

# PROJECT BACKGROUND

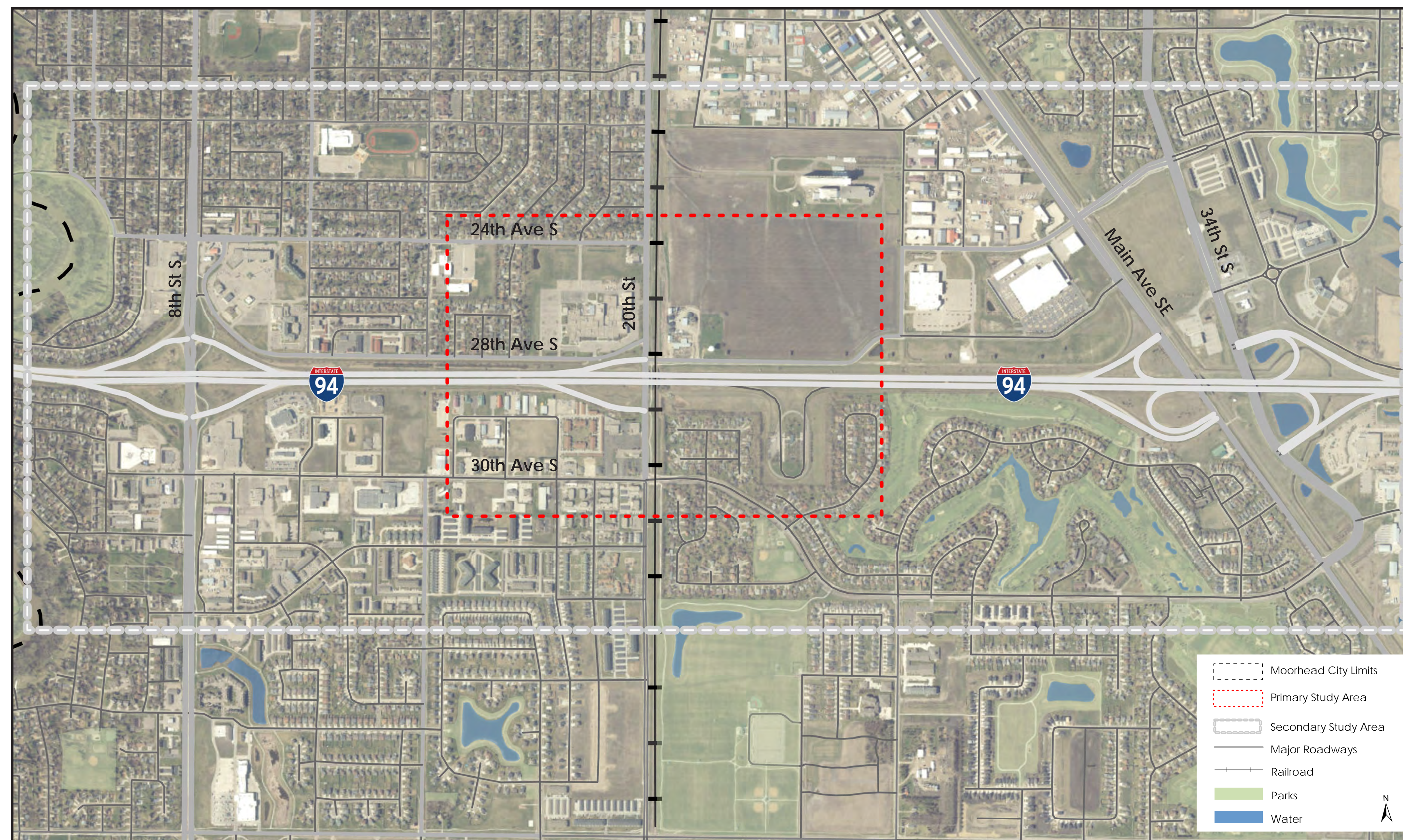
## About the Project

Interstate 94 (I-94) is a heavily traveled corridor and a key link for a variety of traffic users, including local and through freight traffic, workforce and education commuters, local and regional shopping, and recreational travel. While there are four interchanges in less than 2.5 miles in Moorhead, the efficient operations of both I-94 and the local road network are limited by the fact that only two of these are full interchanges.

The current 20th Street Interchange has ramps on the west side only, meaning all westbound traffic on I-94 and traffic wanting to go east on I-94 need to use either the 34th Street (1.25 miles east of 20th Street) or 8th Street/US Hwy 75 (1 mile west of 20th Street) interchanges. The lack of Interstate connectivity to/from the east on 20th Street is presumed to increase the use of nearby interchanges and increase travel time for some users.

## Study Purpose

The purpose of this study is to analyze the need and feasibility for a full interchange at I-94 and 20th Street. This includes reviewing traffic and travel time impacts of a full interchange, completing an environmental screening, and identifying potential alternatives which would look at impacts to the surrounding area and estimated construction costs.



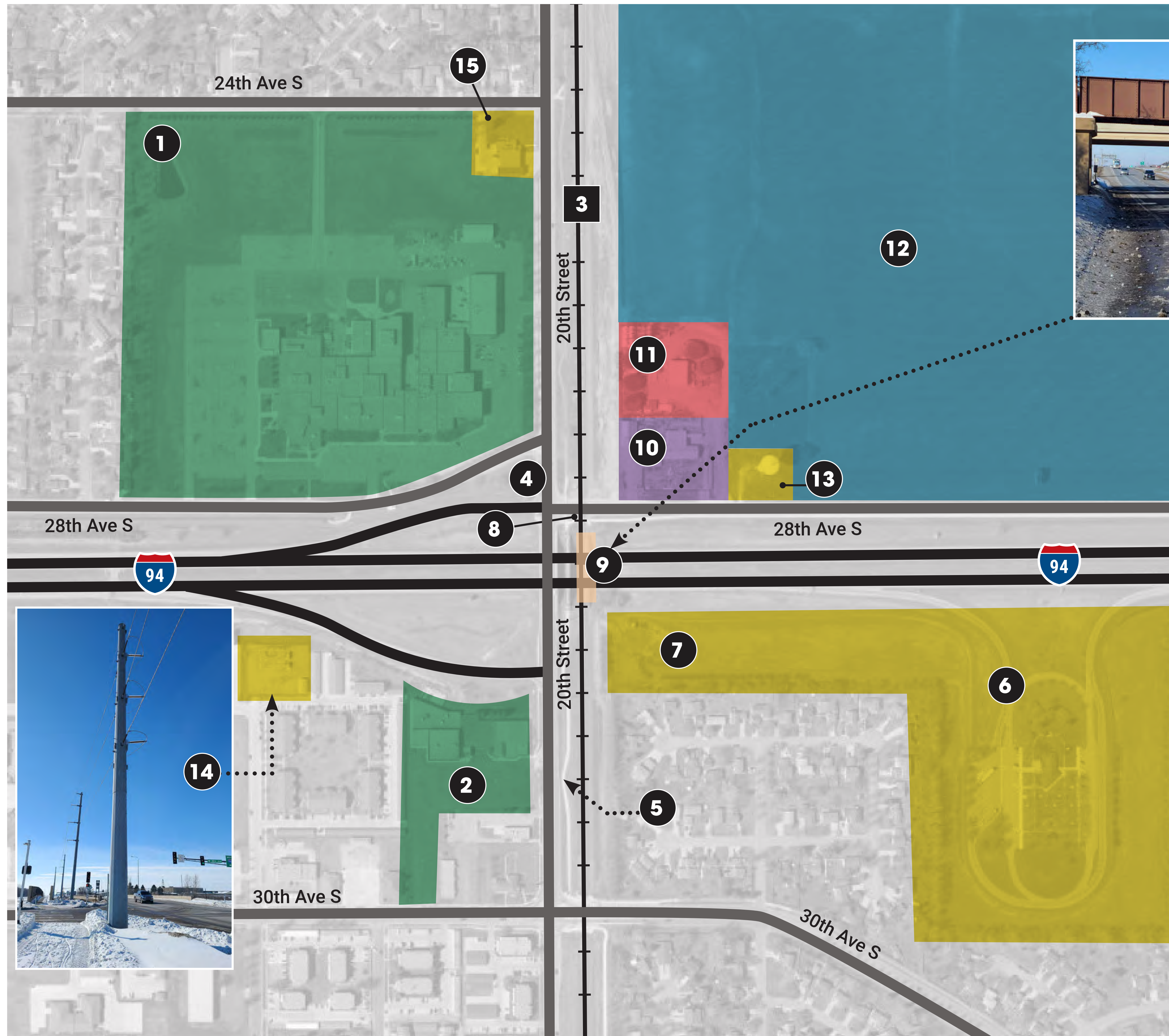
## Primary Study Area

The primary study area being analyzed focuses on the I-94 interchange at 20th Street. This area encompasses the footprint of the potential interchange alternatives. Screening for environmental impacts, technical performance, project costs, etc. for each of the interchange alternatives will take place in this area.

## Secondary Study Area

The purpose of the secondary study area is to understand how different interchange alternatives at I-94 and 20th Street might effect the surrounding local and interstate network. This will not identify or evaluate potential alternatives within this area.

# KEY FEATURES

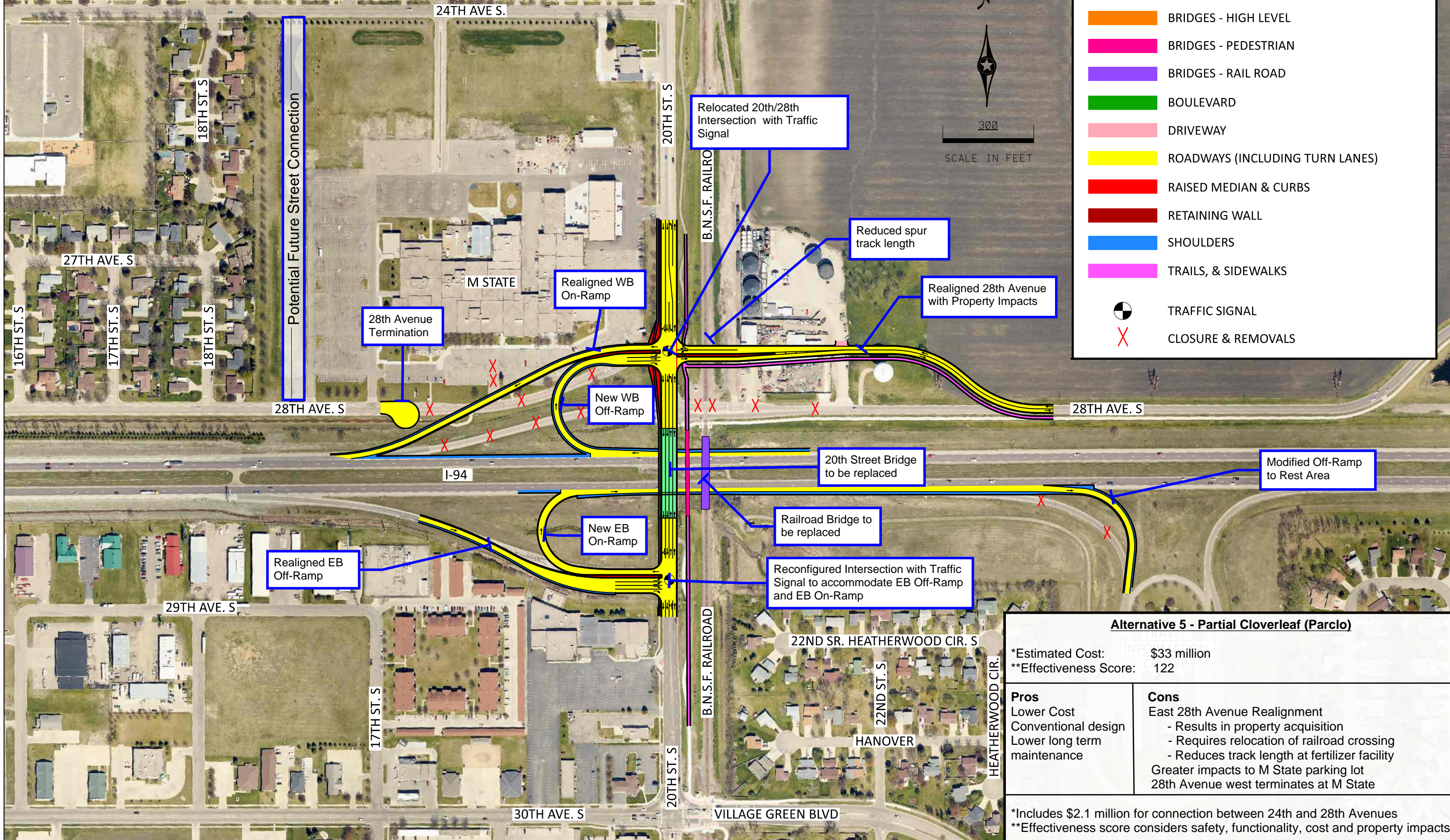
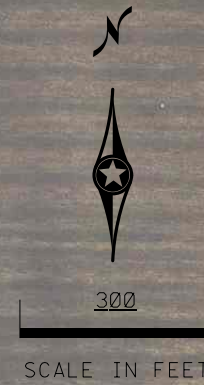


## FEATURES

1	M State
2	Triumph Lutheran Brotherhood Church
3	BNSF Moorhead Subdivision Track
4	28th Avenue Intersections
5	Multi-Use Trail
6	MnDOT Wayside Rest Area
7	MnDOT Lift Station
8	At-grade RR Crossing Contributes to Congestion and Driver Confusion
9	Existing Bridge Piers Limit I-94 Modifications
10	Ken's Sanitation and Recycling
11	Gavilon Fertilizer
12	Busch Agricultural Resources Property
13	City of Moorhead Water Tower
14	Moorhead Public Service Substation
15	Moorhead Fire Station No. 2

# Partial Cloverleaf Interchange

LEGEND	
	BRIDGES - CONVENTIONAL
	BRIDGES - HIGH LEVEL
	BRIDGES - PEDESTRIAN
	BRIDGES - RAIL ROAD
	BOULEVARD
	DRIVEWAY
	ROADWAYS (INCLUDING TURN LANES)
	RAISED MEDIAN & CURBS
	RETAINING WALL
	SHOULDERS
	TRAILS, & SIDEWALKS
	TRAFFIC SIGNAL
	CLOSURE & REMOVALS



Alternative 5 - Partial Cloverleaf (Parclo)	
*Estimated Cost:	\$33 million
**Effectiveness Score:	122
<b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"> <li>Lower Cost</li> <li>Conventional design</li> <li>Lower long term maintenance</li> </ul>	<ul style="list-style-type: none"> <li>East 28th Avenue Realignment                             <ul style="list-style-type: none"> <li>- Results in property acquisition</li> <li>- Requires relocation of railroad crossing</li> <li>- Reduces track length at fertilizer facility</li> </ul> </li> <li>Greater impacts to M State parking lot</li> <li>28th Avenue west terminates at M State</li> </ul>
*Includes \$2.1 million for connection between 24th and 28th Avenues	
**Effectiveness score considers safety, functionality, cost and property impacts	

PLOTTED/REVISED:

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NO	DATE	APPR	REVISION	SURVEY



FARGO-MOORHEAD METROPOLITAN COUNCIL OF GOVERNMENTS  
I-94 & 20TH STREET INTERCHANGE

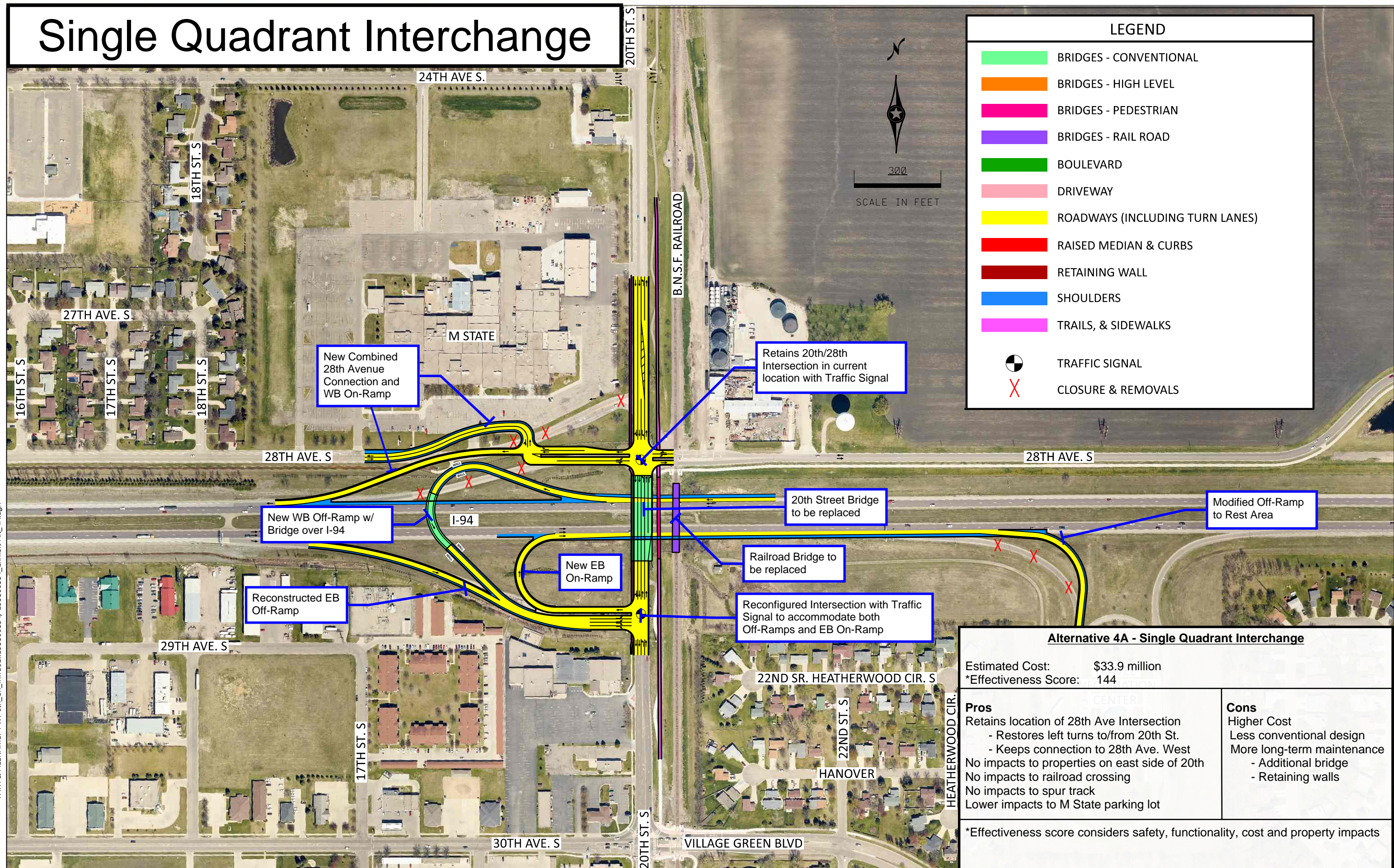
ALTERNATIVE 5  
PARTIAL CLOVERLEAF

STATE PROJ. NO.	-	SHEET NO.	6
TRUNK HWY.	194	TOTAL SHEETS	6

# Single Quadrant Interchange

PLOTTED/REVISED: \$DATES

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LEGEND	
	BRIDGES - CONVENTIONAL
	BRIDGES - HIGH LEVEL
	BRIDGES - PEDESTRIAN
	BRIDGES - RAIL ROAD
	BOULEVARD
	DRIVEWAY
	ROADWAYS (INCLUDING TURN LANES)
	RAISED MEDIAN & CURBS
	RETAINING WALL
	SHOULDERS
	TRAILS, & SIDEWALKS
	TRAFFIC SIGNAL
	CLOSURE & REMOVALS

Alternative 4A - Single Quadrant Interchange	
Estimated Cost:	\$33.9 million
*Effectiveness Score:	144
<b>Pros</b>	<b>Cons</b>
Retains location of 28th Ave Intersection	Higher Cost
- Restores left turns to/from 20th St.	Less conventional design
- Keeps connection to 28th Ave. West	More long-term maintenance
No impacts to properties on east side of 20th	- Additional bridge
No impacts to railroad crossing	- Retaining walls
No impacts to spur track	
Lower impacts to M State parking lot	
*Effectiveness score considers safety, functionality, cost and property impacts	

NO	DATE	APPR	REVISION	SURVEY
				DRAWN
				DESIGNED
				APPROVED



FARGO-MOORHEAD METROPOLITAN COUNCIL OF GOVERNMENTS  
I-94 & 20TH STREET INTERCHANGE

ALTERNATIVE 4A  
SINGLE QUADRANT  
WITH 28TH AVE. CONNECTION

STATE PROJ. NO.	-	SHEET NO.	4A
TRUNK HWY.	194	TOTAL SHEETS	6