

I-35W North Managed Lanes Corridor Study

Minnesota Department of Transportation

Transportation Committee Meeting February 11, 2013



with Kimley-Horn & Associates, Inc.
and ZAN Associates, Inc.



Study Background

Study Consultant - SRF Inc.

Total Study Cost - \$1.05 million

* \$950,000 Congressional IMD Funds

* \$100,000 MnDOT (Non-SRC Match)

Study Timeframe - December, 2011 thru May, 2013

Study Limits - I-35W North, Between Downtown Minneapolis and TH 97 (Forest Lake/Columbus)

Stakeholders - 12 municipalities, 4 counties
Met Transit, Met Council, FHWA

Goals and Objectives



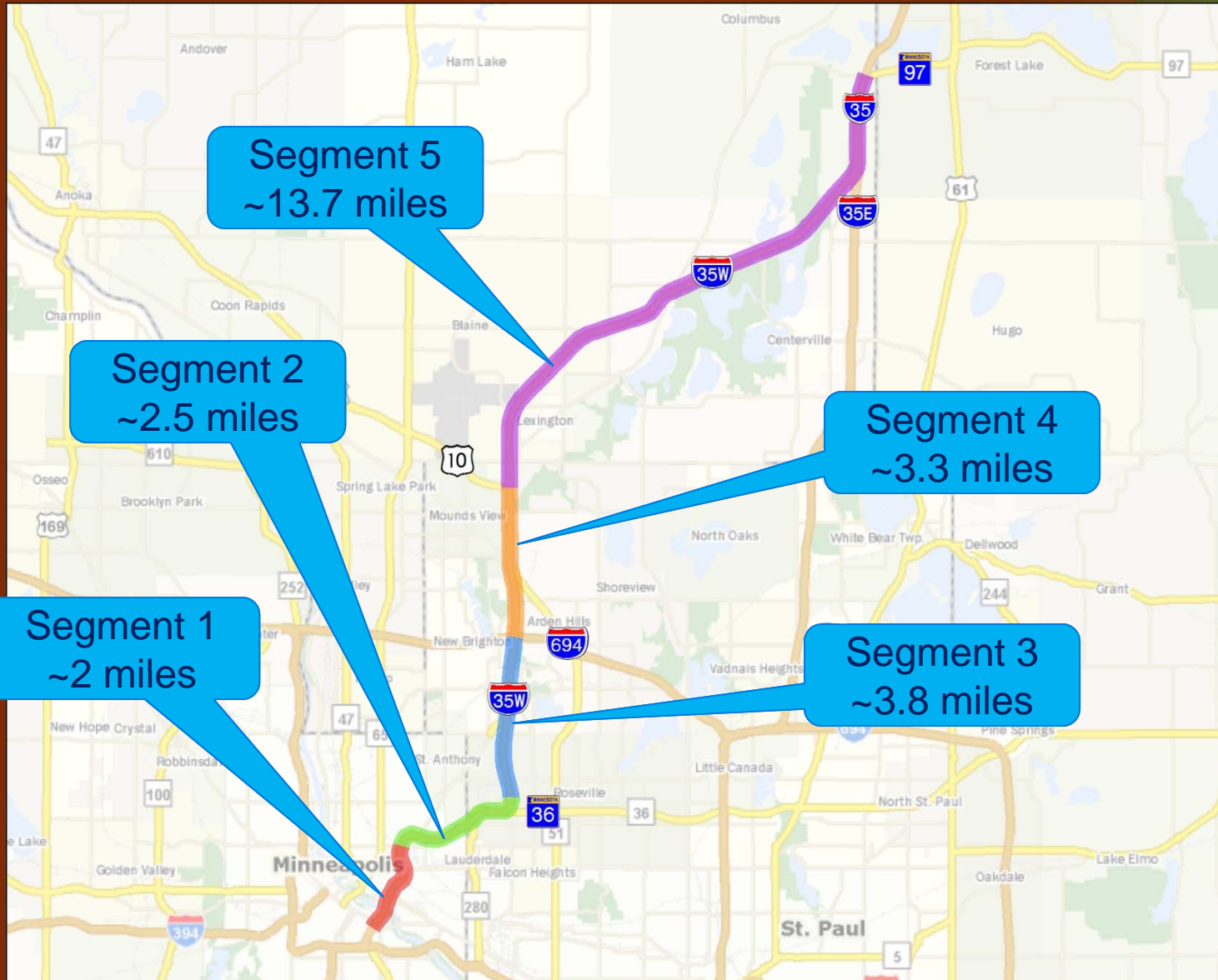
Goal: Better utilize existing and future infrastructure investments.

Goal: Increase transit ridership and the use of high occupancy vehicles by providing travel time advantages.

Goal: Provide a choice for commuters during the peak periods.

Goal: Reduce congestion and improve safety along the corridor.

Corridor Segments



Segmentation

Physical Characteristics

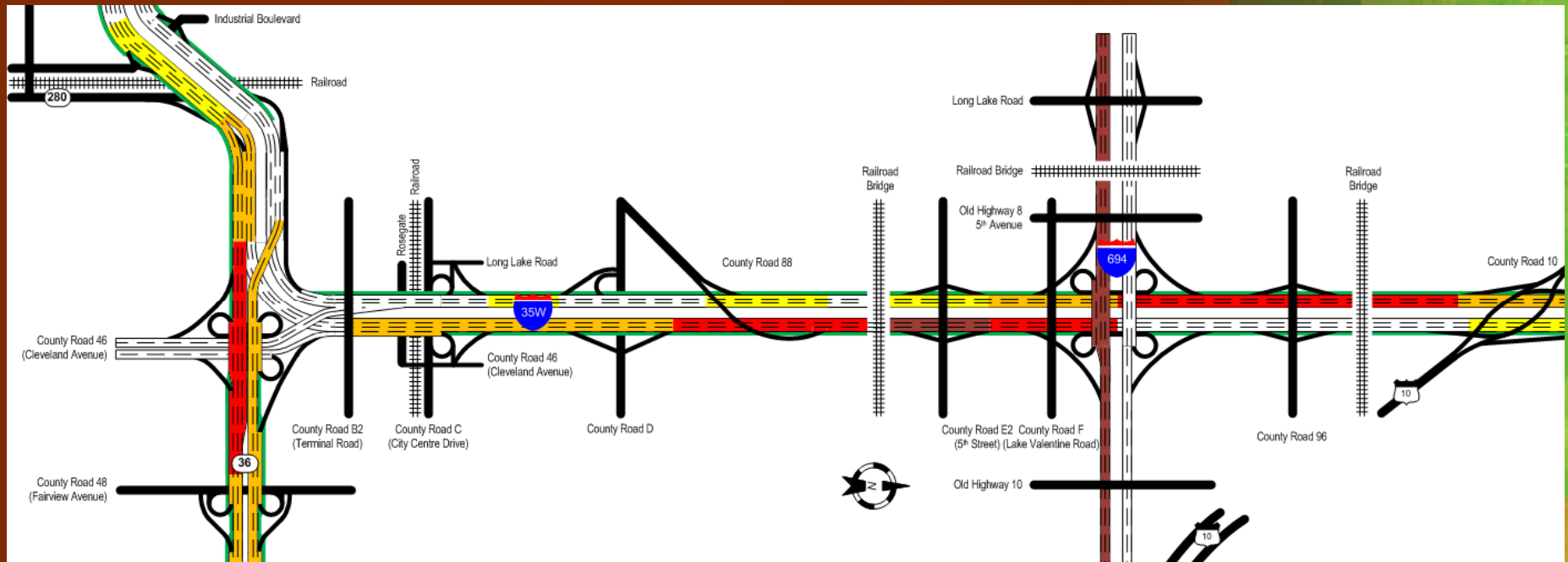
- Number of Through Lanes
- Typical Sections

Traffic Characteristics

- Directional Split
- Peak Hour Percent of Daily Volumes
- Freight Volumes
- Transit Service



Existing Conditions: Congestion Summary



Major Congestion Causes

- SB I-35W at I-694
- NB I-35W at TH 36
- NB I-35W at I-694

Minor Congestion Causes

- SB I-35W at CR 23/CR J
- SB I-35W at TH 10
- SB I-35W at CR 96
- SB I-35W at CR E2
- SB I-35W at CR D
- SB I-35W at CR 88
- NB I-35W at CR D/CSAH 88
- NB I-35W at CR 10

Corridor Alternatives Proposed for Screening

- * No Build
- * Managed Lane without Pavement Widening
- * Southbound Dynamic Managed Lane/ Southbound Dynamic Shoulder Lane
- * Bus Only Shoulder
- * Managed Lane with New Construction (full shoulder)
- * Managed Lane with New Construction (min. shoulder)
- * Reversible Managed Lane (single lane)
- * Reversible Managed Lane (2 lanes)

Screening Criteria

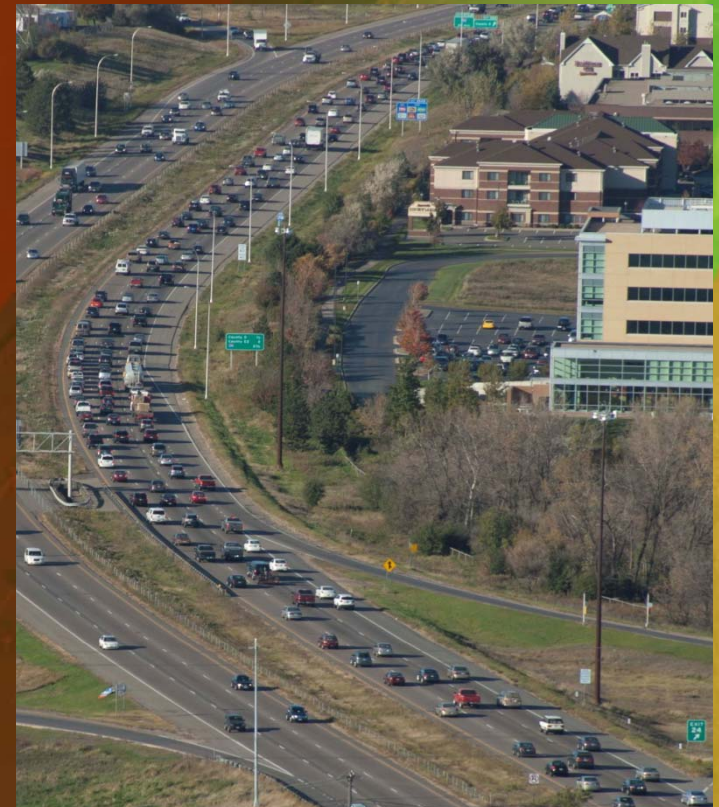
Screening Criteria based on the Goals and Objectives

Primary Screening Criteria

- High-level analysis
- Shorter duration
- Reduce number of alternatives

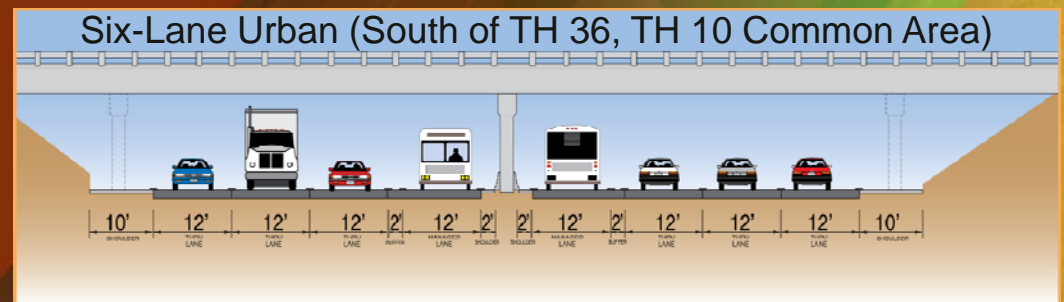
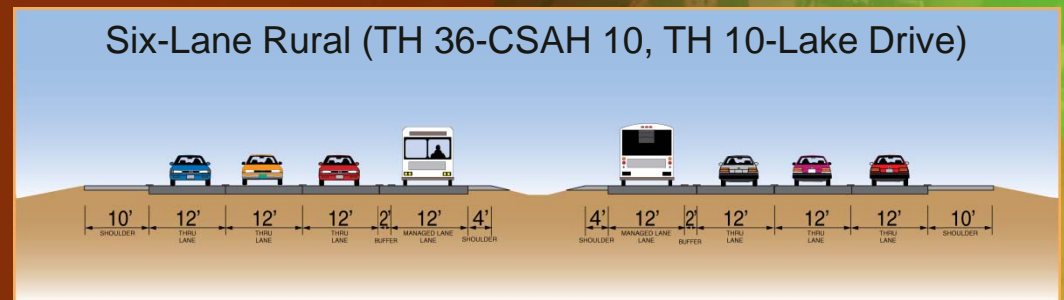
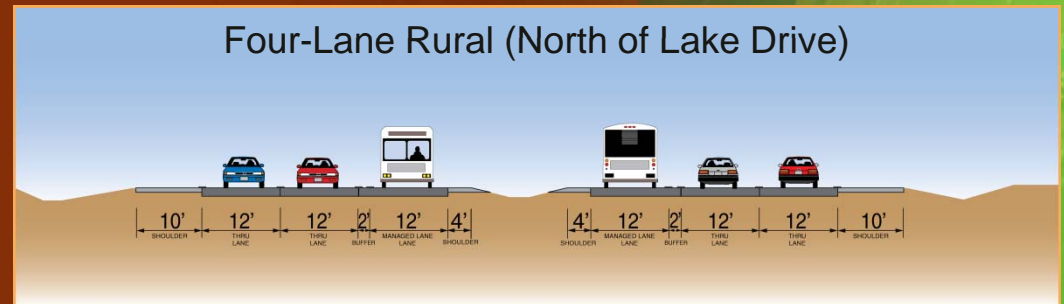
Secondary Screening Criteria

- In-depth analysis
- Extended duration
- Select preferred recommendation



Viabile Alternative

- Inside Managed Lane New Construction, with Minimal Shoulder- balances design standards, cost, and operational trade-offs
- Construction costs competitive with Managed Lane with No Pavement Widening, and Dynamic Shoulder Lanes (when coordinated with preservation needs)
- Consistent design throughout corridor



BRT Evaluation

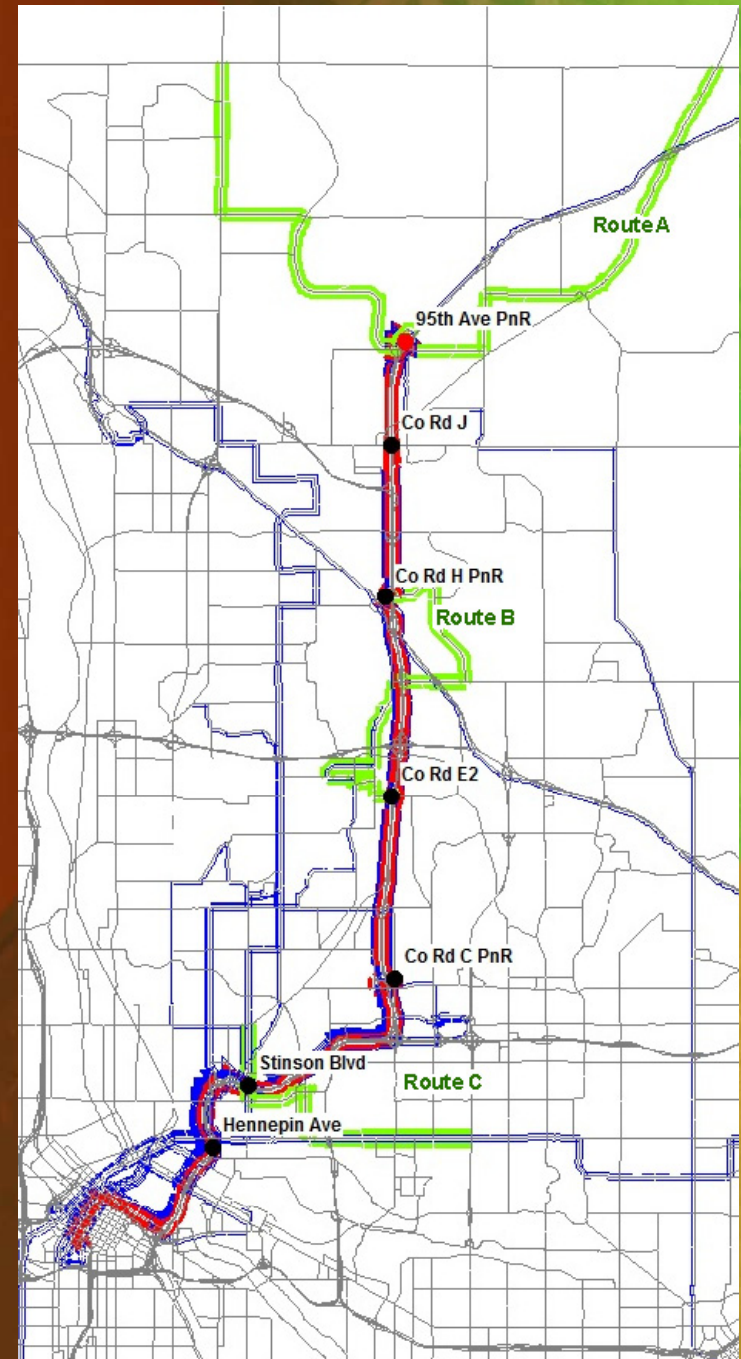
Assumptions

- BRT corridor from downtown Minneapolis to the 95th Avenue park and ride facility.
- Three new connecting routes developed to provide better connectivity to/from the BRT in underserved areas.
- Most stations assumed to be online to maximize potential ridership:
 - 95th Avenue (offline)
 - CR J
 - CR H
 - CR E2
 - CR C
 - Stinson Boulevard
 - Hennepin Avenue
- BRT operational assumptions are consistent with the Metropolitan Council's Regional Transitway Guidelines.



2030 BRT Ridership

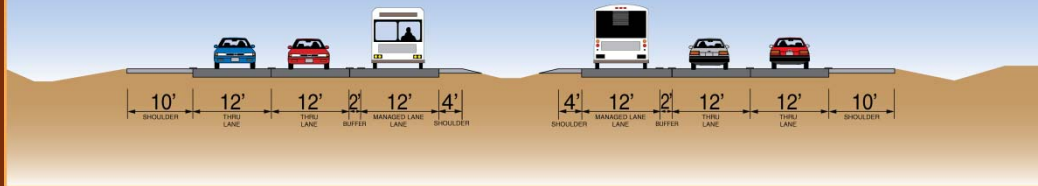
- 8,000 without BRT (primarily downtown express)
- 14,000 with BRT
- Most increases are
 - Non-peak direction
 - At stations where existing local service is limited
 - Serve planned developments in new areas



I-35W Managed Lanes Vision

- Viable managed lanes between downtown Minneapolis and Lexington Avenue

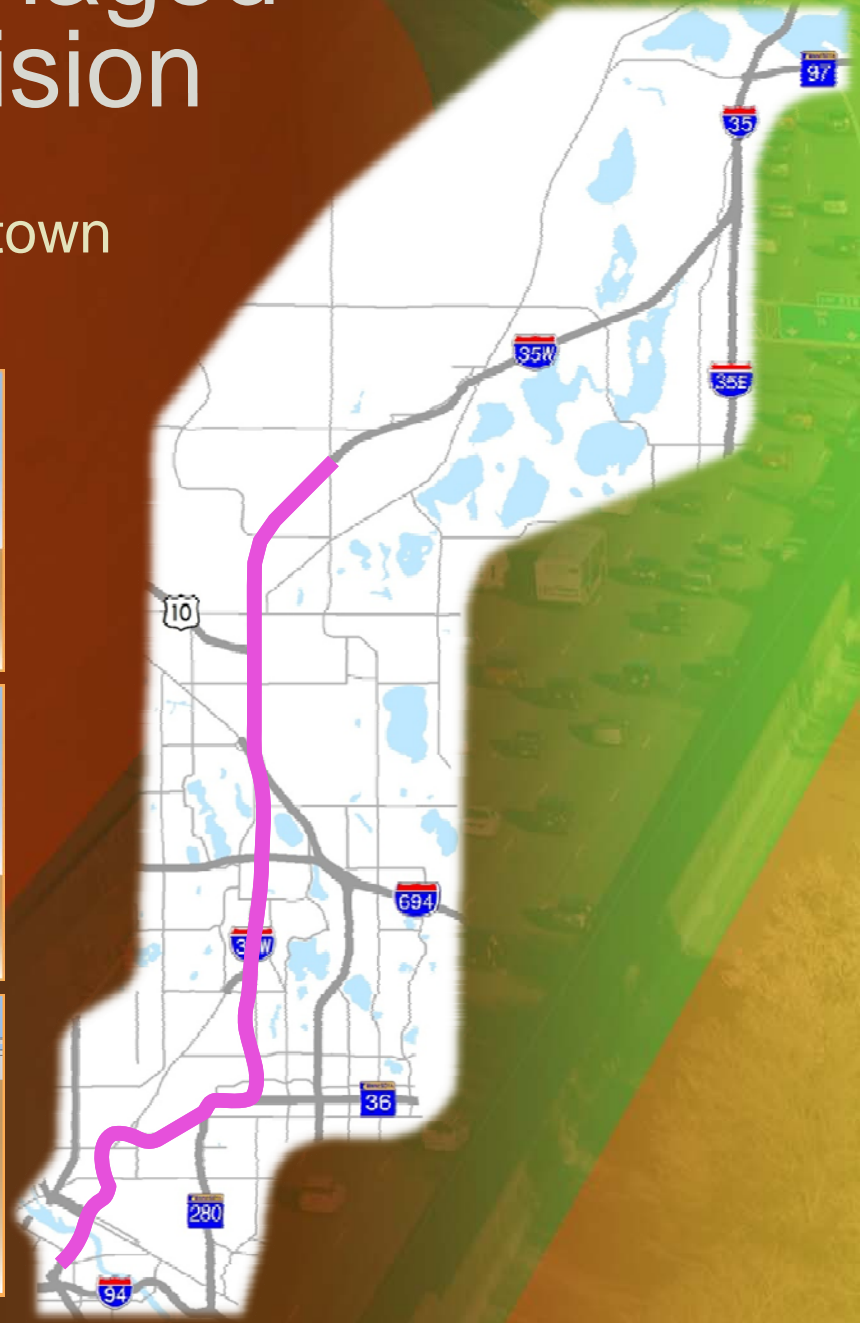
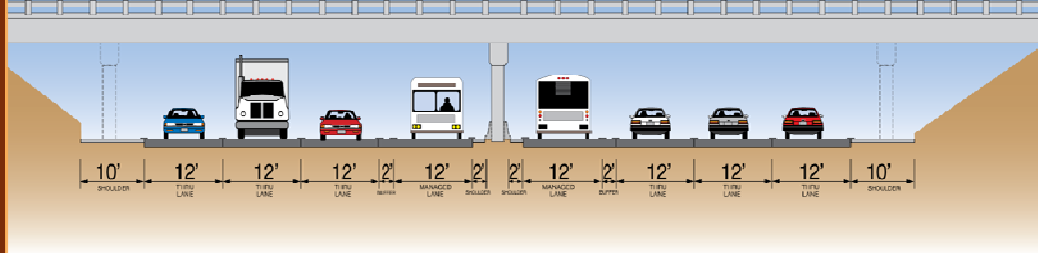
Four-Lane Rural (North of Lake Drive)



Six-Lane Rural (TH 36-CSAH 10 & TH 10-Lake Drive)

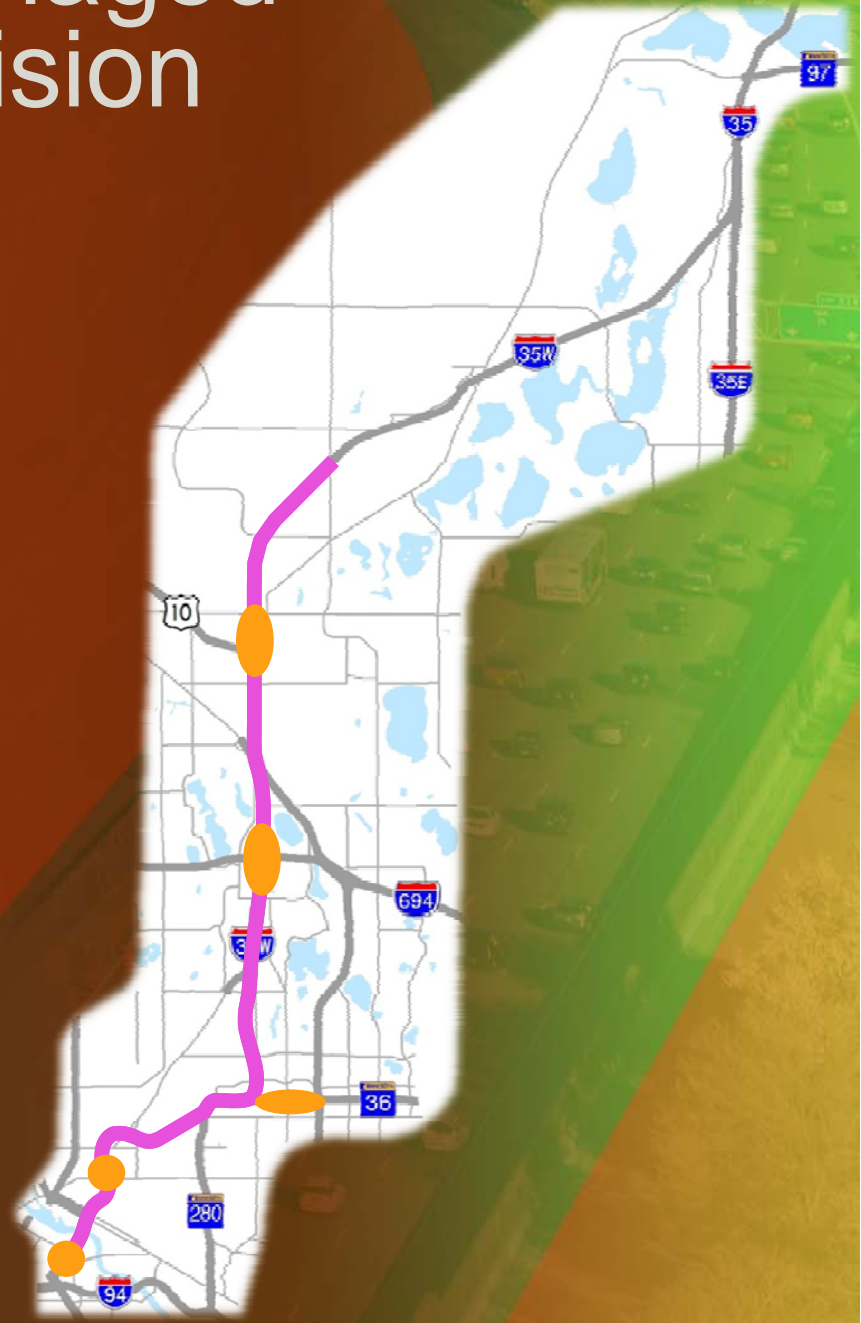


Six-Lane Urban (South of TH 36 & TH 10 Common Area)



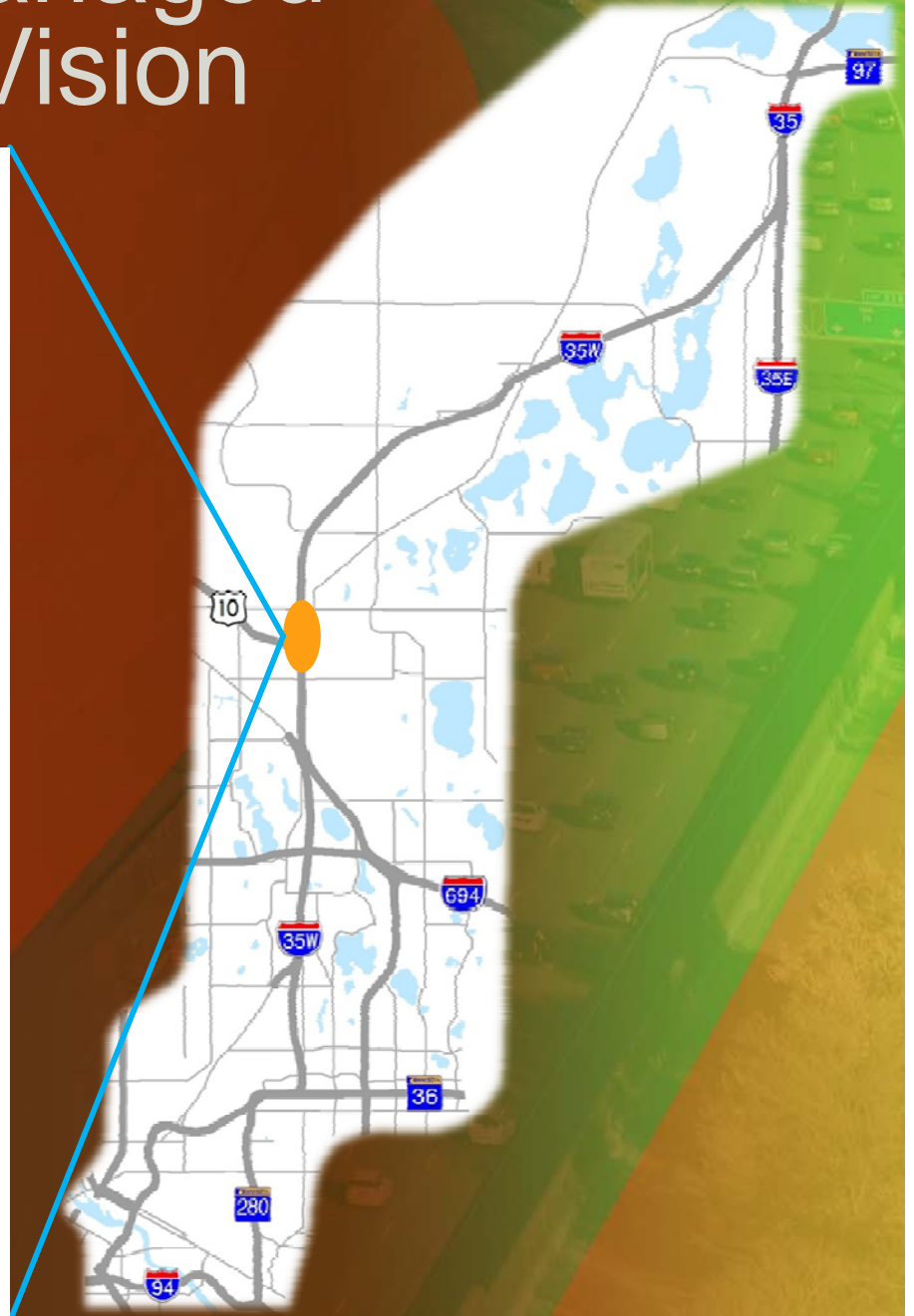
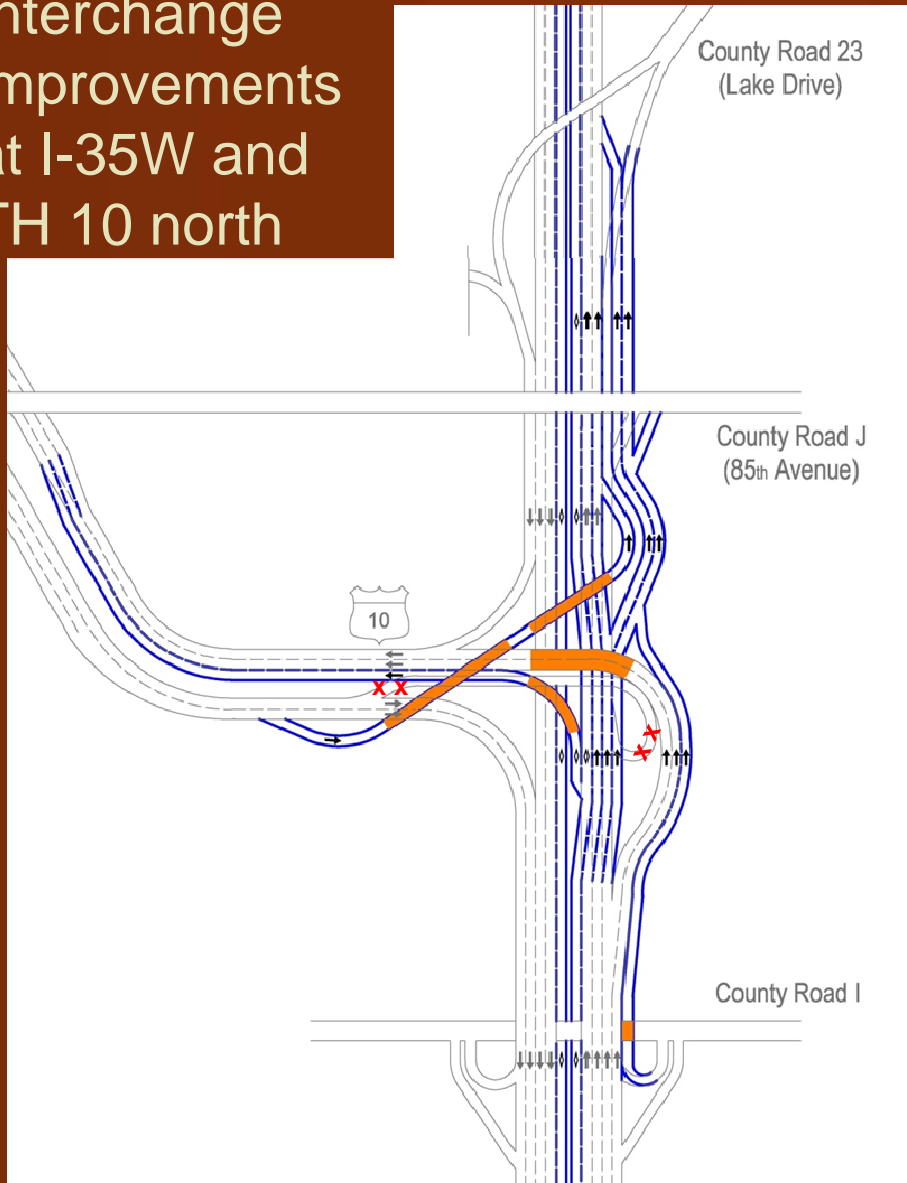
I-35W Managed Lanes Vision

- Managed lanes between downtown Minneapolis and Lexington Avenue
- Interchange improvements at I-35W and TH 10 north junction
- Interchange improvements along I-35W at I-694
- TH 36 eastbound improvements
- Managed lane direct connections to downtown Minneapolis



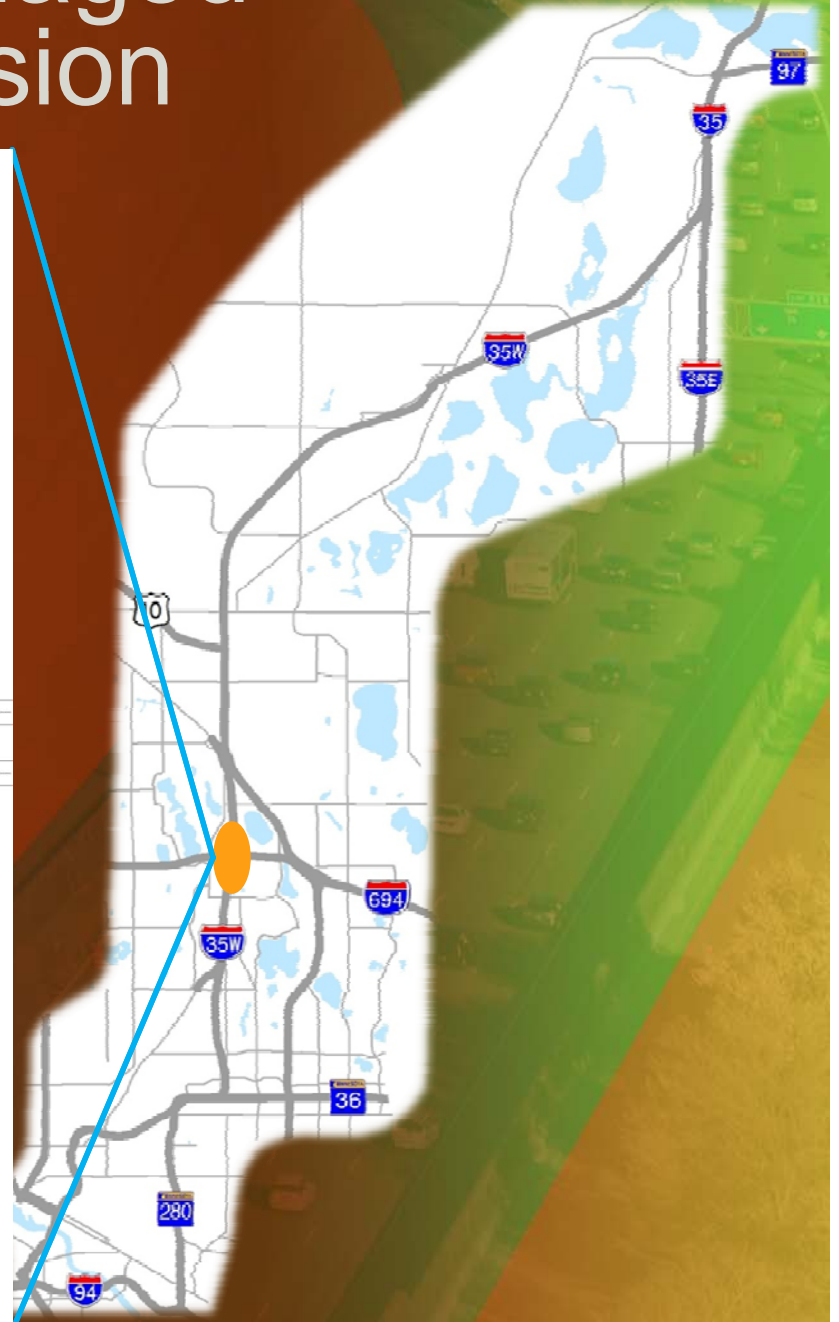
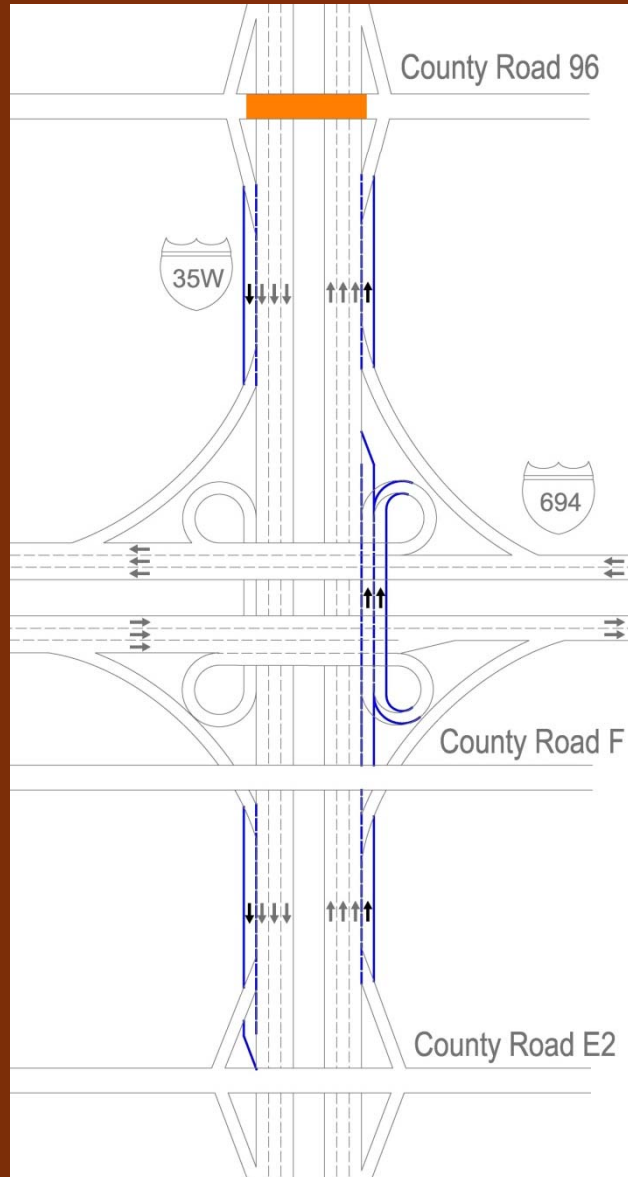
I-35W Managed Lanes Vision

- Interchange improvements at I-35W and TH 10 north



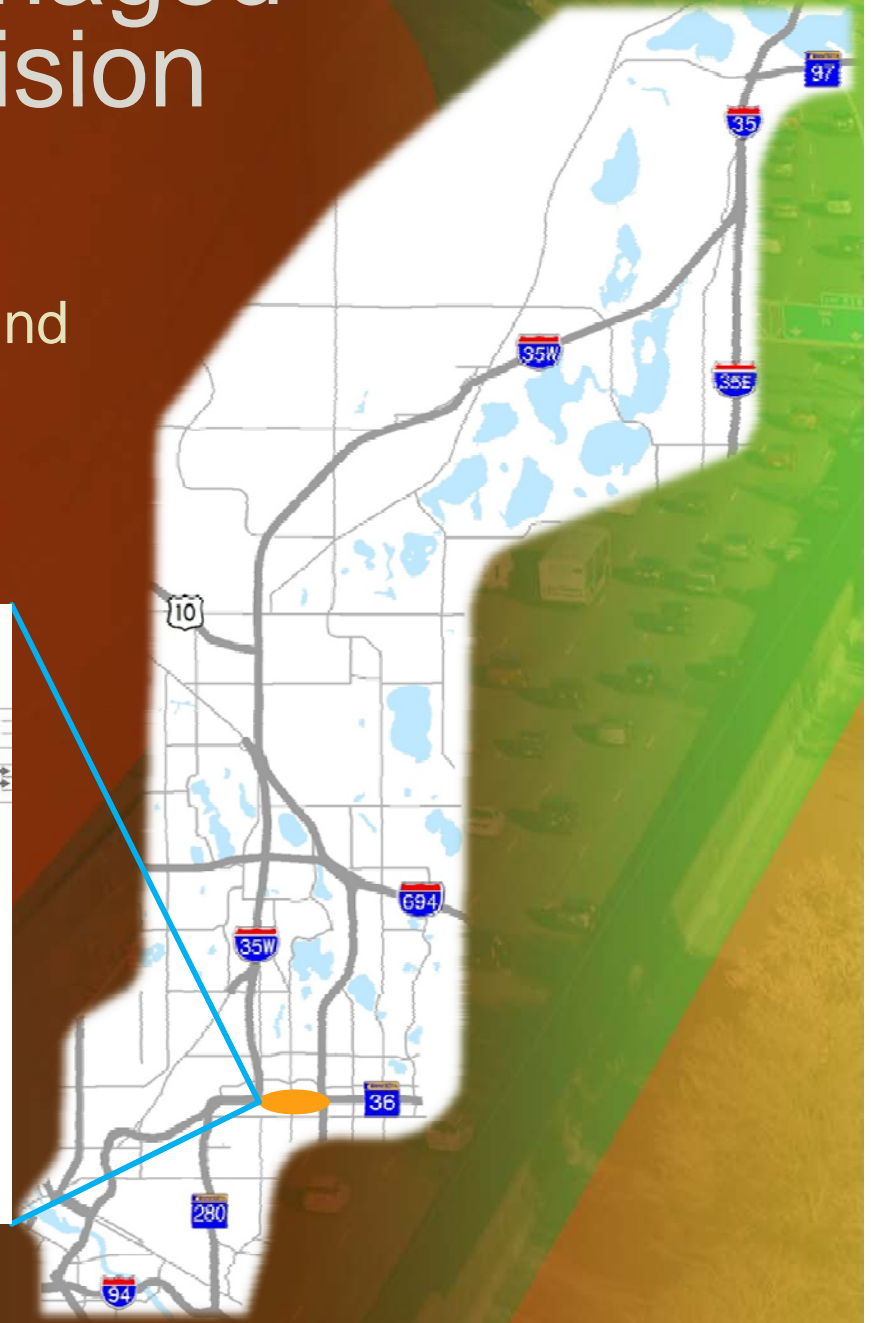
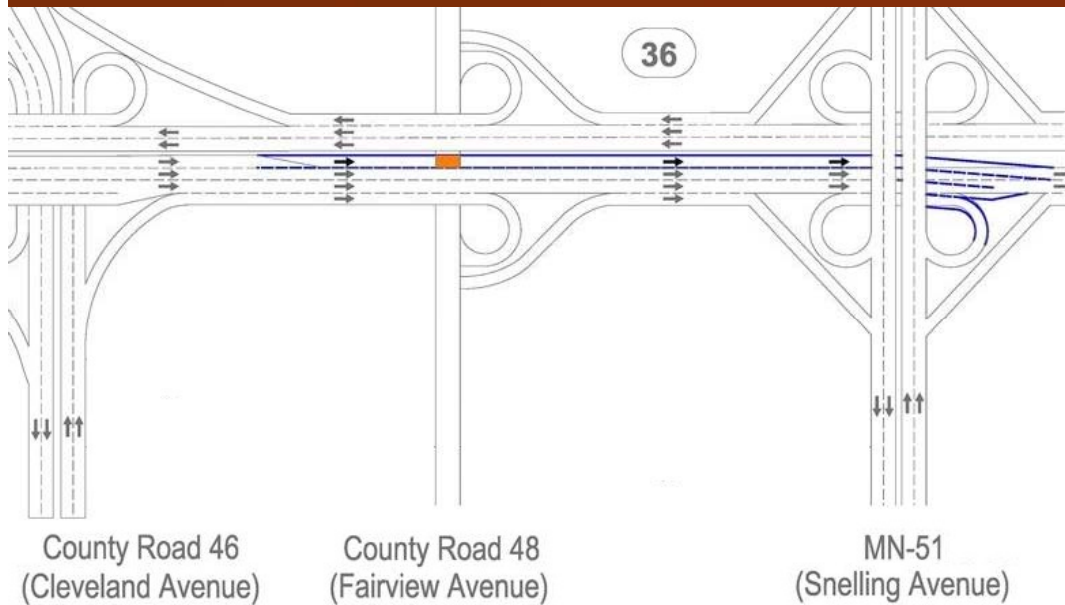
I-35W Managed Lanes Vision

- Interchange improvements at I-35W and I-694 system interchange
 - Auxiliary lanes between CR E2 and I-694
 - Auxiliary lanes between I-694 and CSAH 96
 - Northbound buffer lane



I-35W Managed Lanes Vision

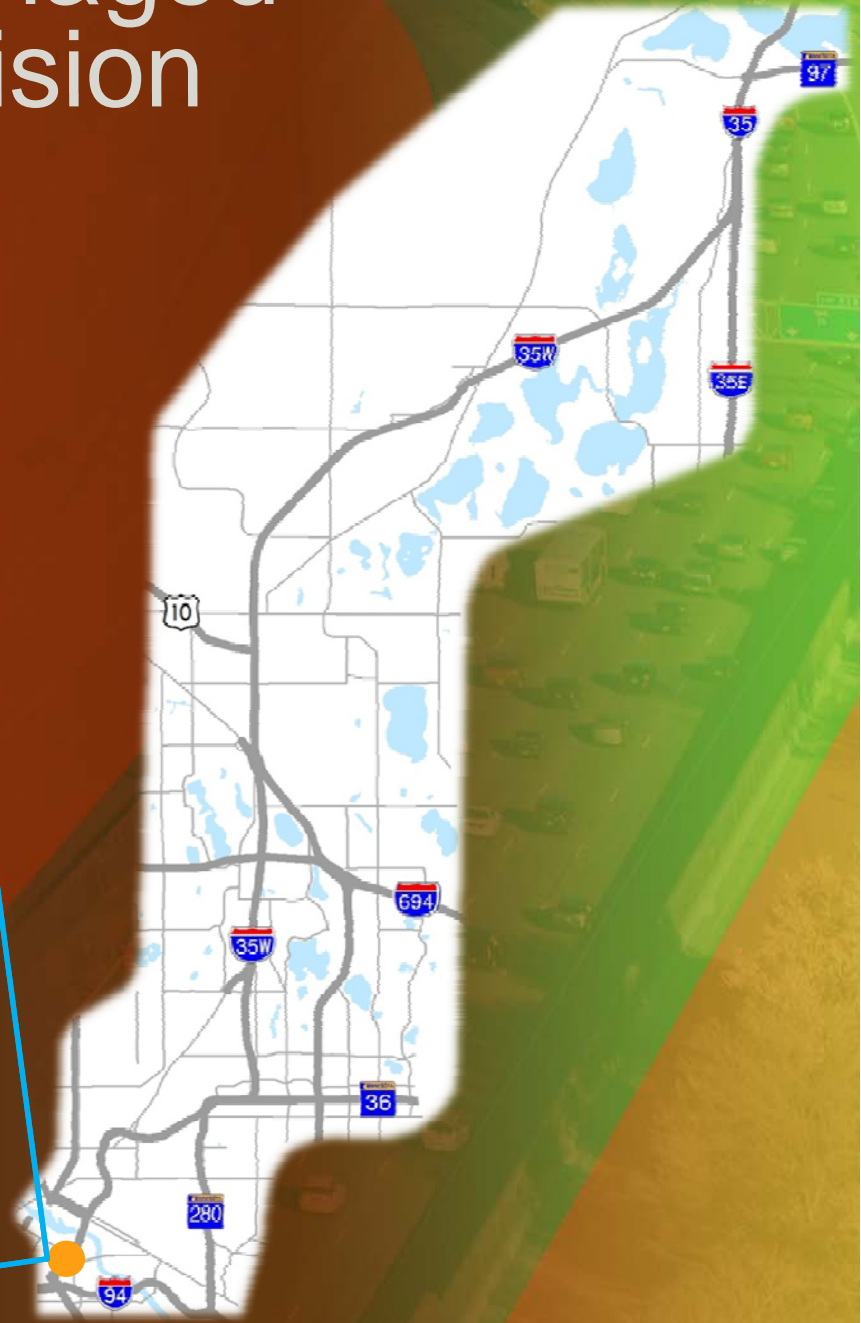
- Improvements along TH 36 eastbound



I-35W Managed Lanes Vision

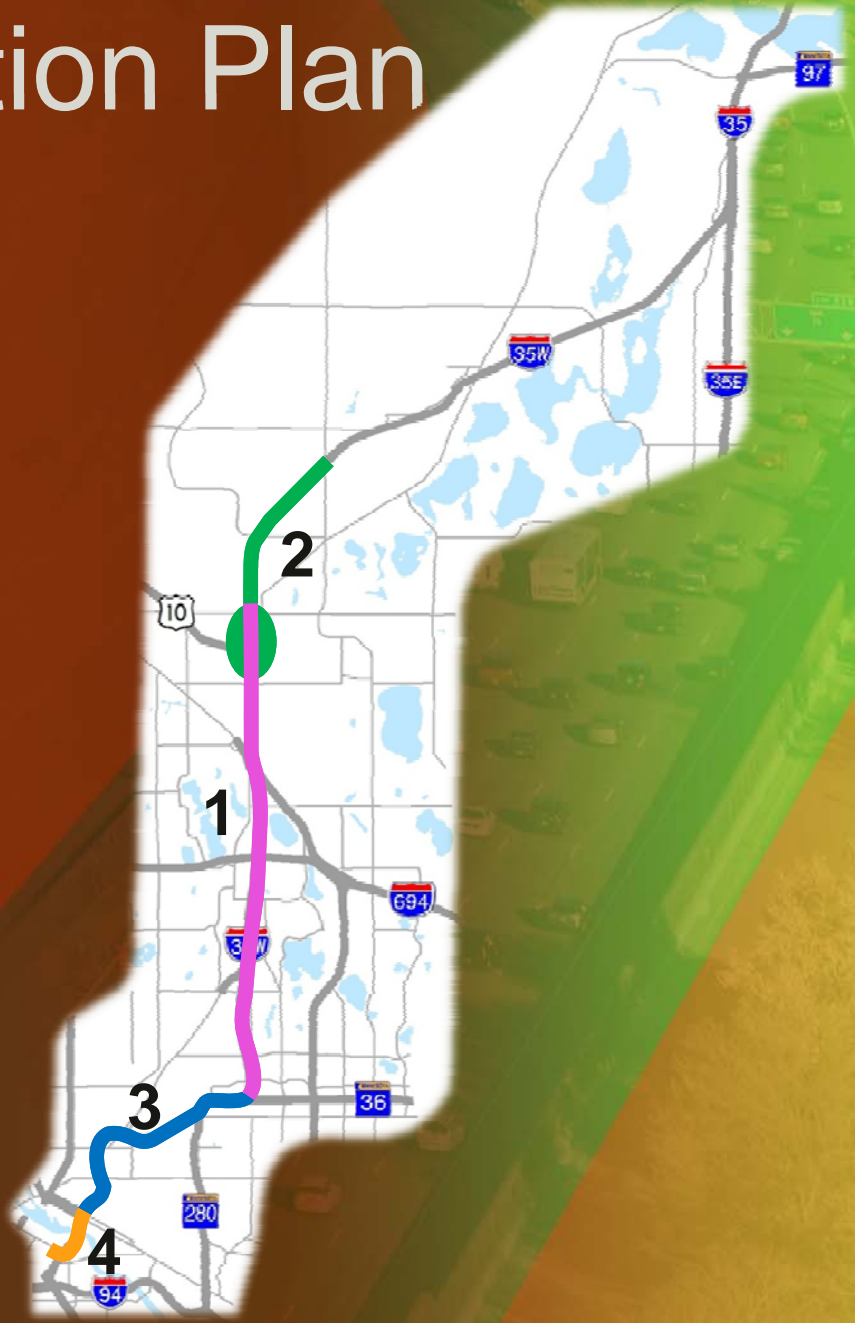
- Managed lane direct connections to downtown Minneapolis

2nd Street Connection



Implementation Plan

- Managed lanes completed in four phases
 - Phase 1: TH 36 through TH 10 north
 - Phase 2: North section to Lexington Avenue
 - Phase 3: University Avenue/ 4th Street to TH 36
 - Phase 4: Downtown Minneapolis direct connections to University Ave/4th Street



Implementation Plan

Unknown Influences

- Downtown Vikings Stadium
- Minneapolis access
- TCAAP redevelopment
- TH 610 completion
- Funding sources/opportunities

Cost Summary

- Total Corridor Expenditure (2011 Dollars)

STIP (2013-2016 Programmed Improvements)	Preservation Needs	Managed Lane Costs	Total
\$35.9 M	\$252M	\$258M	\$546M

An aerial photograph of a highway interchange, showing multiple lanes of traffic and several large trucks. The right side of the image is overlaid with a semi-transparent green filter. The left side of the image is a solid dark brown color.

Questions/Discussion