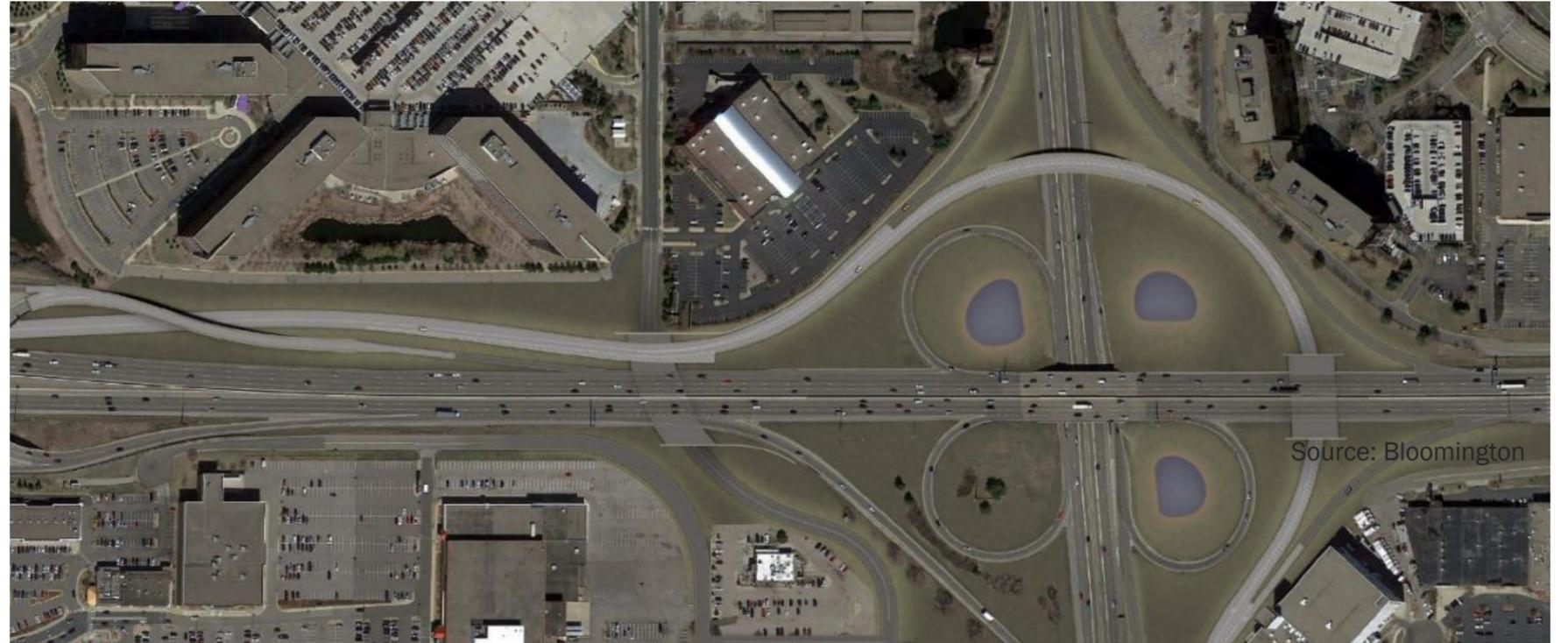


# MnDOT/Met Council: Freeway System Interchange Study

TAC Planning  
1/10/19

*Freeway System Interchange Study*

# Example: 494/35W Bloomington/Richfield



- North to west directional ramp
- Corridors of Commerce awarded \$70 million to begin in 2021
- Includes directional ramp and "bridge braids"

# Background

I-494/US 169 built in  
2012 @ \$125 million  
Eden Prairie/Edina/Bloomington

- System studies context
- System interchanges: connect two freeways
- Congestion and crash concentrations
- Recent major investments
- Numerous identified needs
- Locations have been evaluated independently

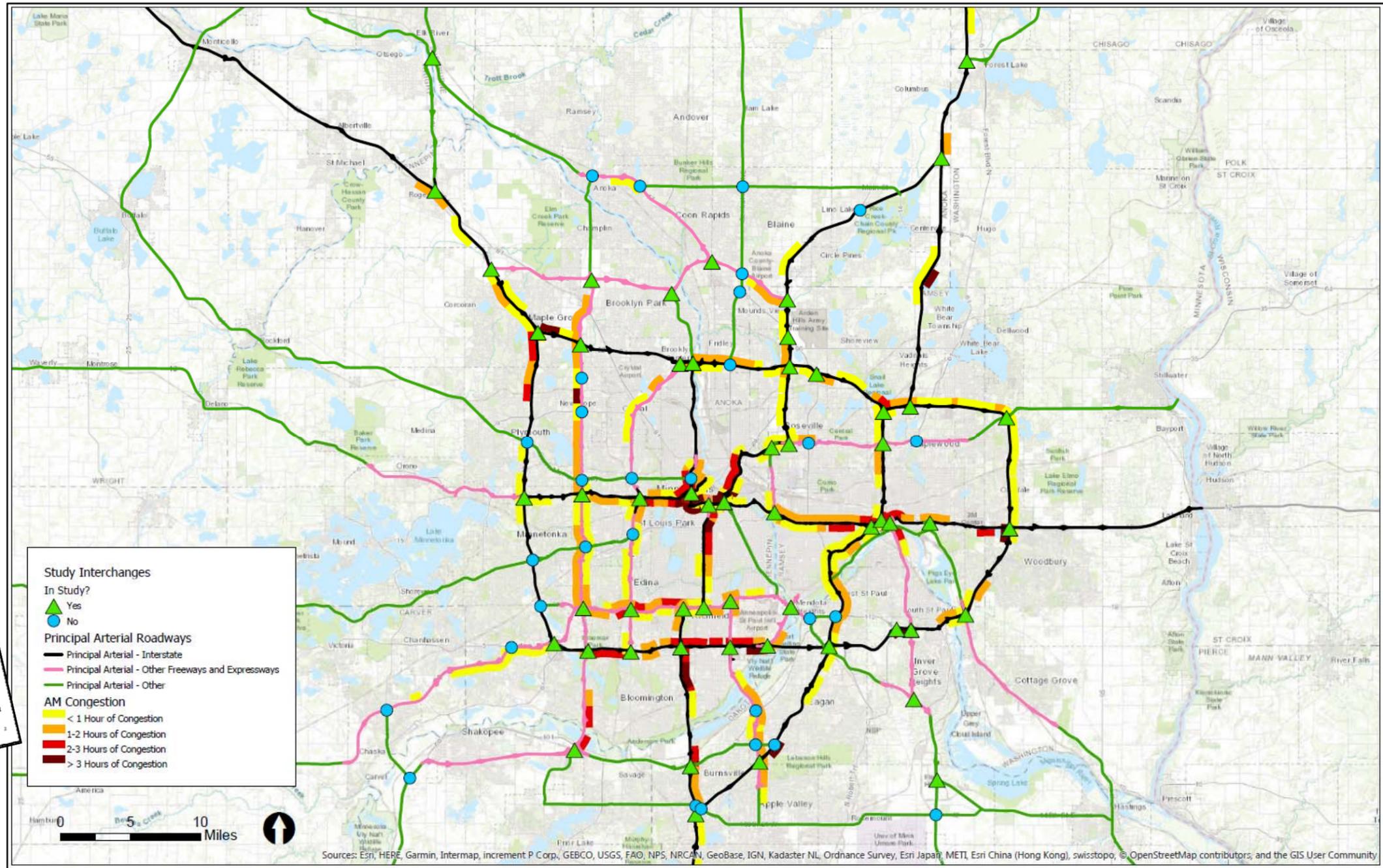


# 56 Study Interchanges

**Freeway System Interchange Study**  
List of Study Interchanges

**DRAFT**

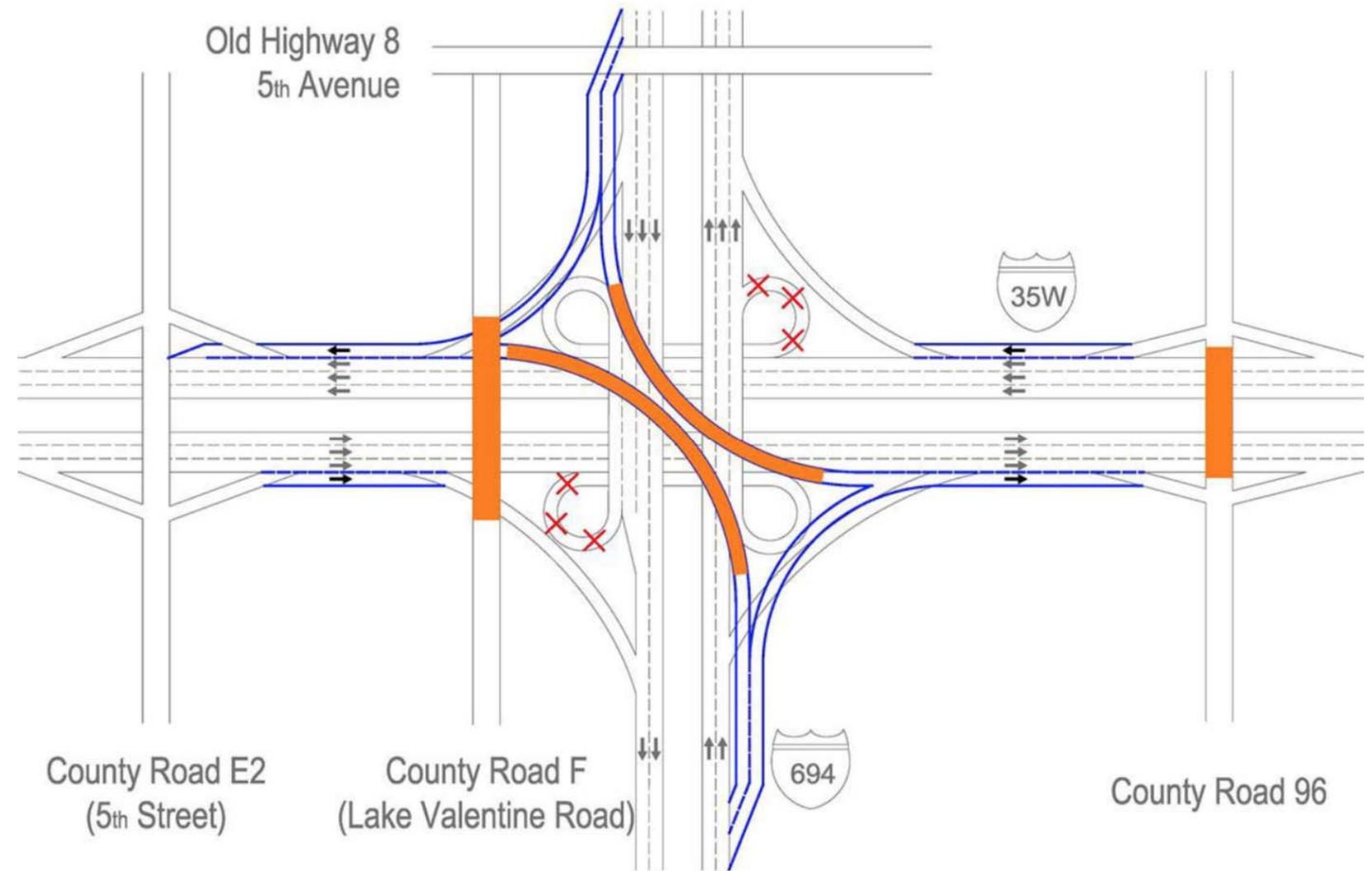
Interchange	Location	State	South Freeway	East-West Freeway	Interchange	County	Area	Number of Interchanges
1	104 & Hwy 104	IN	X			Hamilton	West	12
2	104 & Hwy 104	IN	X			Hamilton	West	12
3	104 & Hwy 104	IN	X			Hamilton	West	12
4	104 & Hwy 104	IN	X			Hamilton	West	12
5	104 & Hwy 104	IN	X			Hamilton	West	12
6	104 & Hwy 104	IN	X			Hamilton	West	12
7	104 & Hwy 104	IN	X			Hamilton	West	12
8	104 & Hwy 104	IN	X			Hamilton	West	12
9	104 & Hwy 104	IN	X			Hamilton	West	12
10	104 & Hwy 104	IN	X			Hamilton	West	12
11	104 & Hwy 104	IN	X			Hamilton	West	12
12	104 & Hwy 104	IN	X			Hamilton	West	12
13	104 & Hwy 104	IN	X			Hamilton	West	12
14	104 & Hwy 104	IN	X			Hamilton	West	12
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16	104 & Hwy 104	IN	X			Hamilton	West	12
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22	104 & Hwy 104	IN	X			Hamilton	West	12
23	104 & Hwy 104	IN	X			Hamilton	West	12
24	104 & Hwy 104	IN	X			Hamilton	West	12
25	104 & Hwy 104	IN	X			Hamilton	West	12
26	104 & Hwy 104	IN	X			Hamilton	West	12
27	104 & Hwy 104	IN	X			Hamilton	West	12
28	104 & Hwy 104	IN	X			Hamilton	West	12
29	104 & Hwy 104	IN	X			Hamilton	West	12
30	104 & Hwy 104	IN	X			Hamilton	West	12
31	104 & Hwy 104	IN	X			Hamilton	West	12
32	104 & Hwy 104	IN	X			Hamilton	West	12
33	104 & Hwy 104	IN	X			Hamilton	West	12
34	104 & Hwy 104	IN	X			Hamilton	West	12
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47	104 & Hwy 104	IN	X			Hamilton	West	12
48	104 & Hwy 104	IN	X			Hamilton	West	12
49	104 & Hwy 104	IN	X			Hamilton	West	12
50	104 & Hwy 104	IN	X			Hamilton	West	12
51	104 & Hwy 104	IN	X			Hamilton	West	12
52	104 & Hwy 104	IN	X			Hamilton	West	12
53	104 & Hwy 104	IN	X			Hamilton	West	12
54	104 & Hwy 104	IN	X			Hamilton	West	12
55	104 & Hwy 104	IN	X			Hamilton	West	12
56	104 & Hwy 104	IN	X			Hamilton	West	12



## Freeway System Interchange Study

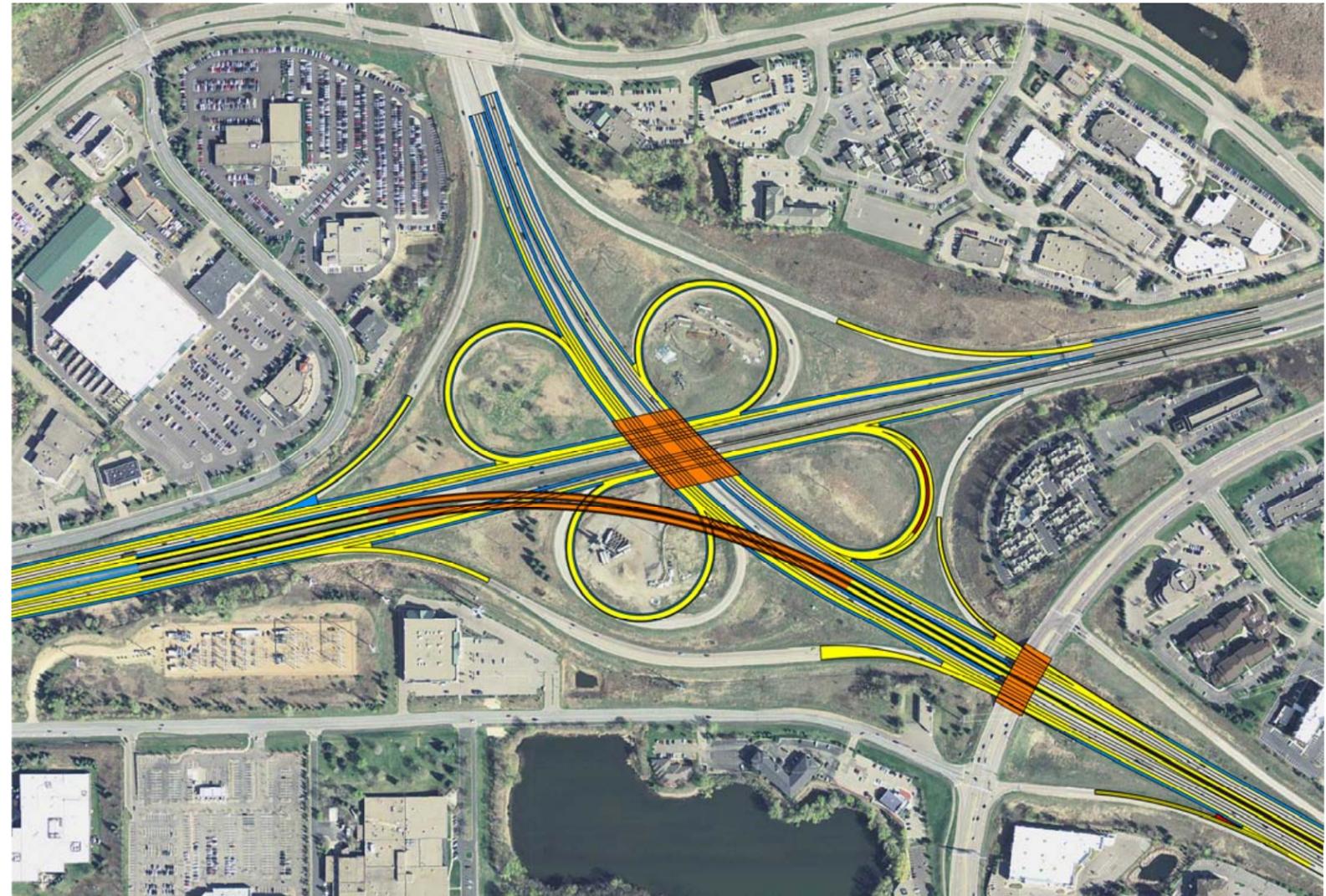
# Purpose

- Reduce delay and crashes
- Consider needs of freight and transit
- Systematically discover and prioritize opportunities across region
- Right size investments



# Outcomes

Prioritized list of projects that can improve the region's freeways at these targeted locations to continue supporting and improving economic vitality and quality of life in our region.



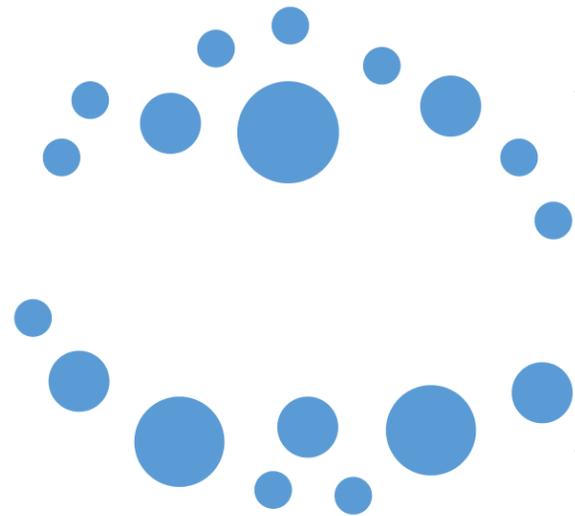
## *Freeway System Interchange Study*

# Stakeholder Engagement

Study Leadership	Agency Outreach
<p><b>Technical Advisory Committee</b></p> <ul style="list-style-type: none"> <li>• Seven-county Metro Area counties</li> <li>• Wright and Sherburne counties</li> <li>• Local governments</li> <li>• Federal Highway Administration</li> <li>• MnDOT</li> <li>• Metropolitan Council</li> </ul>	<ul style="list-style-type: none"> <li>• Minnesota Freight Advisory Committee</li> <li>• Transportation Advisory Board                             <ul style="list-style-type: none"> <li>-Technical Advisory Committees</li> </ul> </li> <li>• Congestion Management Process</li> <li>• State’s Capital Improvements Committee</li> <li>• Met Council Transportation Committee</li> </ul>

# Analysis Process

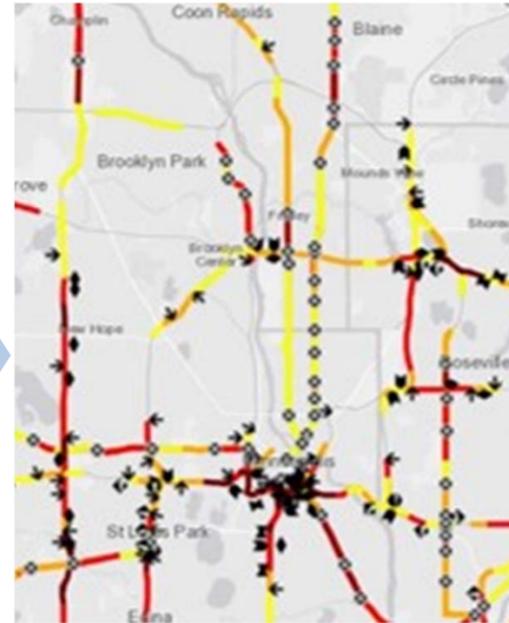
System Interchanges



Determine locations to be studied

**56**  
*locations*

Evaluate current issues



Identify highest problem magnitudes

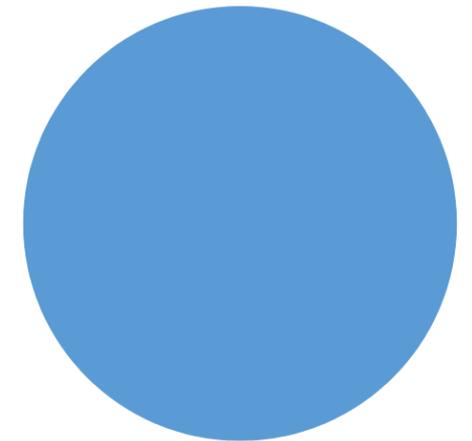
**~20**  
*locations*

Develop a range of solutions



Estimate return on investment

Identify priority locations



Document recommendations for future investments

**10-12**  
*locations*

*Freeway System Interchange Study*

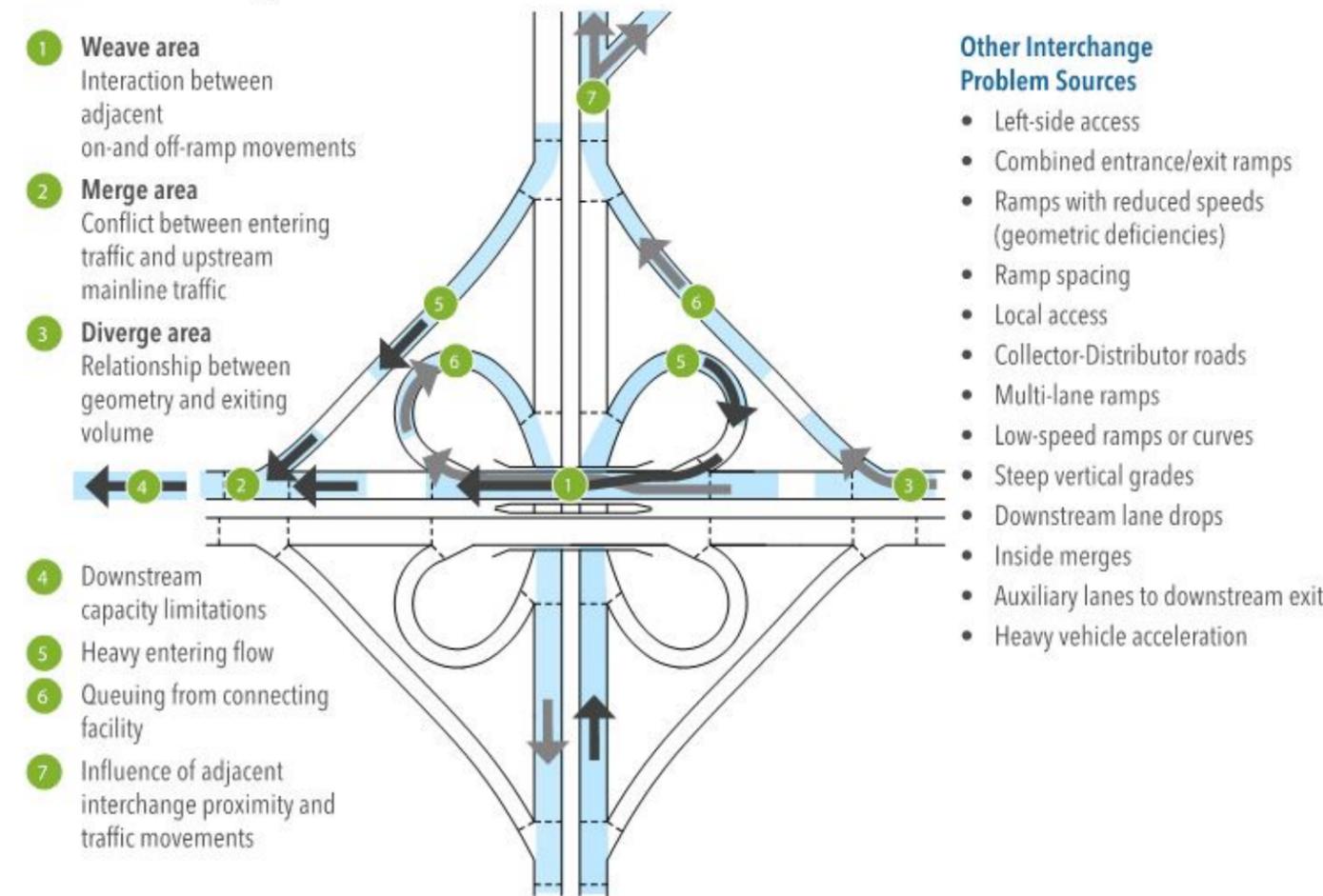
# Problem Assessment and Screening

## 1) Data collection and evaluation

- Collect appropriate data to quantify problems considering: delay, safety, reliability, heavy commercial vehicles
- Consider weighting of criteria

## 2) Select interchanges for solution development

Potential Areas of Interchange Conflict

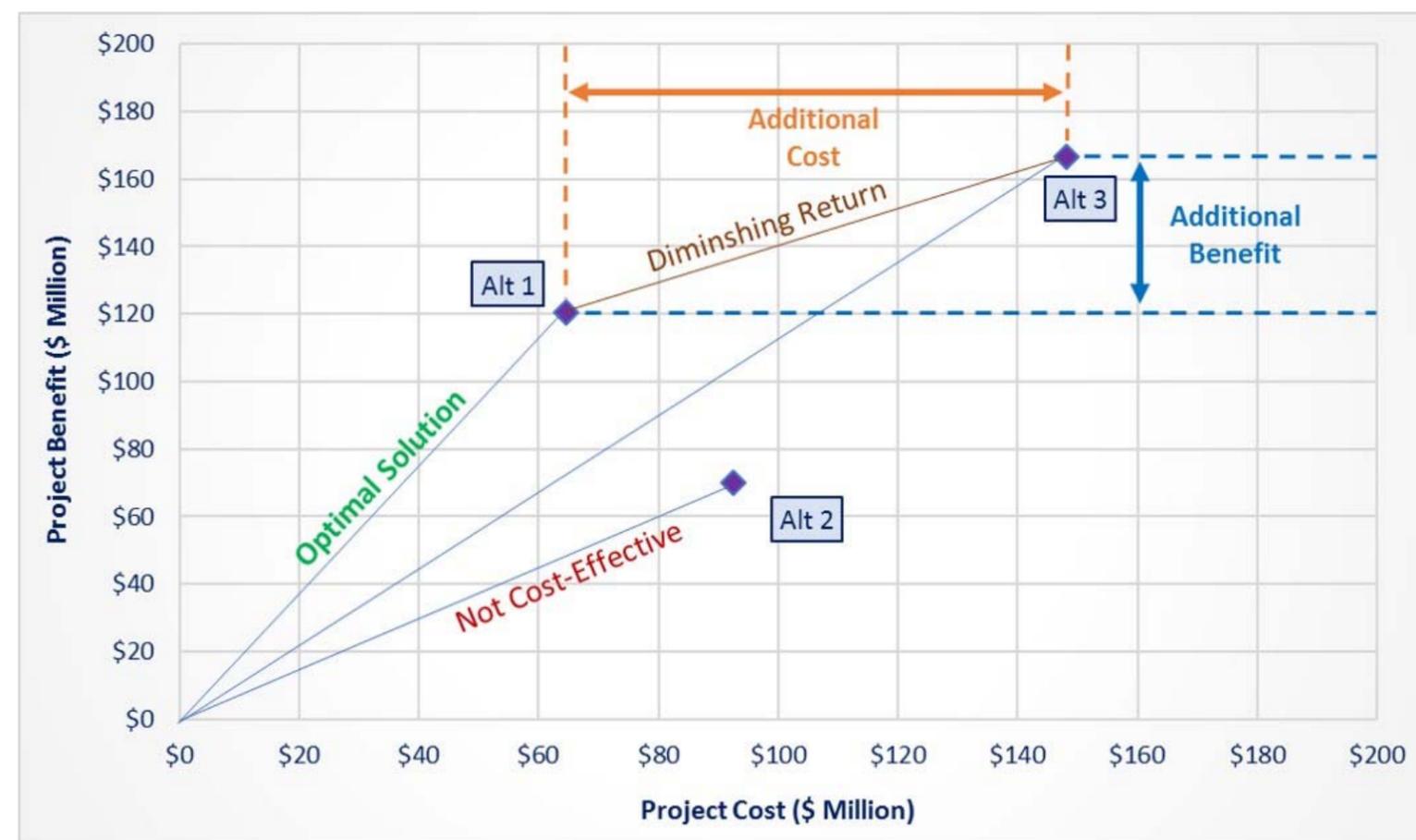


# Performance Measures – Recommended Approach

Metric Category	Performance Measure(s)	Units	Source
Mobility	Travel time delay	Vehicle-hours of delay (VHD)	Loop detectors, NPMRDS/INRIX data
Reliability	Variability of congestion	Standard deviation (minutes)	Loop detectors, NPMRDS/INRIX data
Safety	Cost of crashes	Dollars	MN DPS crash data
Freight	Freight Volume	HCAADT	ATR/VC counts
Transit	Transit ridership	Persons	Met Council

# Next Steps: Issue Identification, solution development, and prioritization

- 1) Collect data to analyze interchange problems
- 2) Methods for developing design solutions
- 3) Develop design solutions and suggest implementation priority
- 4) Documentation of results by end of 2019 --> Next TPP Update



# Questions for you:

- What are your concerns about freeways and connections?
- Keys to making this study successful?
- Other questions or concerns?

# Thank you!

## Contacts:

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