Morgantown Monongalia MPO

2025 - 2055 Metropolitan Transportation Plan

Appendix C: Downtown Traffic Study Final Recommendation Presentation

Downtown Morgantown Microsimulation Study

May 15, 2025

MMMPO

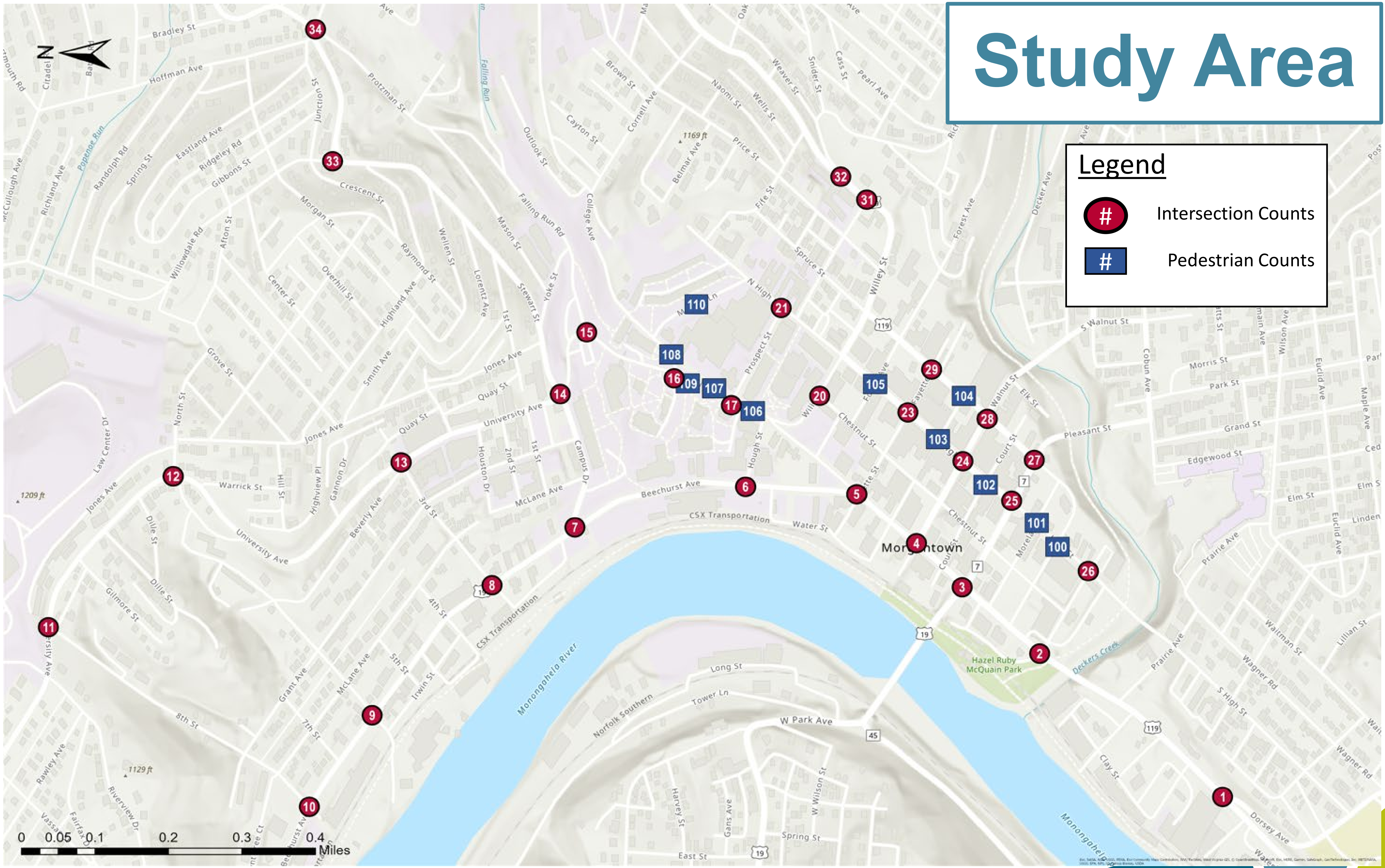
Kimley»Horn

Project Purpose

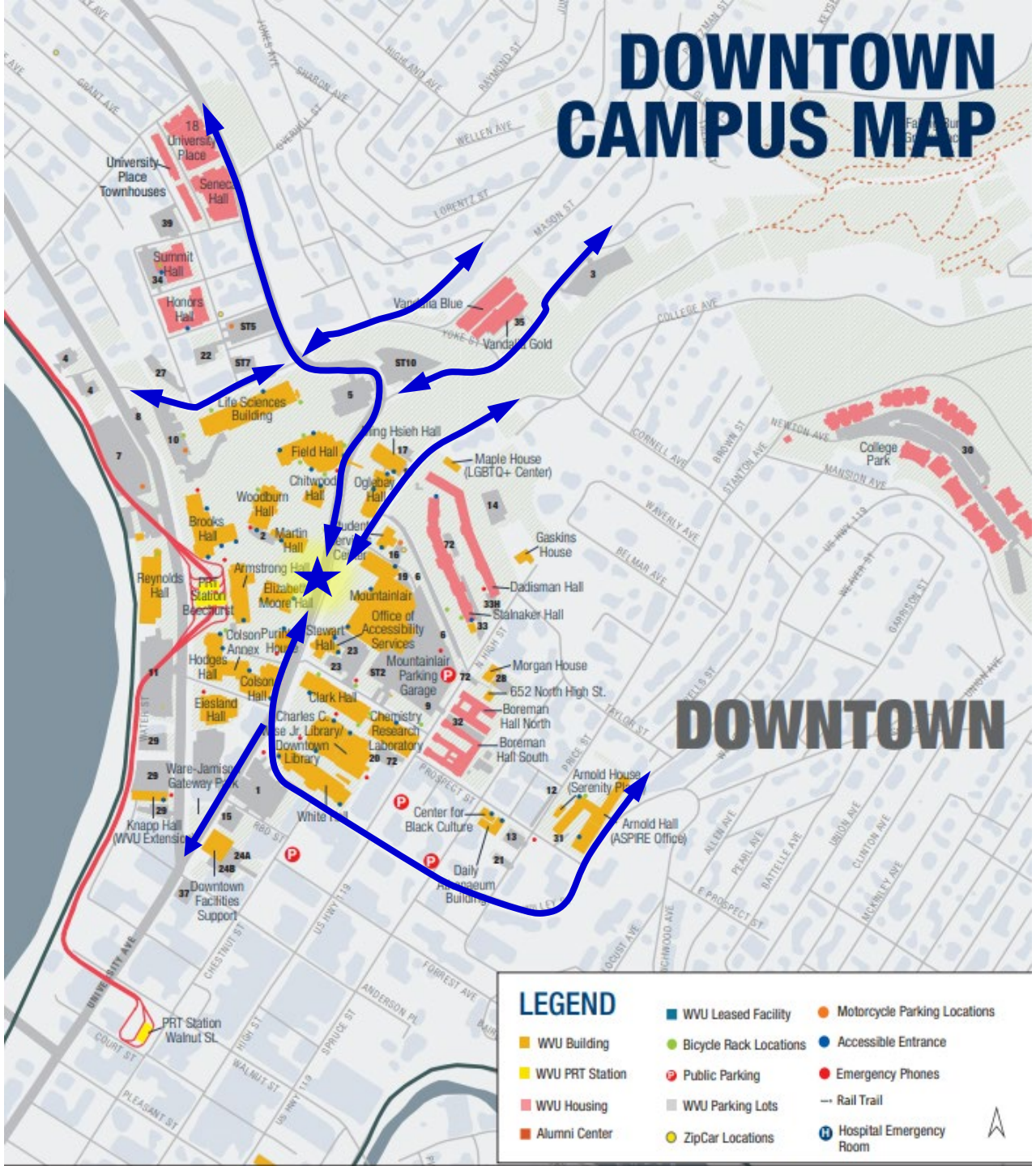
To recommend potential future reconfigurations of the downtown Morgantown transportation network based on:

- Assessment of existing safety, parking, and congestion
- Input from the community and stakeholders
- A robust microsimulation model of the network

Study Area



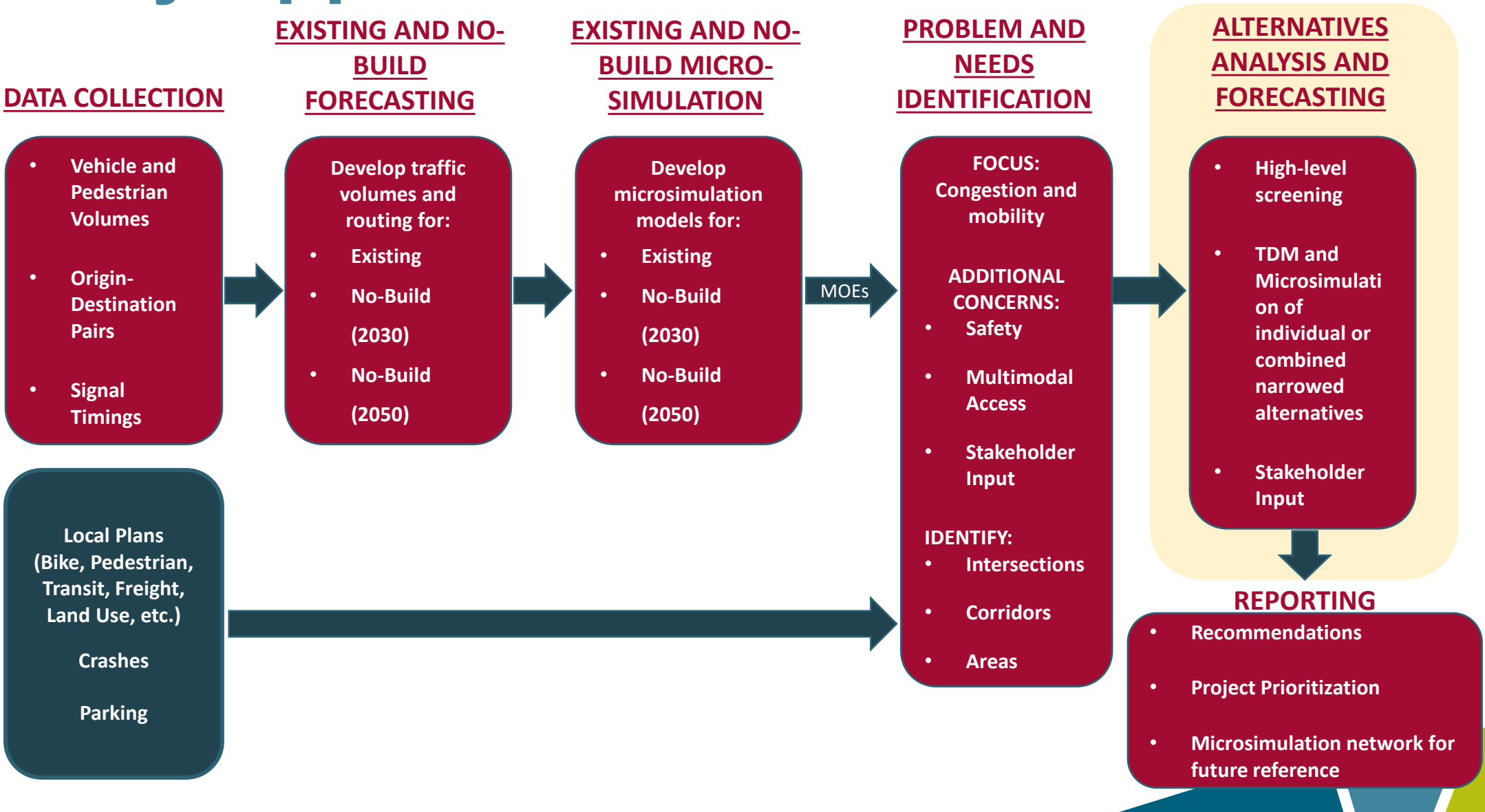
Legend
Intersection Counts
Pedestrian Counts
N
0 0.05 0.1 0.2 0.3 0.4
Miles
Morgantown
Monongahela River
Hazel Ruby McQuain Park
Deckers Creek
CSX Transportation
Norfolk Southern
Beechurst Ave
University Ave
W Park Ave
S Walnut St
Pleasant St
Chestnut St
Water St
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 20 21 23 24 25 26 27 28 29 31 32 33 34
100 101 102 103 104 105 106 107 108 109 110



Grumbein's Island

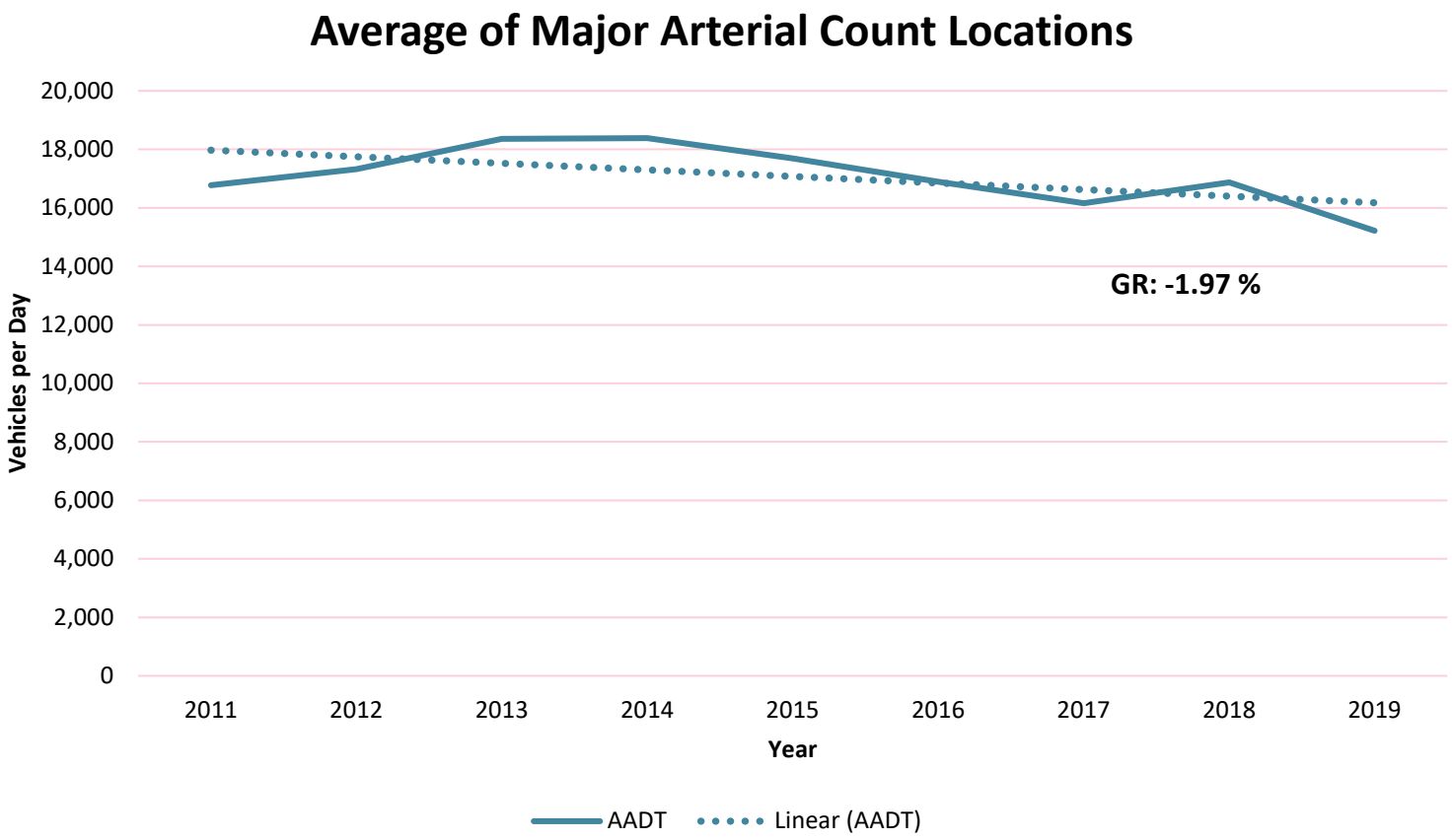
- Centrally located on WVU's Downtown campus
- High pedestrian volumes create a "choke point" for north-south vehicular traffic
- Potential closure of island will need to answer the question – "where will drivers go, and what effect will that have on the network"?
- This study will use TransCAD and TransModeler to address this question

Study Approach



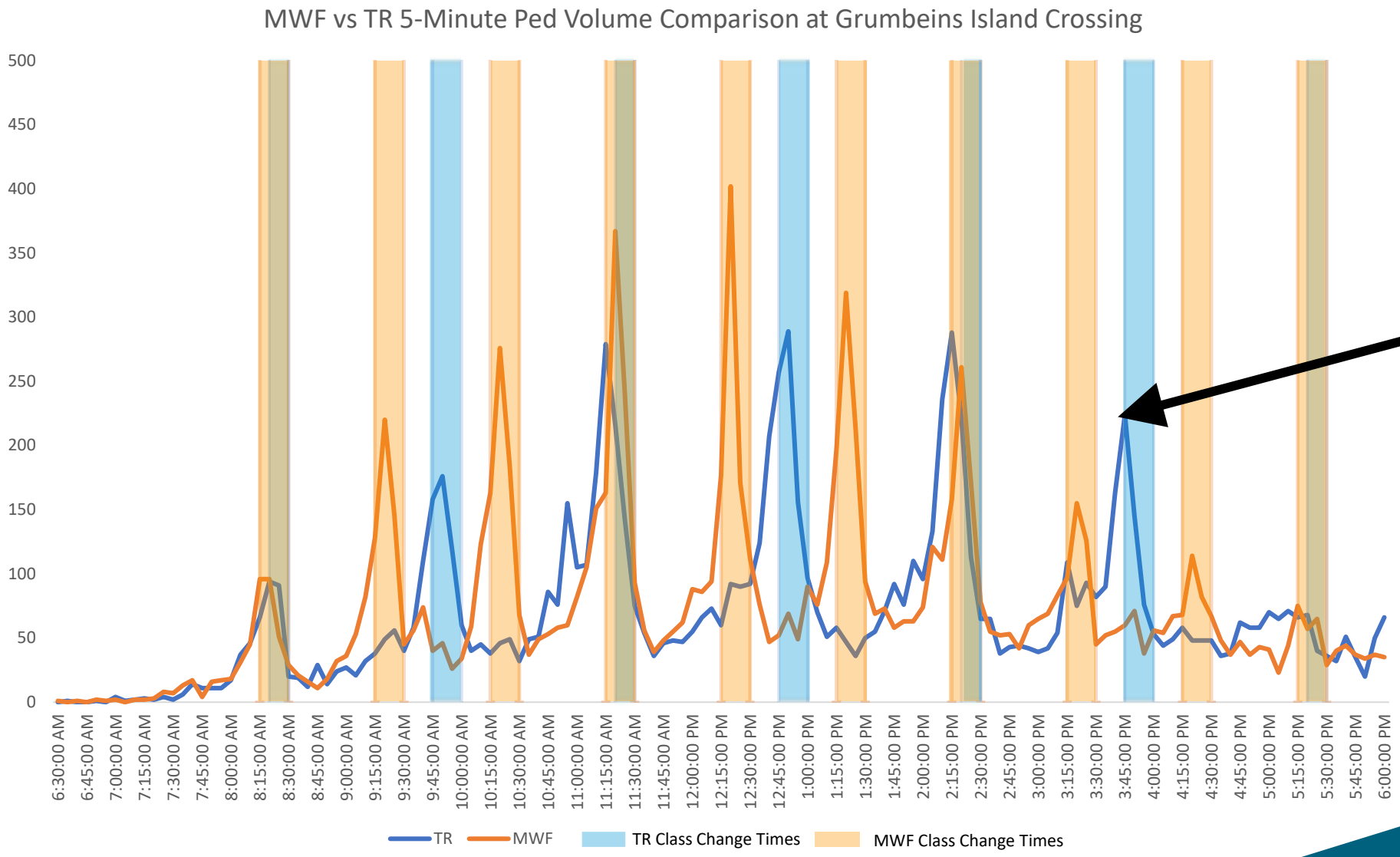
Existing Conditions

Historic AADT Volume Trends



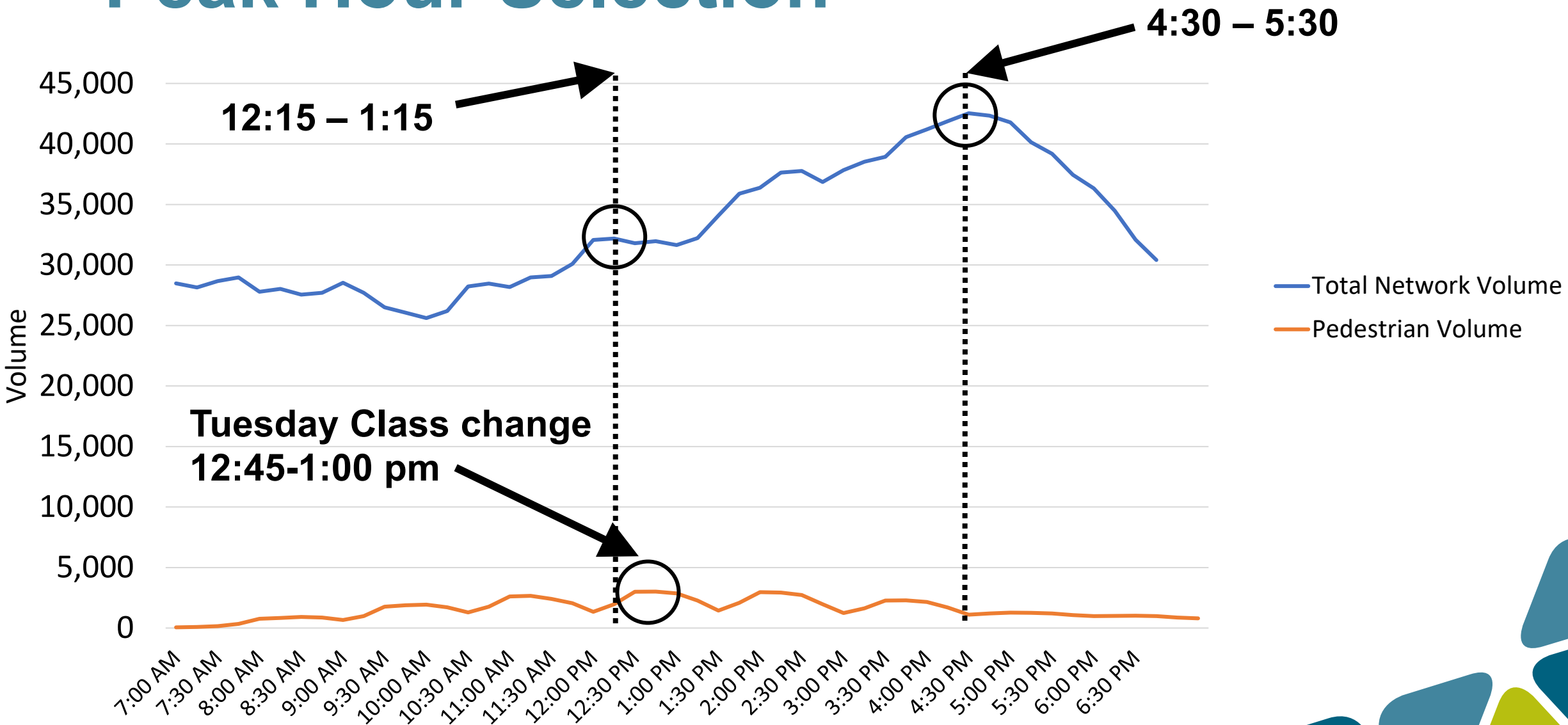
Location	Regression GR
Beechurst Ave North of 8th St	0.90%
Beechurst Ave North of Fayette St	-2.72%
University Ave Southeast of Evansdale Dr	-3.32%
University Ave Southeast of 8th St	-1.19%
University Ave South of 2nd St	-2.97%
University Ave South of College Ave	-2.85%
University Ave South of Westover Bridge	-1.15%
Willey St Northeast of Spruce St	-2.66%
Willey St Northwest of Chestnut St	-3.60%
Westover Bridge	-2.37%
All Locations	**-1.97%**

Weekday Pedestrian Volumes at Grumbein's Island



Peaks follow class schedules

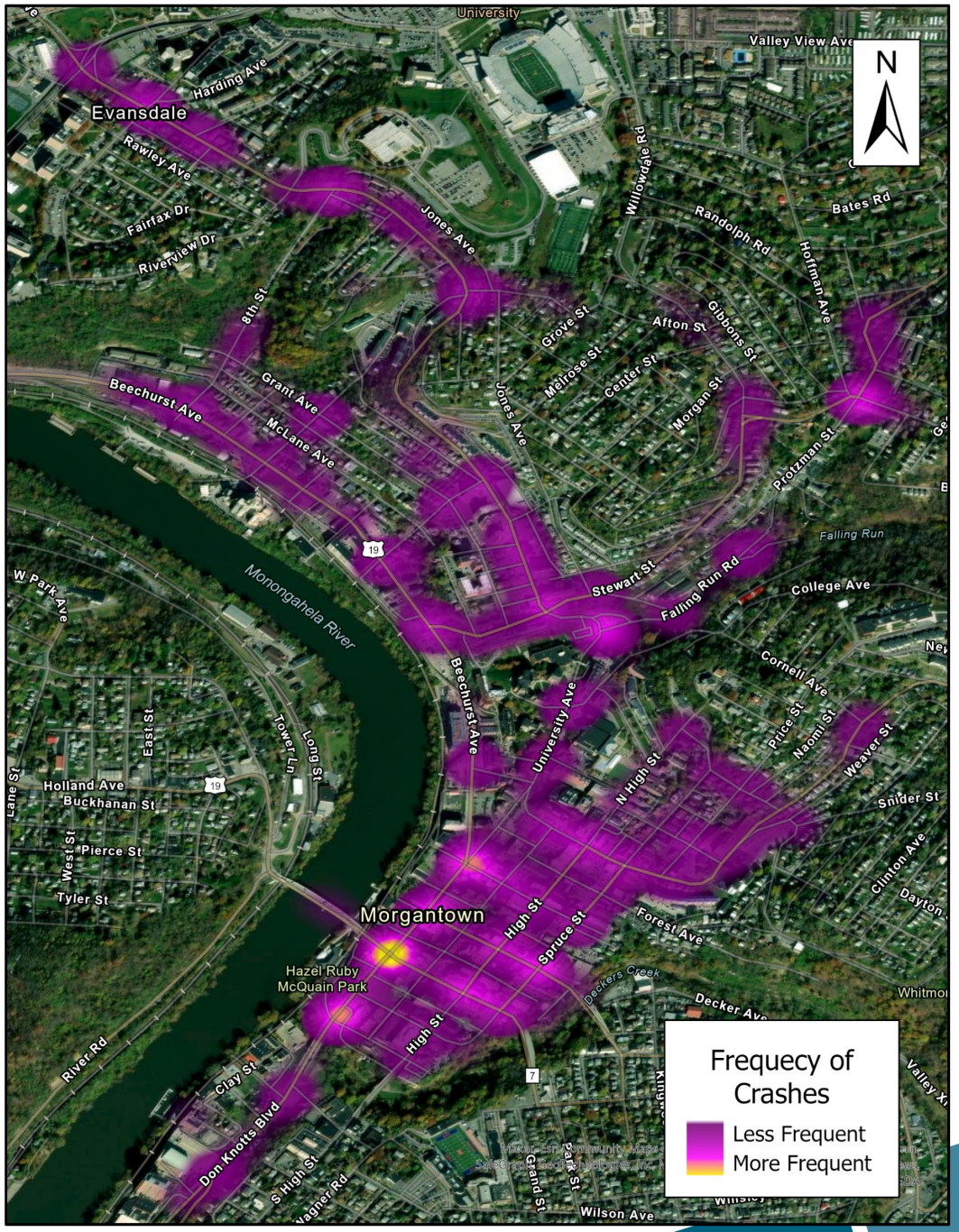
Peak Hour Selection



Crash Analysis

‘More Frequent’ Crash Locations:

- University Avenue and Pleasant Street
- University Avenue and Garrett Street/Foundry Street
- University Avenue and Beechurst Avenue and Fayette Street



Crash Analysis

$$Severity = (\#\ of\ Injury\ Crashes\ x\ 11.2) + \#\ of\ PDO\ Crashes$$

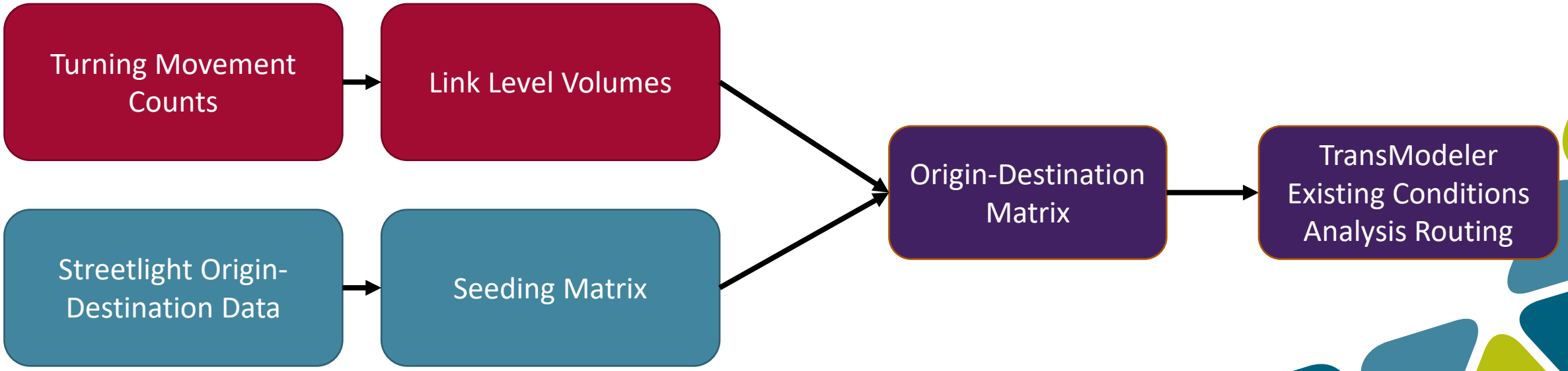
‘More Severe’ Crash Locations:

- University Avenue and Pleasant Street
- University Avenue/Don Knotts and Garrett Street/Foundry Street
- University Avenue and Beechurst Avenue and Fayette Street
- High Street and Pleasant Street
- University Avenue and Walnut Street/Water Street
- University Avenue and Campus Drive/Stewart Street
- University Avenue and Falling Run Road
- Stewart Street and Van Gilder Avenue

Development of Routing

Origin-Destination Routing Development

- Collect turning movement counts
  - Calculate link level ADTs and link level hourly volumes (target matrix)
- Streetlight O-D Matrix
  - Typical distribution of traffic throughout downtown Morgantown (seeding matrix)



Development of Microsimulation Model

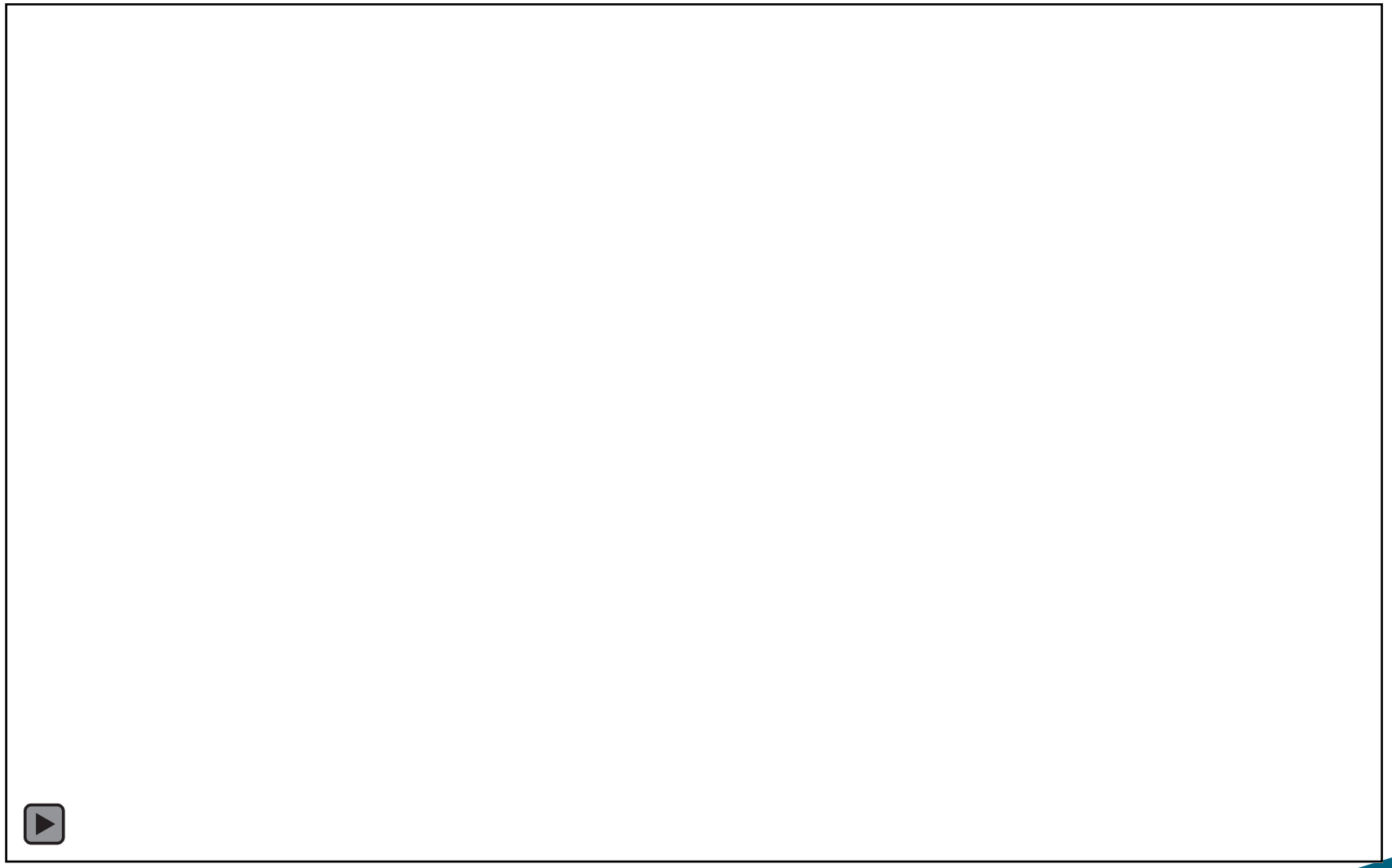
Preview of TransModeler Microsimulation

- Tool to simulate future conditions and better understand impacts of potential changes to network
- Models individual vehicles and pedestrians – simulates how they interact within the road network
- Required inputs:
  - Traffic volumes
  - Pedestrian crossings and activity
  - Traffic signal control (16 signalized, 18 unsignalized)
  - Heavy vehicle data
  - Existing O-D patterns
  - Planned projects by others
  - Road characteristics (speed, # of lanes, etc.)

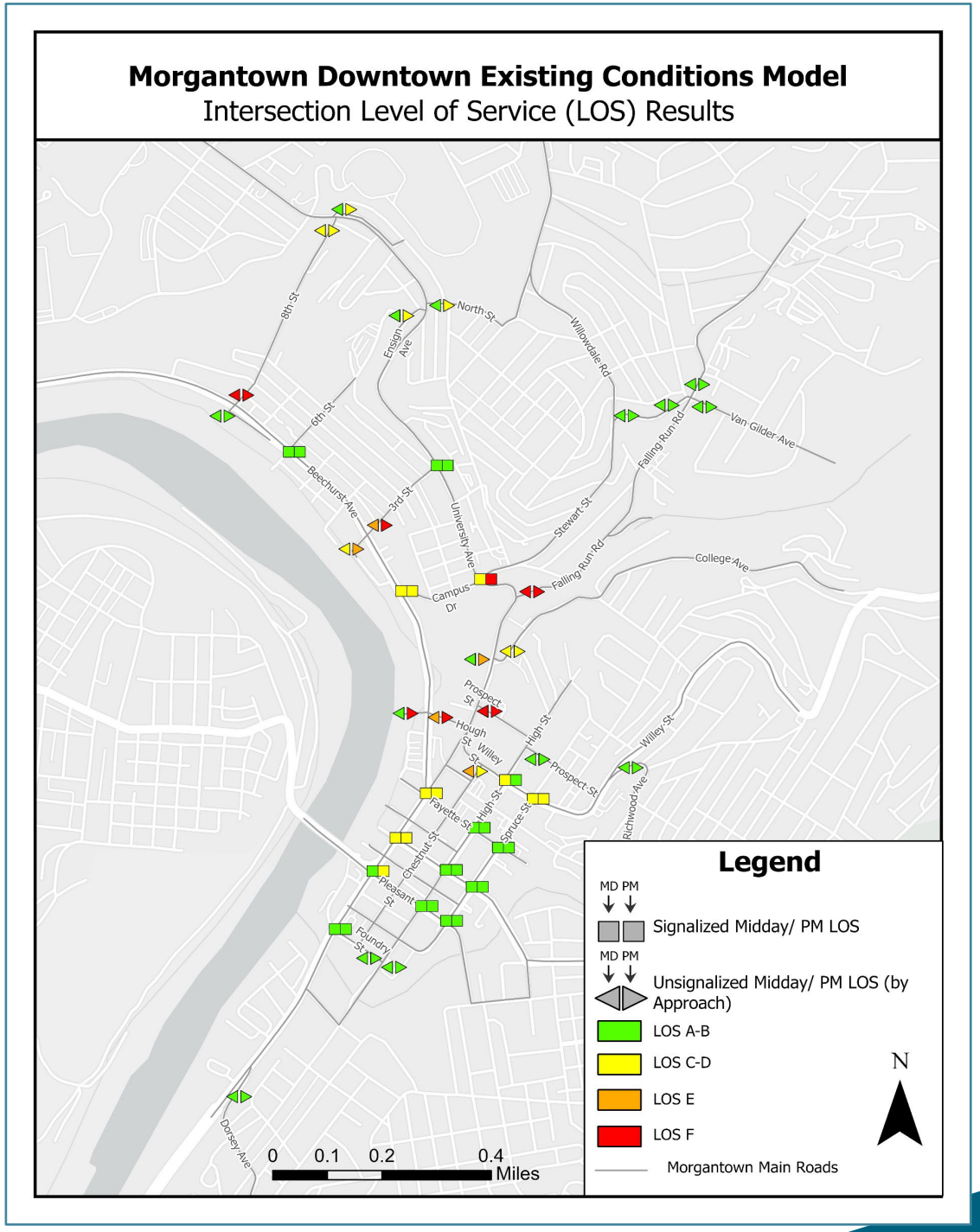
Existing Simulation Calibration

- Need to verify existing conditions model reflects actual traffic conditions observed in the field before proceeding with future models
- Calibration parameters
  - Queueing
  - Travel time
  - Turning movement and throughput volumes
- Calibration is accomplished by adjusting:
  - Routing and volume matrix
  - Pedestrian crossing configuration
  - Global model characteristics such as driver behavior (if needed)

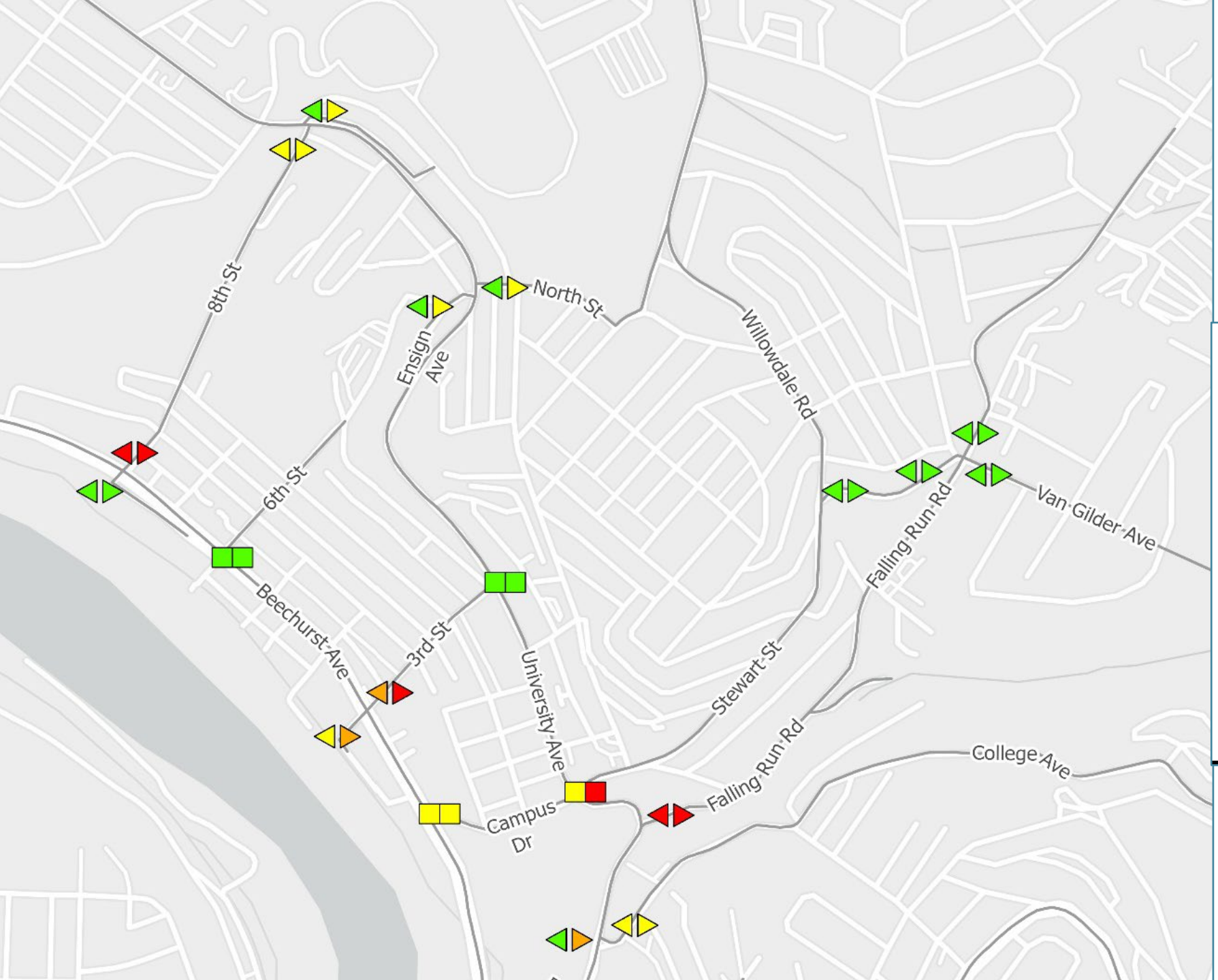
Simulation Recording from the Model



Congestion Model Results



Congestion Model Results



Legend

MD PM

Signalized Midday/ PM LOS

MD PM

Unsignalized Midday/ PM LOS (by Approach)

LOS A-B

LOS C-D

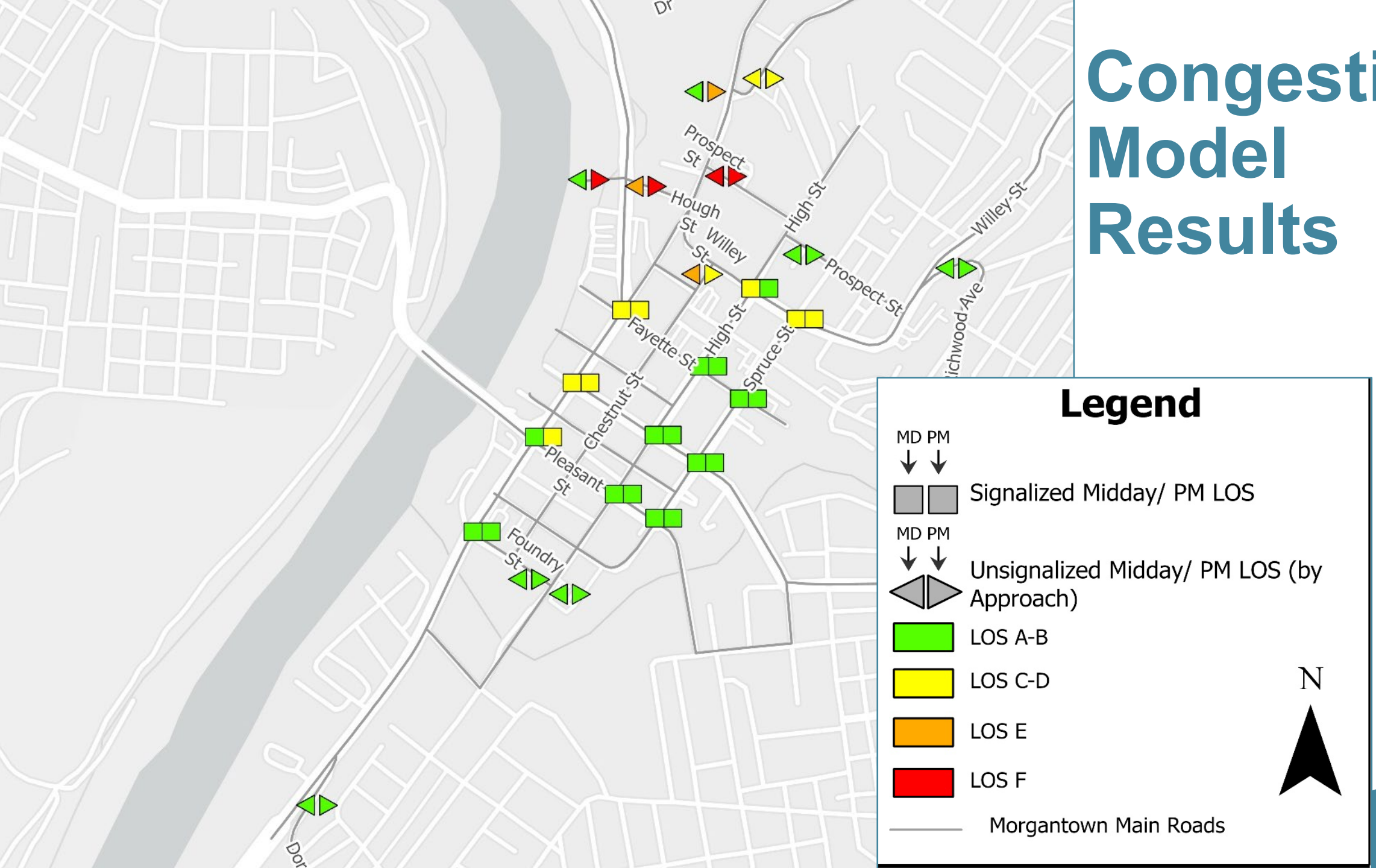
LOS E

LOS F

Morgantown Main Roads

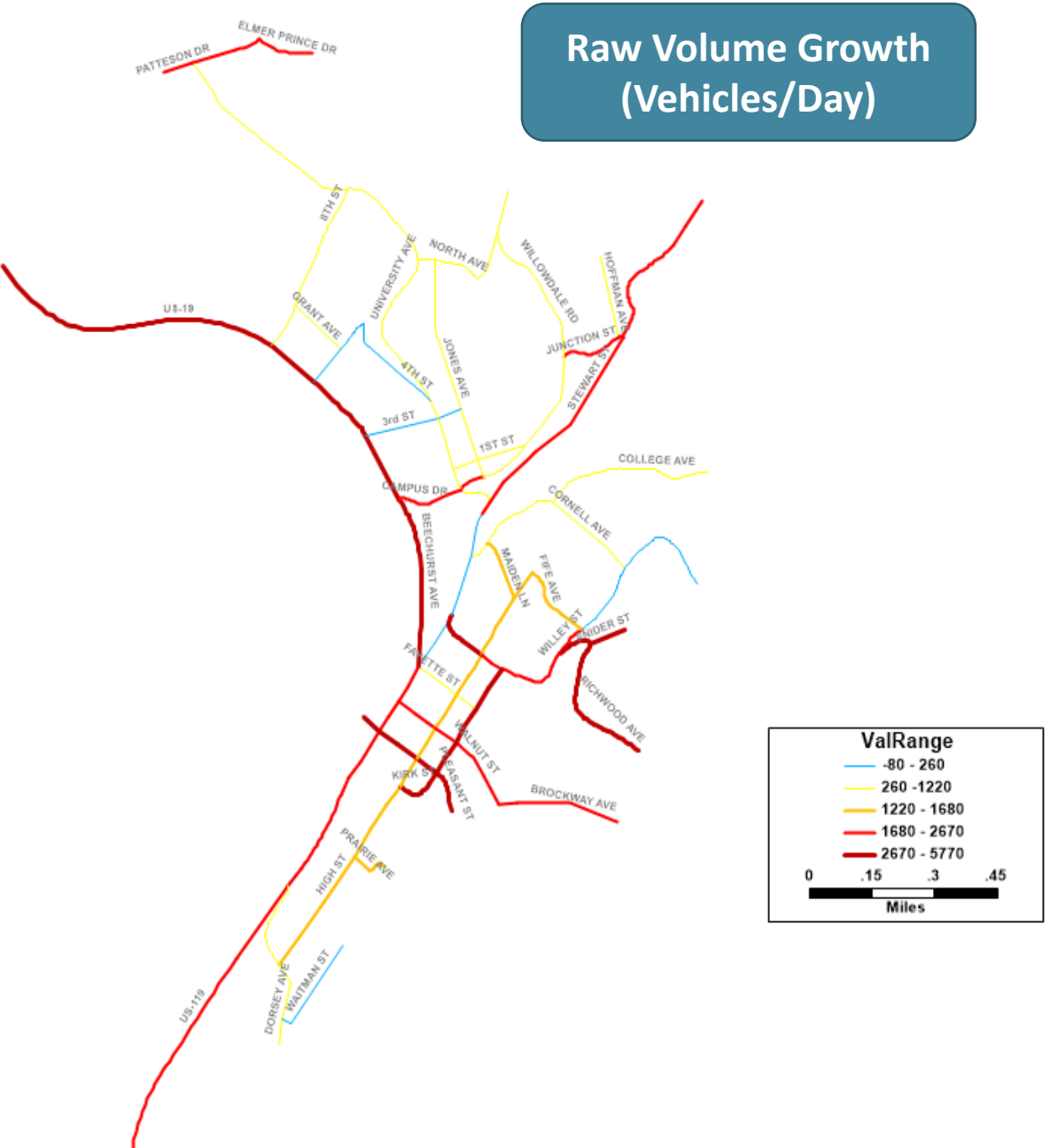
N

Congestion Model Results

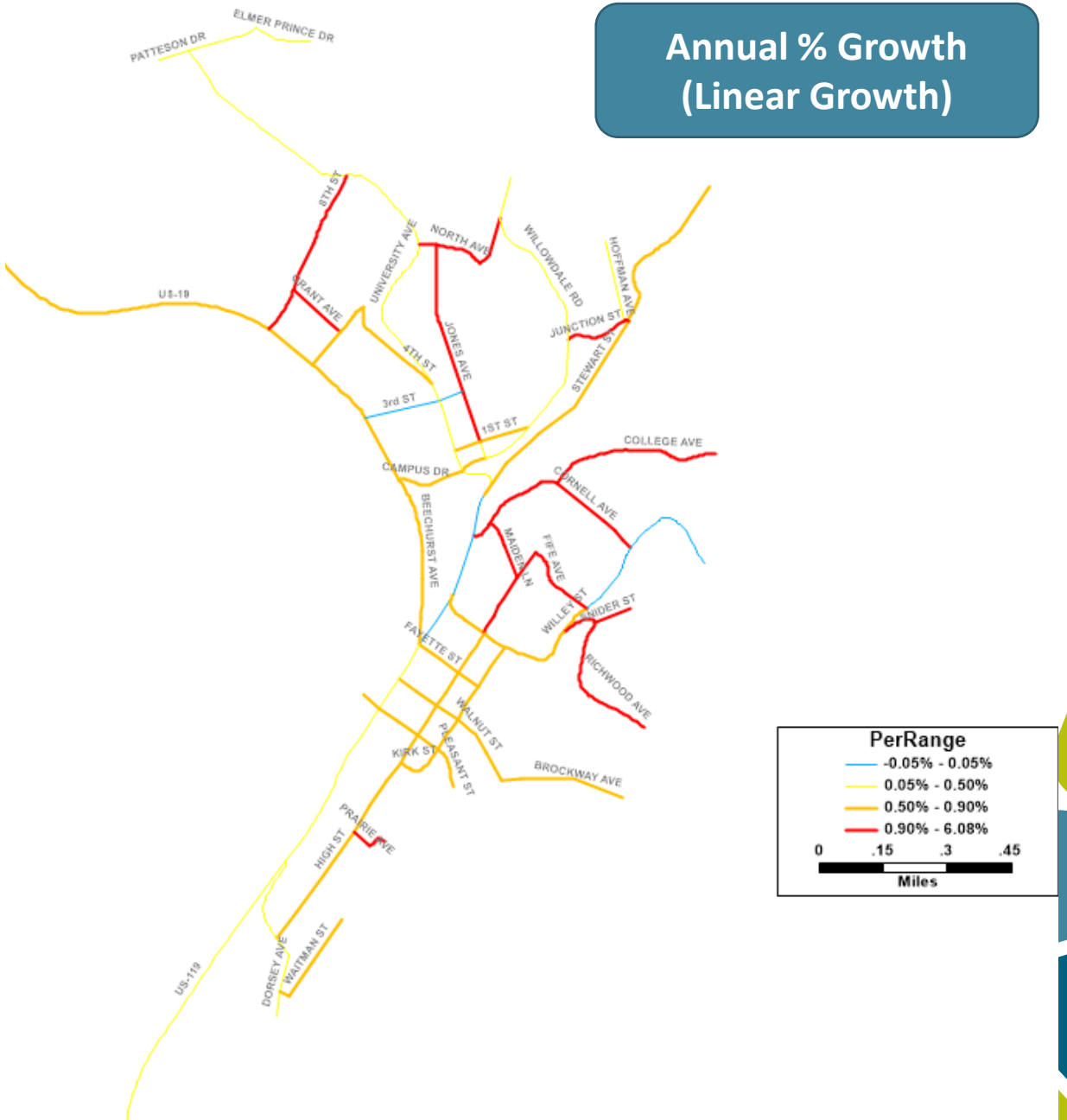


Future Forecasted Growth

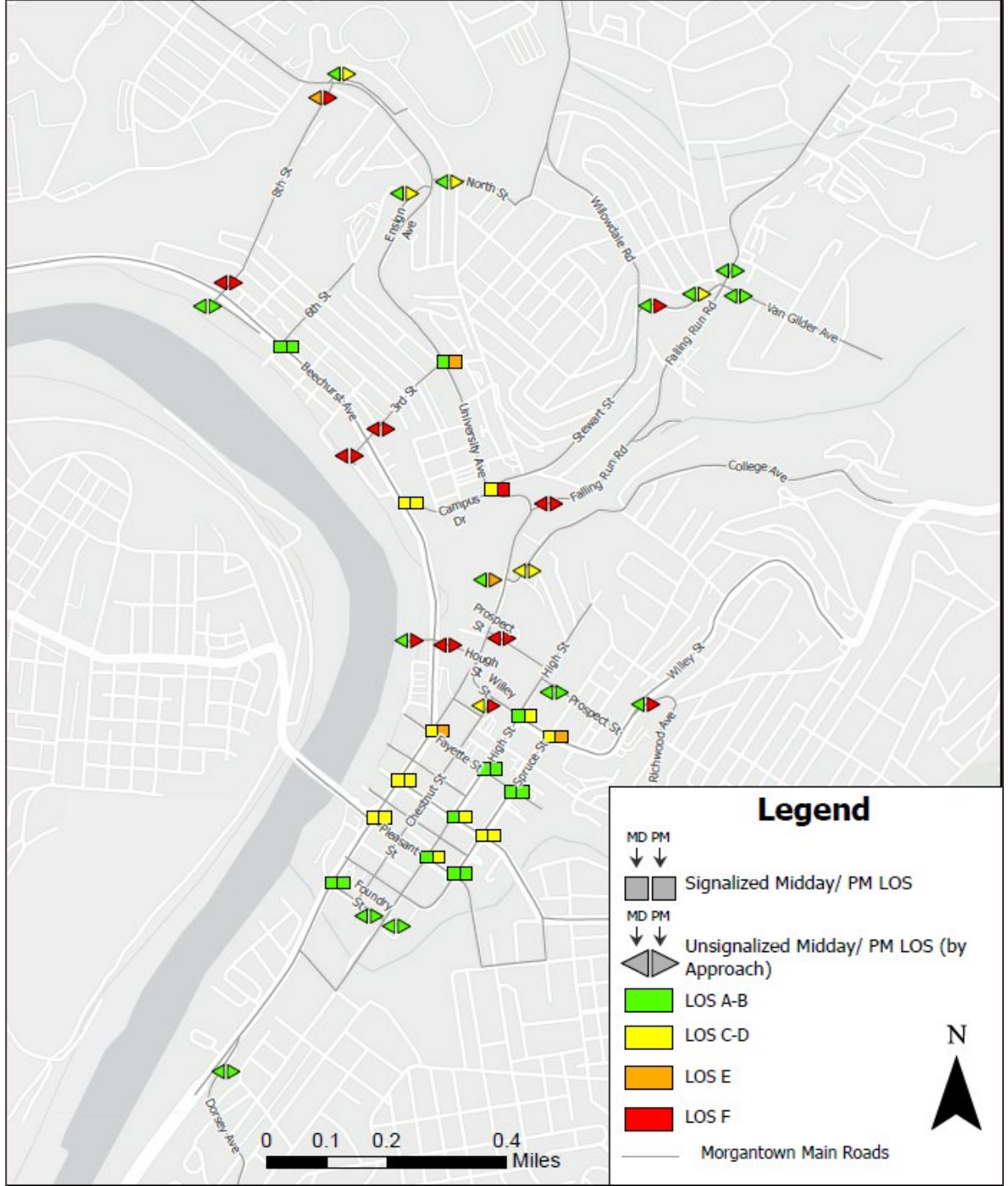
Raw Volume Growth (Vehicles/Day)



Annual % Growth (Linear Growth)



2050 No-Build Operations



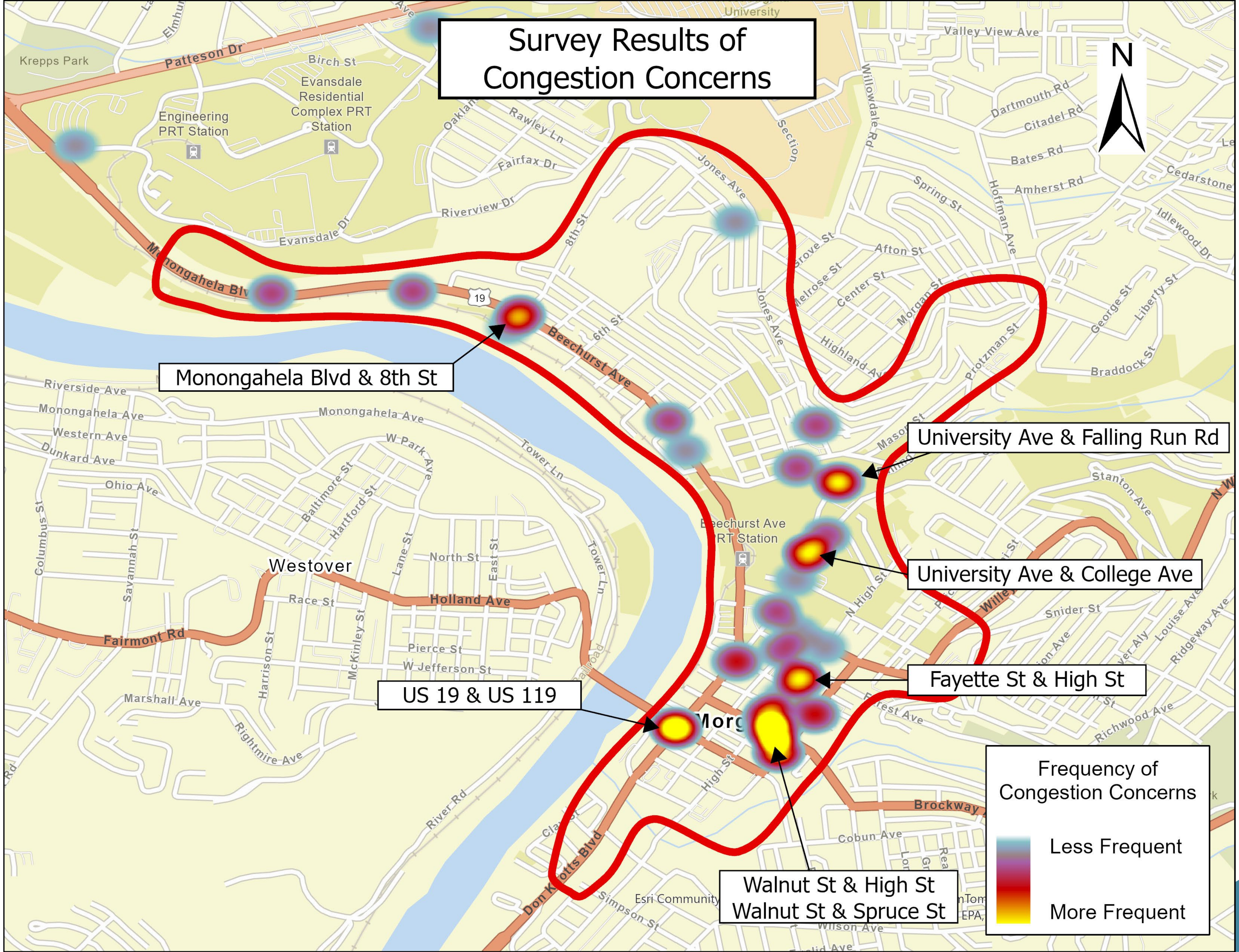
Public Engagement

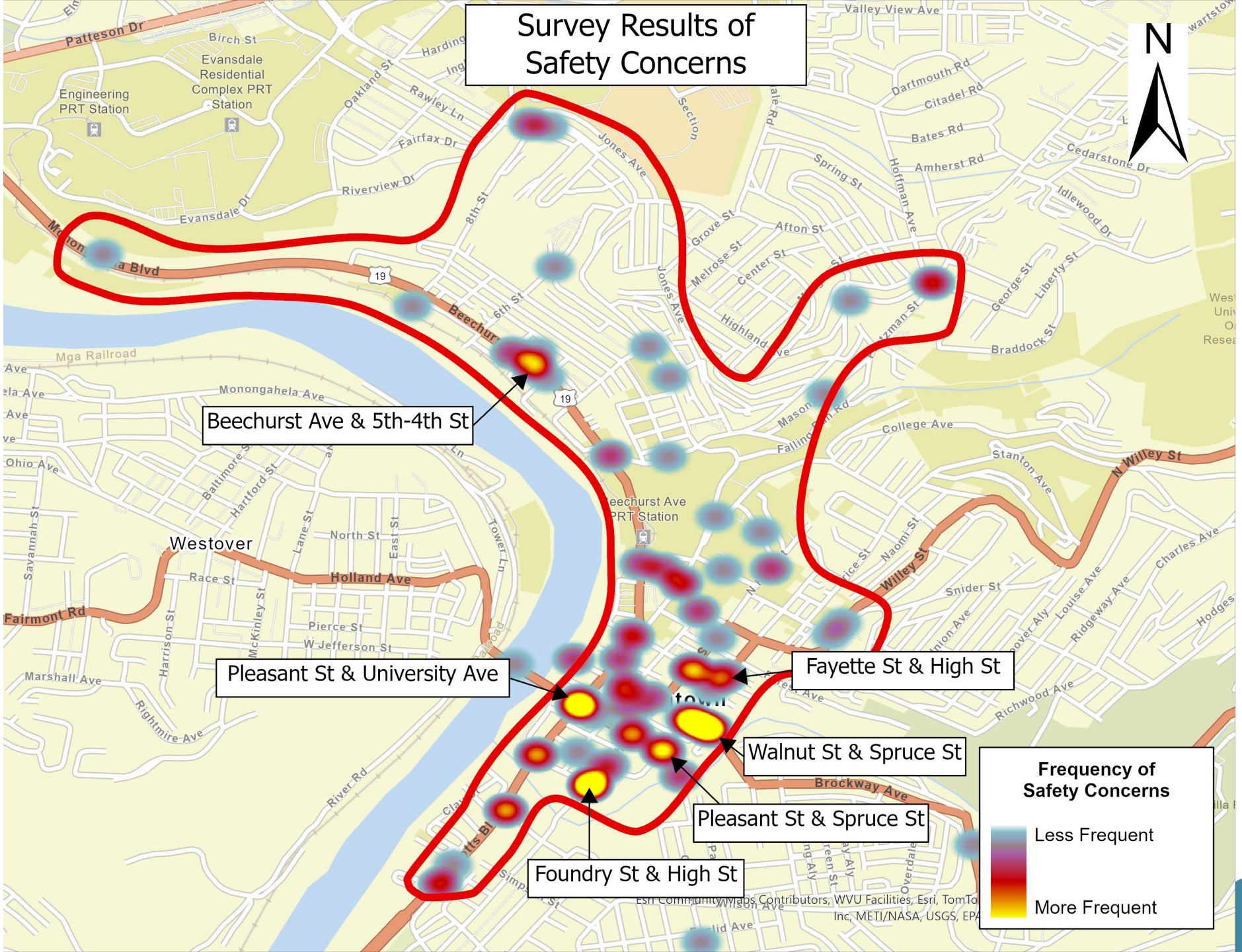
Stakeholder Engagement

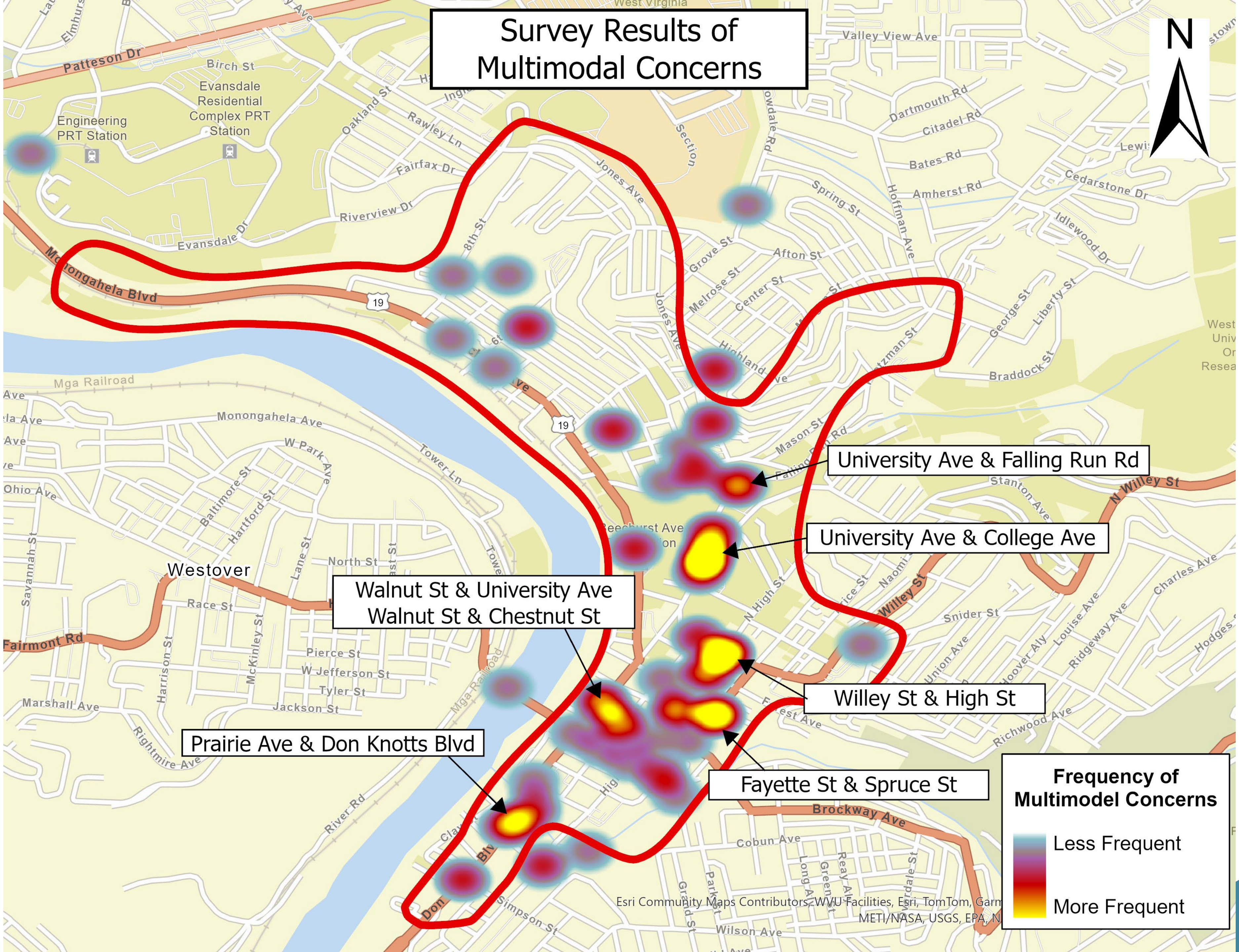
Survey Participation

- Survey ran May 29 – June 19
- 70 total participants

Category Name	Parent Comments	Replies	Total Input
Congestion Concern	35	43	78
Multimodal Concerns	52	29	81
Safety Concern	83	57	140
Total	**170**	**129**	**299**


Survey Results of Congestion Concerns
N
Monongahela Blvd & 8th St
University Ave & Falling Run Rd
University Ave & College Ave
Fayette St & High St
US 19 & US 119
Walnut St & High St
Walnut St & Spruce St
Frequency of Congestion Concerns
Less Frequent
More Frequent
Westover
Evansdale Residential Complex PRT Station
Engineering PRT Station
Beechurst Ave PRT Station
Krepps Park
Patteson Dr
Monongahela Blvd
Beechurst Ave
Holland Ave
Fairmont Rd
Don Knotts Blvd
Brockway Ave


Survey Results of Safety Concerns
N
Beechurst Ave & 5th-4th St
Pleasant St & University Ave
Fayette St & High St
Walnut St & Spruce St
Pleasant St & Spruce St
Foundry St & High St
Frequency of Safety Concerns
Less Frequent
More Frequent
Patteson Dr
Birch St
Evansdale Residential Complex PRT Station
Engineering PRT Station
Evansdale Dr
Riverview Dr
Fairfax Dr
Rawley Ln
Oakland St
Jones Ave
Spring St
Dartmouth Rd
Citadel Rd
Bates Rd
Amherst Rd
Cedarstone Dr
Idlewood Dr
Hoffman Ave
Grove St
Afton St
Melrose St
Center St
Highland Ave
George St
Liberty St
Braddock St
Monongahela Blvd
Beechurst Ave
6th St
8th St
19
Mga Railroad
Monongahela Ave
Ohio Ave
College Ave
Stanton Ave
N Willey St
Willey St
Naomi St
Snider St
Louise Ave
Ridgeway Ave
Charles Ave
Richwood Ave
Brockway Ave
Westover
Holland Ave
Race St
Fairmont Rd
North St
East St
Lane St
Tower Ln
Baltimore St
Hartford St
Savannah St
McKinley St
Harrison St
Pierce St
W Jefferson St
Marshall Ave
Rightmire Ave
River Rd
Esri Community Maps Contributors, WVU Facilities, Esri, TomTo
Inc, METI/NASA, USGS, EP


Survey Results of Multimodal Concerns
N
University Ave & Falling Run Rd
University Ave & College Ave
Walnut St & University Ave
Walnut St & Chestnut St
Willey St & High St
Prairie Ave & Don Knotts Blvd
Fayette St & Spruce St
Frequency of Multimodel Concerns
Less Frequent
More Frequent
Westover
Monongahela Blvd
Engineering PRT Station
Evansdale Residential Complex PRT Station
Esri Community Maps Contributors, WVU Facilities, Esri, TomTom, Garm
METI/NASA, USGS, EPA, N

Purpose and Need Statement

Potential Needs to Address in Study

- Evaluate congestion improvements at hotspots
- Test impacts of safety and multimodal improvements on congestion

Scenario Scoring

Scenario Scoring Rubric

Category	●○○○○	●●○○○	●●●○○	●●●●○	●●●●●	Notes
Traffic Operations (Individual Intersections)	< -7%	-7% to -1%	-1% to 1%	1% to 7%	> 7%	intersection approach movements with an acceptable LOS (D or greater) anticipated to increase or decrease?
Traffic Operations (Downtown Network)	> 20% increase	4 to 20% increase	4% to -4% change	4 to 20% decrease	> 20% decrease	Is the total delay per vehicle miles traveled anticipated to increase or decrease?
Bike & Pedestrian Mobility	Notable decrease in mobility	Some decrease in mobility	No change in mobility	Some increase in mobility	Notable increase in mobility	How is bike and pedestrian mobility affected, relative to other scenarios?
Bike & Pedestrian Safety	Notable decrease in safety	Some decrease in safety	No change in safety	Some increase in safety	Notable increase in safety	How is bike and pedestrian safety prioritized, relative to other scenarios?
Vehicular Safety	Notable decrease in safety	Some decrease in safety	No change in safety	Some increase in safety	Notable increase in safety	How would vehicular safety be addressed?

Additional Scenario Considerations

Anticipated Public Support	What is the anticipated public response to the proposed scenario?
Constructability	What level of complexity for design and construction would be entailed?
ROW Impacts	What level of right-of-way impacts are anticipated?
Impact to Business and Development	What impact to businesses and development is anticipated?
Cost	What is the anticipated relative cost of implementation?

Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
2. Grumbein's island closure
3. One-way street conversions
4. Willey Street improvements (capacity, realignment, or both)
5. Intersection improvements and Beechurst corridor improvements from campus to 8th
6. Combined Grumbein's island, Willey Street, and one-way conversion
7. Combined Grumbein’s island, Willey Street, and Intersection Improvements

Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
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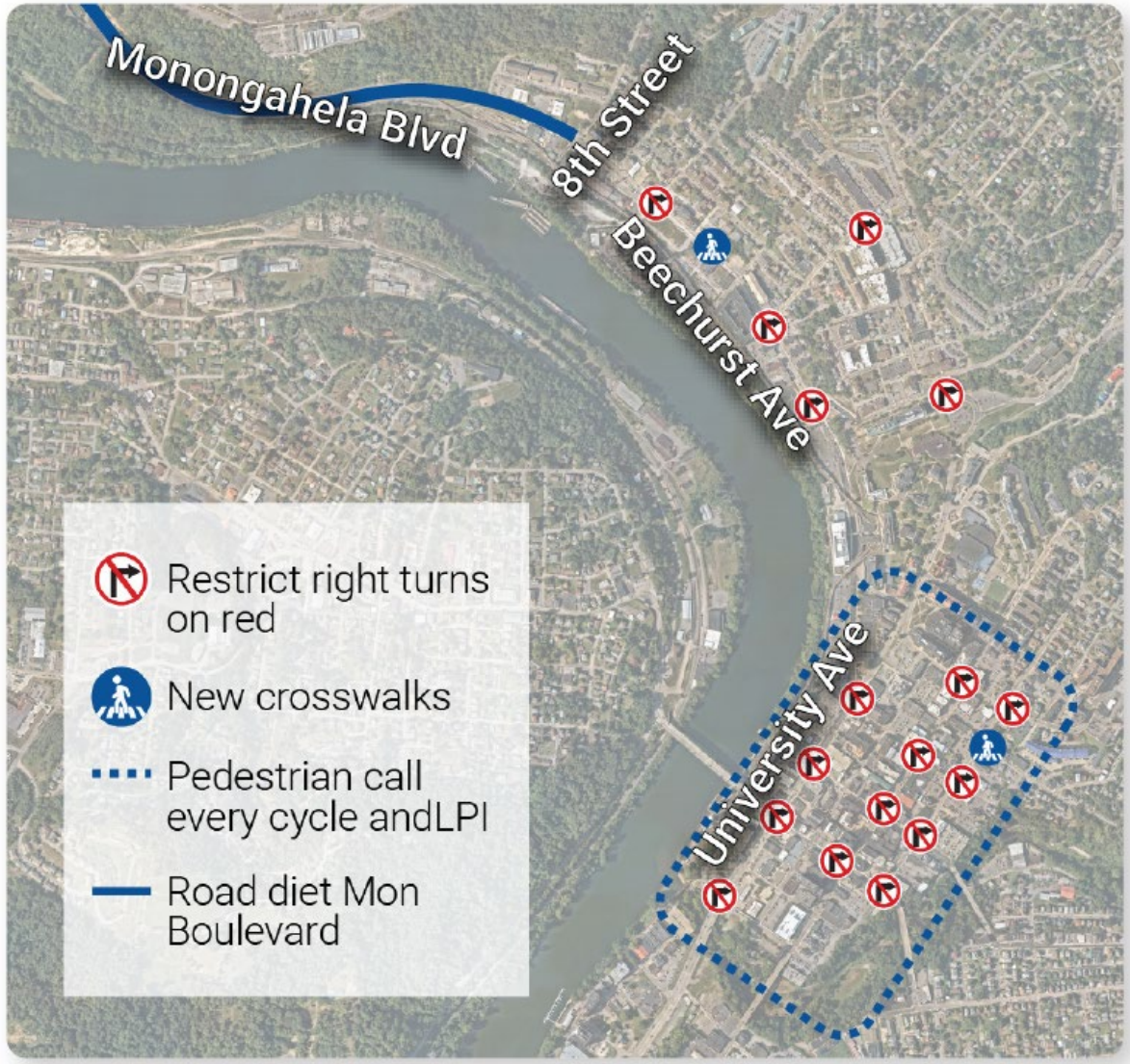

Scenario #1 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●●○	The number of intersections with an acceptable level of service is anticipated to moderately increase (3.9%).
Traffic Operations (Downtown Network)	●●●●○	The total delay per vehicle miles traveled is anticipated to moderately decrease (-17.3%).
Bike & Pedestrian Mobility	●●●●○	This scenario would provide new access for pedestrians at crosswalk locations, a new facility connection along Monongahela Boulevard connecting the Downtown and Evansdale areas, and improve the pedestrian experience at signals downtown.
Bike & Pedestrian Safety	●●●●○	Restricting right-turns on red and including a leading pedestrian interval are anticipated to improve safety at the signalized intersections. Adding marked crosswalks and a separated facility would increase safety where there is an existing desire line.
Vehicular Safety	●●●○○	This scenario is not anticipated to notably affect vehicular safety.
Total Score		**19/25**

Scenario #1 - Considerations

Category	Consideration	Notes
Anticipated Public Support	Positive	Given the limited impacts but wide-ranging benefits of this scenario, it is anticipated that it may receive very favorable support.
Constructability	Straightforward	This project should be very straightforward to design and construct and is not anticipated to present extraordinary challenges.
ROW Impacts	Low	No impacts to right-of-way are anticipated with this scenario.
Impact to Business and Development	Positive	This scenario is anticipated to increase the attractiveness of pedestrian activity in the downtown core, thereby increasing foot traffic in front of local downtown businesses.
Cost	Low	This scenario is anticipated to be the lowest cost alternative. Relatively little new infrastructure construction would be required to take place to implement the recommendations.

Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
2. Grumbein's island closure
3. One-way street conversions
4. Willey Street improvements (capacity, realignment, or both)
5. Intersection improvements and Beechurst corridor improvements from campus to 8th
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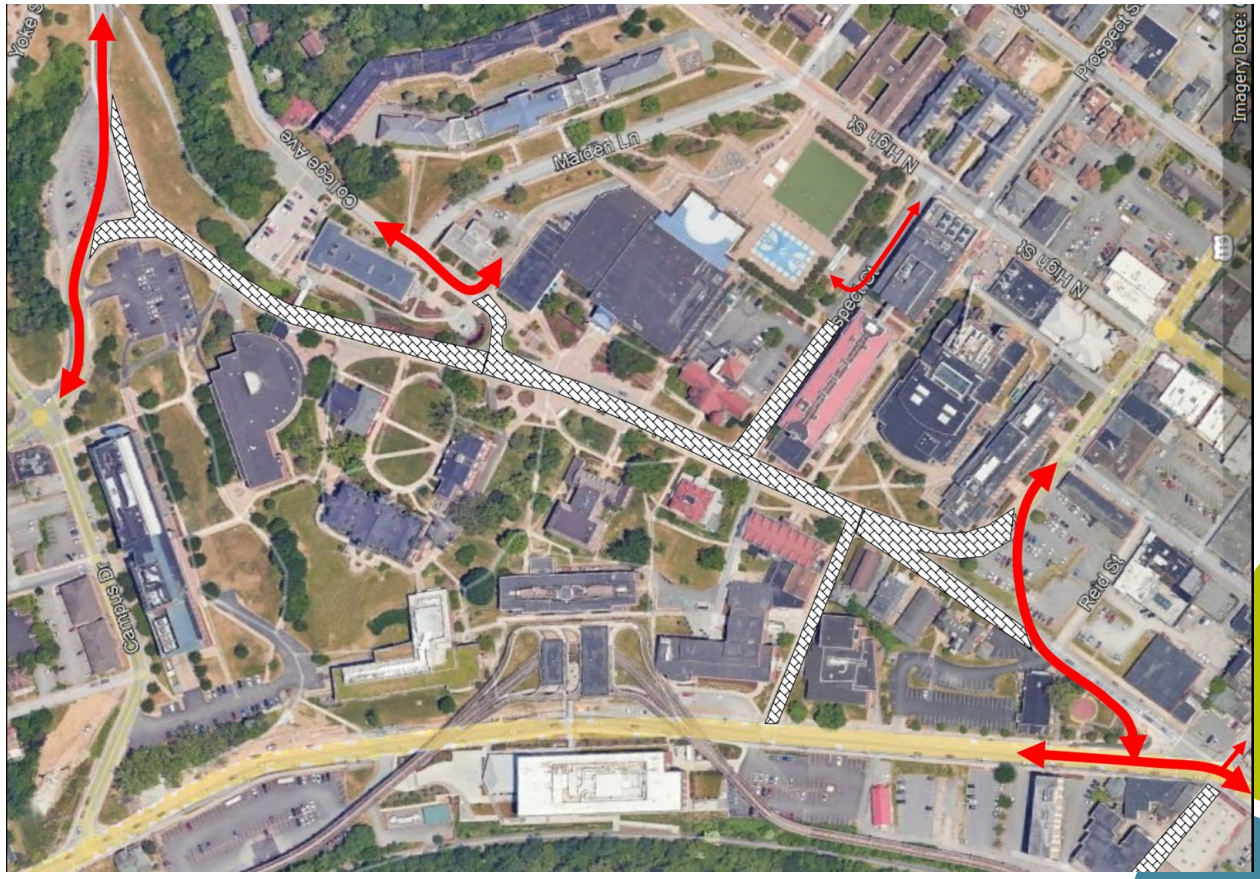

Volume Forecast Changes: Overall downtown network volumes anticipated to decrease by approximately 2% over the course of the day

Scenario #2 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●●●	The number of intersections with an acceptable level of service is anticipated to greatly increase (7.2%)
Traffic Operations (Downtown Network)	●●●●○	The total delay per vehicle miles traveled is anticipated to moderately decrease (-18.2%)
Bike & Pedestrian Mobility	●●●●●	A dedicated pedestrian zone within the WVU Downtown campus increases mobility and could lead to an increase in pedestrian travel in downtown Morgantown.
Bike & Pedestrian Safety	●●●●●	This scenario would provide a conflict-free zone for pedestrians who cross University Avenue between WVU Classes.
Vehicular Safety	●●●●○	The elimination of the vehicle-pedestrian conflict at Grumbein's Island and the notable decrease in congestion is anticipated to improve safety for drivers.

Total Score 23/25

Scenario #2 - Considerations

Category	Consideration	Notes
Anticipated Public Support	Neutral	Given the significant change from the existing and long-standing configuration, balanced with a significant increase in pedestrian mobility and safety, it is anticipated that there may be both strong support and opposition of this scenario.
Constructability	Complex	As compared to other scenarios, this scenario scores relatively low based on the number of intersections that need to be re-aligned.
ROW Impacts	Medium	Right-of-way impacts are relatively limited as compared to other scenarios, with the only impacts occurring at the new re-alignment at Beechurst Avenue and the new alignment of Falling Run Road and generally limited to WVU owned properties.
Impact to Business and Development	Medium	It is not anticipated that there will be notable impact to business and development directly related to this scenario.
Cost	High	The cost of this scenario is anticipated to be relatively high as compared to other scenarios. This is due to the scale of the construction, potential for right-of-way impacts, and re-alignment and re-design of numerous intersections.

Modeling Scenario Options

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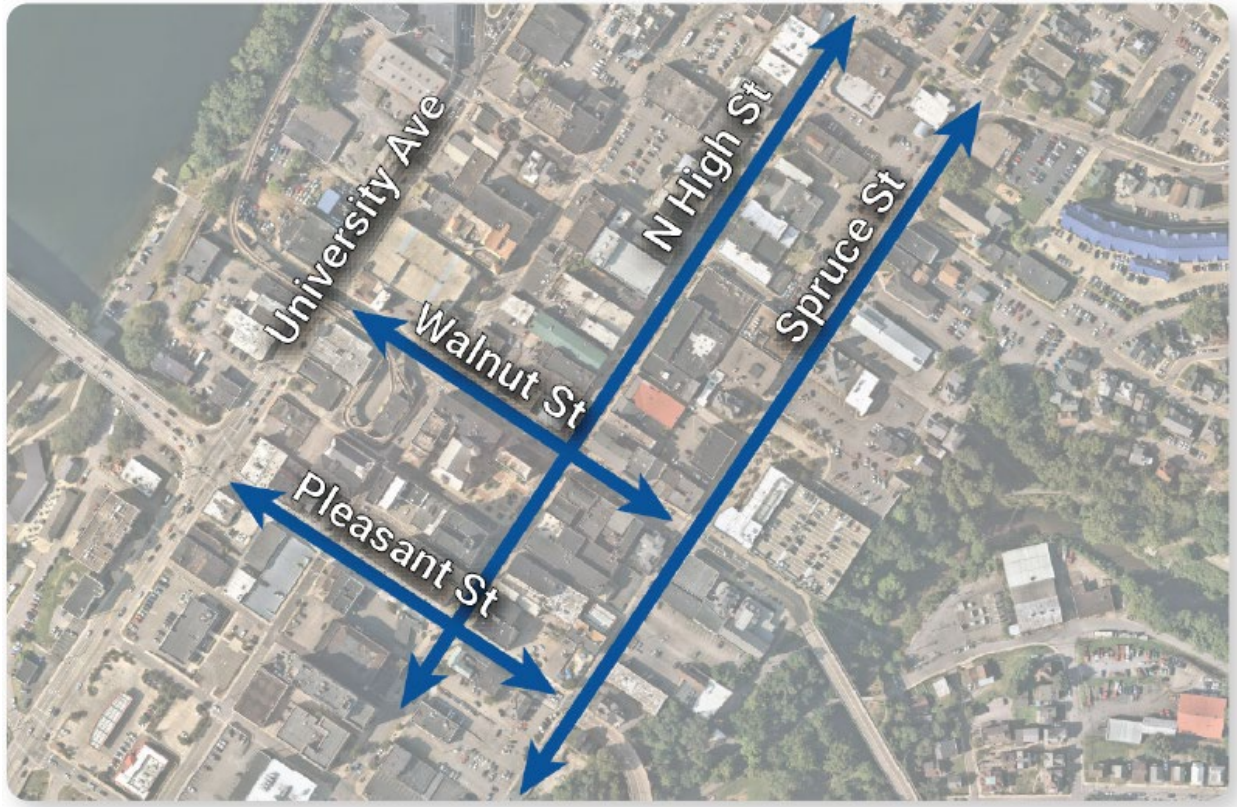

Volume Forecast Changes: Overall downtown network volumes anticipated to remain the same over the course of the day

Scenario #3 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●○○○	The number of intersections with an acceptable level of service is anticipated to moderately decrease (-1.1%)
Traffic Operations (Downtown Network)	●●●○○	The total delay per vehicle miles traveled is anticipated to only slightly decrease (-5.1%)
Bike & Pedestrian Mobility	●●○○○	Converting the one-way streets to two-way may restrict future development/use of the right-of-way for bicycle or pedestrian specific facilities like bike lanes.
Bike & Pedestrian Safety	●●●○○	Conversion to a two-way street is anticipated to have a net neutral change in pedestrian and bicycle safety. For example, pedestrians will now need to be aware of traffic approaching from two directions but may also have increased visibility at mid-block crosswalks.
Vehicular Safety	●●●●○	The two-way street configuration would increase the number of conflict points at intersections but is anticipated to have an overall positive impact to vehicular safety due to the anticipated decrease in vehicular speeds within the urban core.
Total Score		**14/25**

Scenario #3 - Considerations

Category	Consideration	Notes
Anticipated Public Support	Negative	Some opposition to the project is anticipated to be presented from the driving public and business owners downtown.
Constructability	Complex	The complete replacement of signal control infrastructure and potential intersection modifications could present some challenges during the planning and design process.
ROW Impacts	Medium	Due to the potential modification of intersections, there is anticipated to be many instances of minor temporary or permanent right-of-way impacts without any relocations.
Impact to Business and Development	Neutral	There is anticipated to be mixed opinions from business owners on the impacts to business and development. The change in parking access or loading zones is anticipated to balance with the potential neutral change in pedestrian safety.
Cost	Medium	Relative to other scenarios considered, this project is anticipated to have a moderate cost. No new location roadway facilities would be required but the complete replacement of signal control infrastructure and potential intersection modifications could add sizable costs.

Modeling Scenario Options

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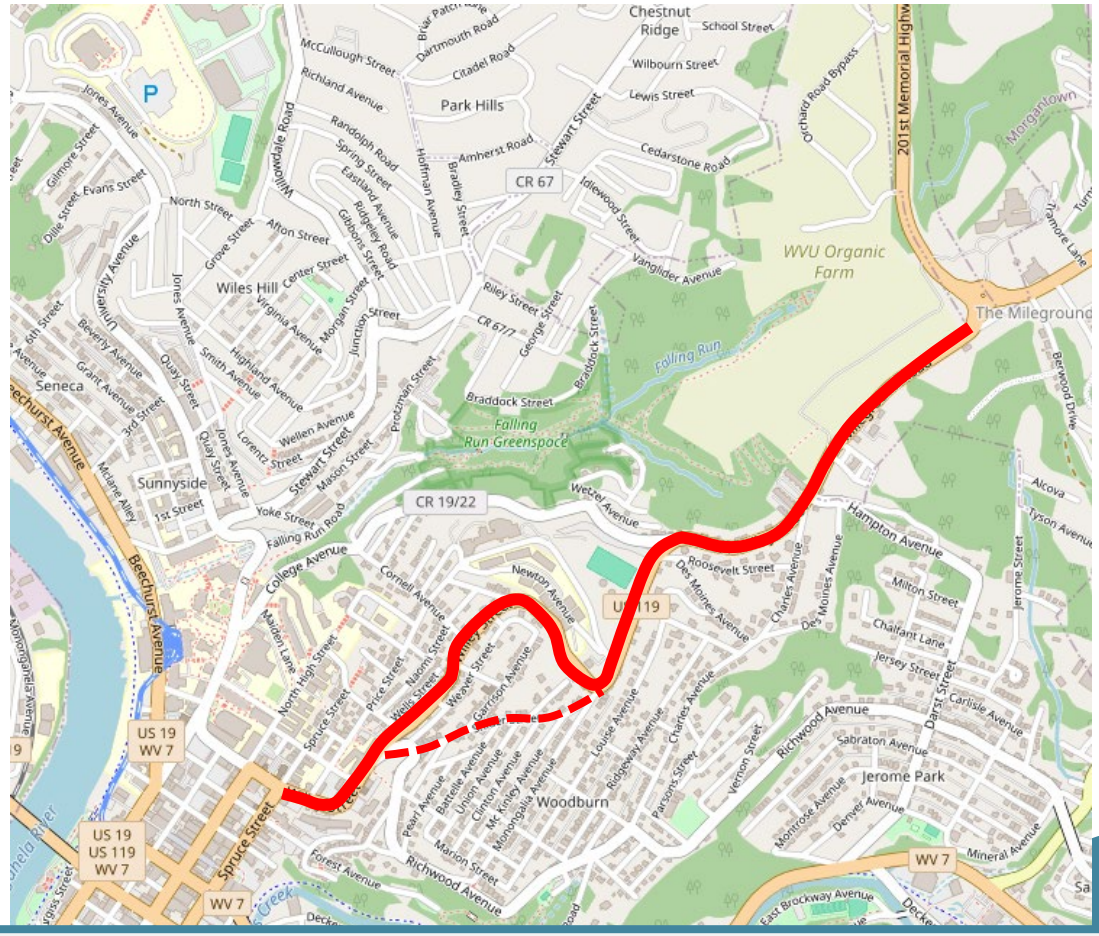


Volume Forecast Changes: Overall downtown network volumes anticipated to remain the same over the course of the day

Scenario 4: Interim and Long-Term

Scenario 4A – Interim Improvements

Scenario 4B – Long-Term Improvements

Scenario #4A - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●○○	The number of intersections with an acceptable level of service is anticipated to narrowly decrease (-0.3%)
Traffic Operations (Downtown Network)	●●●○○	The total delay per vehicle miles traveled is anticipated to narrowly decrease (-3.1%)
Bike & Pedestrian Mobility	●●●○○	Bike and pedestrian mobility does not increase nor decrease with the configuration of this scenario.
Bike & Pedestrian Safety	●●●●○	Bike and pedestrian safety may slightly increase due to the realignment of the existing intersection.
Vehicular Safety	●●●●○	This scenario's configuration proposes the elimination of the existing intersection at Richwood Avenue and Willey Street which had poor sight distance, providing a potential increase in safety.
Total Score		**17/25**

Scenario #4A - Considerations

Category	Consideration	Notes
Anticipated Public Support	Neutral	It is anticipated that there will be balanced support, given the improvements, and opposition, given the potential impacts along Willey Street, for this scenario.
Constructability	Complex	The constructability of this project may be somewhat challenging due to the conflicts arising from the widening of Willey Street.
ROW Impacts	High	It is anticipated that the widening of Willey Street will impact several properties and homes, leading to multiple full relocation impacts in this scenario.
Impact to Business and Development	Positive	This scenario is consistent with development plans for the East End Village and promotes additional connectivity to Downtown Morgantown, which may lead to a positive impact for business owners.
Cost	High	The cost of this scenario is expected to be relatively expensive compared to other scenarios. Costs stem from the widening of Willey Street as well as the proposed intersection reconfigurations.

Scenario #4B - Scorecard

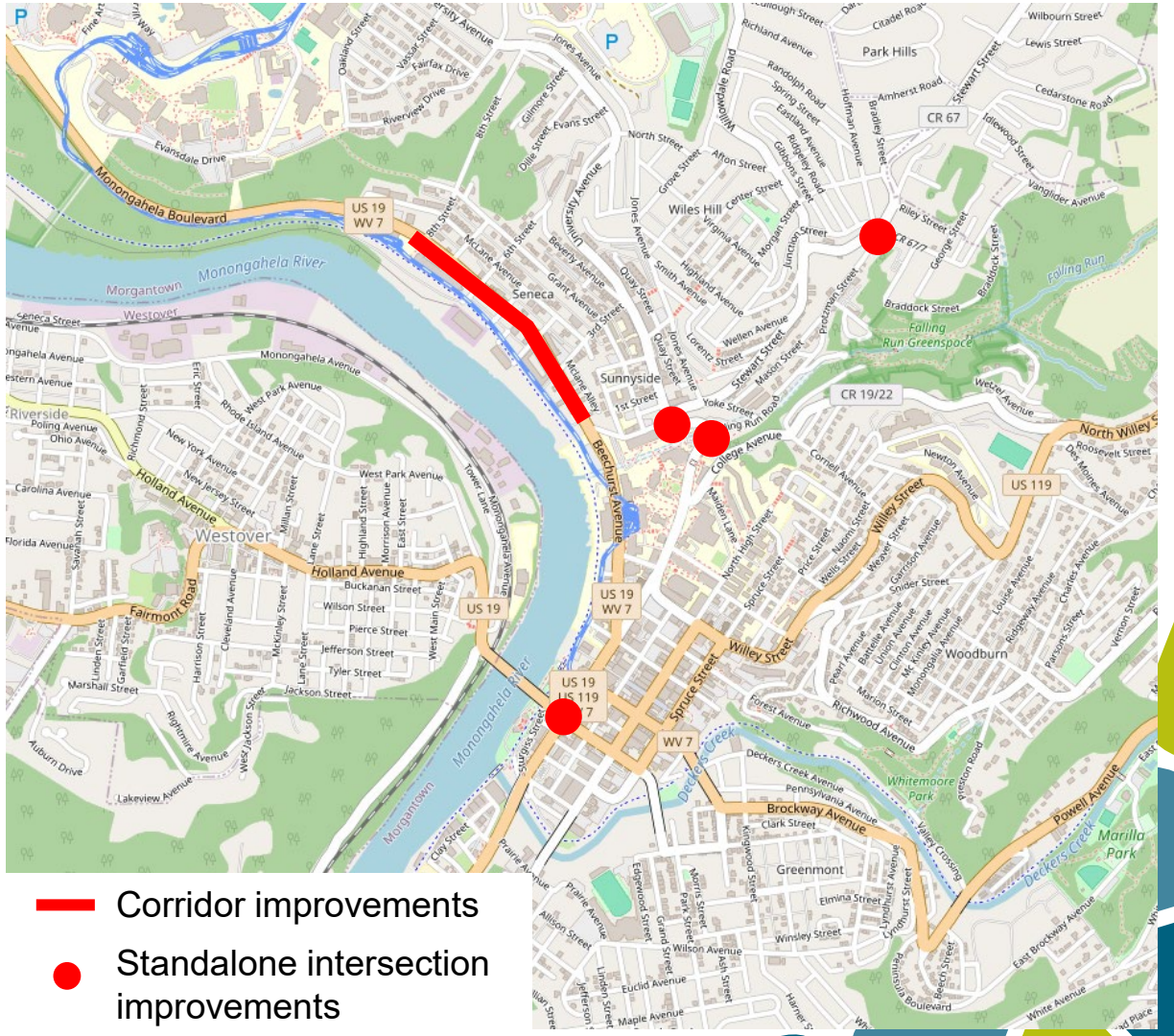
Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●○○	The number of intersections with an acceptable level of service is not anticipated to noticeably change (-0.1%)
Traffic Operations (Downtown Network)	●●●○○	The total delay per vehicle miles traveled is anticipated to narrowly decrease (-0.9%)
Bike & Pedestrian Mobility	●●●●○	The bicycle and pedestrian facilities implemented along Snider Street may increase connectivity to the downtown Morgantown area from the neighborhoods northeast of downtown.
Bike & Pedestrian Safety	●●●●●	The bicycle and pedestrian facilities along Snider Street and realignment of Willey Street are anticipated to provide a moderate increase in bike and pedestrian safety.
Vehicular Safety	●●●●●	This scenario may significantly improve vehicular safety due to the elimination of the misaligned intersection at Willey Street and Richwood Avenue and the shift of traffic from the windy portion of Willey Street to the relatively straight Snider Street alignment.
Total Score		**20/25**

Scenario #4B - Considerations

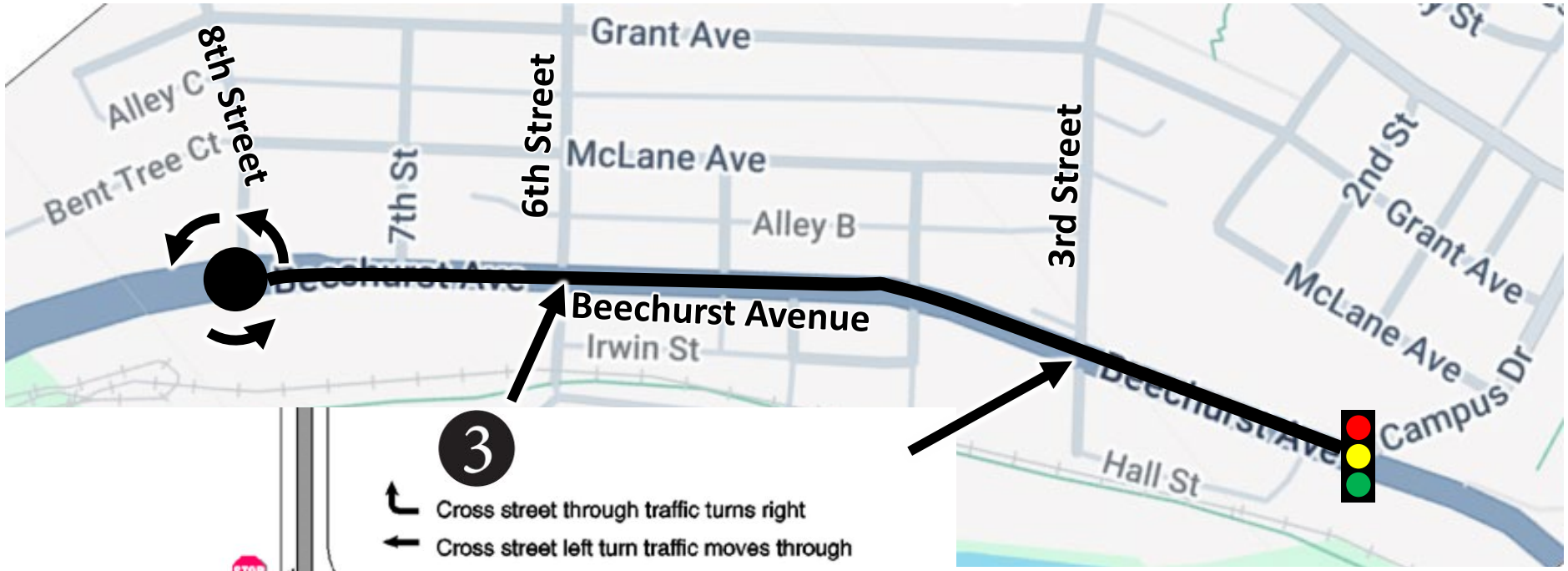
Category	Consideration	Notes
Anticipated Public Support	Negative	The acquisition of right-of-way from multiple property owners along Snider Street may present challenges in gaining public support. Travelers using Willey Street today to enter the downtown area from the Mileground are anticipated to support the project.
Constructability	Complex	The constructability is anticipated to be somewhat difficult, due to the challenges that may be presented along Snider Street when implementing widened lanes and multi-modal facilities.
ROW Impacts	High	It is anticipated that the upgrade of Snider Street will impact several properties requiring multiple full relocations.
Impact to Business and Development	Positive	This scenario is consistent with development plans for the East End Village and promotes additional connectivity to Downtown Morgantown, which may lead to positive impact for business owners.
Cost	High	This scenario is anticipated to be relatively expensive in comparison to other scenarios. The cost largely stems from the re-alignment of Willey Street and the upgrades to Snider Street.

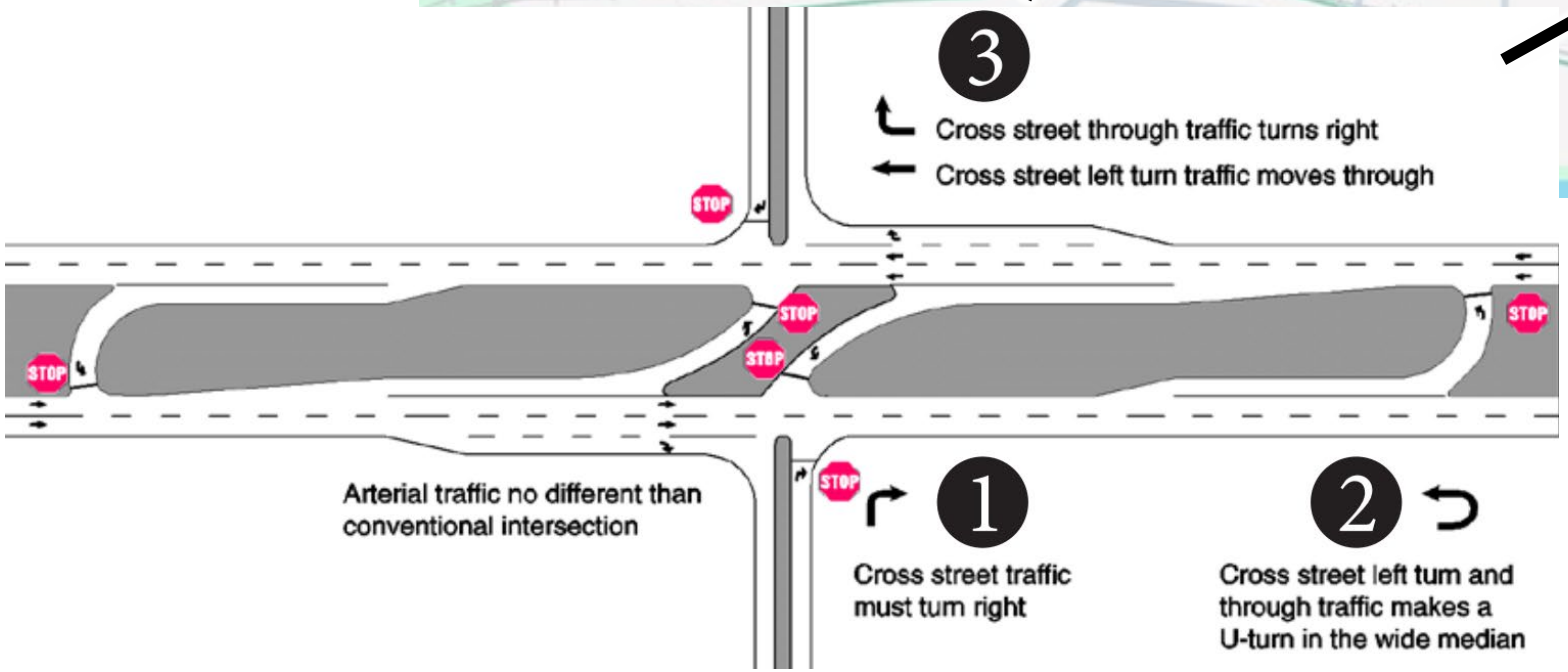
Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
2. Grumbein's island closure
3. One-way street conversions
4. Willey Street improvements (capacity, realignment, or both)
5. Intersection improvements and Beechurst corridor improvements from campus to 8th
6. Combined Grumbein's island, Willey Street, and one-way conversion
7. Combined Grumbein’s island, Willey Street, and Intersection Improvements

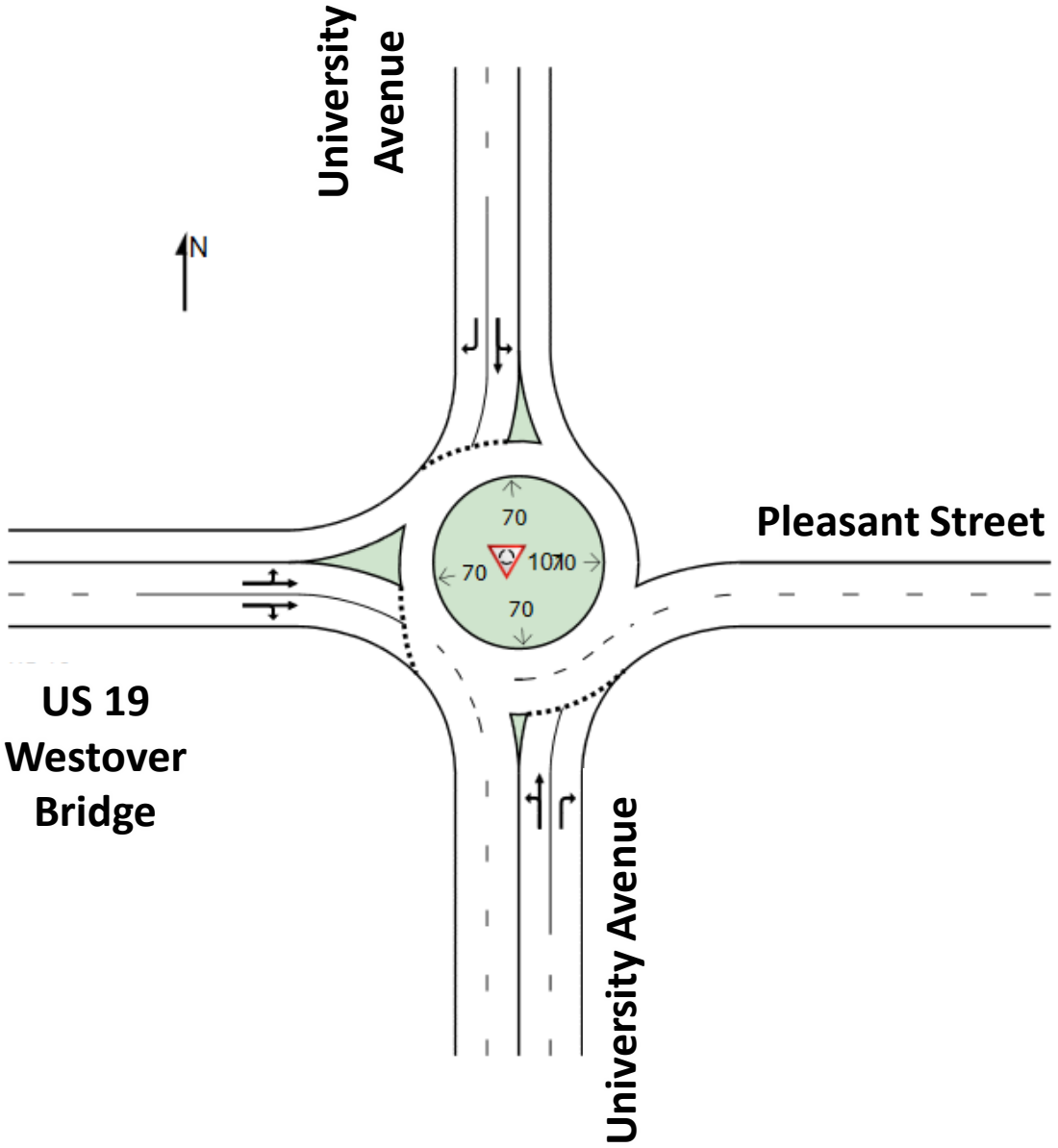


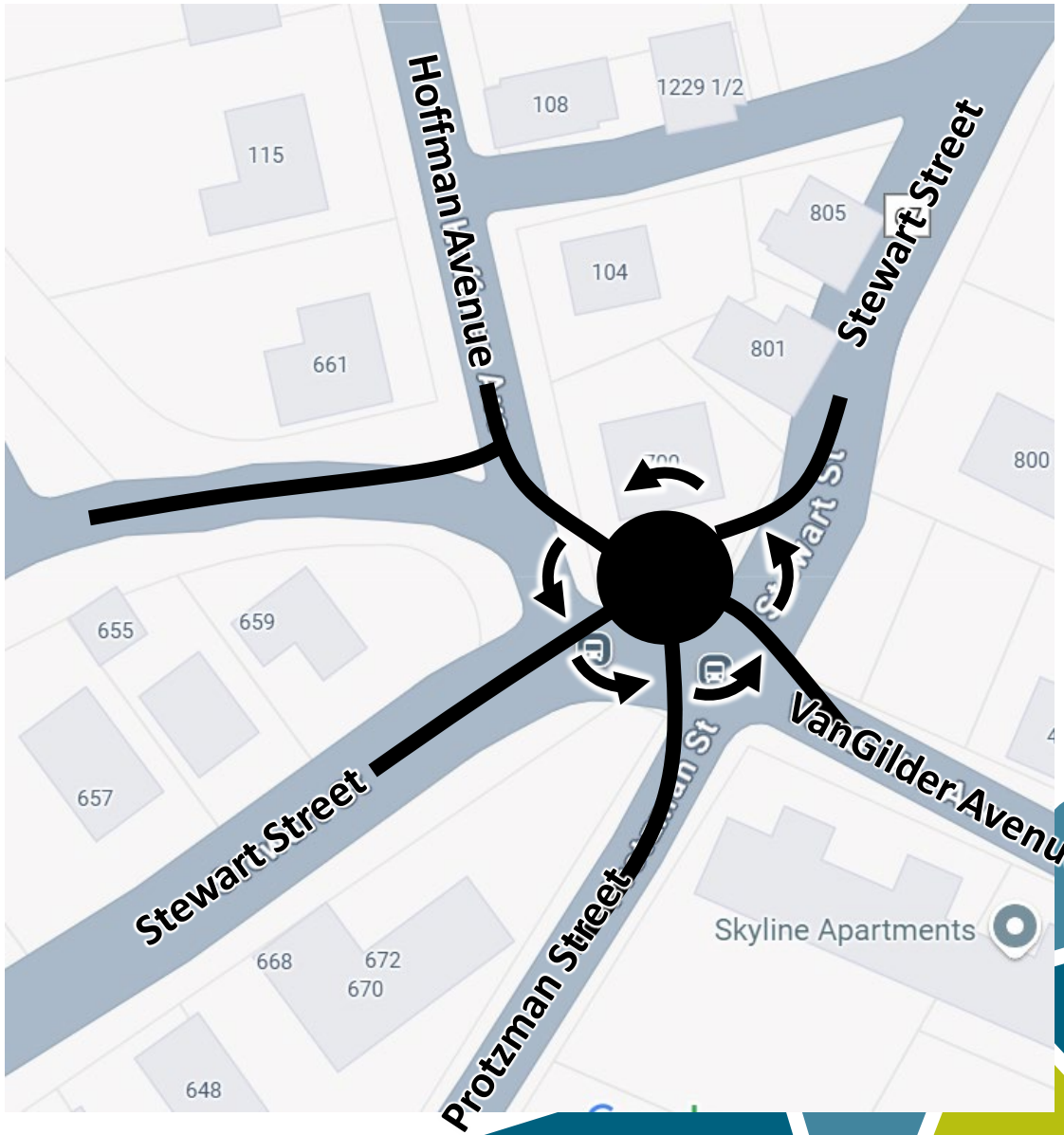
Scenario 5: Beechurst Corridor



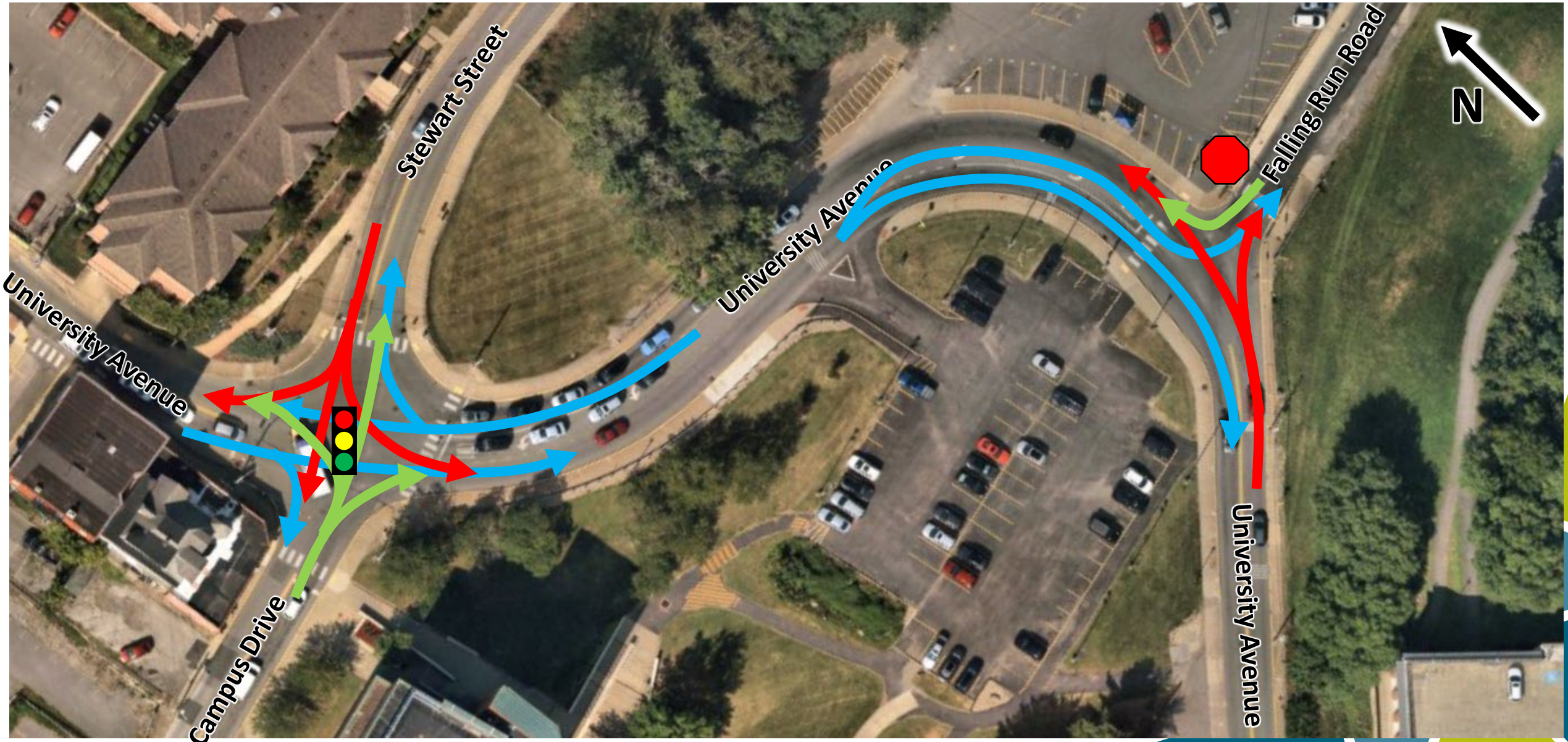


Scenario 5: Intersection Improvements





Scenario 5: Intersection Improvements



Scenario #5 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●●○	The number of intersections with an acceptable level of service is anticipated to moderately increase (6.3%)
Traffic Operations (Downtown Network)	●●●●●	The total delay per vehicle miles traveled is anticipated to greatly decrease (-22.6%)
Bike & Pedestrian Mobility	●●●●○	In general, the intersection improvements proposed will provide additional access for pedestrians and provide separated facilities.
Bike & Pedestrian Safety	●●●●○	By providing improved separated facilities, reducing conflict points with drivers, and improving crossings, safety for pedestrians and bicyclists is anticipated to improve.
Vehicular Safety	●●●●●	The intersection and corridor improvements proposed will greatly reduce the number of conflict points at intersections, reduce speeds, and improve congestion, all of which are anticipated to significantly increase vehicular safety.
Total Score		**22/25**

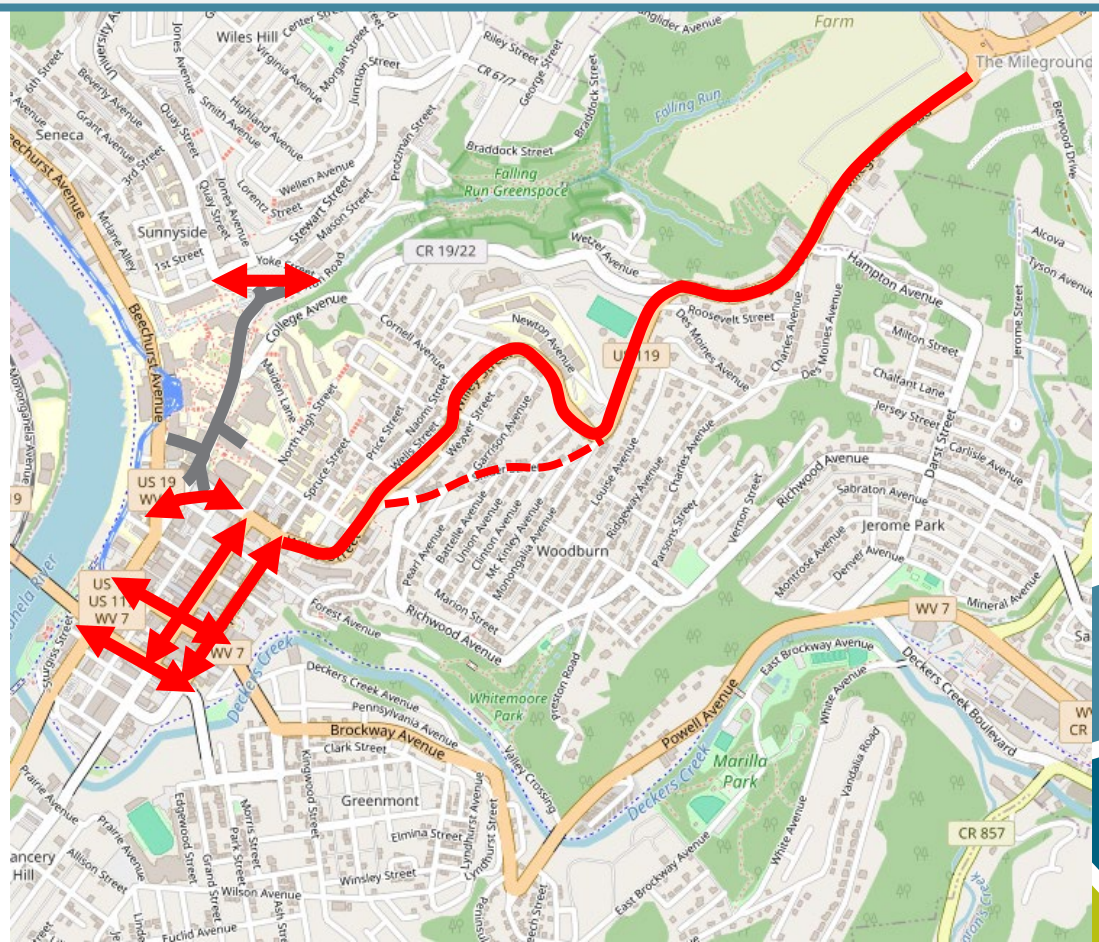
Scenario #5 - Considerations

Category	Consideration	Notes
Anticipated Public Support	Neutral	There is anticipated to be mixed support for these proposed improvements due to the increase in safety and mobility for multimodal users but also the restrictions in access along Beechurst Avenue and potential for right-of-way impacts.
Constructability	Medium	The proposed improvements follow typical intersection configurations and would present neutral challenges.
ROW Impacts	Medium	Full relocations are anticipated at the two proposed roundabout locations due to the increased size of the intersections.
Impact to Business and Development	Negative	The access restrictions proposed for side street access to Beechurst Avenue may have a possible negative impact to existing businesses, especially freight access.
Cost	Medium	Relative to other scenarios considered, this project is anticipated to have a moderate cost. No new location roadway facilities would be required but the complete reconfiguration of multiple intersections and improvements along Beechurst Avenue is anticipated to present sizable costs.

Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
2. Grumbein's island closure
3. One-way street conversions
4. Willey Street improvements (capacity, realignment, or both)
5. Intersection improvements and Beechurst corridor improvements from campus to 8th
6. Combined Grumbein's island, Willey Street, and one-way conversion
7. Combined Grumbein's island, Willey Street, and Intersection Improvements

Volume Forecast Changes: Overall downtown network volumes anticipated to decrease by approximately 2% over the course of the day



Scenario #6 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●●●	The number of intersections with an acceptable level of service is anticipated to greatly increase (8.7%)
Traffic Operations (Downtown Network)	●●●●○	The total delay per vehicle miles traveled is anticipated to moderately decrease (-18.4%)
Bike & Pedestrian Mobility	●●●●●	Due to the combination of bike and pedestrian mobility improvements associated with the closure of Grumbein's Island and the Snider Street conversion, this scenario provides for significant improvements in bike and pedestrian mobility.
Bike & Pedestrian Safety	●●●●●	Due to the combination of bike and pedestrian safety improvements associated with the closure of Grumbein's Island and the Snider Street Conversion, this scenario provides for significant improvement in bike and pedestrian safety.
Vehicular Safety	●●●●○	The elimination of the vehicle-pedestrian conflict at Grumbein's Island combined with the reconfiguration of the misaligned intersection at Willey Street and Richwood Avenue provide for a potential moderate increase in vehicle safety.

Total Score 23/25

Scenario #6 - Considerations

Category	Consideration	Notes
Anticipated Public Support	Negative	The acquisition right-of-way from property owners along Snider Street as well as the conversion of one-way street to two-way may present challenges for public support.
Constructability	Complex	The constructability is anticipated to be somewhat difficult, between the reconfiguration of intersections surrounding Grumbein's Island and the challenges that may be presented along Snider Street when implementing widened lanes and multimodal facilities.
ROW Impacts	High	It is anticipated that there will be multiple right-of-way impacts, largely stemming from the updated configuration of Snider Street.
Impact to Business and Development	Positive	This scenario provides improved access to businesses, largely stemming from the Snider Street conversion providing additional connectivity to Downtown Morgantown and its consistency with development plans for the East End Village.
Cost	High	This scenario is anticipated to be the most expensive due to costs stemming from the closure of Grumbein's Island and the upgrades to Snider Street.

Modeling Scenario Options

1. Signal timing optimization and corridor coordination, and bicycle and pedestrian safety and access improvements
2. Grumbein's island closure
3. One-way street conversions
4. Willey Street improvements (capacity, realignment, or both)
5. Intersection improvements and Beechurst corridor improvements from campus to 8th
6. Combined Grumbein's island, Willey Street, and one-way conversion
7. Combined Grumbein's island, Willey Street, and Intersection Improvements

Volume Forecast Changes: Overall downtown network volumes anticipated to decrease by approximately 2% over the course of the day

Scenario #7 - Scorecard

Category	Score (1-5)	Notes
Traffic Operations (Individual Intersections)	●●●●●	The number of intersections with an acceptable level of service is anticipated to greatly increase (10.2%)
Traffic Operations (Downtown Network)	●●●●●	The total delay per vehicle miles traveled is anticipated to greatly decrease (-23.6%)
Bike & Pedestrian Mobility	●●●●●	Due to the combination of bike and pedestrian mobility improvements associated with the closure of Grumbein's Island, the Snider Street conversion, and intersection improvements, this scenario provides for significant improvements in bike and pedestrian mobility.
Bike & Pedestrian Safety	●●●●●	Due to the combination of bike and pedestrian safety improvements associated with the closure of Grumbein's Island, the Snider Street Conversion, and the intersection improvements, this scenario provides for significant improvement in bike and pedestrian safety.
Vehicular Safety	●●●●●	The reduction of the conflict points and severity of potential crashes with the intersection improvements plus the elimination of the vehicle-pedestrian conflict at Grumbein's Island combined with the reconfiguration of the misaligned intersection at Willey Street and Richwood Avenue provide for a potential notable increase in vehicle safety.
Total Score		**25/25**

Scenario #7 - Considerations

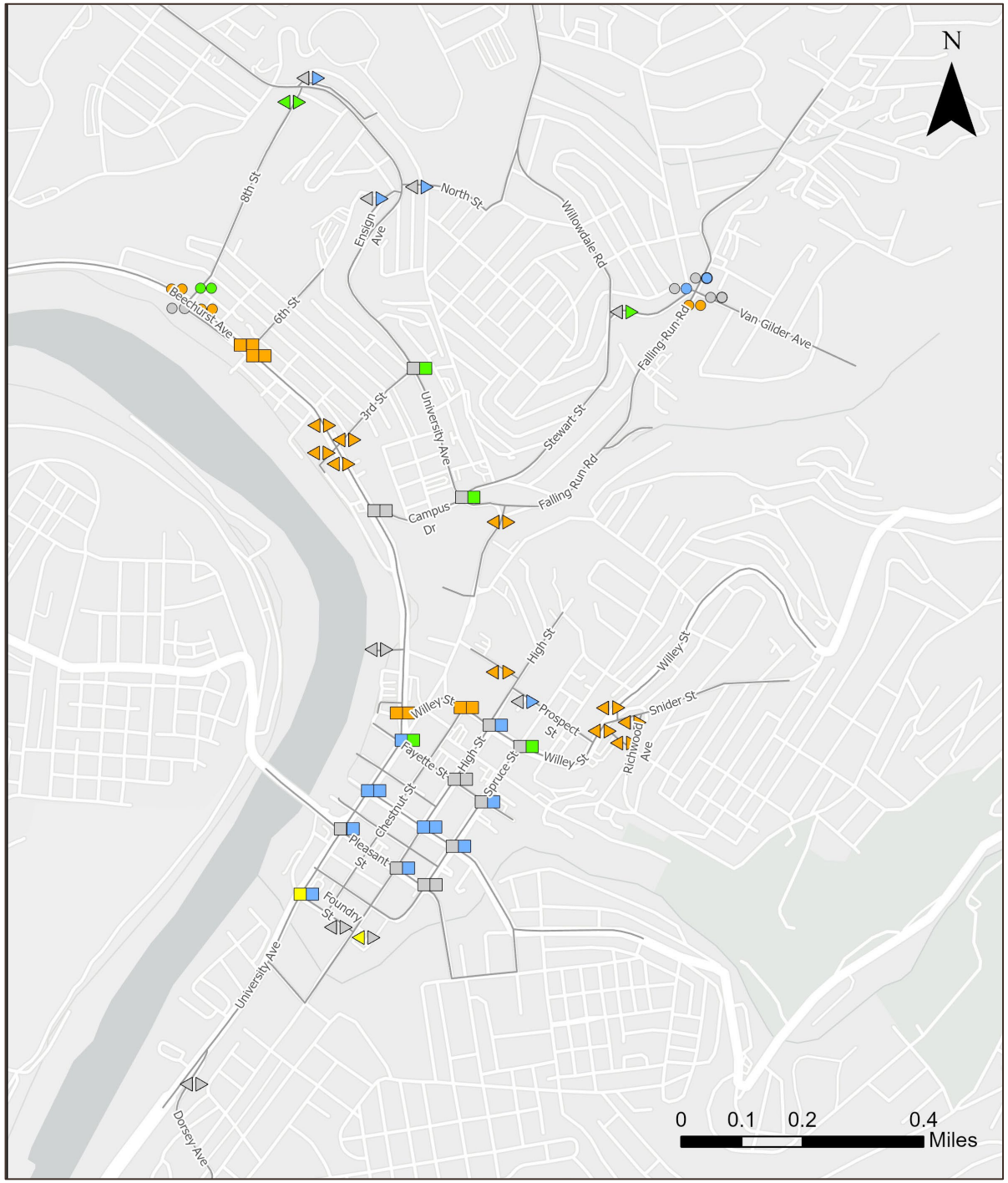
Category	Consideration	Notes
Anticipated Public Support	Negative	The acquisition right-of-way from property owners along Snider Street and at the intersection improvements and the access restrictions along Beechurst may present some public support challenges.
Constructability	Complex	The constructability is anticipated to be somewhat difficult, between the reconfiguration of intersections surrounding Grumbein's Island and the challenges that may be presented along Snider Street when implementing widened lanes and multimodal facilities.
ROW Impacts	High	It is anticipated that there will be multiple right-of-way impacts, largely stemming from the updated configuration of Snider Street and the proposed roundabouts at Pleasant Street and Stewart Street intersections.
Impact to Business and Development	Medium	This scenario provides improved access to businesses, largely stemming from the Snider Street conversion providing additional connectivity to Downtown Morgantown and its consistency with development plans for the East End Village.
Cost	High	This scenario is anticipated to be the most expensive due to costs stemming from the closure of Grumbein's Island and the upgrades to Snider Street.

Categories	Scenario 1	Scenario 2	Scenario 3	Scenario 4A	Scenario 4B	Scenario 5	Scenario 6	Scenario 7
	Scores							
Traffic Operations (Individual Intersections)	4	5	2	3	3	4	5	5
Traffic Operations (Downtown Network)	4	4	3	3	3	5	4	5
Bike & Pedestrian Mobility	4	5	2	3	4	4	5	5
Bike & Pedestrian Safety	4	5	3	4	5	4	5	5
Vehicular Safety	3	4	4	4	5	5	4	5
Total	**19**	**23**	**14**	**17**	**20**	**22**	**23**	**25**

Recommendations

- Include Scenario 7 in long range planning for Morgantown
  - Scenario 1 – Signal optimization and multimodal improvements
  - Scenario 2 – Grumbein's Island closure
  - Scenario 4B – Realignment of US 119 to Snider Street
  - Scenario 5 – Intersection Improvements
- Scenario 7 can be phased as standalone projects
- Not recommended to be carried forward
  - Scenario 3 – one-way street conversions

Scenario #7 - Operations



Legend

MD PM

Signalized Midday/ PM Delay Comparison

MD PM

Unsignalized Midday/ PM Delay Comparison (By Approach

No change in LOS or change from EF (still failing)

LOS improvement from EF to ABCD

LOS improvement between ABCD (still acceptable)

LOS decrease between ABCD (still acceptable)

LOS decrease from ABCD to EF (acceptable to failing)

Newly Proposed Intersection/ Approach

Morgantown Main Roads

Estimated Costs for Planning

Alternative	Planning Level Cost
Alt 1-Signal Timing and Multimodal Improvements	$1M—$5M
Alt 2-Grumbein's Island Closure	$6M—$12M
Alt 4B-Realignment of US 119 to Snider Street	$10M—$20M
Alt 5-Intersection/Beechurst Corridor Improvements	$12M—$24M