines population and employment densities for each Census Block Group to indicate the viability of fixed-route service in an area. In general, regions with a density of at least five jobs plus people per acre relatively may be better suited to support fixed-route transit service; areas with densities lower than five jobs plus people per acre may be better suited to support