

# **URBAN REGIONAL & URBAN ROADS PROJECT SCOPING WORKSHEET**

DATE: 1/8/2024

PRIORITY# 2      Regional: Y/N      Urban Roads: Y/N

City: Minot      Street: US Highway 2/52 and US Highway 83 Interchange

County: Ward Length: 2100 feet

Proposed Improvement: Improvements include bridge widening, shared use path installation, new signals, new concrete pavement, and conversion to a continuous T interchange.

Cost Estimates Breakdown (in \$1,000)							
PE	CE	R/W	Utility	Constr.	Bridges	Non-Participating	Total
1,000	1,089			8,136	2,310		

Present Road: Surface Width? 94'      Surface Type? Concrete and Asphalt

On Street Parking Allowed? No    Present: (No)    One Side    Both Sides    Angle    Parallel  
Proposed: (No)    One Side    Both Sides    Angle    Parallel

Proposed Improvements			
ADT Present: <u>23,700</u>	Yr: <u>2020</u>	Travel Way Width : <u>82'</u>	
ADT Design: _____	Design year _____	No. of Lanes: <u>4 to 6</u>	
Design Speed: _____		Roadway Width: <u>82'</u>	
Maximum Curve: _____		Min. R/W Width: <u>Varies</u>	
Maximum Grade: _____			

Right of Way
Will Additional ROW or easement be acquired? <u>No</u> ROW acquisition by: City <b>DOT</b>
Has any ROW easements been acquired since 7-1-72: <u>Unknown</u> ROW Condemnation by: City <b>DOT</b>
Est. No. of occupied family dwelling to be displaced? <u>0</u>
Est. No. business to be displaced? <u>0</u>
Impacts

Will there be any additional Impacts (Cultural and Environmental Resources): USACE 404 Permit, City Floodplain Permit

Will there be any impacts to 4(f) or 6(f) properties: No

Airports: No Public Hearings: No

Environmental Classification (Cat-Ex, EA, EIS): Cat-Ex

Transportation Enhancements: ITS infrastructure

Intermodal: City Bus route over bridge

Pedestrian Needs: Bridge widening needed for shared use path installation

Railroads Crossings						
RR Name	No. Xings	No. Tracks and Type of Crossing	Daily Train Movements	Train Speed	Present Protection	Proposed Protection

**Purpose and Need Statement:**

Based on the Broadway Corridor Study, one of the options was to construct a continuous T interchange with a bridge expansion to carry a shared use path. This alternative was used as the basis of estimate. The project is needed to address capacity issues, alignment concerns, and pedestrian access restrictions.

**Existing Conditions:**

1. When was the current street section built? Has there been any additional maintenance to the street section?  
Current interchange was constructed in the mid to late 1970s. NDDOT constructed a bridge deck overlay in 2016.
2. How many driving lanes and turning lanes does the street section currently have and what is the widths of the driving and turning lanes?  
Four driving lanes, and a right turn lane for each of the on-ramps.
3. What is the condition of the pavement section?
  - A. If the pavement section is asphalt, is there any alligator cracking, longitudinal cracking, transverse cracking, raveling, bituminous patching or rutting?
  - B. If the pavement section is concrete, are there any broken slabs, faulting, bituminous patching, joint spalling, transverse cracking, or longitudinal cracking.

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Asphalt pavements are showing rutting and cracking issues. NDDOT maintenance staff have been adding spray patch on the

larger cracks. The concrete bridge section is in good condition. Interchange ramps have been replaced in 2023.

4. Any existing geometric concerns?  
There is a city street that continues west from the US 2 off-ramp.
5. Are there any access points to adjoining properties that present a special concern?  
The above city street does serve some commercial properties. This access will have to be addressed in the design.
6. Are there any existing sidewalks or shared use path in place?  
None at this time. However, a major project element will be to extend a shared use path across the interchange.
7. What is the condition of the existing storm sewer? Will any additional storm sewer work need to be done along with this project?  
The system will need to be analyzed and likely replaced. The structural steel plate pipe that carries Puppy Dog Coulee must be replaced.
8. What is the condition of the city's water and sewer line? Will any work have to be done to the city's water and sewer lines along with this project?  
No work should be needed.
9. Describe the existing lighting system currently in place? What type of standards and luminaires are currently being used?  
High mast lighting was recently installed through the interchange area. Some luminaries on Broadway will need replacement based on project limits.
10. What intersections currently have traffic signals? Are there any locations that have a high accident rate? Are additional turning lanes needed?  
Both ramps have traffic signals that need replacement. Not aware of any high crash locations in the interchange area, only near the project termini at 28<sup>th</sup> Ave and 20<sup>th</sup> Ave. Turn lane configurations will change based on final design.

Remarks:

The City wishes to partner with the NDDOT to design and construct improvements to the US 2/52 and US 83 interchange. The improvement will provide a continuous pedestrian/shared use connection through the area when coupled with the Broadway Reconstruction project. A Continuous T or other configuration will alleviate future congestion issues.

City Engineer: 

Date: 1/24/2024

District Engineer: 

Date: 1/11/2024

## US 2 and US 83 Continuous T Interchange Estimate

Project Length:	2100
Section:	modified 6 lanes
Intersection Control:	Signalized
Frontage Roads:	None
Bridge Area:	5485
Bridge Length:	290

Item	LF/EA/SF	Price/Unit	Cost
Mainline 4 lane	850	\$ 2,737.47	\$ 2,326,848.68
Mainline 6 lane	960	\$ 2,737.47	\$ 2,627,970.27
Signals	2	\$ 526,436.35	\$ 1,052,872.70
Right of Way	0	\$ 10.53	\$ -
22nd Removal	22000	\$ 35.10	\$ 772,106.65
Bridge Widening	LSUM	\$ 350.96	\$ 1,925,002.26
	Sub Total		\$ 8,704,800.56
	Contingency	20%	\$ 1,740,960.11
			\$ 10,445,760.67
	Engineering	20%	\$ 2,089,152.13
	Total (2028)		\$ 12,534,912.81

Figure 130: I.2 Continuous T Interchange



