Capital District Transportation Committee

Delaware Avenue Complete Streets

FEASIBILITY STUDY

Creighton Manning | The LA GROUP

Study Goals

"Create a Plan for a more balanced transportation system along Delaware Avenue to enable safe and comfortable ADA compliant access for users of all ages and abilities, including pedestrians, bicyclists, transit users and motor vehicle drivers, otherwise known as Complete Streets."

What are Complete Streets?

Complete Streets are streets for everyone, no matter who they are or how they travel.

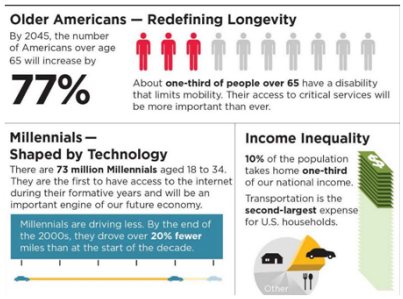
National Complete Streets Coalition

Why Complete Streets - Safety

- Safer streets = less costly streets
- Recent Madison Avenue Road Diet in the City of Albany showed a 4:1 cost benefit ratio
- Road diets are one of FHWA's proven safety counter measures
- Reduce crashes by 19 to 47percent
- Speeds likely to be reduced by 3 to 5 mph

Why Complete Streets – Economy & Mobility

- Promotes Community Interaction
- Less $ on transportation = more spending money
- By 2045 the number of Americans over age 65 will increase by 77 percent
- Increased home values: 15 real estate markets; one-point increase in the walkability scores; $700 to $3,000 increase



Overall Operations

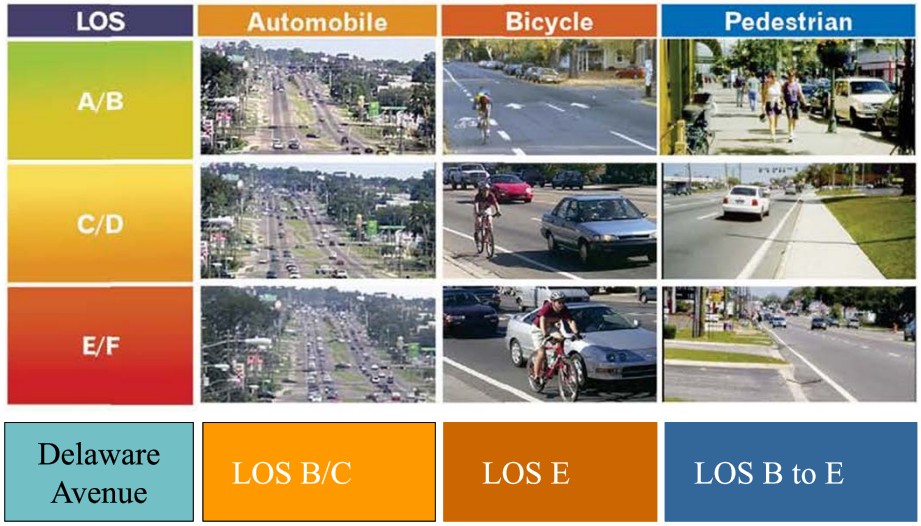
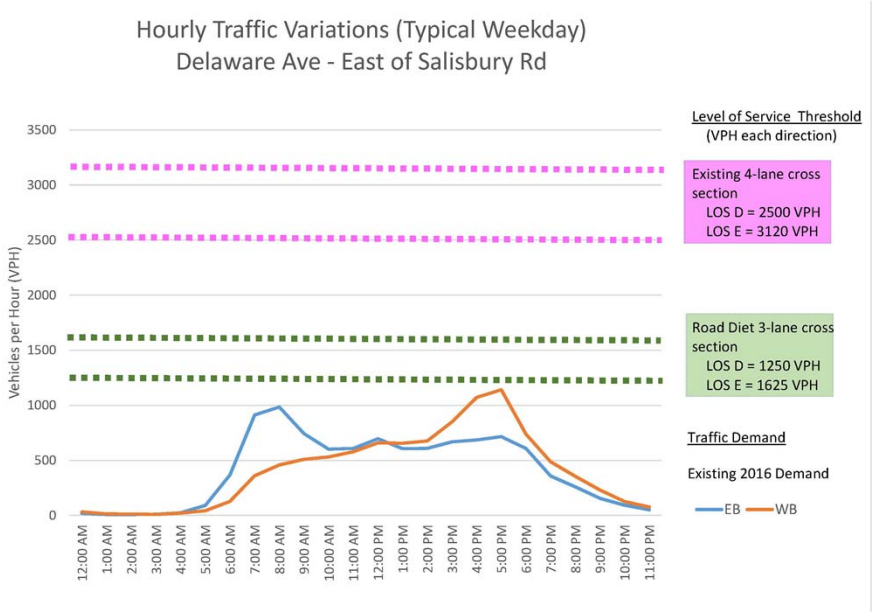
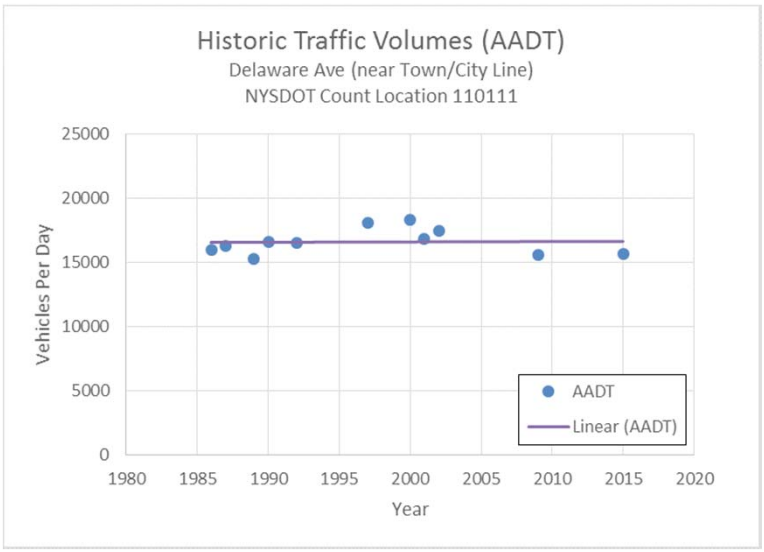


Image Courtesy of State of Florida Department of Transportation 2013 Quality/Level of Service Handbook

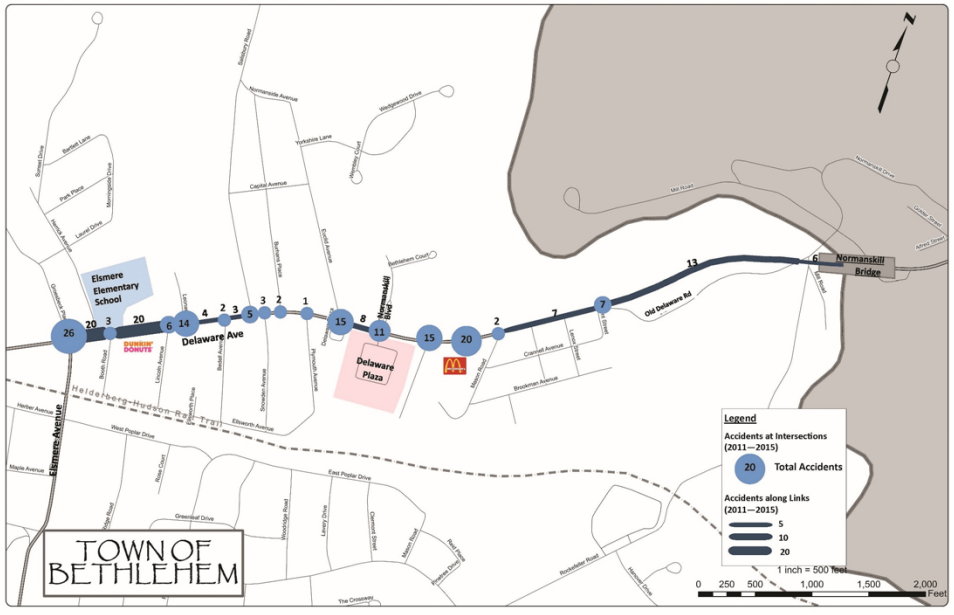
Volumes



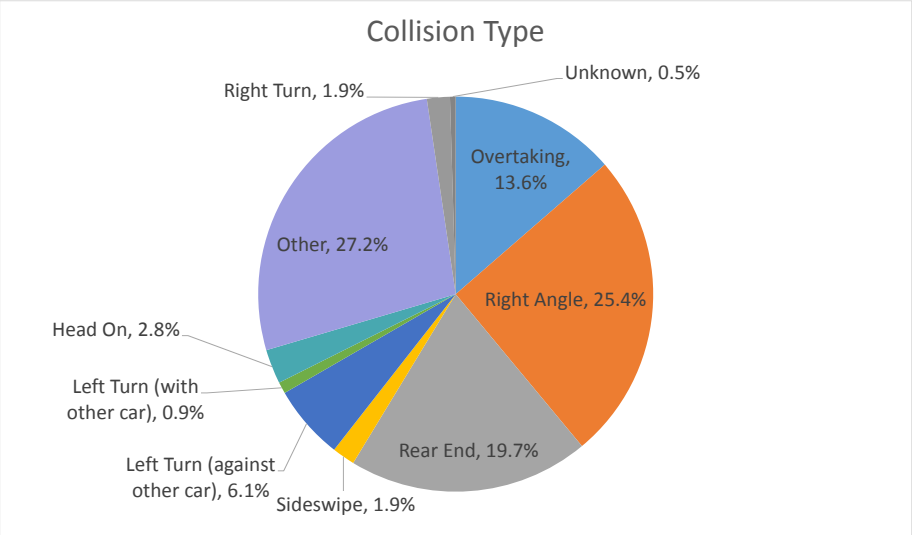
Traffic Volume Consistency



Crashes by Location



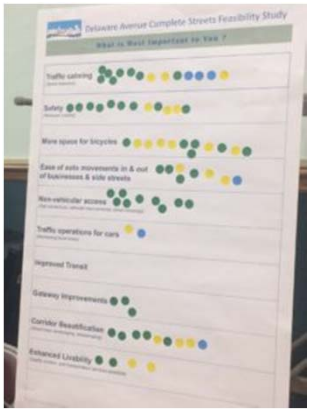
Crashes by Type



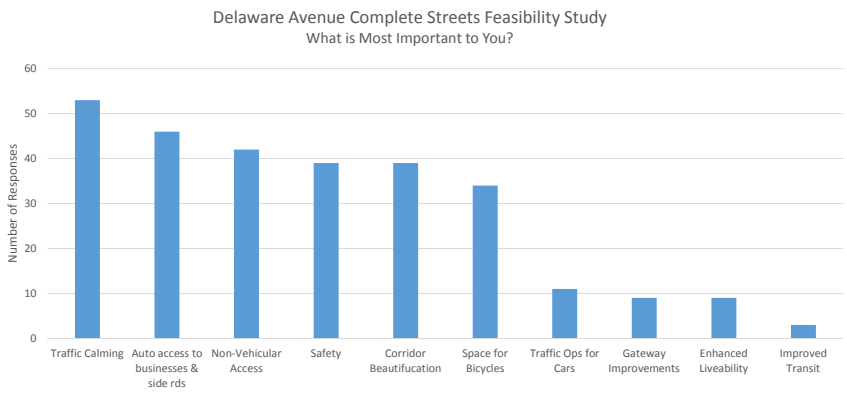
Road Diet Crash Reduction Factors

Countermeasure	Crash Type	Crash Reduction Factor
Narrow roadway cross section (4 to 3 lanes) with two way left-turn lane	All	**26%**
	Left-turn	**24%**
	Rear-end	31%
	Right-angle	37%

Public Meeting Recap



What is Most Important to You?



Five Alternatives

- A Null
- B Full Road diet (1-1-1)
- C Half corridor road diet
- D 1-1-2 Eastbound
- E Westbound 2-1-1

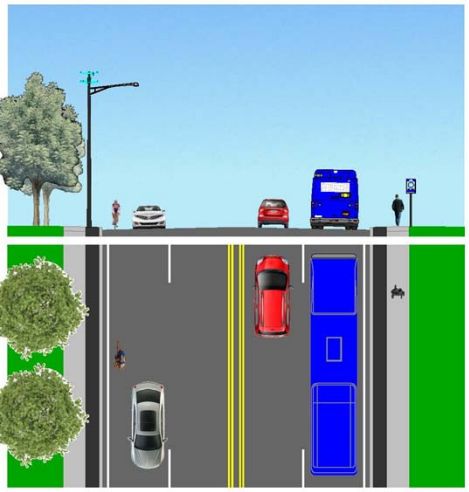
Would you be willing to exchange…

- Up to 50 seconds of travel time during the peak commute

for

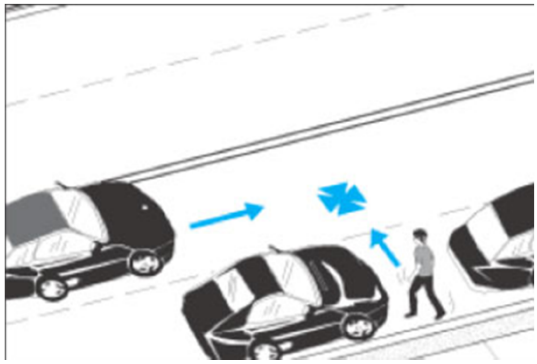
- Traffic calming on Delaware Avenue, fewer crashes, better access for left turns, a more comfortable pedestrian environment, greater separation between cars and the sidewalk, improved pedestrian crossings, and space for bicycles?

Existing – Null Alternative



- Pros
  - Maintains current traffic operations
  - No cost
- Cons
  - High crash rate
  - Difficult crossing for pedestrians
    - » Multi-threat
  - Poor bike accommodation
  - Left turn challenge

Multi-threat



Full Road Diet (1-1-1)

- Pros
  - Traffic calming
  - Improved safety
  - Improved bike accommodation
  - Improved pedestrian crossing accommodation
  - Improved access to/from unsignalized side streets and businesses
- Cons
  - Some traffic diversions (3 to 4 %)
    - » Peak hour only
  - Increased peak hour signal delay
    - » +15 to 50 seconds (AM)
  - Increased corridor travel times - PM Peak end to end
    - » + 45 seconds each way

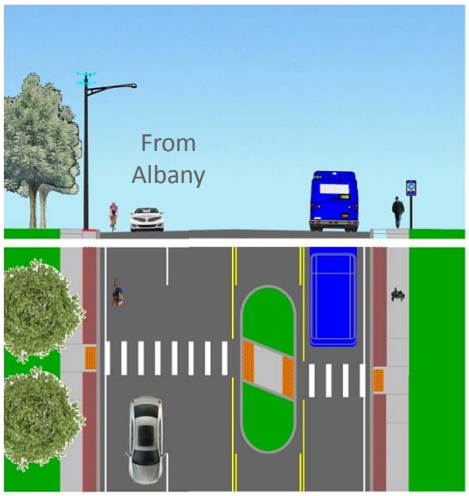
Half Corridor Road Diet
(Delaware Plaza to Normanskill Bridge)

- Pros
  - Maintains traffic operations - Elsmere to Plaza.
  - Improved safety, traffic calming bike accommodation and pedestrian crossing accommodation in road dieted section
  - Improved access to/from unsignalized side streets and businesses – road dieted section
- Cons
  - High crash rate Elsmere to Plaza
  - Multi-threat Elsmere to Plaza
  - Lack of bike lane and pedestrian crossing accommodation Elsmere to Plaza

1-1-2 Eastbound (with full Road Diet Plaza to Bridge)

- Pros
  - Ties into existing conditions / Enhancements project at Elsmere
  - Some safety and traffic calming benefits
  - Improved ped crossing opportunities
- Cons
  - Lack of bike lane Elsmere to Plaza
  - Multi-threat in one direction
  - Travel time increase
    - » + 45 seconds WB, + 15 seconds EB

Westbound 2-1-1 (with full Road Diet Plaza to Bridge)



- Pros
  - Good PM peak hour traffic operations
  - Some safety and traffic calming benefits
  - Improved ped crossing opportunities
- Cons
  - Lack of bike lane Elsmere to Plaza
  - Multi-threat in one direction
  - Travel time increase
    - » + 15 seconds WB, + 45 seconds EB

Crashes Reduced (5 years)

- 213 Crashes (2011 to 2015)

Crashes Reduced					
	A	B	C	D	E
Elsmere to Normanskill Bridge	0	60	21	41	41
		28%	10%	19%	19%

Pedestrian Scores

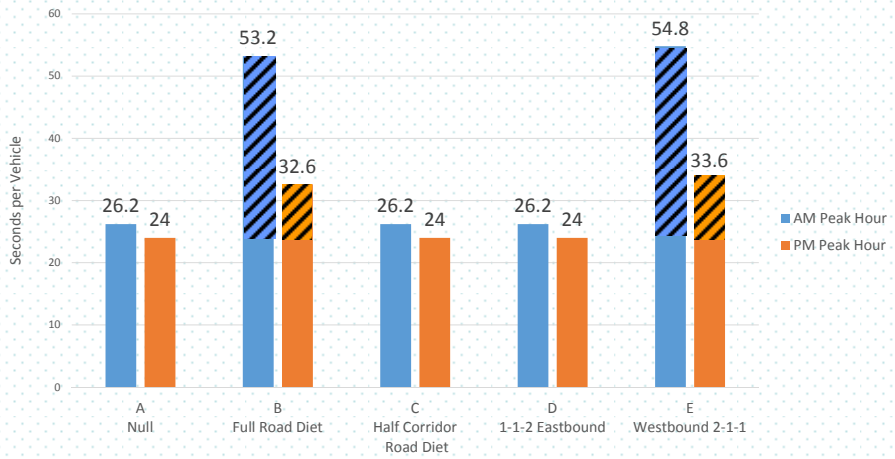
LOS A/B

Pedestrian Scores					
	A	B	C	D	E
Elsmere Ave	B	A	B	B	B
Herrick Ave	D	C	D	D	D
Booth Rd	D	C	D	D	D
Lincoln Ave	D	A	D	B	B
Leonard Place	D	D	D	D	D
Bedell Ave	D	C	D	D	D
Salisbury Rd	D	A	D	B	B
Snowden Ave	D	C	D	D	D
Burhans Place	D	C	D	D	D
Plymouth Ave	D	C	D	D	D
Euclid Ave	D	A	D	B	B
Normanskill Blvd	C	A	C	C	C
Mason Rd	D	C	C	C	C
Winslow St	D	A	A	A	A
Lenox St	D	C	C	C	C
Grant St	D	A	A	A	A
Old Delaware Ave	D	C	C	C	C

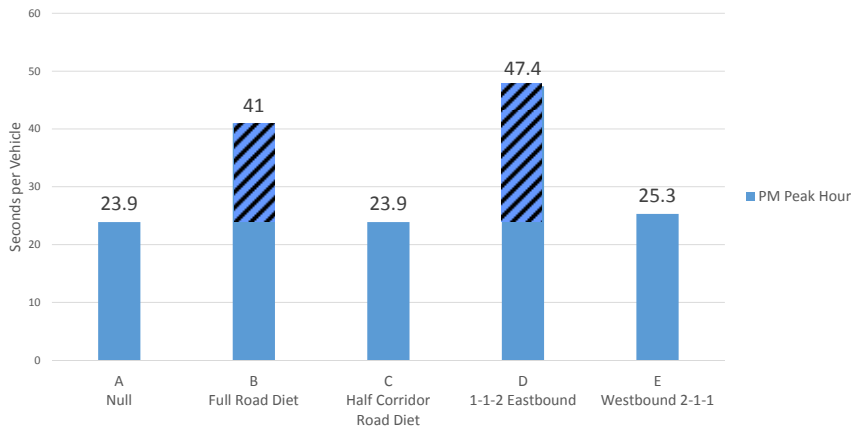
Bicycle Level-of-Service

Bicycle LOS					
	A	B	C	D	E
Elsmere to Delaware Plaza	E/D	C	D	D	D
Delaware Plaza to Normanskill	E/D	C	D/C	D/C	D/C

Signal Delay – Delaware / Elsmere



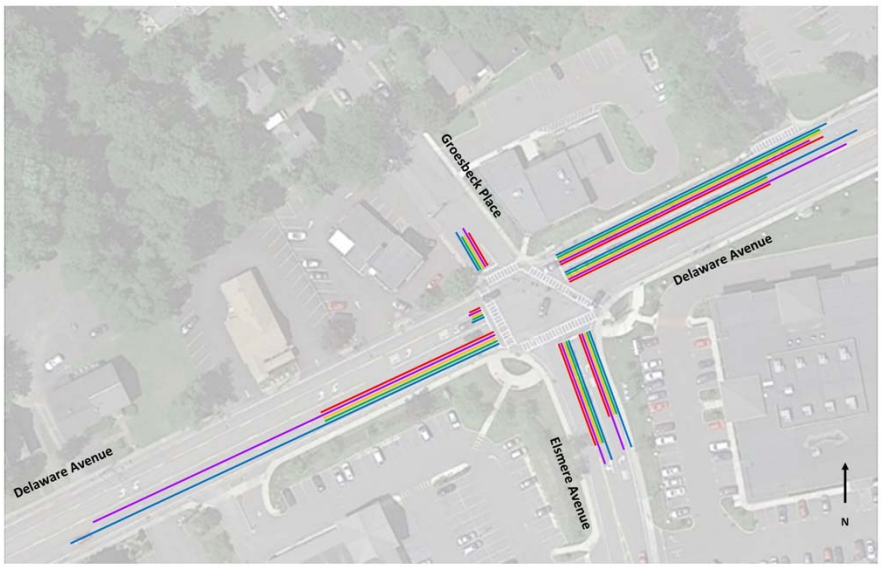
Signal Delay – Delaware Ave / Delaware Plaza



Average Queuing PM Peak Hour Delaware Avenue/Delaware Plaza Drwy/Normanskill Blvd

A Null | B Full Road Diet | C Partial Road Diet | D 1-1-2 Eastbound | E Westbound 2-1-1

Average Queuing PM Peak Hour Delaware Avenue/Elsmere Avenue/Groesbeck Place



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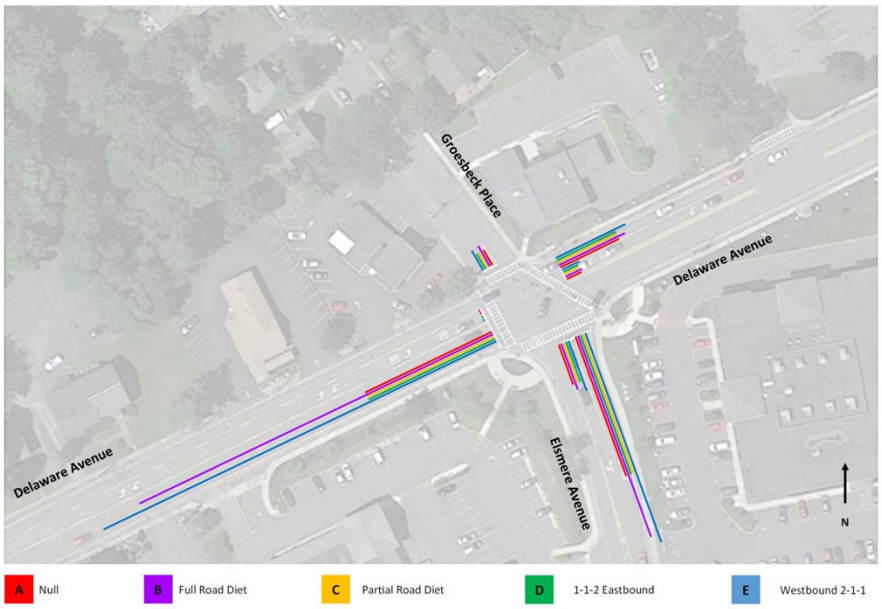
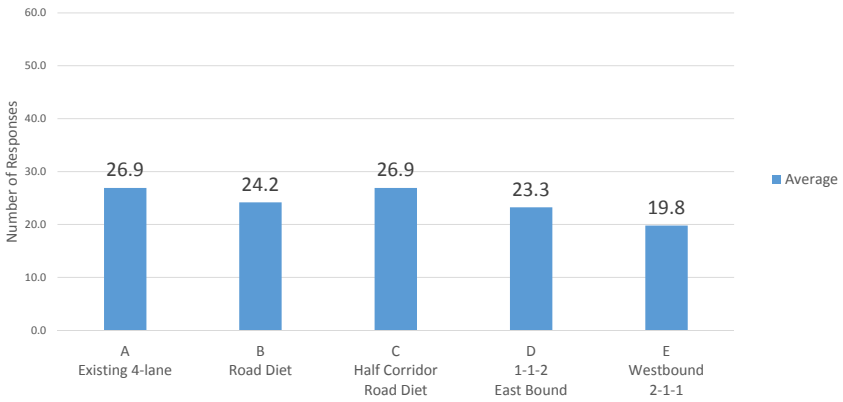
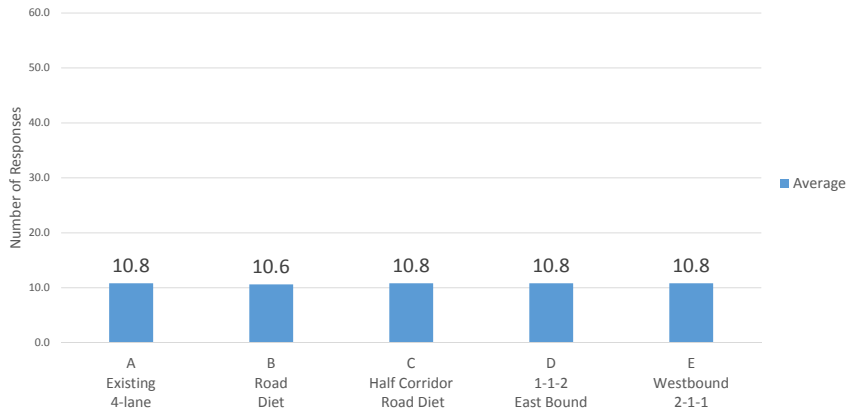
Average Queuing AM Peak Hour Delaware Avenue/Elsmere Avenue/Groesbeck Place



Delay <u>from</u> side streets and driveways



Delay to side streets and driveways



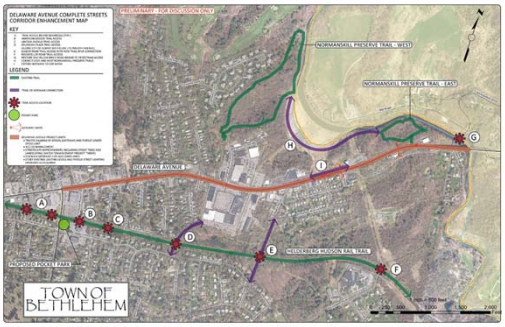
Case Studies

- Economic Impacts of lane elimination (road diet) projects are mixed; most studies point to either no overall economic impacts or some positive impact.
- Business owners are concerned about potential negative economic effects, generally more so if on-street parking is impacted.
- There is little evidence that road diets have a detrimental effect on businesses in terms of their customer volume, revenue, and livelihood.

https://safety.fhwa.dot.gov/road_diets/resources/pdf/fhwasa17019.pdf

Enhancements

- Trail connections
- Traffic calming
- Gateway
- Access management
- Street trees
- Sidewalk extension
- Sidewalk upgrades for ADA compliance
- Bus stop / street crossing integration
- Street lighting upgrades as required



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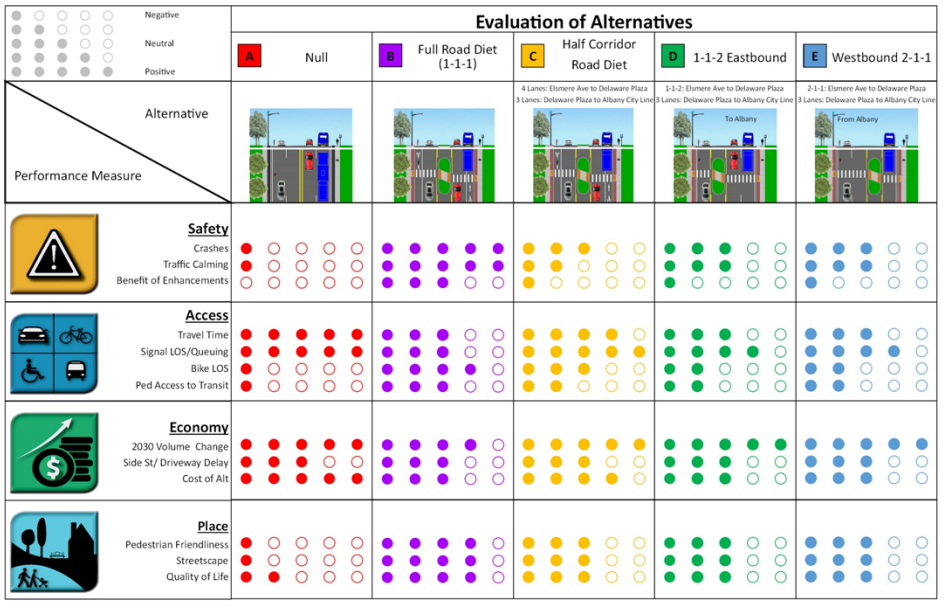

Roundabouts