

Hwy 77 Congestion Mitigation Study Update

I35W Solutions Alliance

May 12, 2022

- Overview of Previous Studies
- Current Study
 - Identified needs
 - Alternatives
 - Performance and cost
 - Conclusions
- Discussion and Next Steps

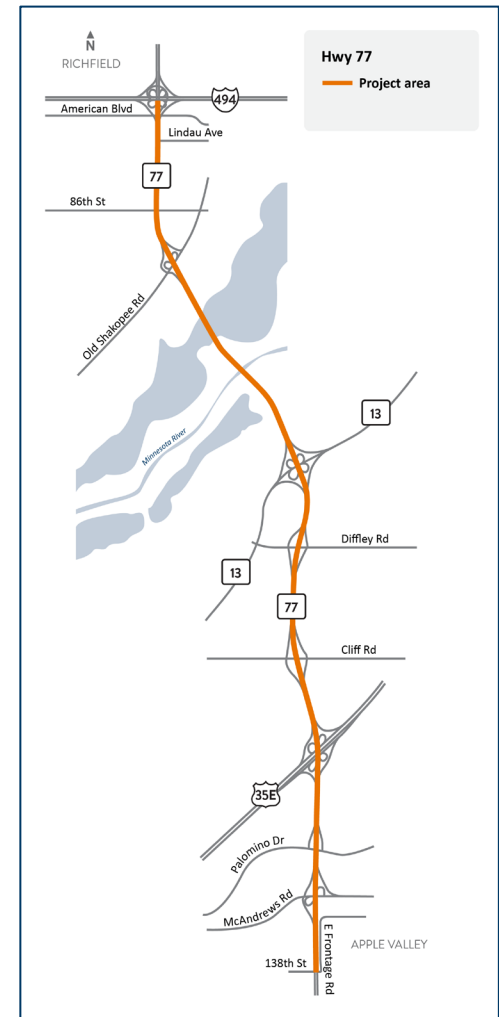
Overview of Previous Studies

2009-2010

- Developed three alternatives (add third lane, two managed lane options)
- Ended without agreement on which alternative to advance

2012-2014

- Considered three alternatives (third lane, managed lane, contra-flow with managed lane)
- Recommended design for new Cedar Grove Transit Station (opened in 2017)
- Recommended a managed lane
- Paused due to lack of funding, need for coordination with I-494 improvements



Current Study (2020-2022)

Why this study?

- MnDOT pavement project in 2026
 - \$44M (138th St to MN River Bridge)
- Continued local agency interest

What was new?

- Improved traffic data
- Targeted equity outreach
- Followed pre-environmental process
- Explored partial corridor options
- Sensitivity analyses

Current Study (2020-2022)

Hwy 77 Needs and Deficiencies

- Vehicle Mobility
 - Recurring congestion in both directions; increasing in the future
 - Poor reliability - trips require 50% buffer on average compared to expected travel time
 - Study uses pre-COVID traffic numbers
- Transit
 - Some issues with reliability and delay, especially northbound AM peak
 - Local interest in improved transit access and service near Palomino drive

Current Study (2020-2022)

Hwy 77 Needs and Deficiencies (cont'd)

- Safety
 - Several locations have elevated crash rates but none are at critical (action) level
 - Crashes generally associated with AM congestion
- Bridges
 - Some bridges are approaching the end of their service life
- Pedestrian and Bicycle Crossings
 - Most bridges have facilities, but some could be improved for safety, convenience, comfort

COVID Traffic Impacts

Metro Freeways and Highways

	2018-2019	2020	2021
% of Miles Congested	24.4%	1.4%	5.8%
Daily Traffic Volumes	100%	50-85%	95%

Hwy 77

	2018-2019	2020	2021
Daily Traffic Volumes	100%	55-80%	85%
Peak Hour Traffic Volumes			
AM (NB at MN River)	100%	70%	85%
PM (SB at MN River)	100%	75%	90%

Alternatives Considered

Full Corridor

1. General Purpose Light
2. General Purpose Add Lane
3. High-Occupancy Toll (HOT) Lane Add Lane (EZ-PASS)

Partial Corridor (“Spot” Improvements)

- A. General Purpose Ultra Light
- B. Four Lanes on MN River Bridge
- C. Two Lanes EB I-494 to SB Hwy 77

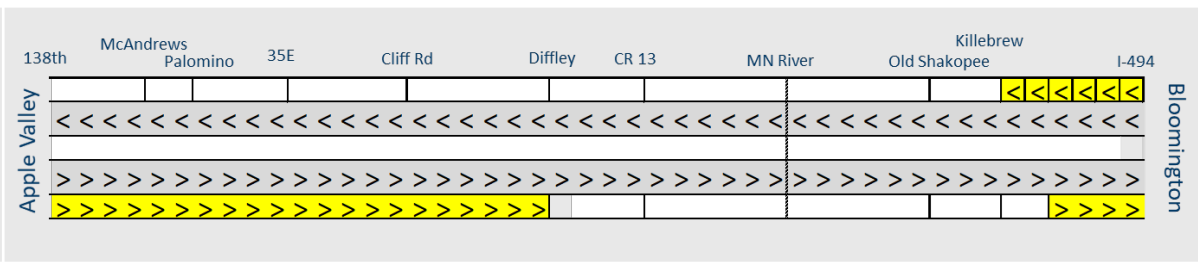
Full Corridor Alternatives

Key				
>	>	>	>	Existing
>	>	>	>	New GP Lane
>	>	>	>	New HOT Lane

1. General Purpose Light

- Adds third NB lane between 138th and Diffley where there are only two lanes today

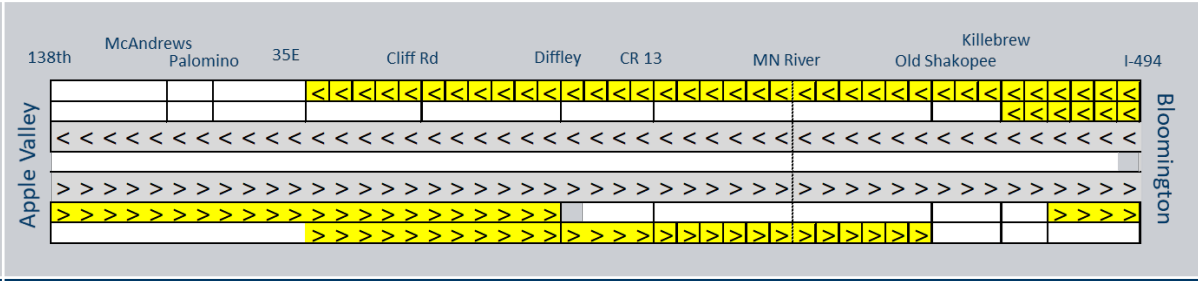
Fills 3rd lane gap areas



2. General Purpose Add Lane

- Provides additional lane for full corridor

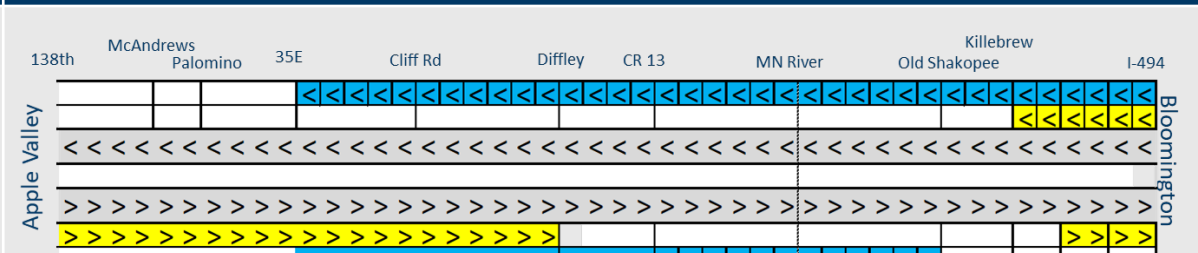
Provides additional lane (full corridor)



3. HOT Lane Add Lane

- Provides additional lane for full corridor, which would function as E-ZPass lane during rush hour

Provides additional lane (full corridor: E-ZPASS lane)



Key				
>	>	>	>	Existing
>	>	>	>	New GP Lane

Partial Corridor Alternatives

<h2>A. General Purpose Ultra Light</h2>	<h2>Fill 3rd lane gap at south end (138th to McAndrews)</h2>
<ul style="list-style-type: none"> Adds 3rd lane northbound from 138th to McAndrews only 	
<h2>B. Four Lanes Over MN River</h2>	<h2>Relieves bottleneck at MN River Bridge</h2>
<ul style="list-style-type: none"> Restripes MN River Bridge to allow four lanes Does not widen bridge but requires drainage and other improvements 	
<h2>C. Two Lanes EB I-494 to SB 77</h2>	<h2>Relieves bottleneck from EB I 494 to SB Hwy 77</h2>
<ul style="list-style-type: none"> Adds capacity to connection from EB I-494 to SB Hwy 77 	

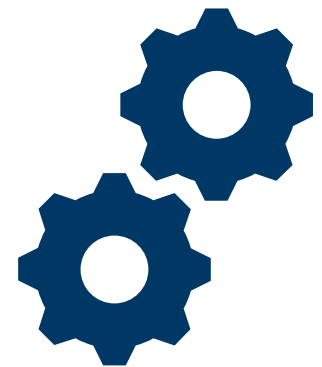
Planning Level Cost Estimates: Methodology

Includes

- Total Project Cost Estimate (TPCE) – not just construction cost
- Assumes extensive noise walls to meet federal requirements
- Inflation to 2026
- Contingency percentage

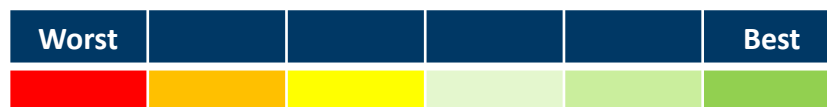
Does not include

- 2026 pavement project (\$44M)



Mobility Evaluation Results Summary

Criteria	Measurement	Full Corridor Options			Partial Corridor Options (results do not include latent demand)			
		1. GP Light	2. GP Add Lane	3. HOT Lane Add Lane	A. GP Ultra Light	B. 4-Lane River Bridge	C. Two Lanes EB 494 to SB 77	B+C Combined
Freeway Level of Service	Peak Period Performance							
Person Throughput	Persons/hour							
Person Travel Time Savings	Person Travel Time							
Travel Time Reliability	Unreliability compared to average							
Transit Daily Travel Time Savings	Minutes							
Transit Throughput	Daily Transit Riders							
Total Project Cost Estimate (TPCE)	\$ Millions	\$106	\$164	\$179	\$45	\$34	\$23	\$57



Study Conclusions

Needs

- Traffic analysis shows congestion and lack of reliability on portions of the corridor
- Traffic volumes on Hwy 77 have not come back as much as on other metro highways (COVID)

Alternatives

- Full lane addition reduces congestion but cost is high (>\$100M)
- Partial corridor options provide moderate benefit at less cost



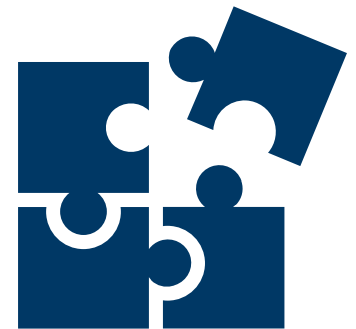
Additional Observations

Funding

- 2026 pavement project is funded (\$44M)
- MnDOT has not identified funding for mobility improvements on Hwy 77
- Funding for mobility improvements are not part of 2040 TPP increased revenue scenario

Other Considerations

- Sustainable Transportation Advisory Council recommends MnDOT limit expansion and implement Vehicle Miles Traveled reduction strategies



Study Results

- Questions/comments for on study process or results?

Next Steps

- Traffic Monitoring
 - Post-pandemic traffic patterns
- Dakota County to Consider
 - Interest in advancing an alternative into preliminary design while finding is pursued?
- Timing (if an alternative is pursued)
 - Stand-alone project
 - In conjunction with 2026 pavement project



Thank you

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