

WELCOME!

Moorhead Center Avenue

Open House #2

5 - 7 PM

PRESENTATION 5:30 PM



City of
Moorhead

CENTER AVENUE
Planning + Preliminary Engineering Study



Moorhead Center Avenue (Red River to 8th Street)

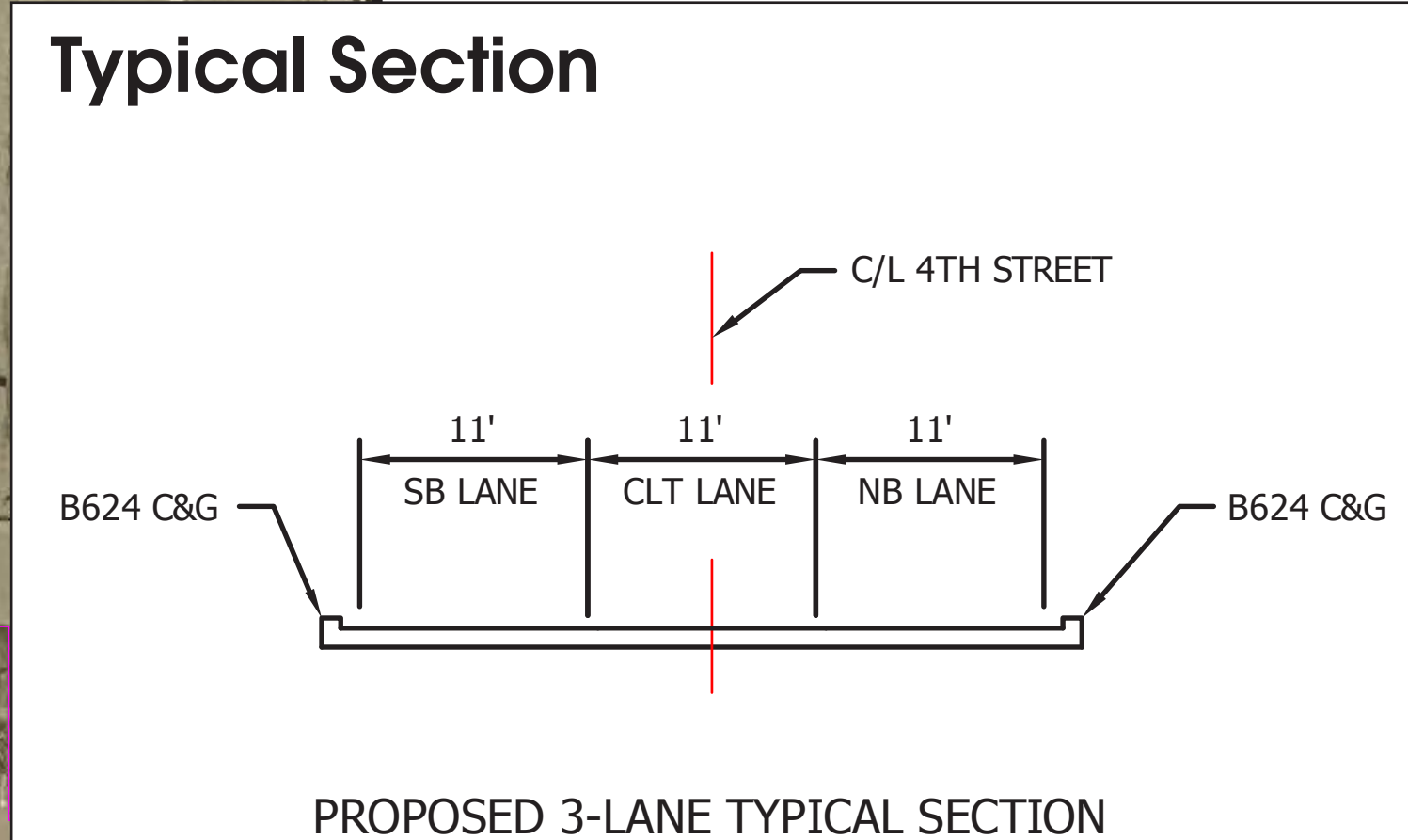
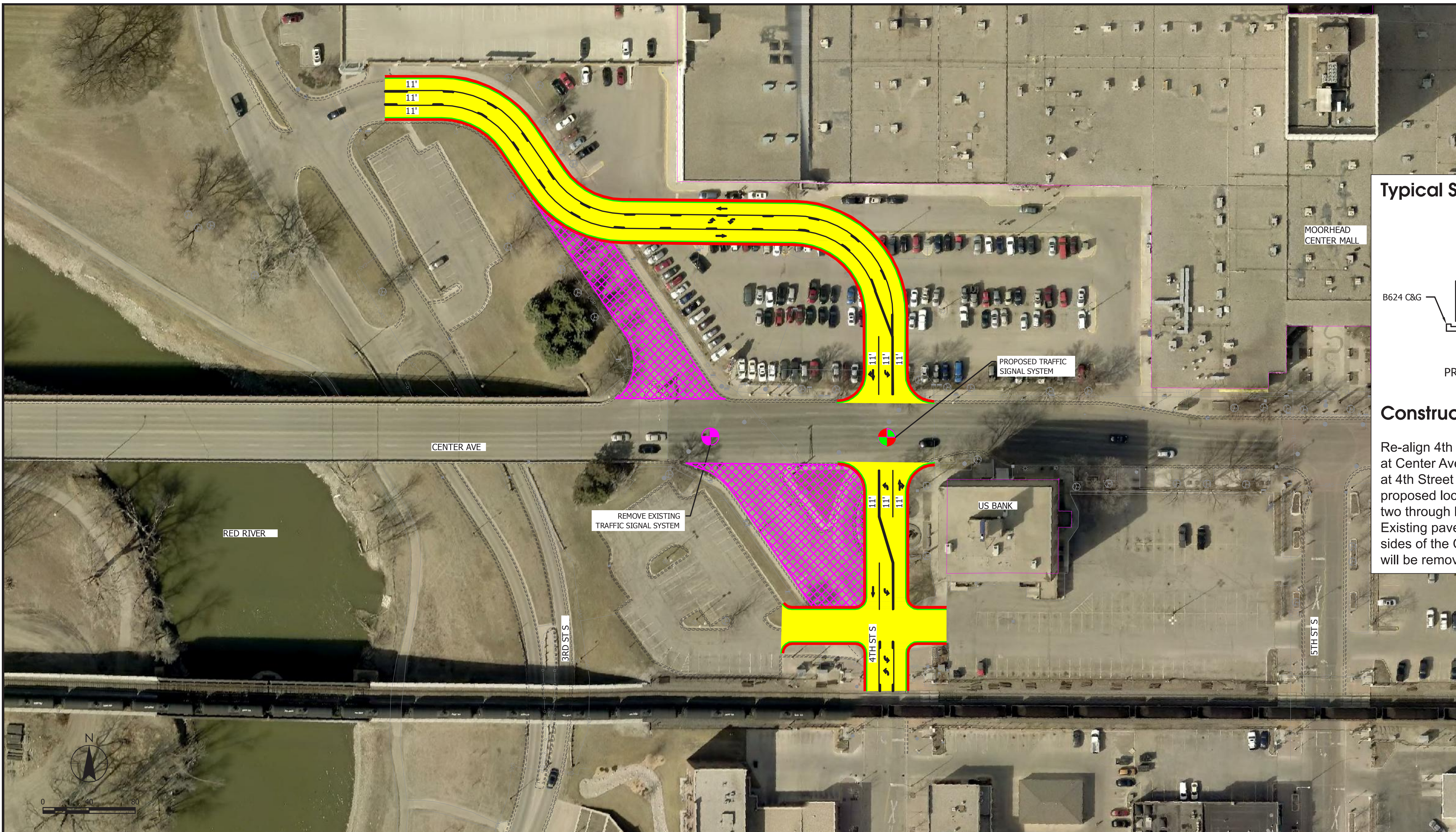
Alternative Analysis Matrix

Alternatives	2040 Future Intersection LOS ⁽¹⁾				Capacity Range for Various Roadway Facility Types (AADT) ⁽³⁾	Meets 2040 Future Capacity Needs ⁽⁴⁾	Addresses Geometric Issues	Crash Reduction ⁽⁵⁾	Transit Impacts	Bicycle Impacts	Pedestrian Impacts	Parking Improvements	Access Modifications			Tree Impacts	Preliminary Cost
	4th Street (AM/PM)	5th Street (AM/PM)	7th Street (AM/PM)	8th Street (AM/PM)									Thai Orchid Access	United Sugars Access	Wells Fargo Access		
No Build Do Nothing	LOS A/B	LOS B/B	LOS B/B	LOS B/C	18,000 - 21,000 (4-Lane Roadway)	Yes V/C = 0.55	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Do Nothing	Do Nothing	Do Nothing	0	\$0
Alternative A⁽²⁾ Mill & Overlay + 3-Lane + Bike Lanes	LOS C/B	LOS B/B	LOS A/A	LOS B/B	14,000 - 16,000 (3-Lane Roadway)	Yes V/C = 0.73	Straightens Alignment by Removing Roadway Shifts	Projected crash reduction of 24%	Buses Delay Traveling Lane at Stops, Bus Bump-out is Removed	Creates Designated Bike Lanes	Encourages Bicyclists to use Roadway Instead of Sidewalks, ADA Compliance	Changes Nothing	Consideration to Do Nothing, Relocate or Close - Relocate/Close Fixes Sight Distance Issues and Reduces the Number of Accesses & Conflict Points to Enhance Safety	Consideration to Do Nothing, Relocate or Close - Relocate/Close Fixes Sight Distance Issues and Reduces the Number of Accesses & Conflict Points to Enhance Safety	Do Nothing - Nothing Changes	4	\$975,000
Alternative B⁽²⁾ Mill & Overlay + 3-Lane + Parking/Wide Outside Lanes	LOS C/C	LOS B/B	LOS A/A	LOS B/B	14,000 - 16,000 (3-Lane Roadway)	Yes V/C = 0.73	Straightens Alignment by Removing Roadway Shifts	Projected crash reduction of 24%	Buses Delay Traveling Lane at Stops, Bus Bump-out is Removed	Creates Share the Road Facility	Encourages Bicyclists to use Roadway Instead of Sidewalks, ADA Compliance	Adds 39 On-Street Parking Spaces	Close - Fixes Sight Distance Issues and Reduces the Number of Accesses & Conflict Points to Enhance Safety	Close - Fixes Sight Distance Issues and Reduces the Number of Accesses & Conflict Points to Enhance Safety	Close - To Maximize On-Street Parking	4	\$816,000
Alternative C⁽²⁾ Mill & Overlay + Re-Stripe to Existing	LOS B/C	LOS B/B	LOS A/A	LOS B/C	18,000 - 21,000 (4-Lane Roadway)	Yes V/C = 0.55	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Changes Nothing	Do Nothing - Nothing Changes	Do Nothing - Nothing Changes	Do Nothing - Nothing Changes	0	\$556,000
Alternative D⁽²⁾ Mill & Overlay + 3-Lane + Shoulders	LOS C/C	LOS B/B	LOS A/A	LOS B/B	14,000 - 16,000 (3-Lane Roadway)	Yes V/C = 0.73	Straightens Alignment by Removing Roadway Shifts	Projected crash reduction of 24%	Buses Delay Traveling Lane at Stops, Bus Bump-out is Removed	Changes Nothing	Pedestrian Improvements, ADA Compliance	Changes Nothing	Consideration to Reconstruct in Current Place - Helps Fix Sight Distance Issues	Do Nothing - Nothing Changes	Do Nothing - Nothing Changes	4	\$948,000
Additive Alternative 1 Realign 4th Street	LOS C/B	N/A	N/A	N/A	N/A	N/A	Aligns Intersection to be Perpendicular	Creates a Perpendicular Intersection, No History of High Crash Volumes	Bus Route can Remain on 4th Street	Safer for Bicyclists to be Seen	Safer for Pedestrians to be Seen	Removes Parking Spaces	Do Nothing - Nothing Changes	Do Nothing - Nothing Changes	Do Nothing - Nothing Changes	18	\$774,000 ⁽⁶⁾

Notes:

- (1) Level of Service (LOS) is a term used to describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. LOS is measured in seconds of delay per vehicle at the intersection and can range from LOS A through LOS E. LOS D is the standard.
- (2) Alternatives A, B, C, and D include Additive Alternative 2, the removal of the 7th Street signal, in the LOS calculations and cost estimate prices.
- (3) AADT stands for Average Annualized Daily Traffic.
- (4) V/C ratios are the volume divided by the capacity of the road. Anything over 1.0 is considered over capacity. The Highest projected volume in 2040 is 11,600 AADT.
- (5) Calculated crash reductions are based on the 2008 FHWA Desktop Reference for Crash Reduction Factors for the transition of a 4-lane to a 3-lane section with a continuous left turn lane. The total number of crashes over 10 years (2006-2015) was 97 crashes.
- (6) Additive Alternative 1 cost would be in addition to any of the three alternatives being considered and could be included with this project or constructed independently at a later date.

Draft Additive Alternative 1



Construction Notes

Re-align 4th Street to create a perpendicular crossing at Center Avenue. Remove the existing traffic signal at 4th Street and install a new traffic signal at the proposed location. 4th Street will continue to utilize two through lanes with turn lanes where applicable. Existing pavement on the northeast and southeast sides of the Center Avenue and 4th Street intersection will be removed.

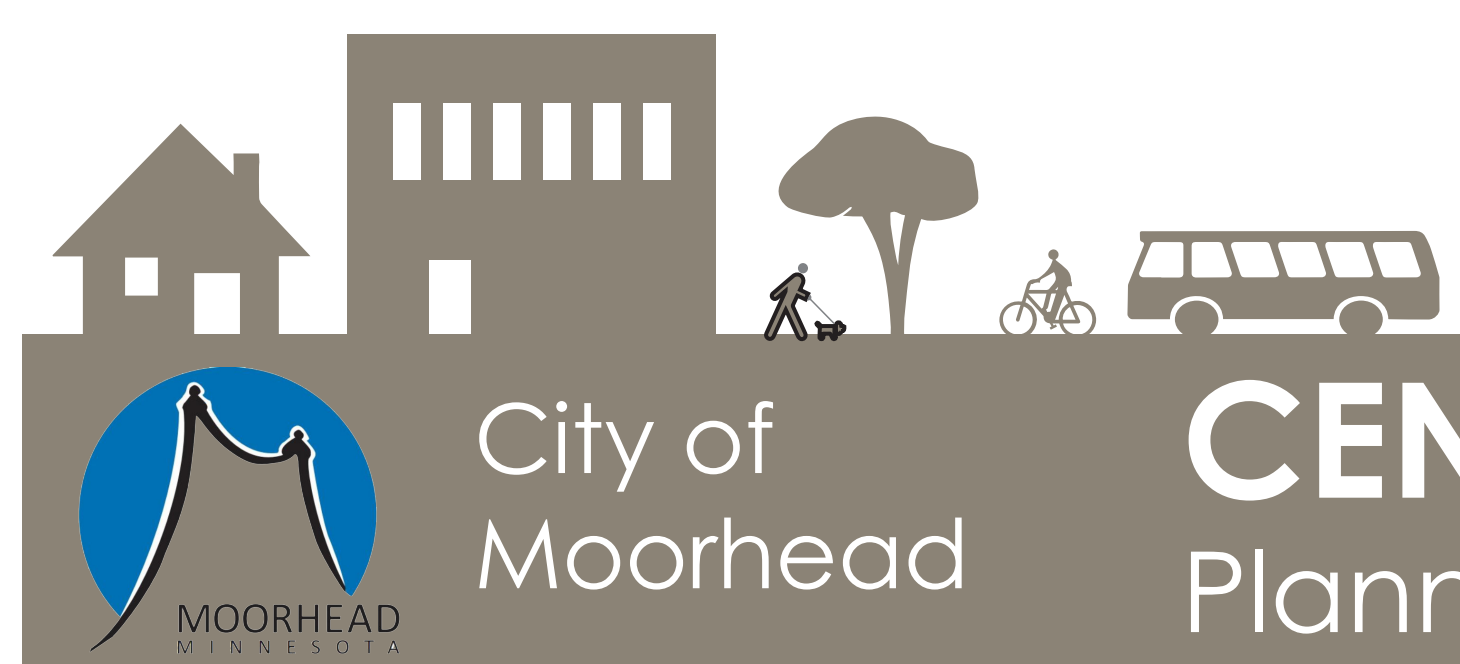
MOORHEAD - CENTER AVENUE - DRAFT ADDITIVE ALTERNATIVE 1

CITY OF MOORHEAD, MN
 PLANNING & PRELIMINARY ENGINEERING STUDY
 DATE: 4/2/2018 PROJ. NO.: 193803913 FIGURE: DRAFT 1-2



LEGEND

- PROPOSED ROADWAY
- CURB/BARRIER
- EXISTING MANHOLE OR CATCH BASIN
- EXISTING TRAFFIC SIGNAL SYSTEM
- POINT OF ACCESS
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- REMOVE EXISTING PAVEMENT



CENTER AVENUE
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Plaza Improvement Opportunities

Existing Conditions of the Moorhead Center Mall Plaza



Plaza Improvement Opportunities



Birdseye View of Potential Plaza Opportunities



The Plaza Decorated to Fit Multiple Seasons

Streetscape Improvement Opportunities

Existing Conditions of Center Avenue at 5th Street Looking East



Streetscape Improvement Opportunities

Center Avenue provides multiple opportunities to create a space for all ages to enjoy. This particular concept portrays the theme of the Red River throughout the corridor.

Possible Features Include:

- Façade Improvements to Existing Buildings
- Boulevard Landscaping and Planters
- Benches and Street Furniture

