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Evaluation of a Shared Space Alternative in Morgantown, WV

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Evaluation of Shared Space in Campus Environment

Colin Frosch

Dr. David Martinelli

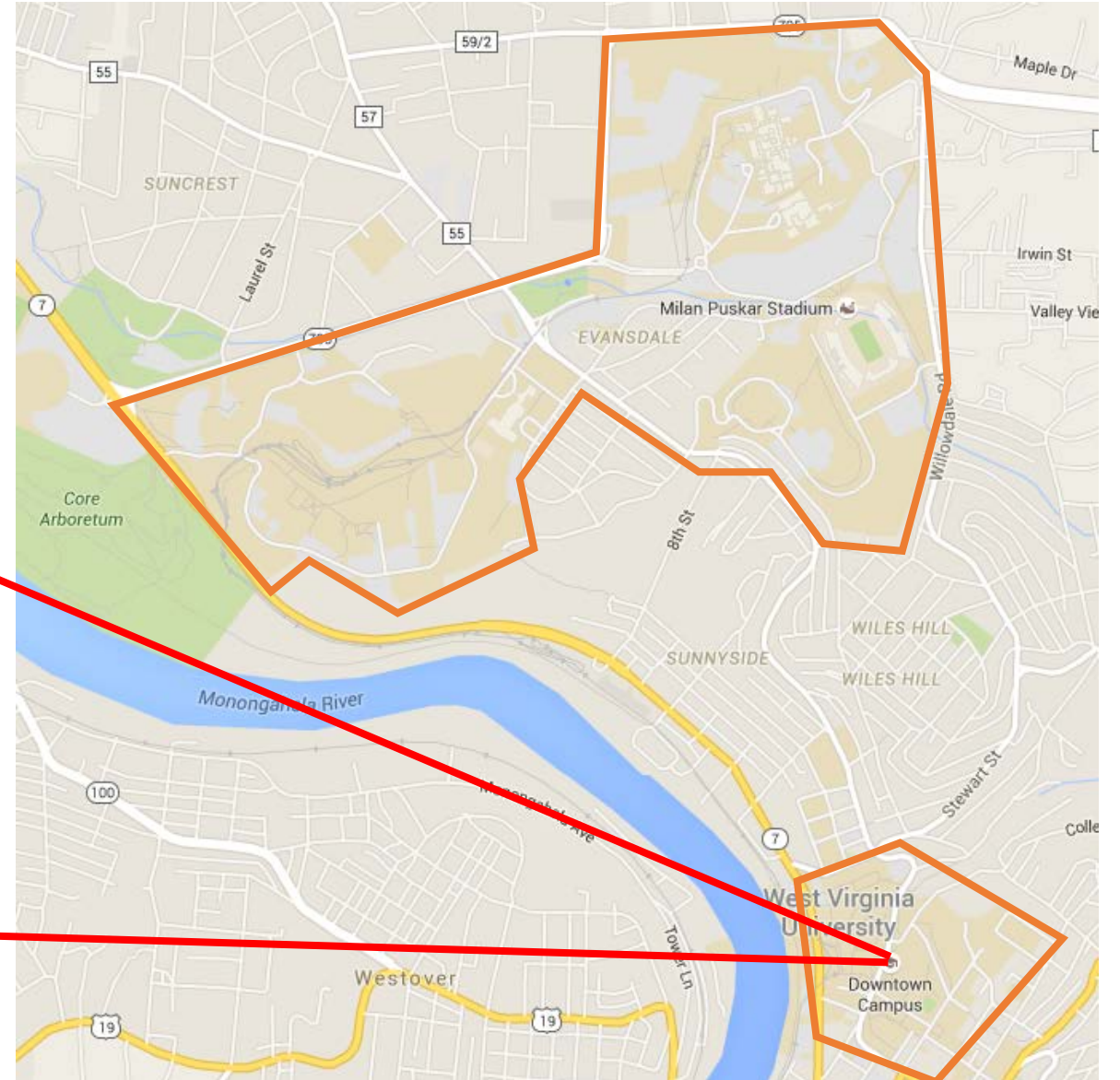
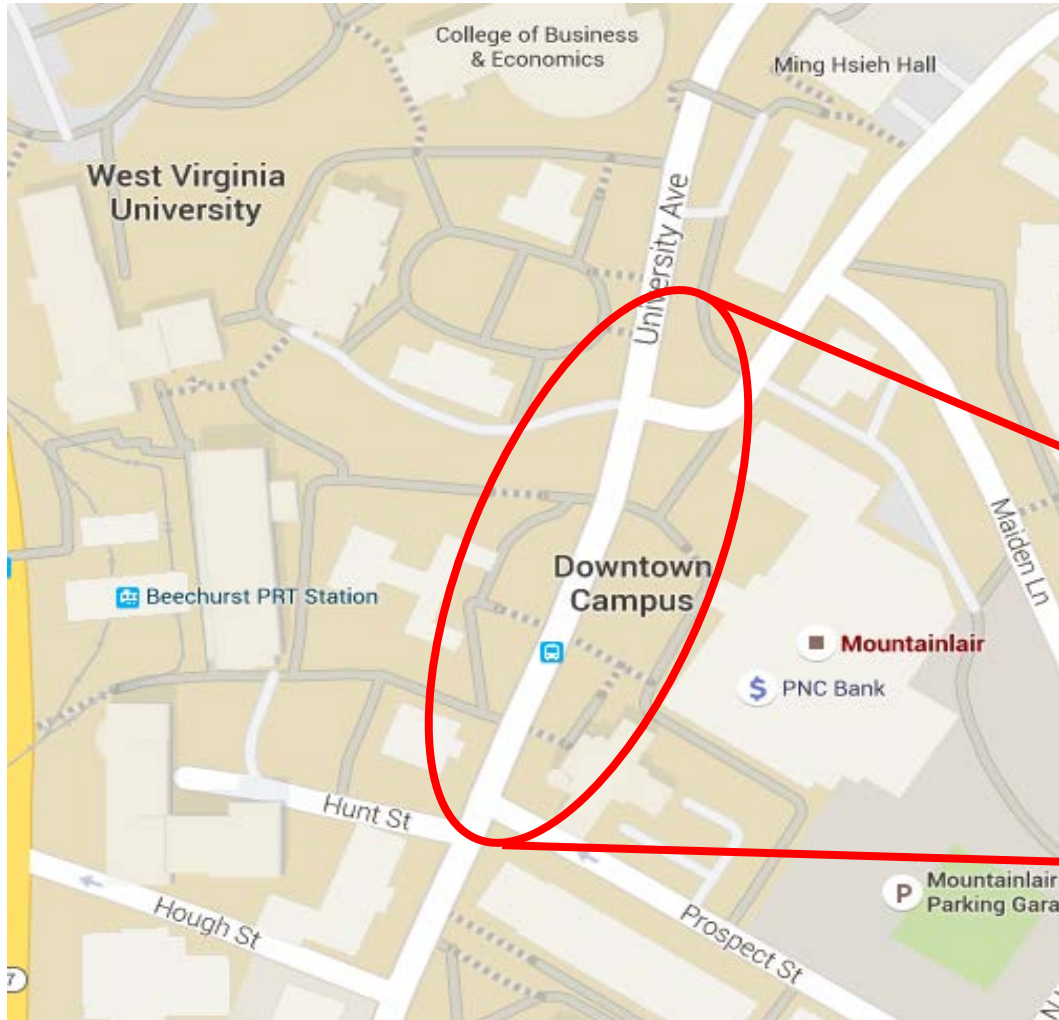
West Virginia University

Dr. Avinash Unnikrishnan

Portland State University



West Virginia University



Problem Area: Grumbein's Island



Implemented in 1934 by Professor Grumbein to provide pedestrians with a refuge while crossing University Ave.

Alternatives



Shared Space



Hans Monderman in Netherlands

Pedestrians and vehicles have equal access

Reduced Speed Areas

Drivers more cautious

Eliminates lanes, sidewalks, crosswalks, and signals and any separation devices

Shared Space



Shared Space: Improved Pedestrian Safety

Increased pedestrian visibility

More alert drivers

More attentive pedestrians

No defined crossing space



Mariahilferstrasse: Vienna, Austria

<http://andreaslindinger.at/>

Shared Space: Community Revitalization



Fountains Place: Poynton, England
ericvery.wordpress.com

Shared Space: Efficiency and Economy

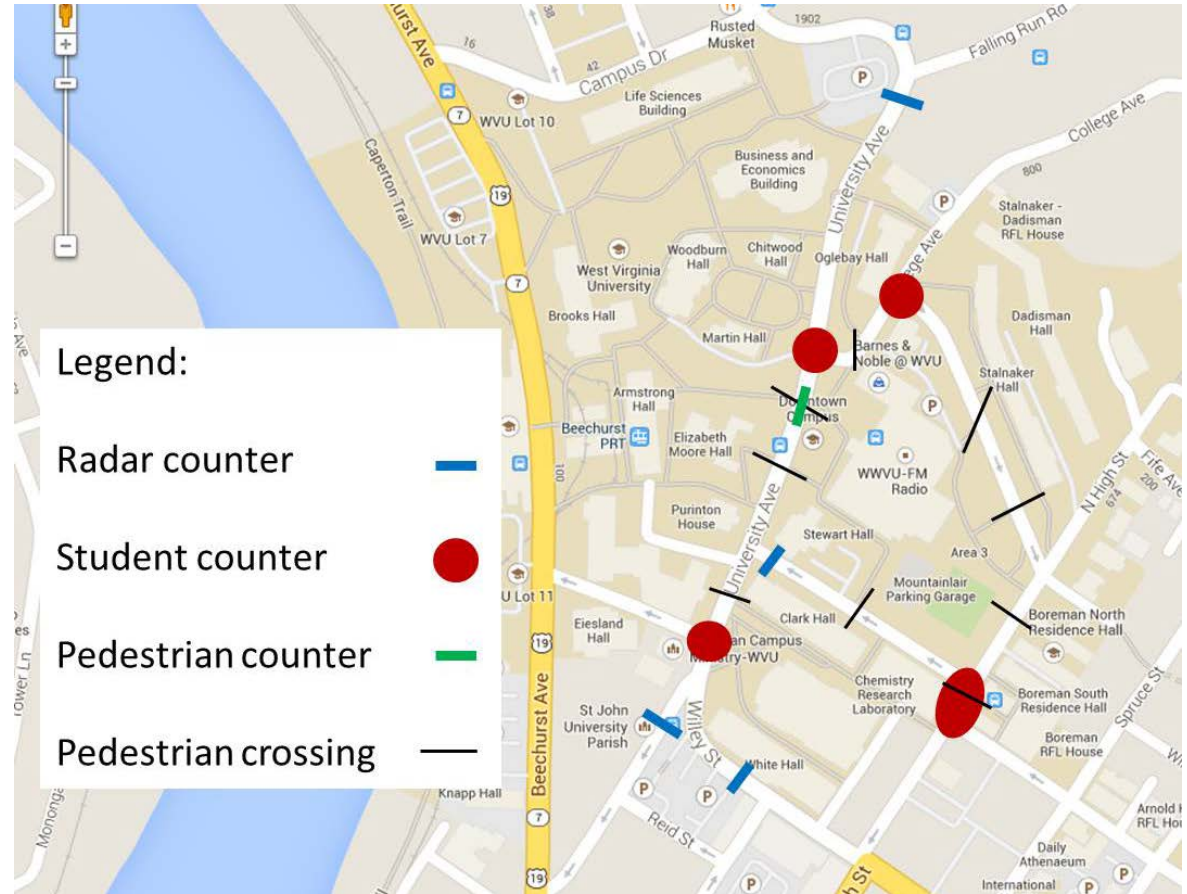
- Continuous traffic flow
- Fewer shock waves
- Pedestrians spread out, yielding to oncoming traffic

- Low impact to existing infrastructure
- Fraction of cost to build bridge and tunnel
- Reduced construction time

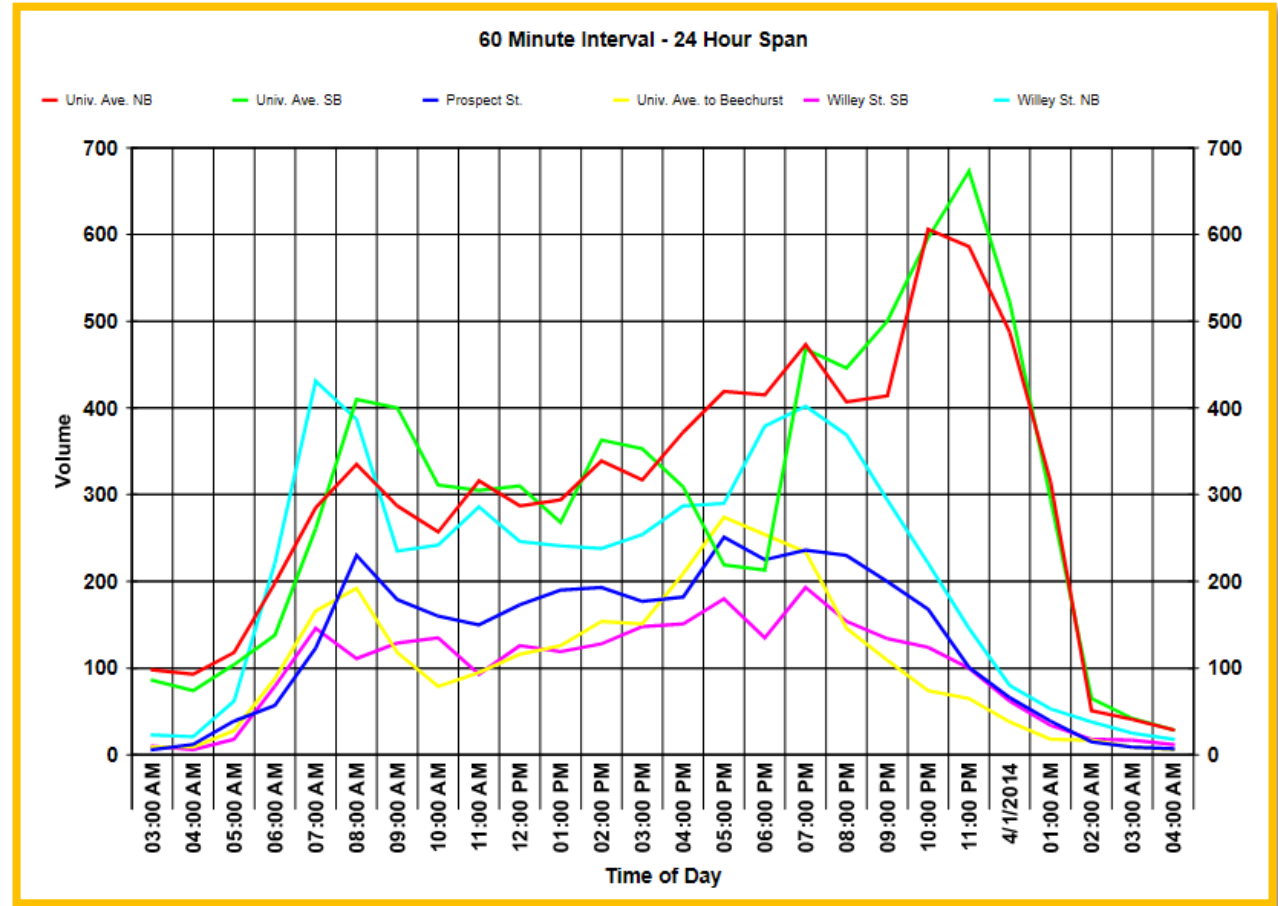


Traffic Study

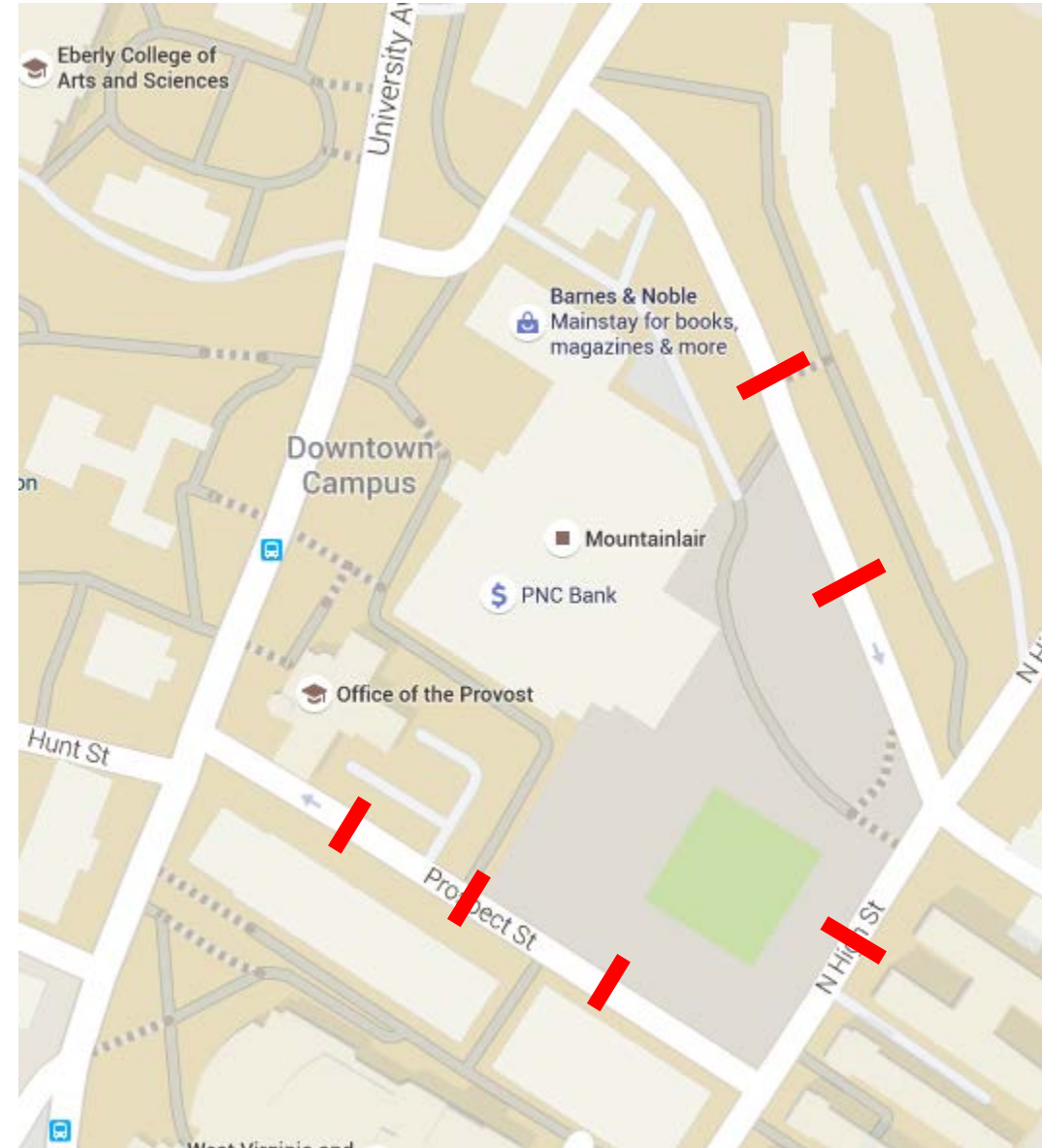
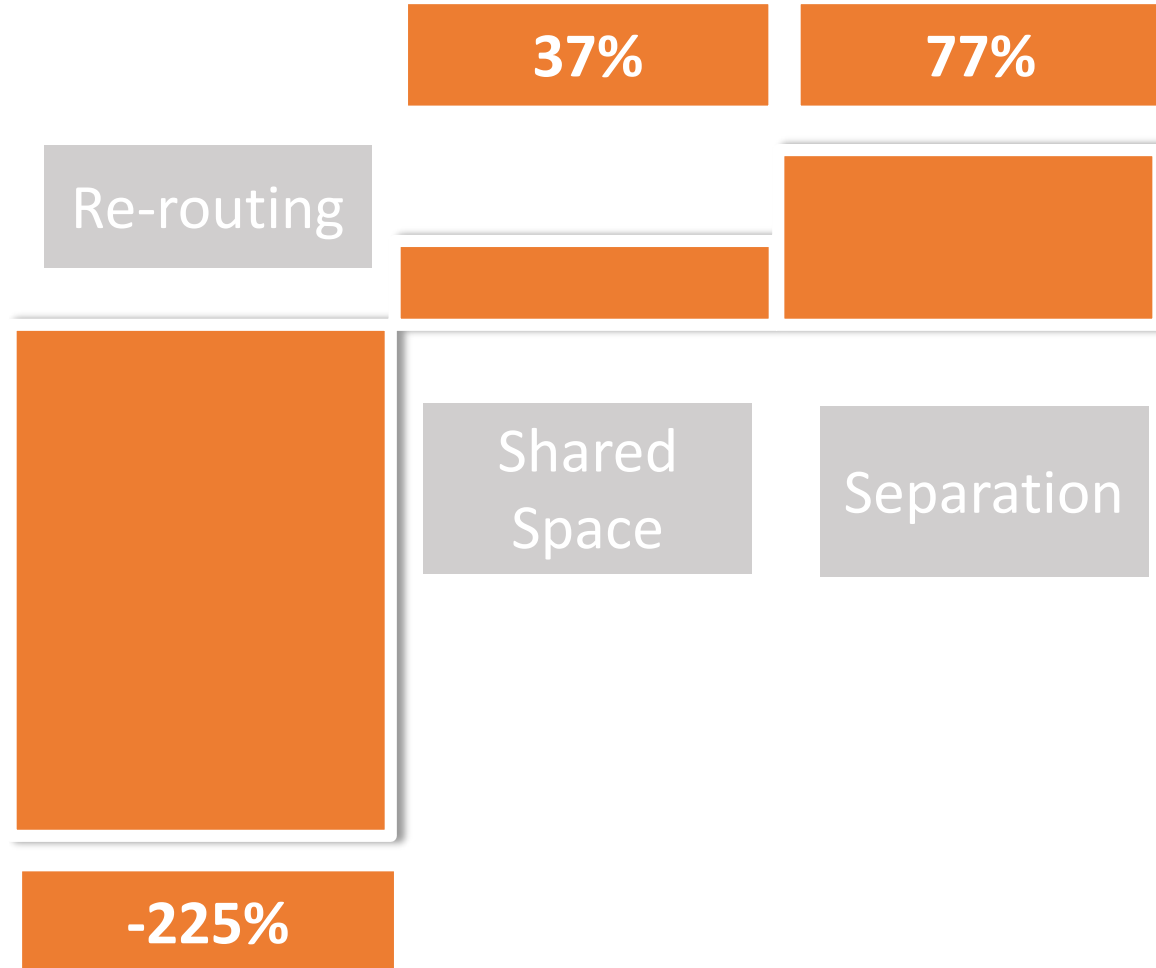
- 28 student volunteers
- Counted vehicles and pedestrians at selected intersections



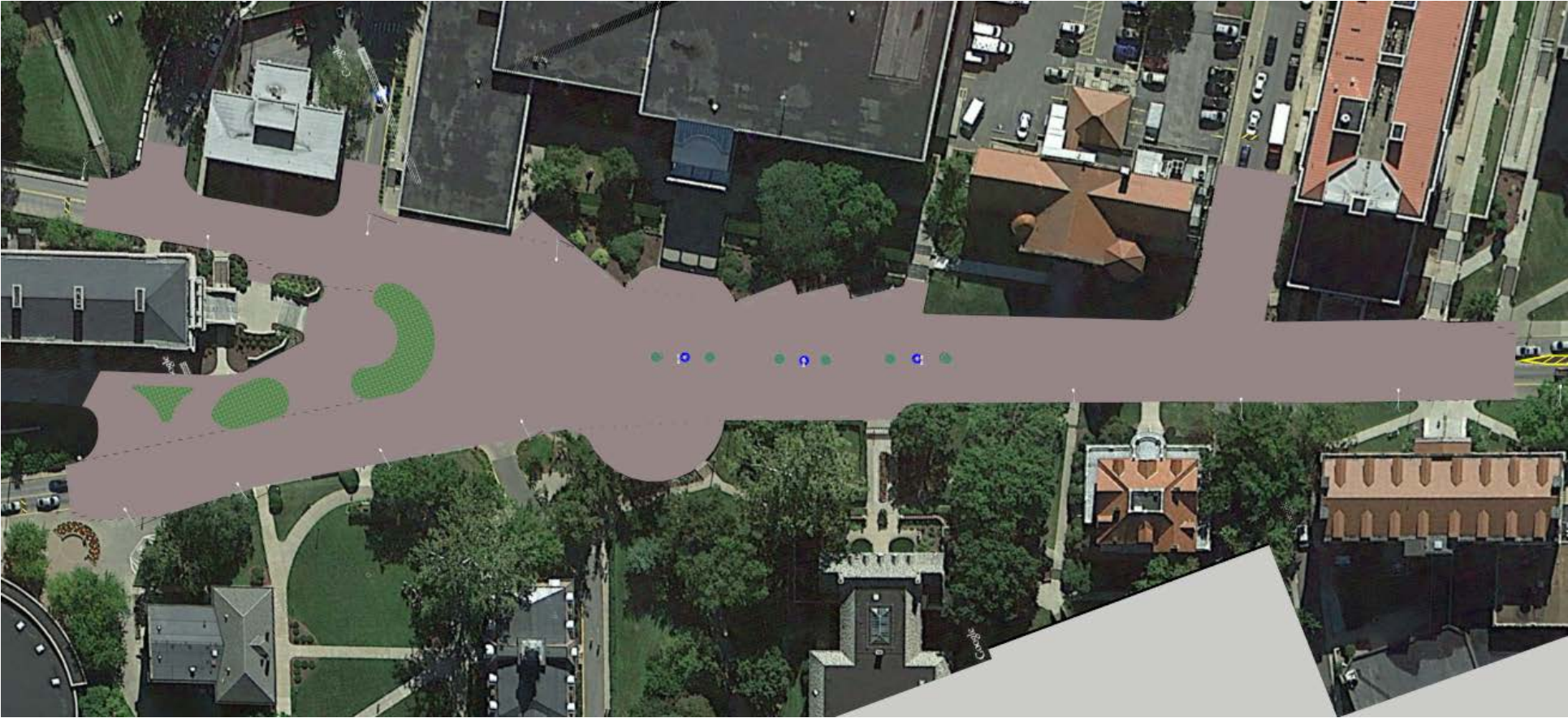
Traffic Study



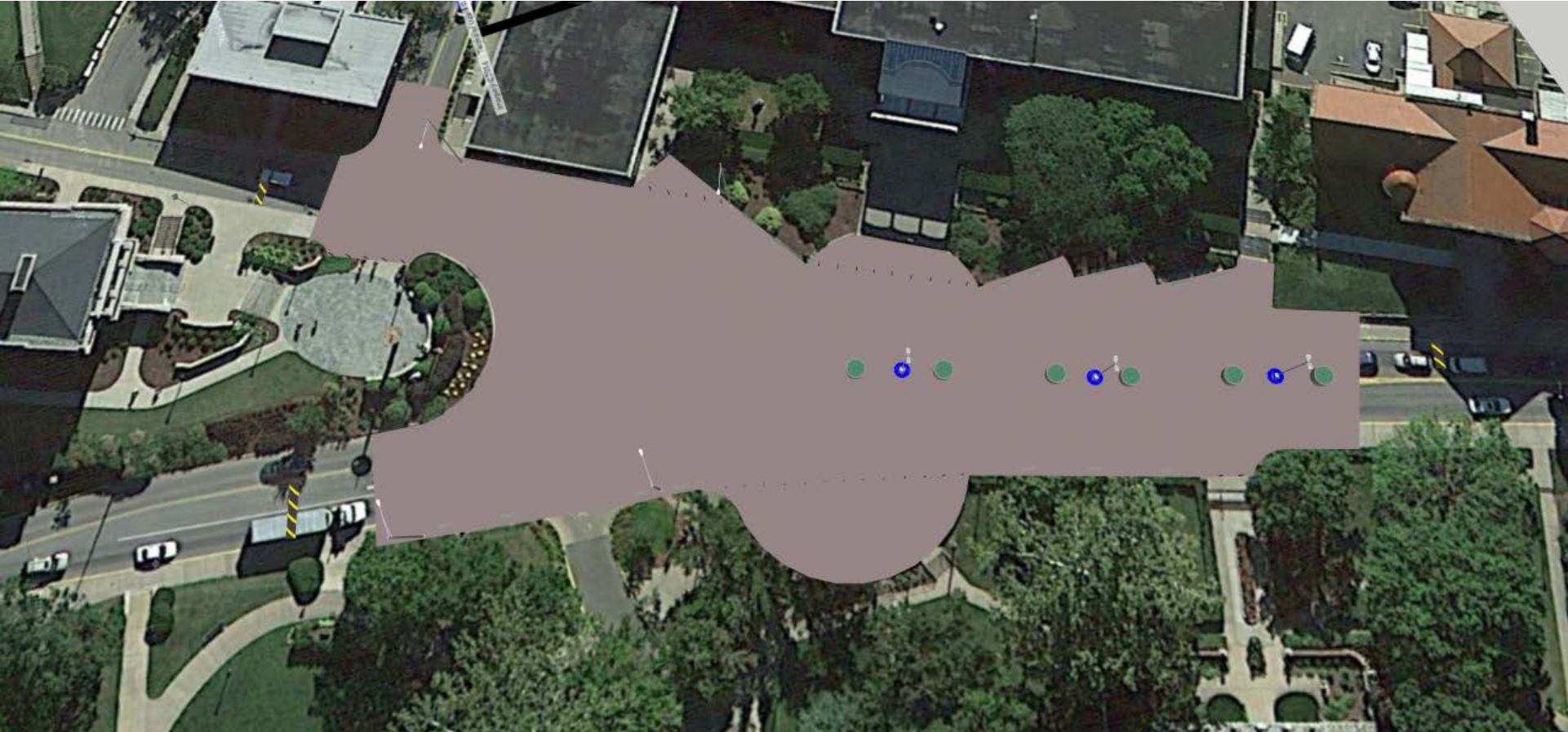
VISSIM Simulation Results



Alternative 1: Large



Alternative 2: Medium





STANTEC
6.18.15

Shared Space Challenges

Legal

- Assess how shared space fits in with WV rules of the road
- Recommend any necessary additions or revisions to laws, codes, or driver's education manual

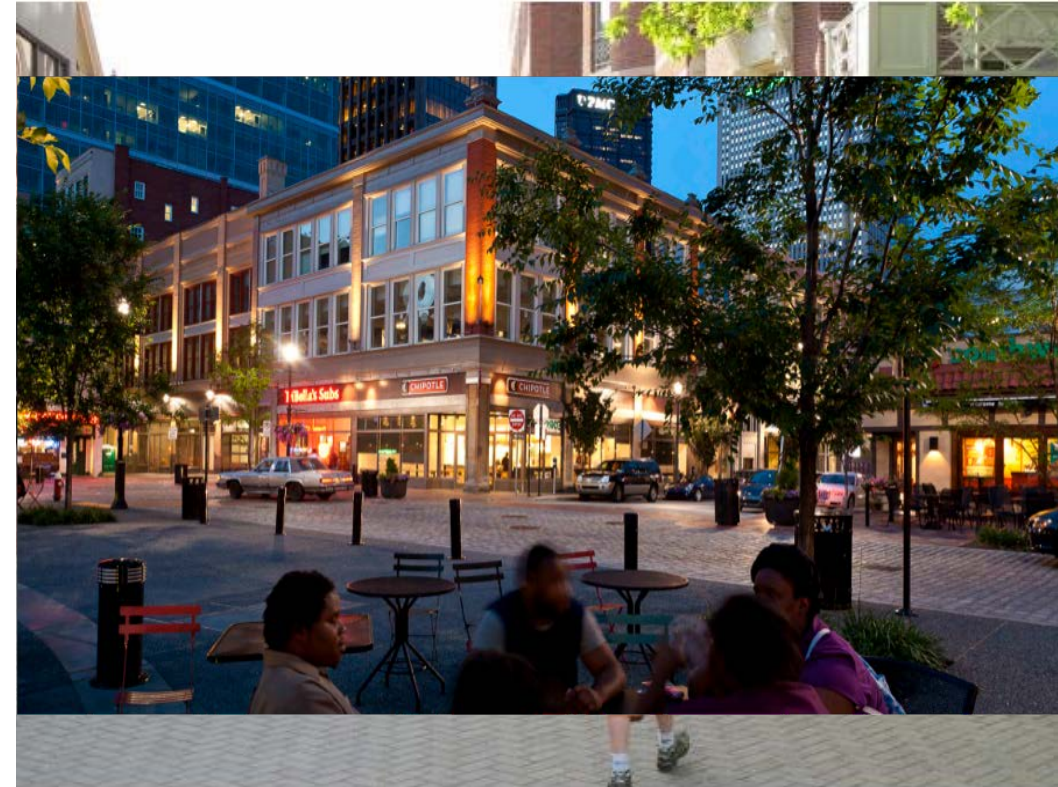
Design

- Designs are in accordance with MUTCD, ADA, and other requirements
- Location of bus stops, freight pickup and delivery zones

Shared Space Challenges

Outreach

- Educate WVU students and local community about shared space
- Involve public through Q & A sessions
- Incorporate public concerns and needs in planning process



Public Relations with assistance from Reed College of Media

Current Research

Improvement of simulation models using VisWalk

Collect more pedestrian data

Collect and analyse crash data

Survey users prior to construction and following construction to measure comfort, perceived safety, willingness to use, and overall approval

Conclusions

Shared space can

- Increase pedestrian safety
- Decrease vehicle congestion
- Improve community atmosphere



Shared space has had success in multiple European cities

WVU downtown campus is well suited to pursue shared space

Questions?

