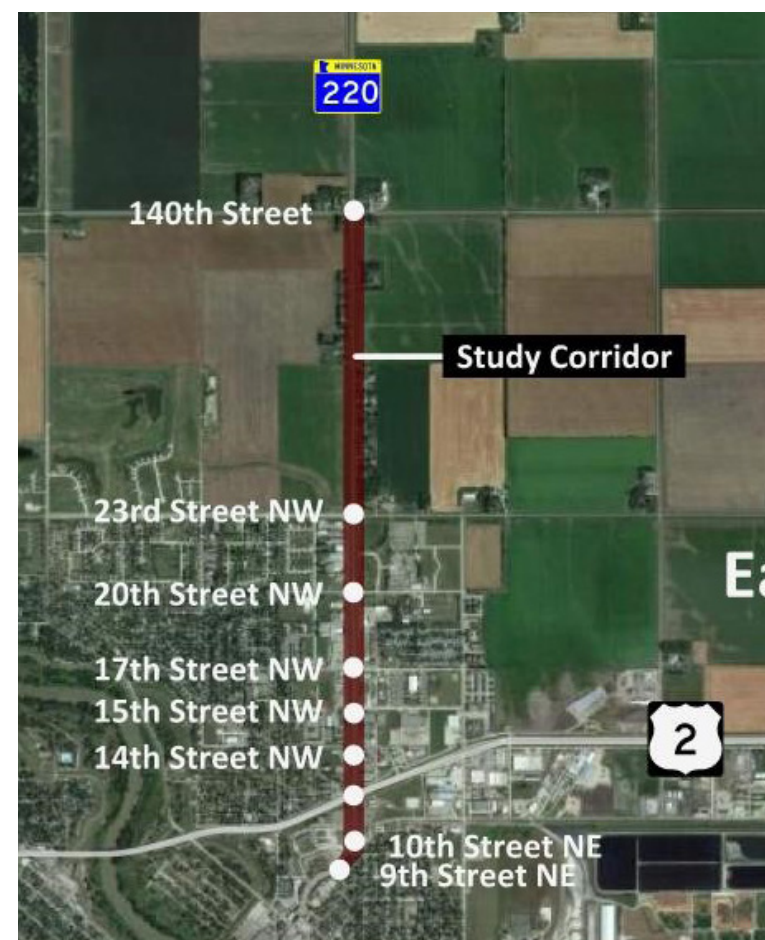


Mn 220 North Corridor Study

Project Overview



The Grand Forks-East Grand Forks Metropolitan Planning Organization (GF-EGF MPO), in cooperation with MnDOT, Polk County, and City of East Grand Forks, is advancing the Mn 220 N Corridor Study.

There have been several previous studies completed for the Mn 220 corridor. Recommendations from these past studies have resulted in some infrastructure improvements already and a few planned improvements identified for future investment through the Metropolitan Transportation Plan (MTP). Recent developments of the MnDOT District Safety Plan and Polk County Safety Plan have found concerns at the Mn 220/US 2 intersection which will be further investigated. In addition, the recent development of the 2045 East Grand Forks Land Use Plan anticipates future redevelopment of agriculture areas north of 23rd Street NW, which may influence the transportation and multimodal needs of the corridor. The purpose of the study is to update previous evaluations and develop a document which will provide recommendations for future transportation facility needs along Mn 220 and its crossroads.

Study Goals & Milestone Timeline



Examine traffic operations at key intersections and develop potential options to improve mobility, access, and safety



Improve pedestrian crossing opportunities and safety at key locations along the corridor

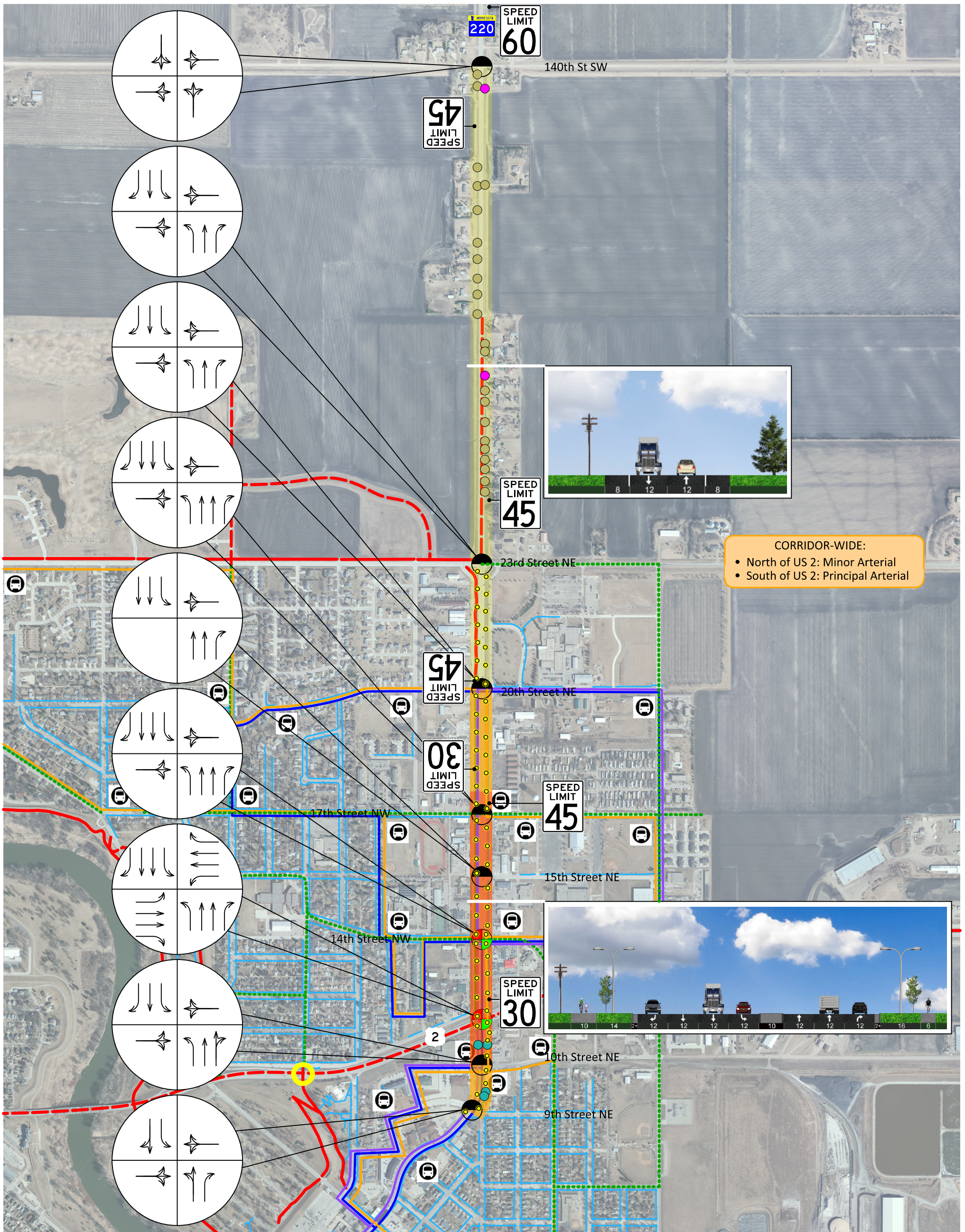


Develop a document that provides recommendations for future transportation facility needs along Mn220 N and its crossroads

EVENT	SUBJECT	TENTATIVE DATES
Steering Committee Meeting #3	Alternatives Development	February 2019
Steering Committee Meeting #4	Preferred Alternatives	April 2019
Public Meeting #2	Alternatives Evaluation	April 2019
Steering Committee Meeting #5	Implementation Plan	May 2019
Draft Report		May 22, 2019
Public Meeting #3	Recommendations	June 2019
Final Report		June 30 2019

Study Process and Schedule





CORRIDOR-WIDE:

- North of US 2: Minor Arterial
- South of US 2: Principal Arterial

LEGEND

Key Study Intersections:

- Signalized Intersection
- Side-Street Stop-Controlled Intersection

Additional Access:

- Public Access (Side-Street Stop-Controlled)
- Private Access (Residential)
- Private Access (Commercial)

Study Corridor:

- 2-Lane* Roadway
 - 3-Lane* Roadway
 - 4-Lane* Roadway
- *Through lanes. Turn lanes present at key intersections.

- Lighting

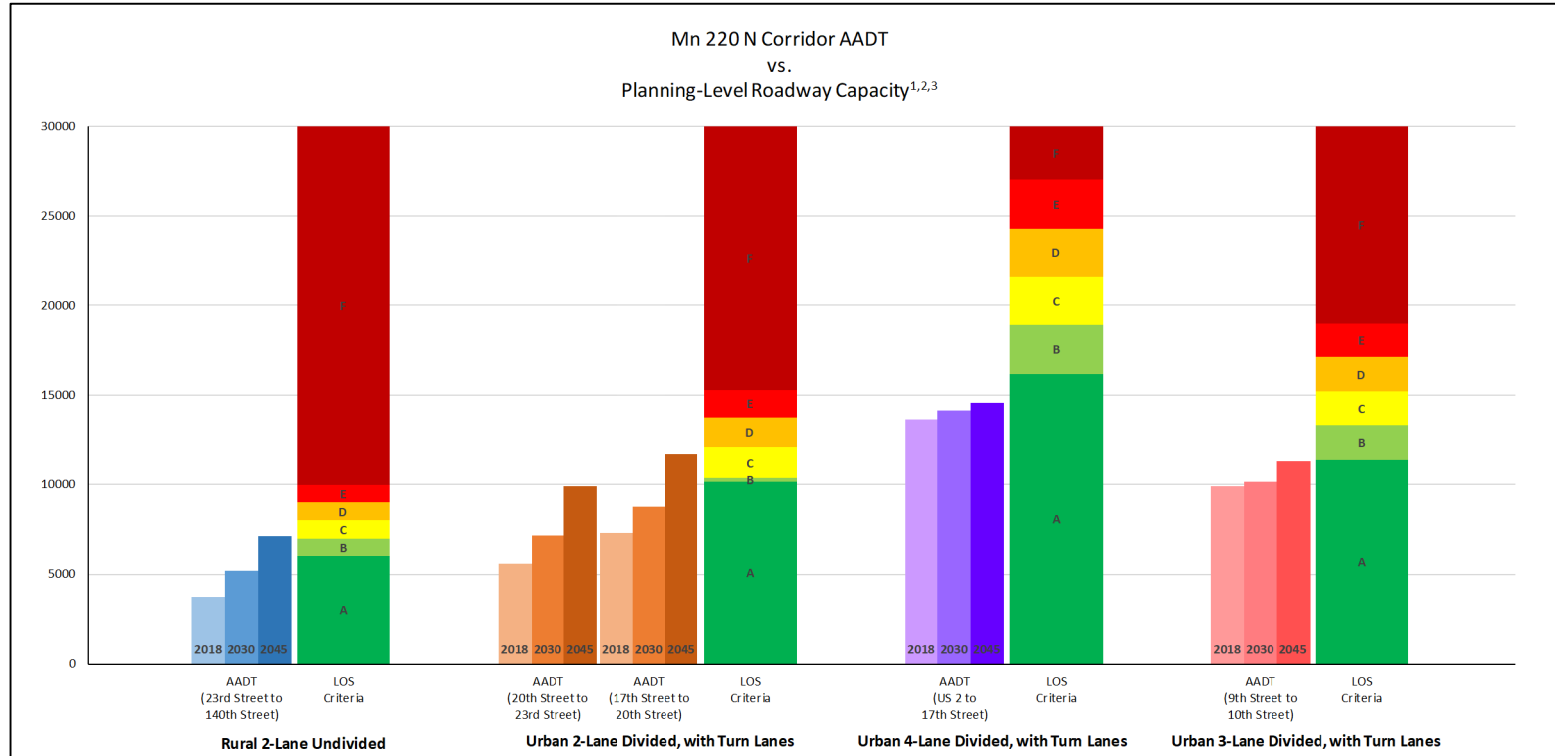
Pedestrian Infrastructure

- Existing Sidewalk
- Existing Multi-Use Path
- Planned Multi-Use Path
(Source: 2045 Transportation Plan Update)
- Planned Bike Path/Bike Route/Sharrows
- Pedestrian Tunnel

CITIES AREA TRANSIT

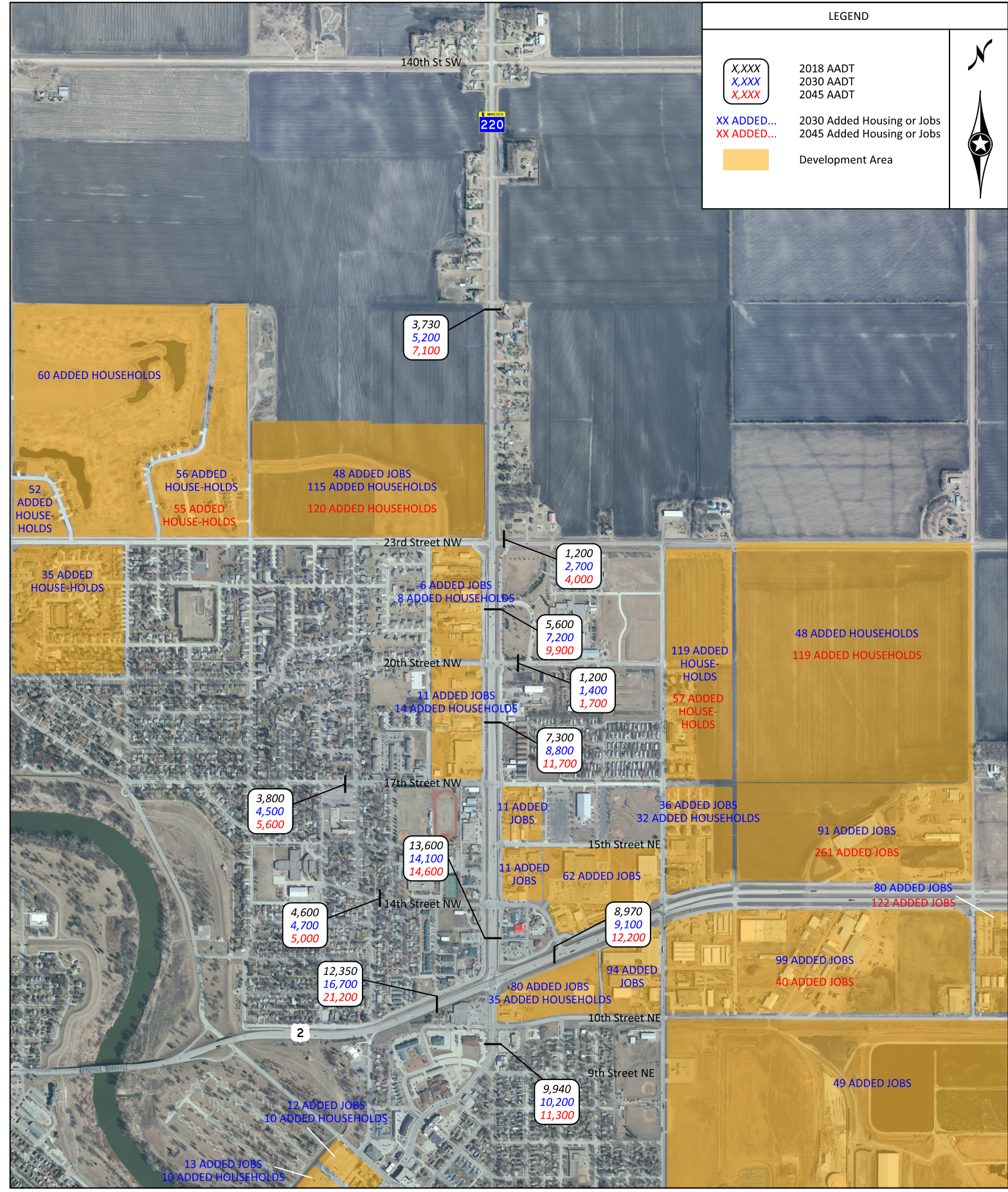
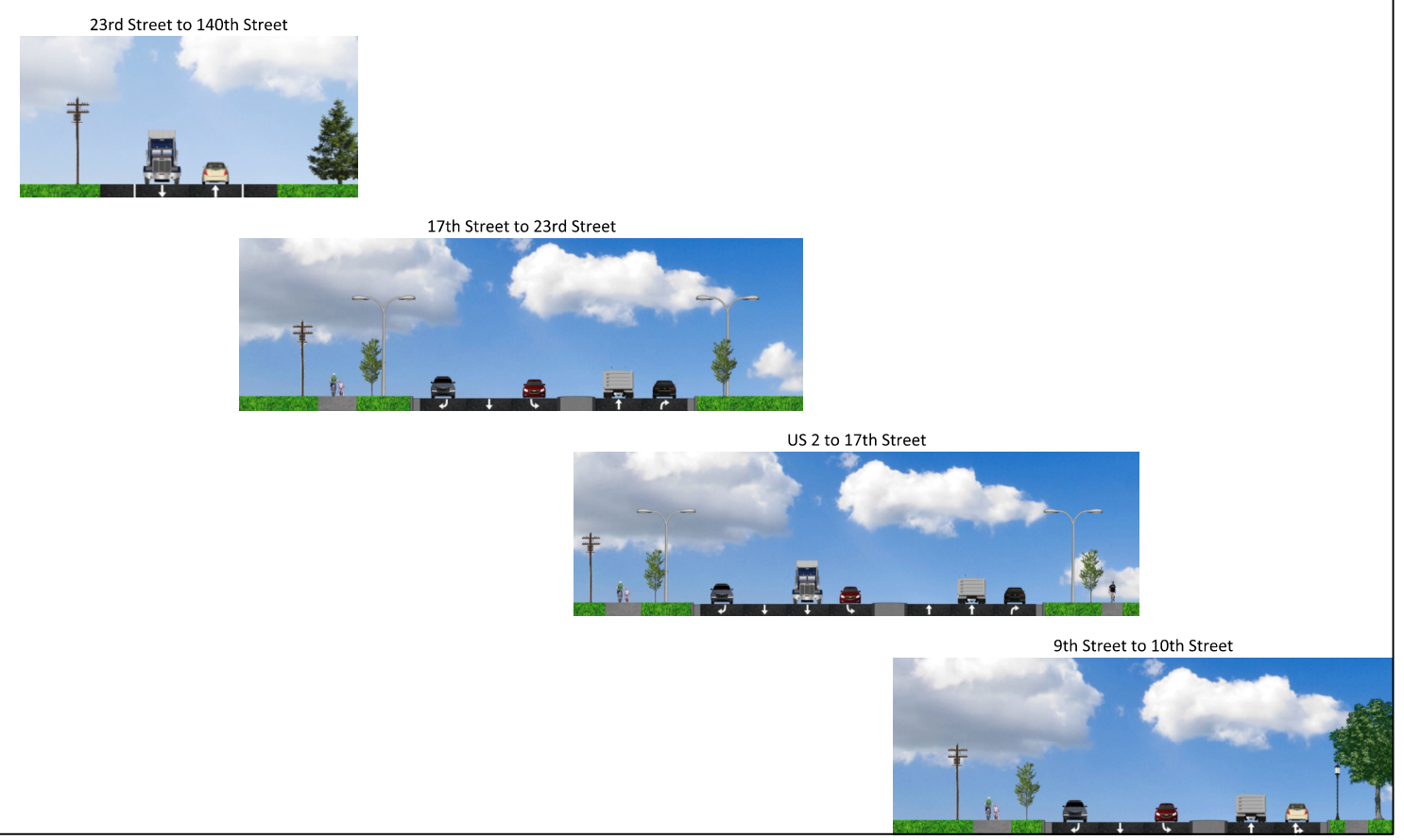
- Route 3/4
- Route 6/7
- Route 12
- Bus Stop





Note: This chart is intended for use as an approximation for planning purposes
¹Capacity source: Consistent with Industry Standards and Previous Planning Documents
²LOS Level source: Transportation Research Board, Highway Capacity Manual, Special Report 209
³The terms urban and rural describe typical section design (e.g., curb and gutter for urban and ditch drainage for rural), not geographical areas.

Existing Typical Roadway Sections:



LEGEND

- X,XXX: 2018 AADT
- X,XXX: 2030 AADT
- X,XXX: 2045 AADT
- XX ADDED...: 2030 Added Housing or Jobs
- XX ADDED...: 2045 Added Housing or Jobs
- Orange Box: Development Area

2019 - 2022 Transportation Improvement Program (TIP)

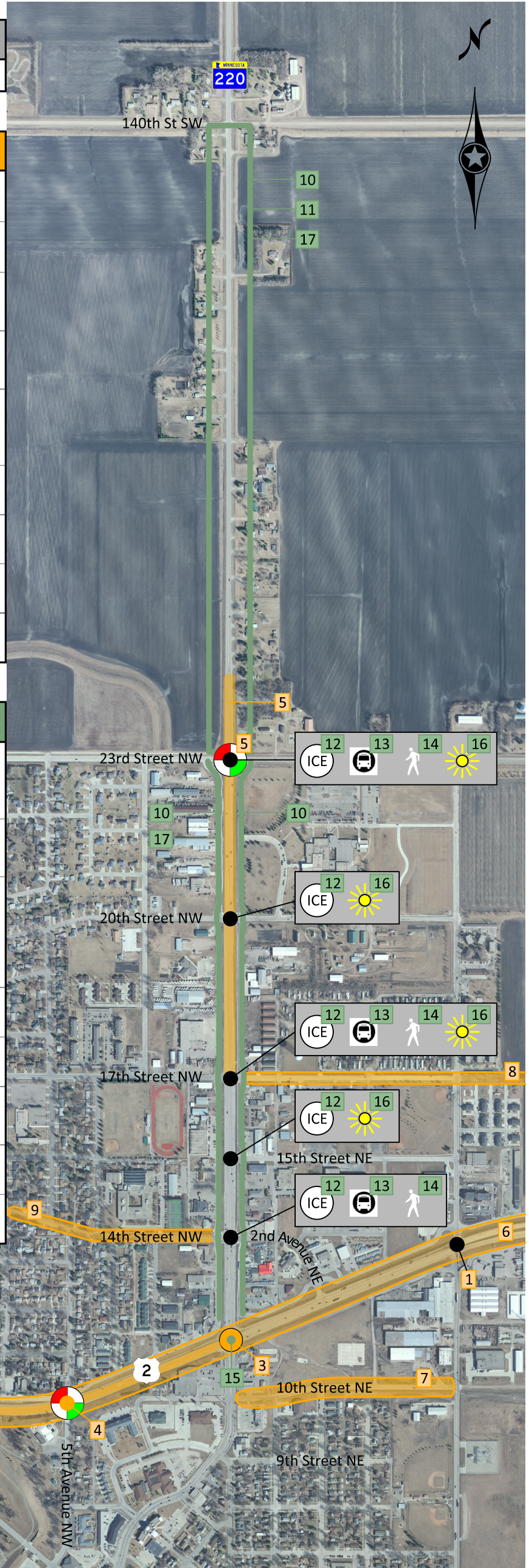
Improvement Number	Future Improvements	Status
--	No Programmed Projects	--

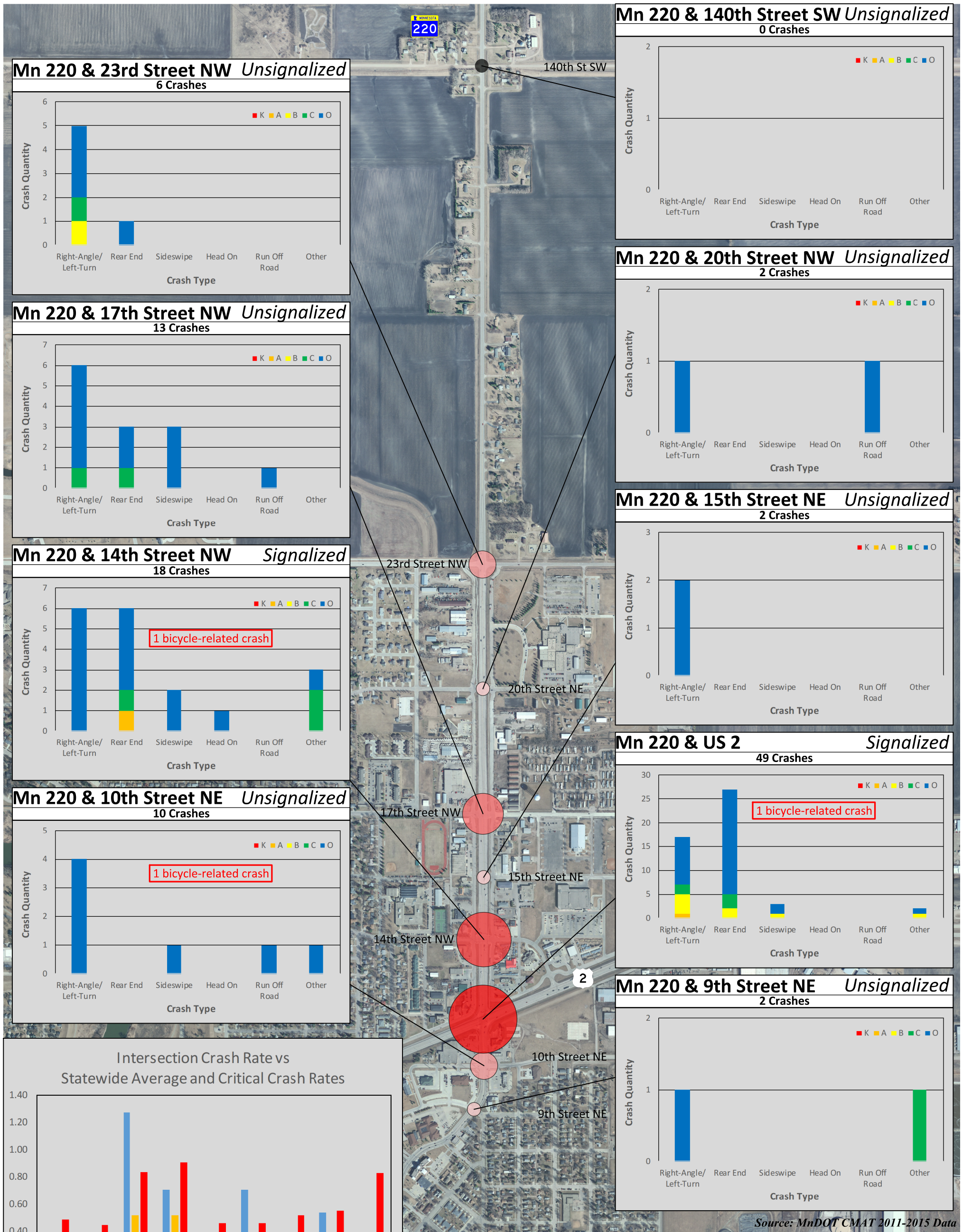
2045 Metropolitan Transportation Plan

Improvement Number	Future Improvements	Program Details
1	2nd Avenue NE/14th Street NE (3/4 Access with US 2. North leg constructed; southside pending)	
2	DeMers Avenue (Reconstruction - 4th Street NW to US 2)	REP-204 Illustrative (Pending Turnback)
3	US 2 at Mn 220 (Right turn/merge geometric modifications and signal timing)	PSO-014 & DIS-001 Illustrative (Study to Determine)
4	US 2 at 5th Avenue NW (Construct full access intersection with traffic signal installation)	PSO-015 Illustrative
5	Mn 220 (Multi-use trail, sidewalks, traffic signal installation at 23rd Street and 4-lane to 2-lane transition north of 23rd Street)	DIS-015 Illustrative Project Plan
6	US 2 Resurfacing - 0.5 miles west of Mn 220 to 0.3 miles east of CSAH 15)	REP-219 Short Range
7	10th Street NE (Reconstruction - Central Avenue to 5th Avenue)	REP-202 Fiscally Constrained
8	17th Street NE (Reconstruction - Mn 220 to 12th Avenue NE)	REP-198 Illustrative
9	14th Street NW (Mill and Overlay - 6th Ave NW to Mn 220)	REP-199 Illustrative

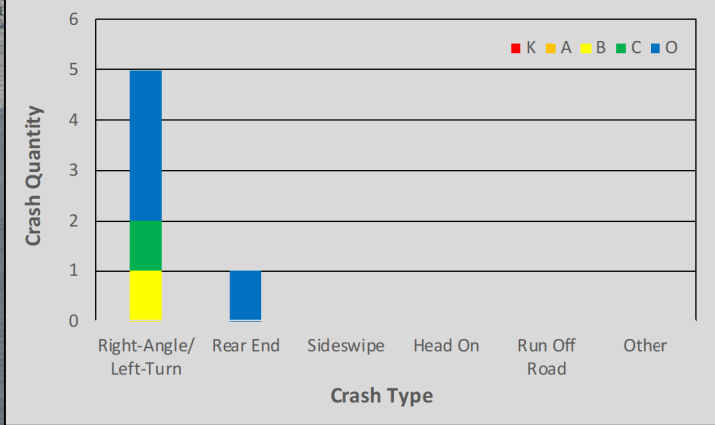
Previous Corridor Study Area Recommendations

Improvement Number	Future Improvements	Program Year	Notes
10	Options: 1. Reduce frontage roads by 14-16 feet on the sides closest to the businesses 2. Backage Road	Partially Implemented	A sidewalk has been placed on the median.
11	Mn 220 Corridor (Multiuse trail north of 23rd Street (west side), Sidewalk north of 23rd Street (east side))	Not Funded	
12	Mn 220 at 14th NW, 15th NW, 17th NW, 20th NW and 23rd NW). (Intersection control evaluation and potential traffic control changes)	Not Funded	ICE studies are needed to evaluate appropriate improvements and access control for each of the key intersections that have congestion or safety issues.
13	Mn 220 at 14th NW, 17th NW and 23rd Street NW (Install transit shelter)	Not Funded	
14	Mn 220 at 14th NW, 17th NW and 23rd Street NW (Improve pedestrian crosswalks)	Not Funded	
15	US 2 at Mn 220 (Confirmation lights and countdown timers per D2 Safety Plan)	Not Funded	Improvements identified to address right angle and pedestrian crossing concerns
16	Mn 220 at 15th NW, 17, 20th NW, 23rd Street NW (Improve intersection lighting)	Not Funded	
17	Mn 220 Corridor (Add pedestrian-scale lighting)	Not Funded	Along multiuse trail

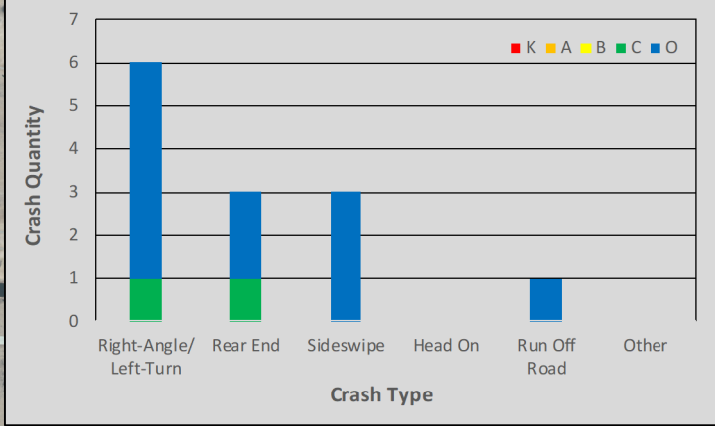




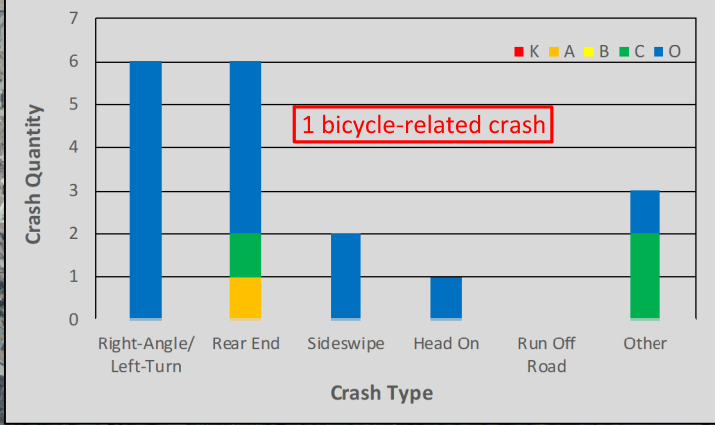
Mn 220 & 23rd Street NW Unsignalized
6 Crashes



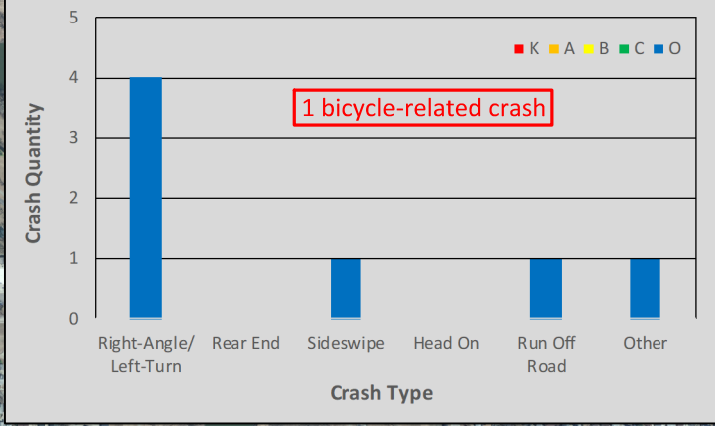
Mn 220 & 17th Street NW Unsignalized
13 Crashes



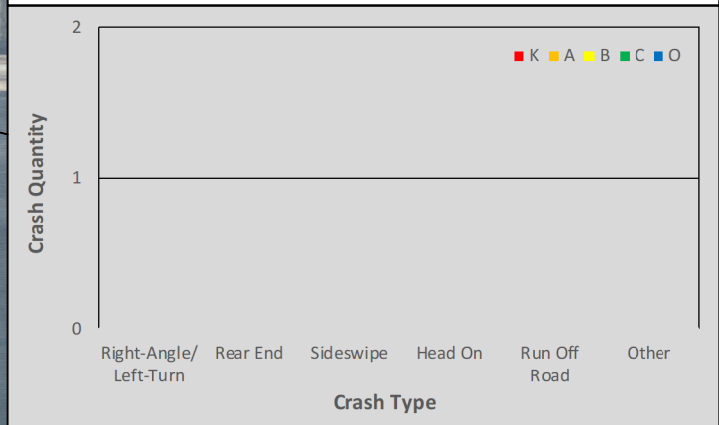
Mn 220 & 14th Street NW Signalized
18 Crashes



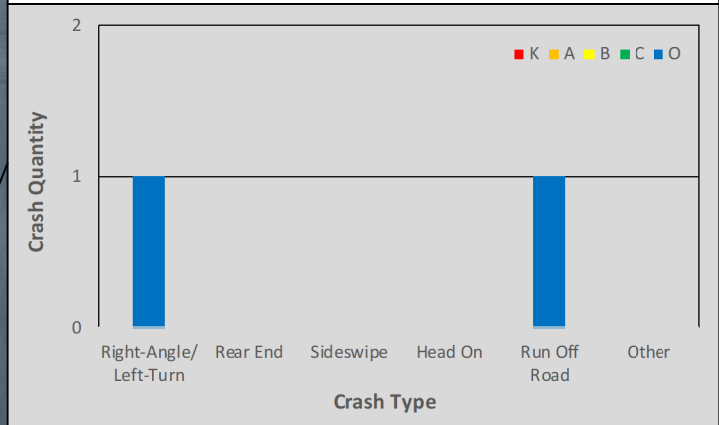
Mn 220 & 10th Street NE Unsignalized
10 Crashes



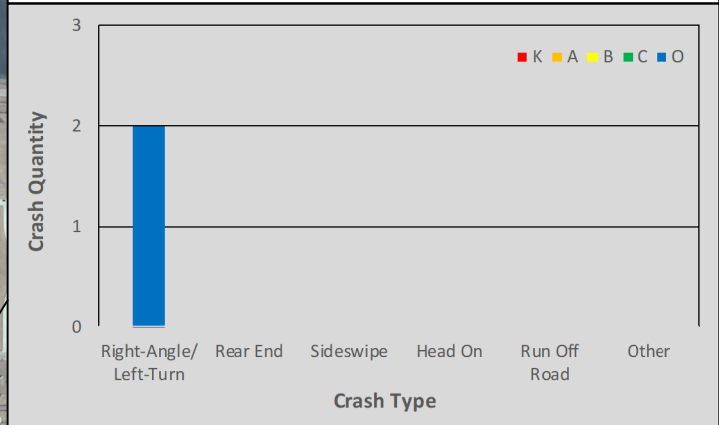
Mn 220 & 140th Street SW Unsignalized
0 Crashes



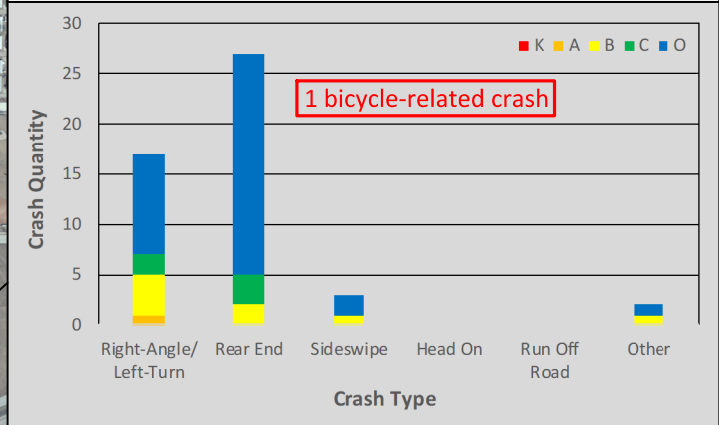
Mn 220 & 20th Street NW Unsignalized
2 Crashes



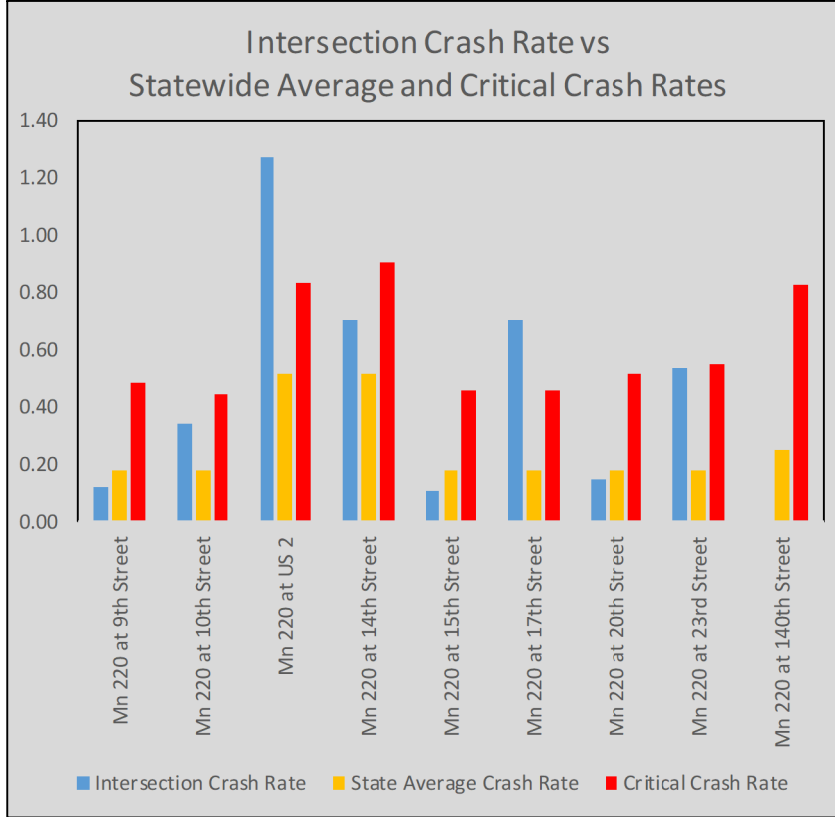
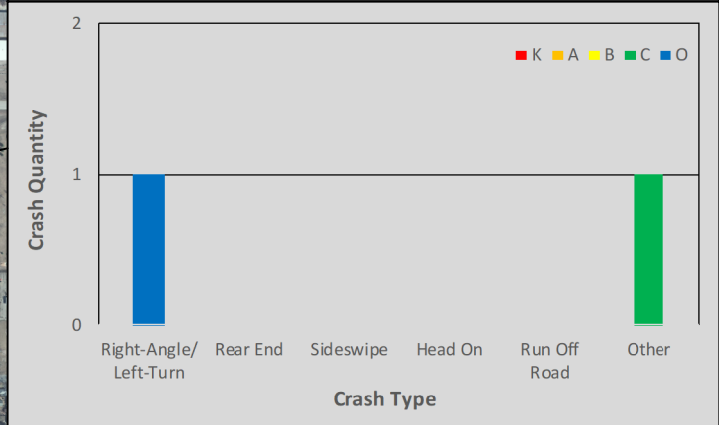
Mn 220 & 15th Street NE Unsignalized
2 Crashes



Mn 220 & US 2 Signalized
49 Crashes



Mn 220 & 9th Street NE Unsignalized
2 Crashes



LEGEND

- 0 Crashes
- 1-5 Crashes
- 6-10 Crashes
- 11-15 Crashes
- 16-20 Crashes
- 21+ Crashes

K = Fatality
A = Incapacitating Serious Injury
B = Non - Incapacitating Injury
C = Possible Injury
O = Property Damage Only

Source: MnDOT CMAT 2011-2015 Data



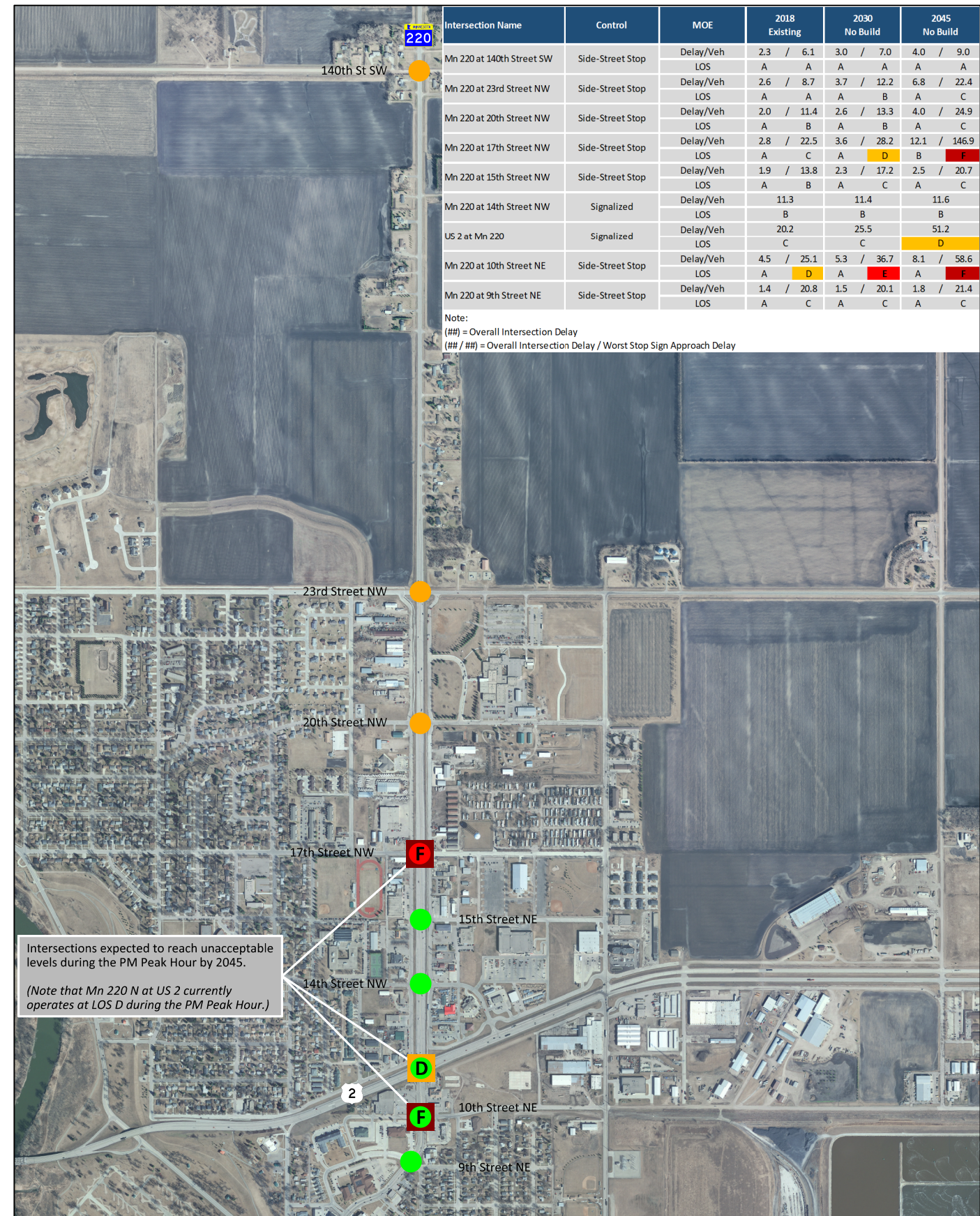
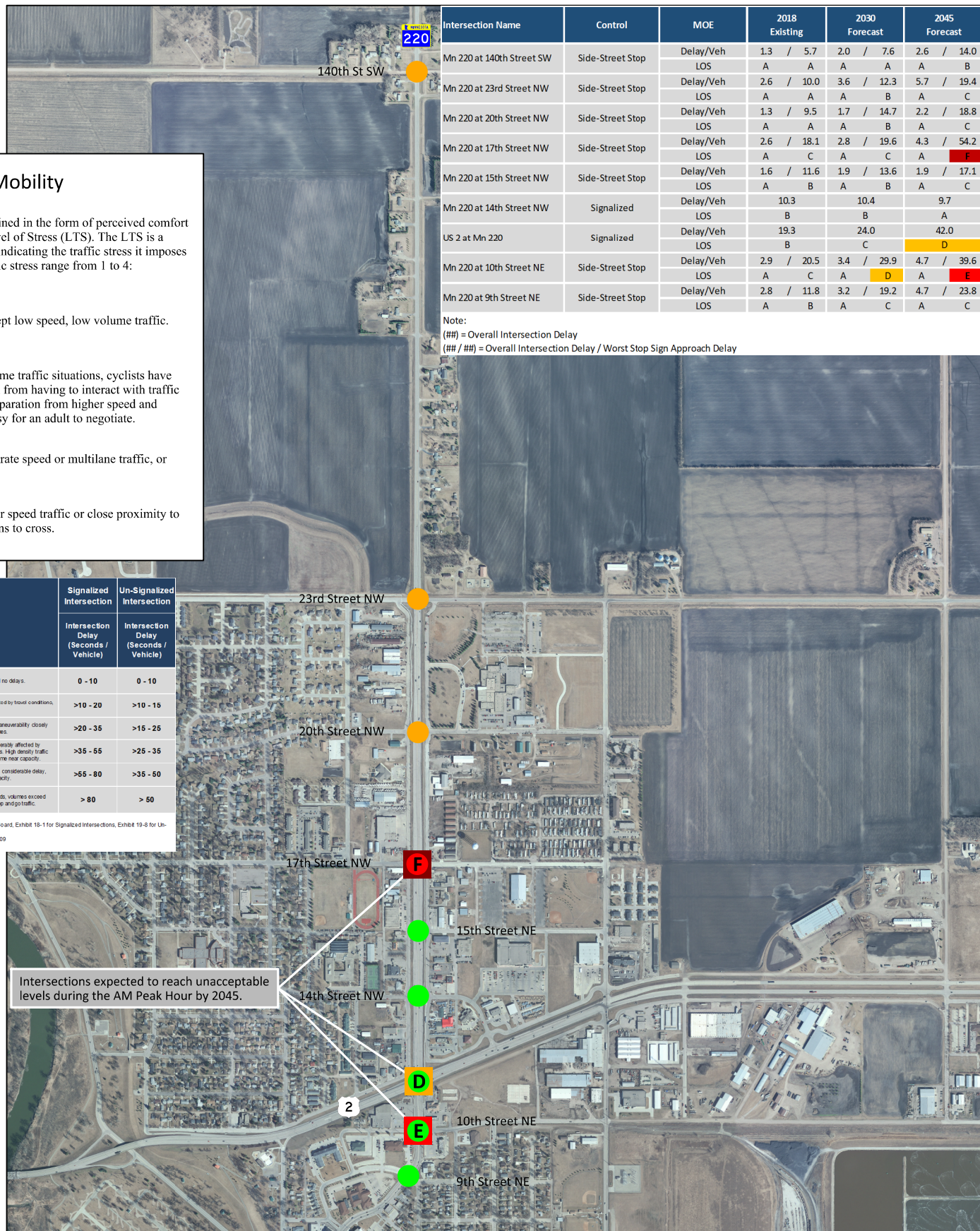
AM Peak Hour

PM Peak Hour

Bicycle and Pedestrian Mobility

Bicycle and pedestrian mobility can be defined in the form of perceived comfort and accessibility, measured in terms of Level of Stress (LTS). The LTS is a rating given to a road segment or crossing indicating the traffic stress it imposes on bicyclists or pedestrians. Levels of traffic stress range from 1 to 4:

- LTS 1:** Strong separation from all except low speed, low volume traffic. Simple crossings.
- LTS 2:** Except in low speed / low volume traffic situations, cyclists have their own place to ride that keeps them from having to interact with traffic except at formal crossings. Physical separation from higher speed and multilane traffic. Crossings that are easy for an adult to negotiate.
- LTS 3:** Involves interaction with moderate speed or multilane traffic, or close proximity to higher speed traffic.
- LTS 4:** Involves interaction with higher speed traffic or close proximity to high speed traffic. Difficult intersections to cross.

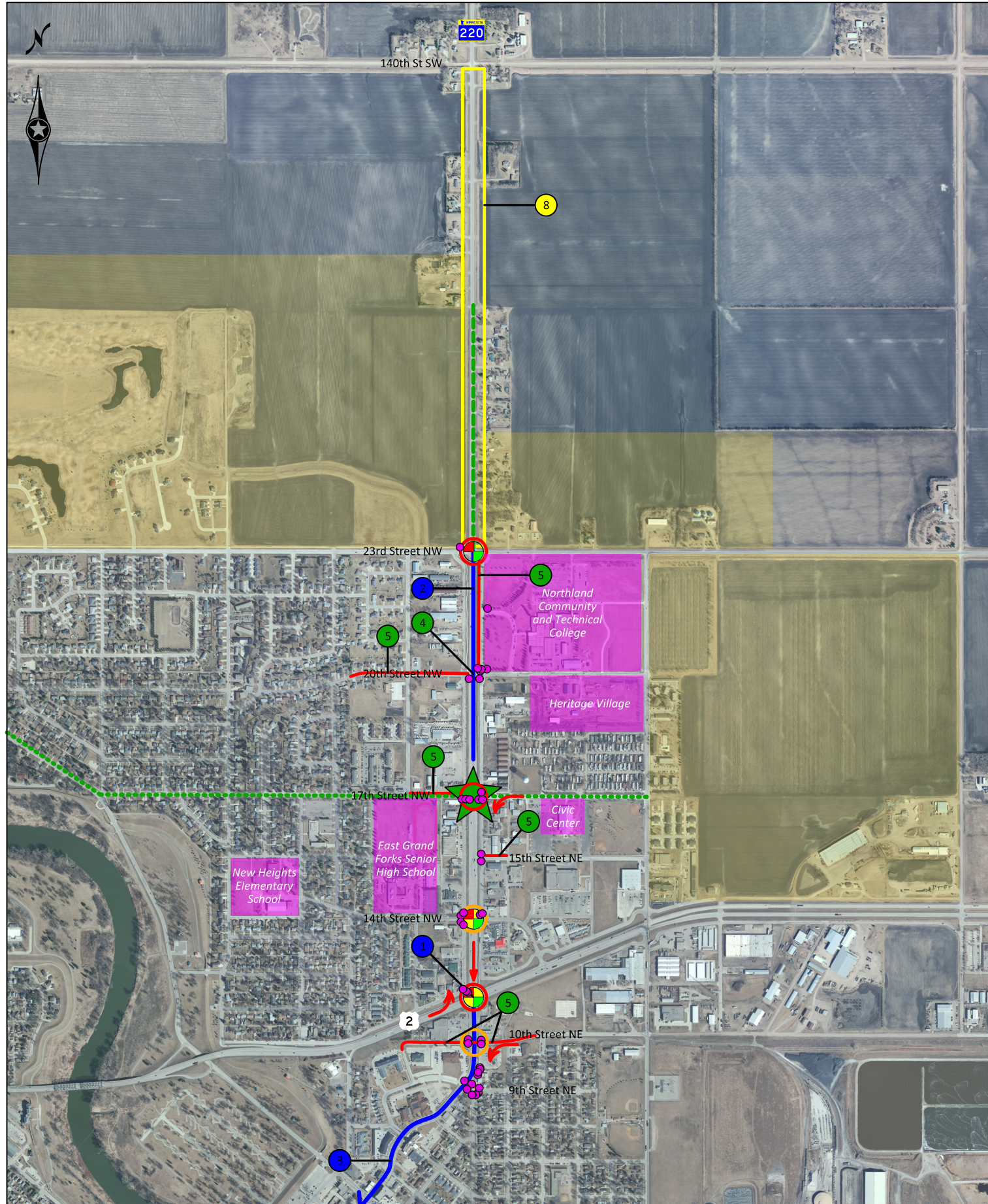


Intersection Name	Control	MOE	2018 Existing	2030 Forecast	2045 Forecast
Mn 220 at 140th Street SW	Side-Street Stop	Delay/Veh LOS	1.3 / 5.7 A A	2.0 / 7.6 A A	2.6 / 14.0 A B
Mn 220 at 23rd Street NW	Side-Street Stop	Delay/Veh LOS	2.6 / 10.0 A A	3.6 / 12.3 A B	5.7 / 19.4 A C
Mn 220 at 20th Street NW	Side-Street Stop	Delay/Veh LOS	1.3 / 9.5 A A	1.7 / 14.7 A B	2.2 / 18.8 A C
Mn 220 at 17th Street NW	Side-Street Stop	Delay/Veh LOS	2.6 / 18.1 A C	2.8 / 19.6 A C	4.3 / 54.2 A F
Mn 220 at 15th Street NW	Side-Street Stop	Delay/Veh LOS	1.6 / 11.6 A B	1.9 / 13.6 A B	1.9 / 17.1 A C
Mn 220 at 14th Street NW	Signalized	Delay/Veh LOS	10.3 B	10.4 B	9.7 A
US 2 at Mn 220	Signalized	Delay/Veh LOS	19.3 B	24.0 C	42.0 D
Mn 220 at 10th Street NE	Side-Street Stop	Delay/Veh LOS	2.9 / 20.5 A C	3.4 / 29.9 A D	4.7 / 39.6 A F
Mn 220 at 9th Street NE	Side-Street Stop	Delay/Veh LOS	2.8 / 11.8 A B	3.2 / 19.2 A C	4.7 / 23.8 A C

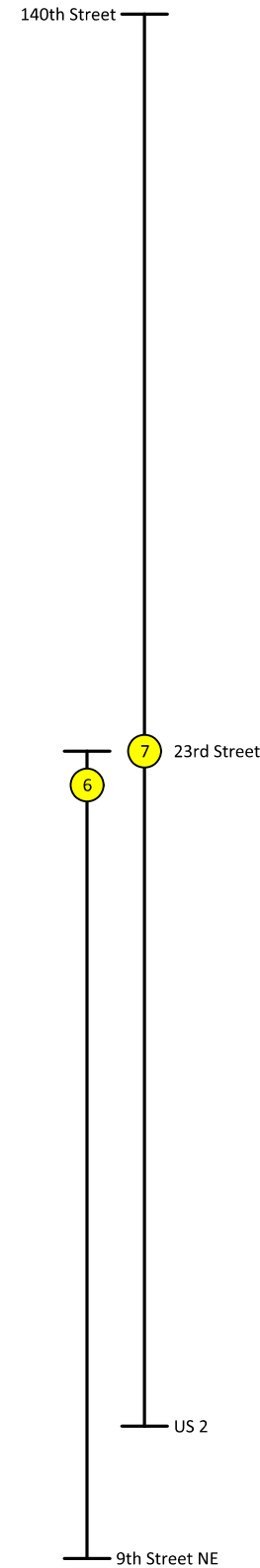
Intersection Name	Control	MOE	2018 Existing	2030 No Build	2045 No Build
Mn 220 at 140th Street SW	Side-Street Stop	Delay/Veh LOS	2.3 / 6.1 A A	3.0 / 7.0 A A	4.0 / 9.0 A A
Mn 220 at 23rd Street NW	Side-Street Stop	Delay/Veh LOS	2.6 / 8.7 A A	3.7 / 12.2 A B	6.8 / 22.4 A C
Mn 220 at 20th Street NW	Side-Street Stop	Delay/Veh LOS	2.0 / 11.4 A B	2.6 / 13.3 A B	4.0 / 24.9 A C
Mn 220 at 17th Street NW	Side-Street Stop	Delay/Veh LOS	2.8 / 22.5 A C	3.6 / 28.2 A D	12.1 / 146.9 B F
Mn 220 at 15th Street NW	Side-Street Stop	Delay/Veh LOS	1.9 / 13.8 A B	2.3 / 17.2 A C	2.5 / 20.7 A C
Mn 220 at 14th Street NW	Signalized	Delay/Veh LOS	11.3 B	11.4 B	11.6 B
US 2 at Mn 220	Signalized	Delay/Veh LOS	20.2 C	25.5 C	51.2 D
Mn 220 at 10th Street NE	Side-Street Stop	Delay/Veh LOS	4.5 / 25.1 A D	5.3 / 36.7 A F	8.1 / 58.6 A F
Mn 220 at 9th Street NE	Side-Street Stop	Delay/Veh LOS	1.4 / 20.8 A C	1.5 / 20.1 A C	1.8 / 21.4 A C

LOS	Description	Signalized Intersection Intersection Delay (Seconds / Vehicle)	Un-Signalized Intersection Intersection Delay (Seconds / Vehicle)
A	Free Flow. Low volumes and no delays.	0 - 10	0 - 10
B	Stable Flow. Speeds restricted by local conditions, minor delays.	>10 - 20	>10 - 15
C	Stable Flow. Speeds and maneuverability closely controlled due to higher volumes.	>20 - 35	>15 - 25
D	Stable Flow. Speeds considerably affected by change in operating conditions. High density traffic restricts maneuverability, volume near capacity.	>35 - 65	>25 - 35
E	Unstable Flow. Low speeds, considerable delay, volume at or slightly over capacity.	>65 - 80	>35 - 50
F	Forced Flow. Very low speeds, volumes exceed capacity, long delays with stop-and-go traffic.	> 80	> 50

Source:
1. Highway Capacity Manual, 6th Edition (Published 2016). Transportation Research Board, Exhibit 18-1 for Signalized Intersections, Exhibit 19-8 for Un-Signalized Intersections, and Exhibit 19-3 for Urban Street Facilities.
2. Transportation Research Board (TRB), Highway Capacity Manual, Special Report 209



ROADWAY DEFICIENCIES



LEGEND

CAPACITY

← Movement Expected to Reach Unacceptable LOS by 2045

TRANSPORTATION DEMAND

⊗ Potential Future Signal

— Illustrative Reconstruction Project (2045 MTP)

SOCIAL OR ECONOMIC DEMAND

■ Key Land Use

■ Significant Growth Area (Expected to Impact Corridor)

MODAL INTERRELATIONSHIPS

— Gaps in Sidewalk Connectivity

⊗ Ped Ramp Doesn't Meet Current Standards

⋯ Future Bike Route (Crossing Mn 220)

— Future Multiuse Trail (Along Mn 220)

★ Preferred Crossing Point for Area Schools (currently uncomfortable crossing for bikes and peds)

ROADWAY DEFICIENCIES

⊗ Signal System Expected to Reach End of Useful Life by 2030

SAFETY

○ Crash Issue (Exceeds Statewide Average)

○ Crash Issue (Exceeds Critical Rate)

Notes:

- 1 Previously identified project to provide right turn/merge modifications and signal timing improvements (2045 MTP).
- 2 Illustrative project to extend 4-lane to 2-lane transition to 23rd Street (2045 MTP)
- 3 Illustrative project to reconstruct DeMers Avenue (2045 MTP). DeMers Avenue is on National Highway System. Greater Minnesota mobility has identified potential mobility concerns.
- 4 Pedestrians must cross roadway to continue north/south connectivity
- 5 Gap in sidewalk network and accessibility.
- 6 Current spacing of intersections between 9th Street and 23rd Street do not meet MnDOT access spacing guidelines.
- 7 MnDOT project assessment indicates that this segment will require concrete rehabilitation in 2033 and reconstruction in 2058.
- 8 Increased traffic demand north of 23rd Street likely to warrant turn lanes at key locations between 23rd Street and 140th Street. Additionally, future redevelopment of adjacent agricultural land will require access management guidance.