

# West Run Corridor Study

a preliminary analysis of urban, natural, and  
transportation conditions on West Run Road

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Morgantown Monongalia MPO



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## Outline



Urban Environment

Natural Environment

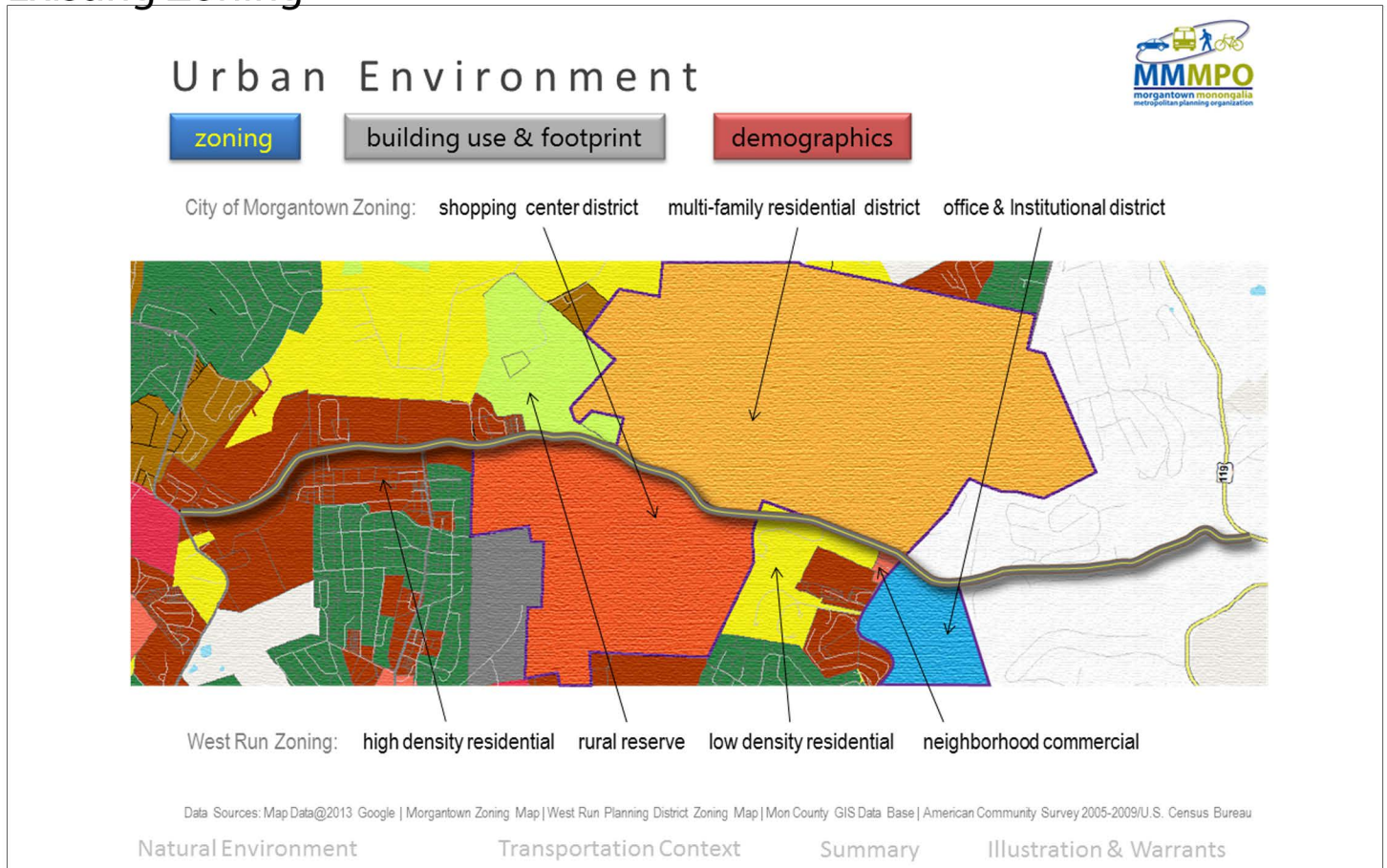
Transportation Context

Summary: Opportunities and Challenges

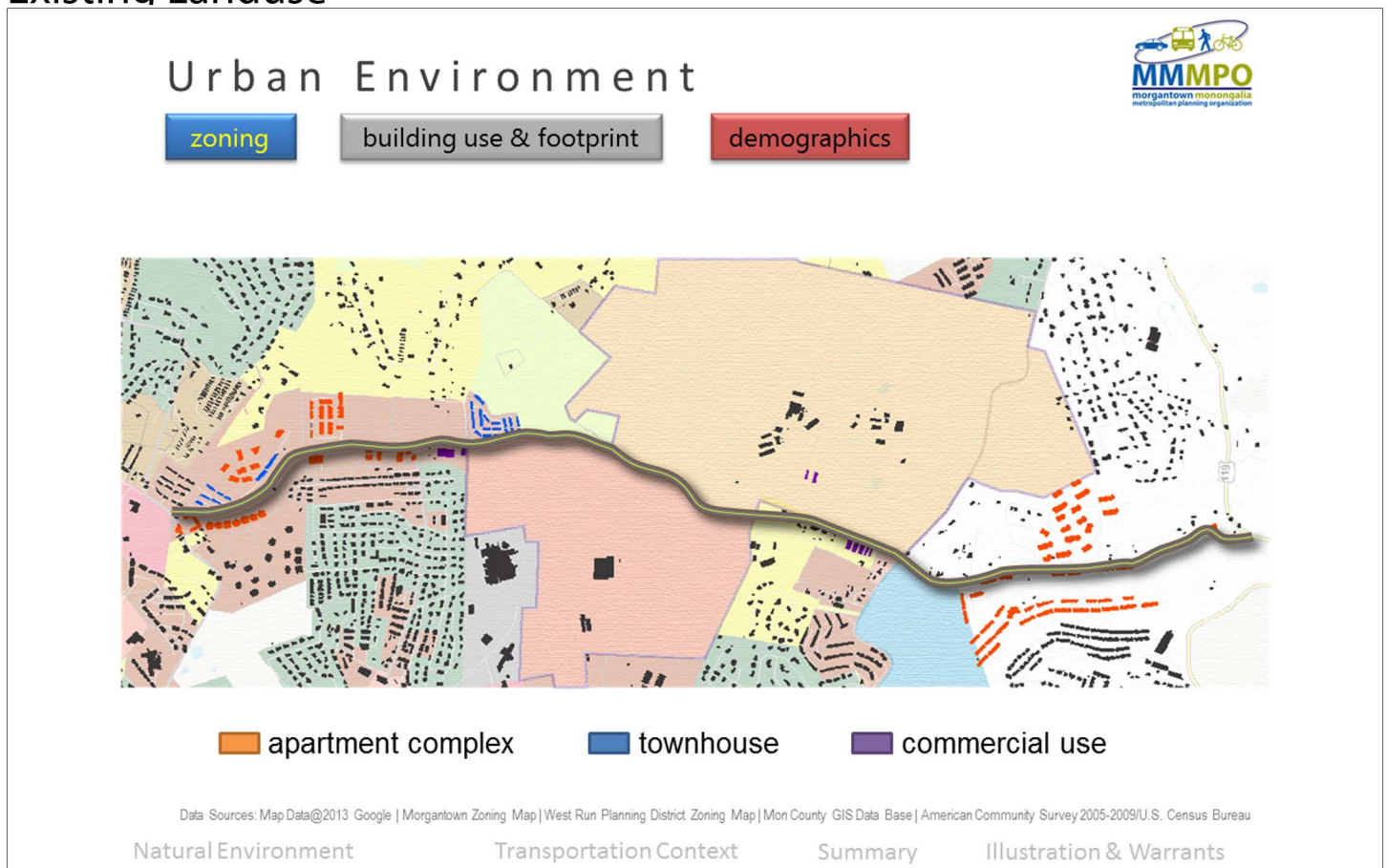
Illustration & Warrants

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# Existing Zoning



# Existing Landuse

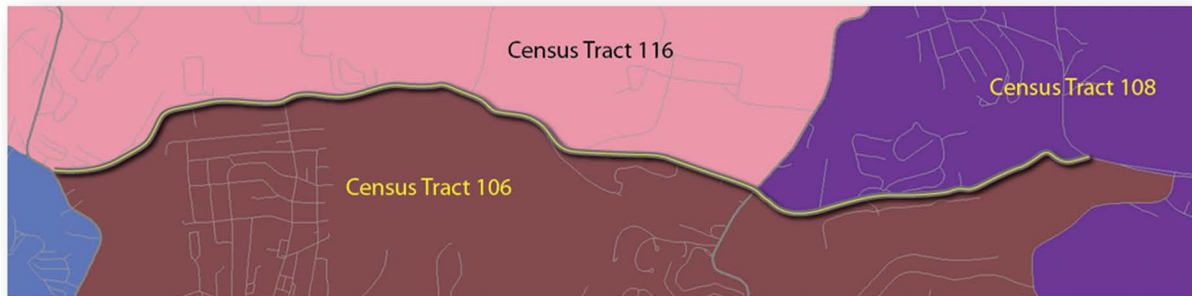
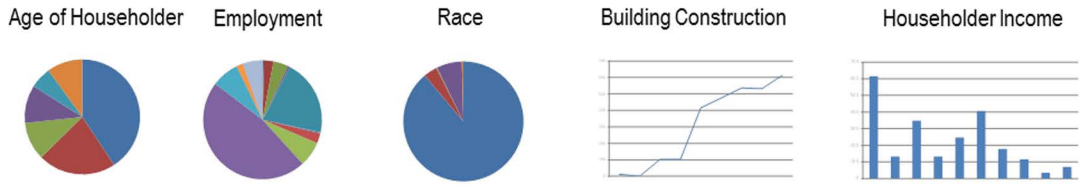


# Resident Census Information



## Urban Environment

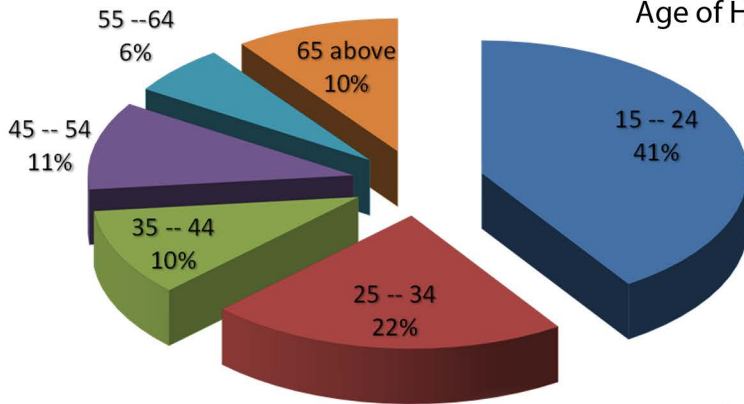
- zoning
- building use & footprint
- demographics



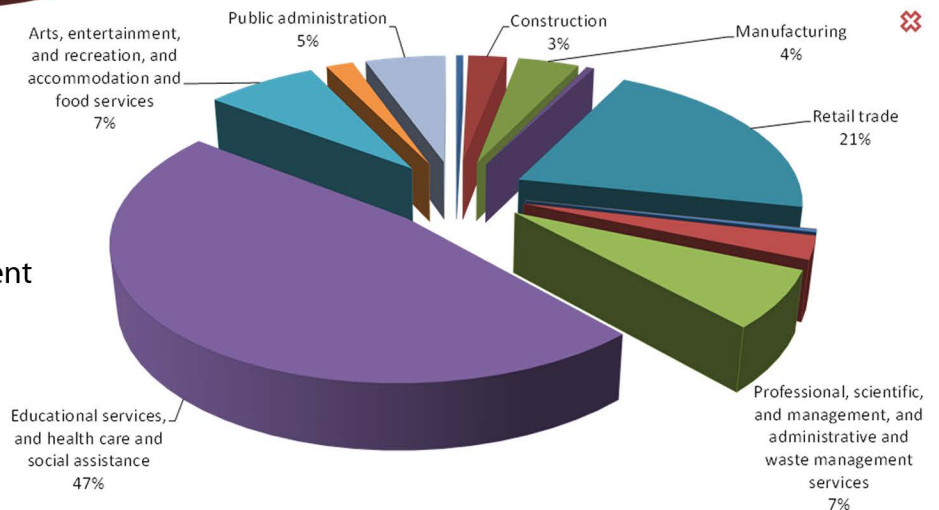
Data Sources: Map Data@2013 Google | Morgantown Zoning Map | West Run Planning District Zoning Map | Mon County GIS Data Base | American Community Survey 2005-2009/U.S. Census Bureau

- Natural Environment
- Transportation Context
- Summary
- Illustration & Warrants

### Age of Householder



### Employment



# Roadway Topograohy

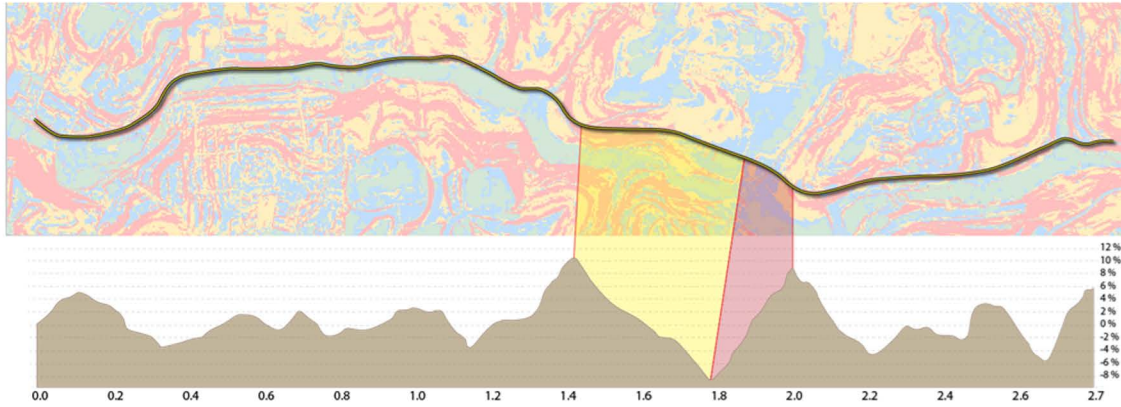
## Natural Environment



topography & slope

road profile

vegetation and open space



Data Sources: MapData@2013 Google | Mon County GIS Data Base

Urban Environment

Transportation Context

Summary

Illustration & Warrants

# Potential ROW Concerns

## Transportation Context



facility

transit, pedestrians & biking

behavior

accident

traffic

road section

intersections

off road structures

area of concerns



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Urban Environment

Natural Environment

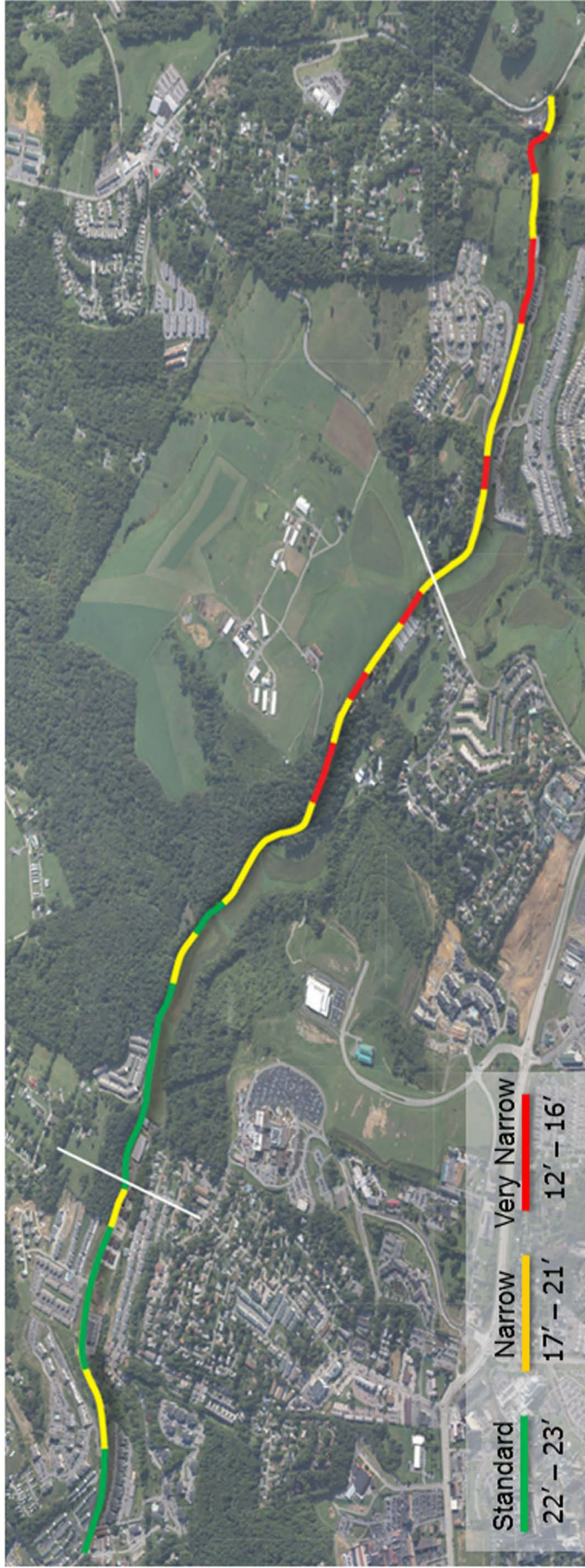
Summary

Illustration & Warrants



## Transportation Context

facility	transit, pedestrians & biking	behavior	accident	traffic
road section	intersections	off road structures		



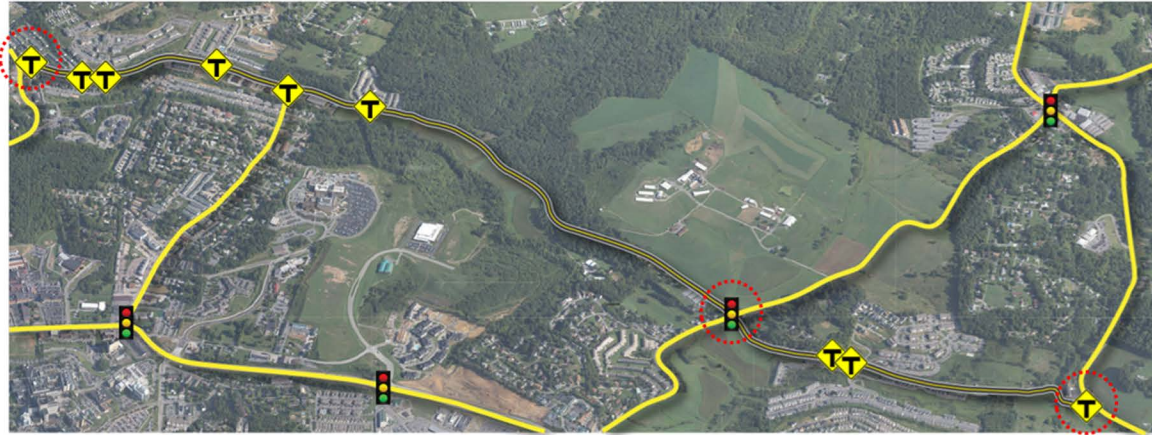
# Unusual Intersection Locations

## Transportation Context



- facility
- transit, pedestrians & biking
- behavior
- accident
- traffic
- road section
- intersections
- off road structures

⊙ unusual intersection geometry



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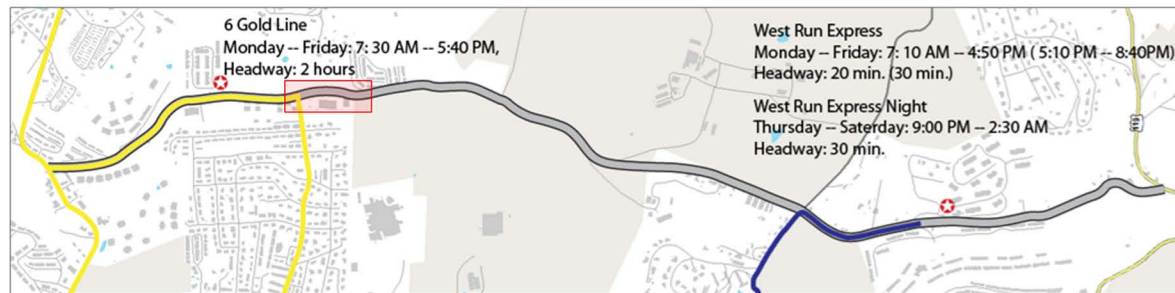
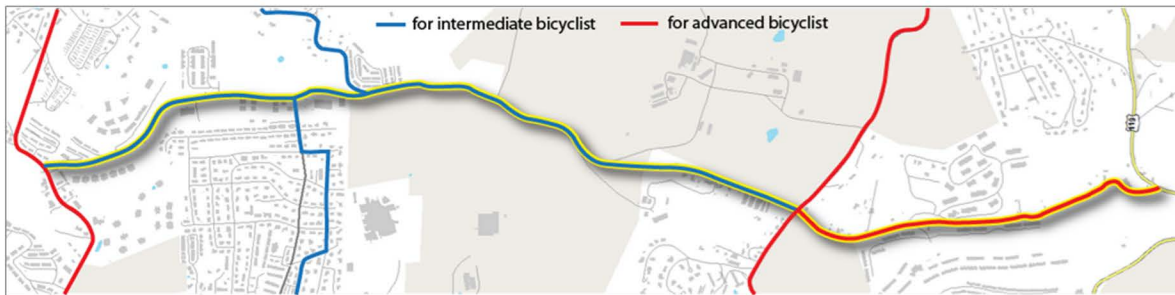
Urban Environment      Natural Environment      Summary      Illustration & Warrants

# Transit Service, Pedestrian Activity & Bike Routes

## Transportation Context



- facility
- transit, pedestrians & biking
- behavior
- accident
- traffic



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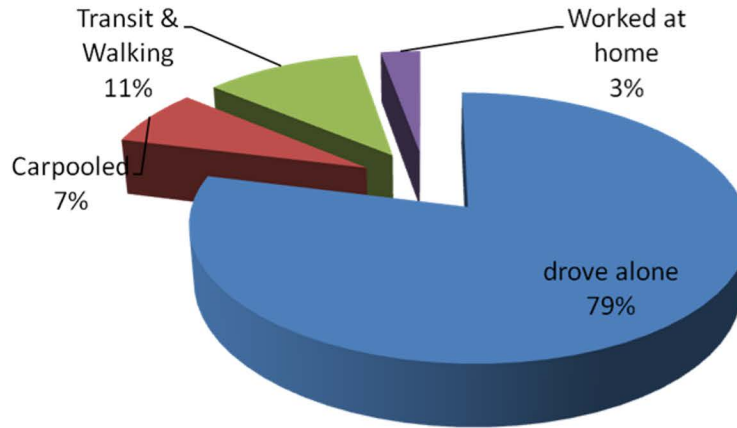
Urban Environment      Natural Environment      Summary      Illustration & Warrants



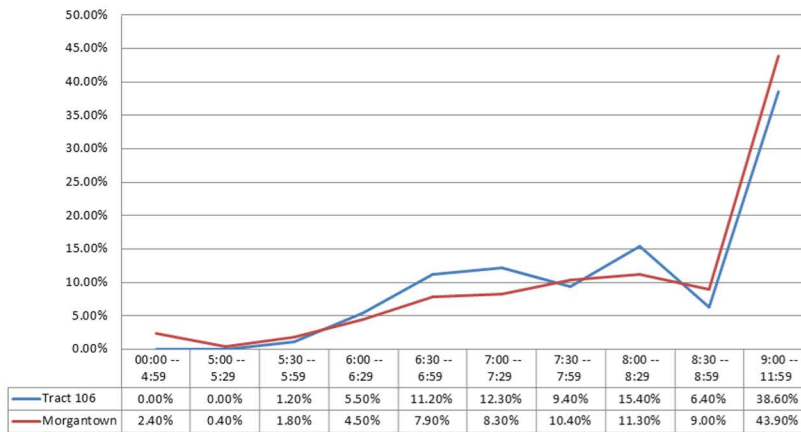
## Transportation Context

- facility
  - transit, pedestrians & biking
  - behavior
  - accident
  - traffic
- means of transportation to work
  - time leaving home to work
  - vehicle available
- means of transportation by citizenship status | by time leaving home to work

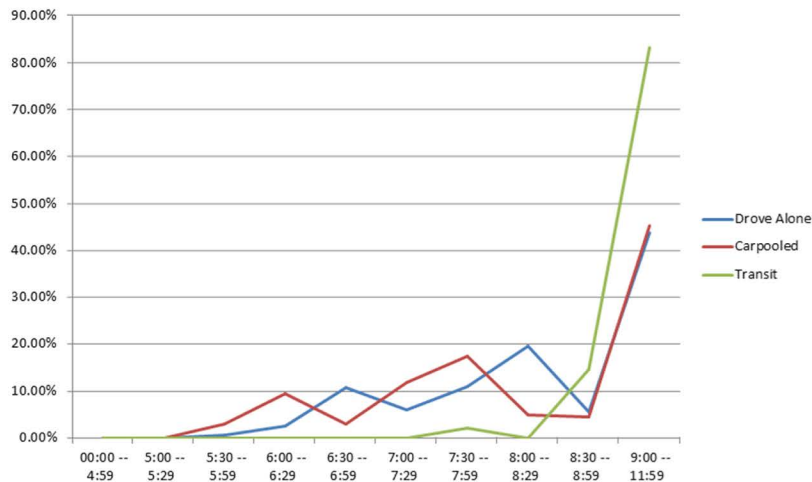
Means of Transportation to Work



Time Leaving Home to Work



Means of Transportation by Time Leaving Home to Work



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# Accident Types

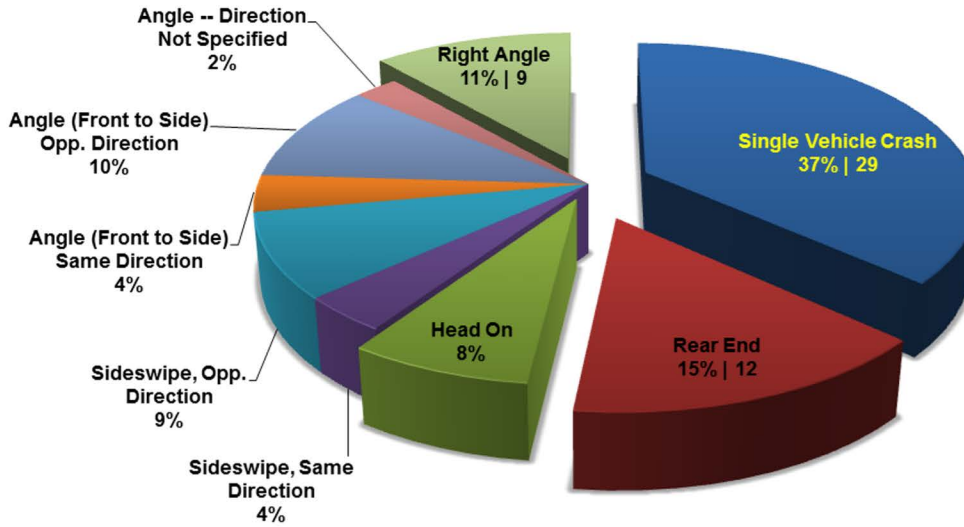
## Transportation Context



facility
transit, pedestrians & biking
behavior
accident
traffic

percent view
time view
location view

Total number of Accidents: 79  
Time period: 2009 -- 2011



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Urban Environment      Natural Environment      Summary      Illustration & Warrants

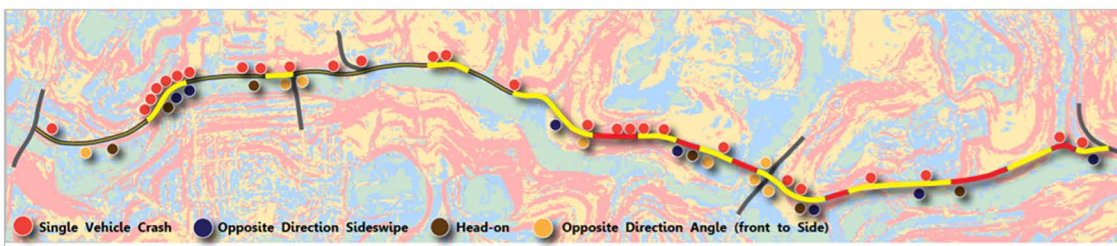
# Accident Locations

## Transportation Context



facility
transit, pedestrians & biking
behavior
accident
traffic

percent view
time view
location view



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Urban Environment      Natural Environment      Summary      Illustration & Warrants

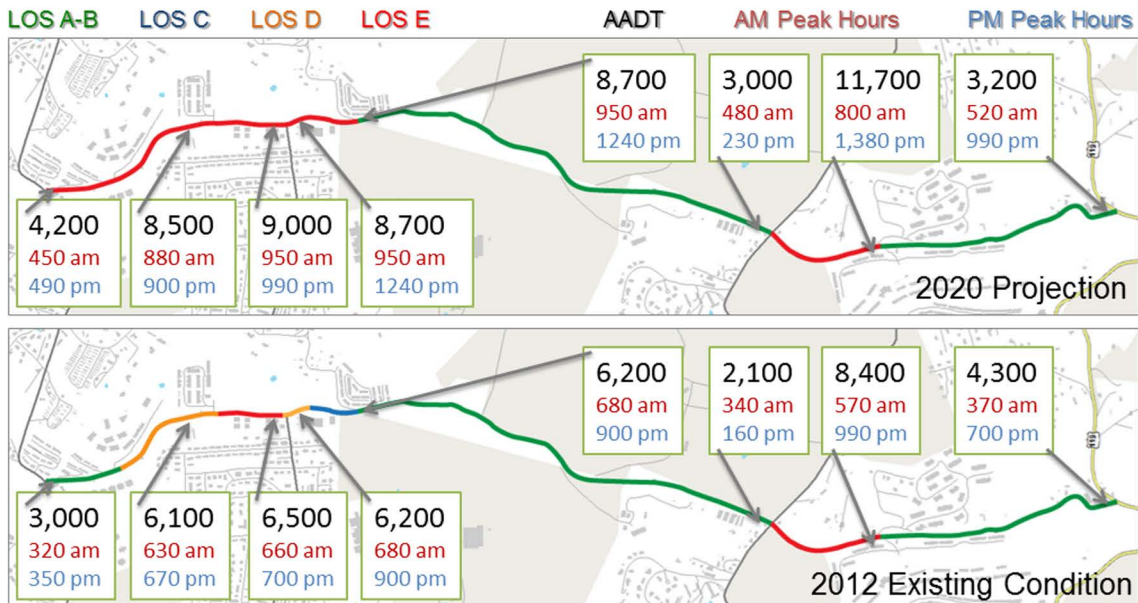


# Existing & Projected Traffic Volumes

## Transportation Context



- facility
- transit, pedestrians & biking
- behavior
- accident
- traffic



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Urban Environment      Natural Environment      Summary      Illustration & Warrants

# Traffic Count on the Intersection of West Run Rd. and Riddle Ave.

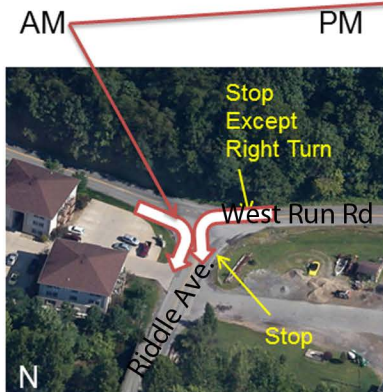
## Illustration & Warrants

Traffic Count | Warrants



Date: February 12 & 13 (Tuesday & Wednesday)

Time: 7:00 am – 9:00 am, 11:00 am – 1:00 pm, 4:00 pm – 6:00 pm



Time Period	EB		WB		NB	
	T	R	T	L	L	R
7:00:00 - 7:15:00	13	30	9	19	3	10
7:15:00 - 7:30:00	27	39	12	56	6	8
7:30:00 - 7:45:00	32	82	32	70	11	10
7:45:00 - 8:00:00	17	65	22	64	9	10
8:00:00 - 8:15:00	24	51	16	37	12	7
8:15:00 - 8:30:00	22	68	20	37	12	13
8:30:00 - 8:45:00	17	65	23	35	23	8
8:45:00 - 9:00:00	20	46	23	22	18	8
11:00:00 - 11:15:00	18	29	16	9	14	10
11:15:00 - 11:30:00	12	26	12	7	17	12
11:30:00 - 11:45:00	14	15	10	4	12	8
11:45:00 - 12:00:00	19	20	12	12	18	11
12:00:00 - 12:15:00	11	13	12	9	24	7
12:15:00 - 12:30:00	27	38	25	16	38	19
12:30:00 - 12:45:00	16	30	9	8	28	12
12:45:00 - 13:00:00	23	34	18	21	28	17
16:00:00 - 16:15:00	45	26	40	11	70	67
16:15:00 - 16:30:00	40	20	38	11	36	57
16:30:00 - 16:45:00	25	16	11	7	42	52
16:45:00 - 17:00:00	37	31	44	11	50	73
17:00:00 - 17:15:00	24	26	33	13	59	50
17:15:00 - 17:30:00	34	27	39	12	63	66
17:30:00 - 17:45:00	30	33	33	16	56	45
17:45:00 - 18:00:00	26	29	35	14	71	45

Urban Environment      Natural Environment      Transportation Context      Summary

# Visualization of Proposed Improvements



## Illustration & Warrants



Urban Environment

Natural Environment

Transportation Context

Summary



# Evaluation of Potential New Signal Location (West Run & Riddle)



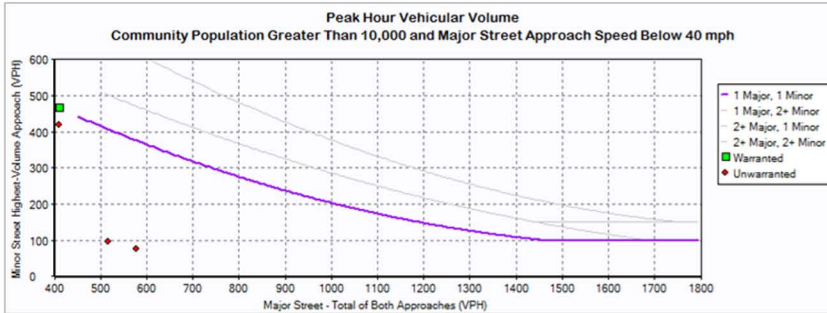
## Illustration & Warrants

Traffic Count | Warrants

MUTCD Warrant Met: *the need for a traffic control signal shall be considered*

Three conditions exist for the same 1 hour (any four consecutive 15-minute periods)

- Total stopped time delay experienced by the traffic on Riddle Ave. exceeds 4 vehicle-hours
- The volume on Riddle Ave. approach (one direction only) exceeds 100 vehicles per hour
- The total entering volume serviced during the hour exceeds 650 vehicles per hour



Note:

- 1) Counts taken during construction on WV 705
- 2) Recount needed after construction complete

Software: Synchro Warrants 7

Urban Environment

Natural Environment

Transportation Context

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## Summary

### Opportunities & Challenges



#### Opportunities

##### Multi-modal transportation

- demographic configuration
- high density urban environment (existing & expected)
- pedestrian activities

##### Capacity improvement

- open space & proposed development

##### Safety improvement

- narrow and dangerous road sections
- low visibility intersection
- intersection reconfiguration

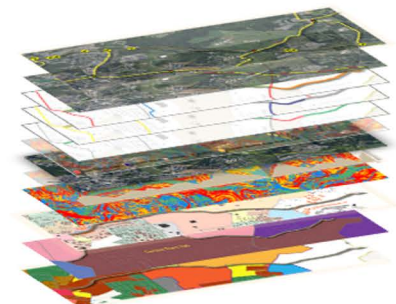
#### Challenges

##### Slope

- excessive slop above 12%

##### Built structure

- utility poles
- buildings
- containing walls



Urban Environment

Natural Environment

Transportation Context

Illustration & Warrants

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