

PUBLIC INPUT MEETING

June 13, 2019

43rd Avenue NE Reconstruction

*from the intersections of
North Washington Street to State Street
Bismarck, North Dakota*



ENGINEERING, REIMAGINED

Meeting Goals



Inform the
Public of
the Project

Discuss
Proposed
Alternatives

Receive
Input

Project Location



Need for the Project



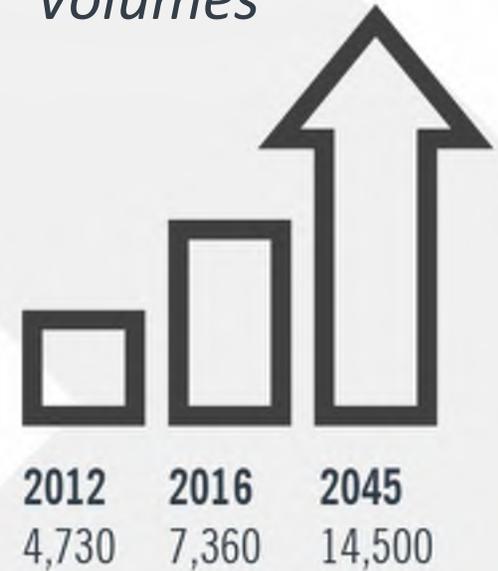
- Social Demands & Economic Development
- Roadway Deficiencies
 - › Turn Lanes
 - › Lighting
 - › Pedestrian Facilities
- Capacity/Increase in Traffic



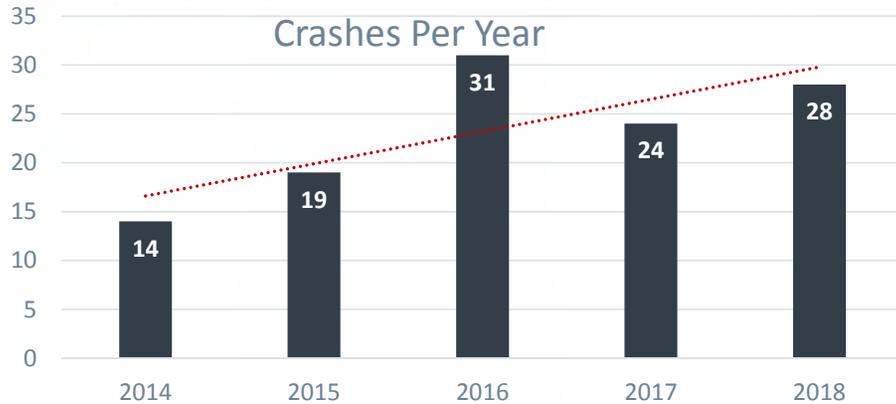
Traffic Volumes



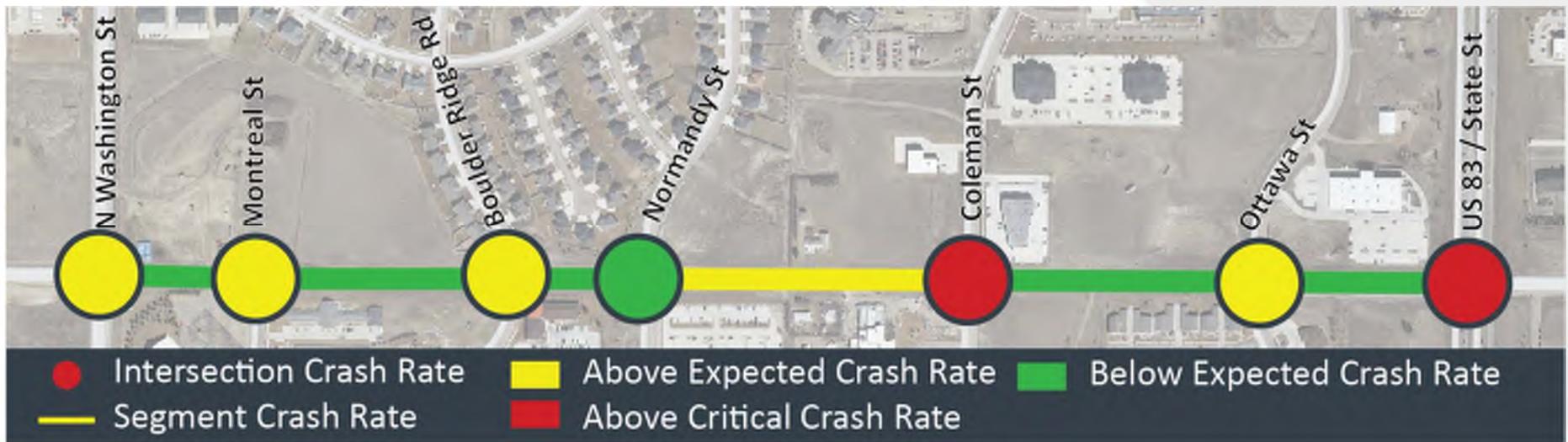
➤ *Daily Traffic Volumes*



Crash History



25%
Resulting In Injury

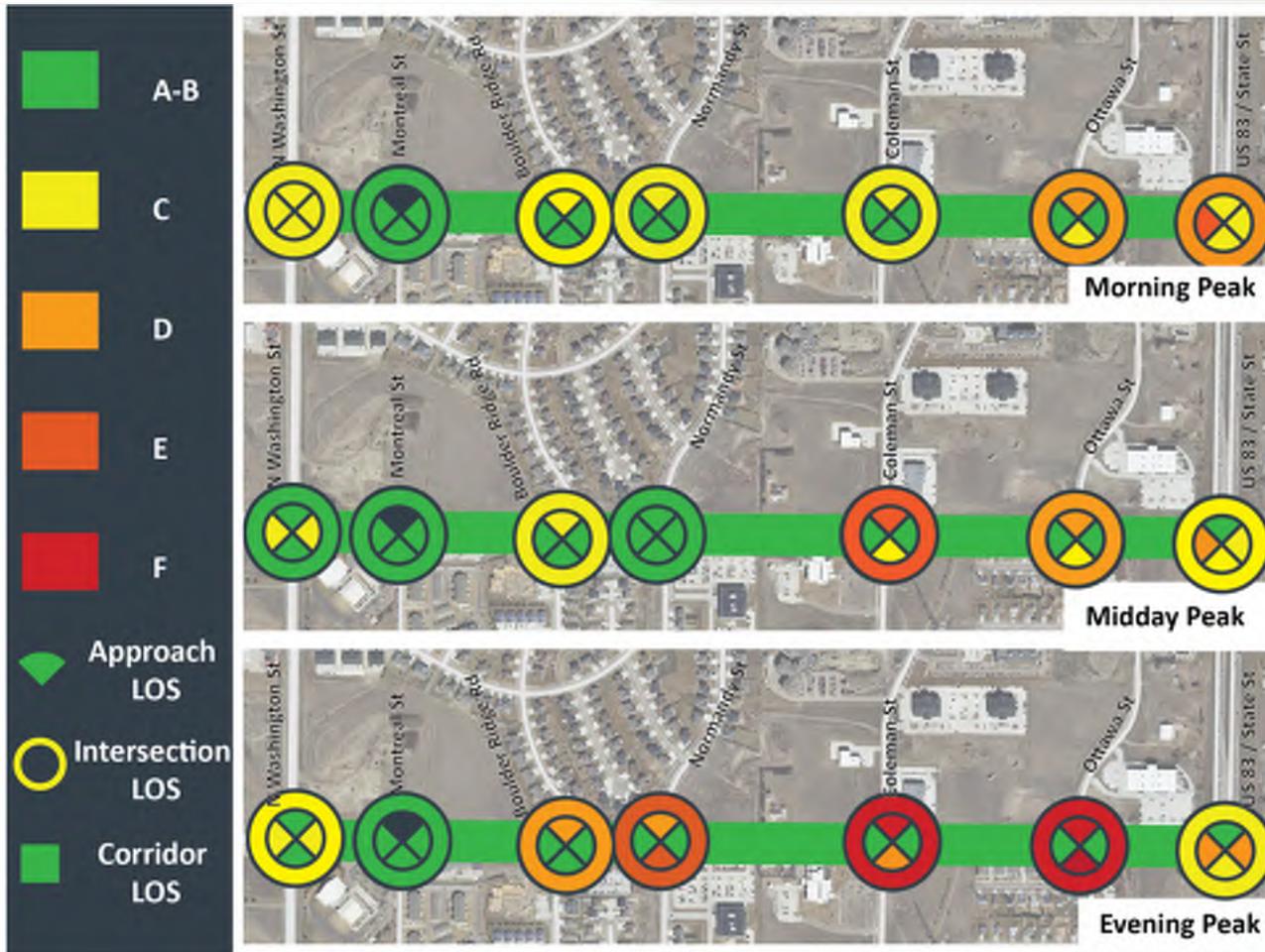


Level of Service

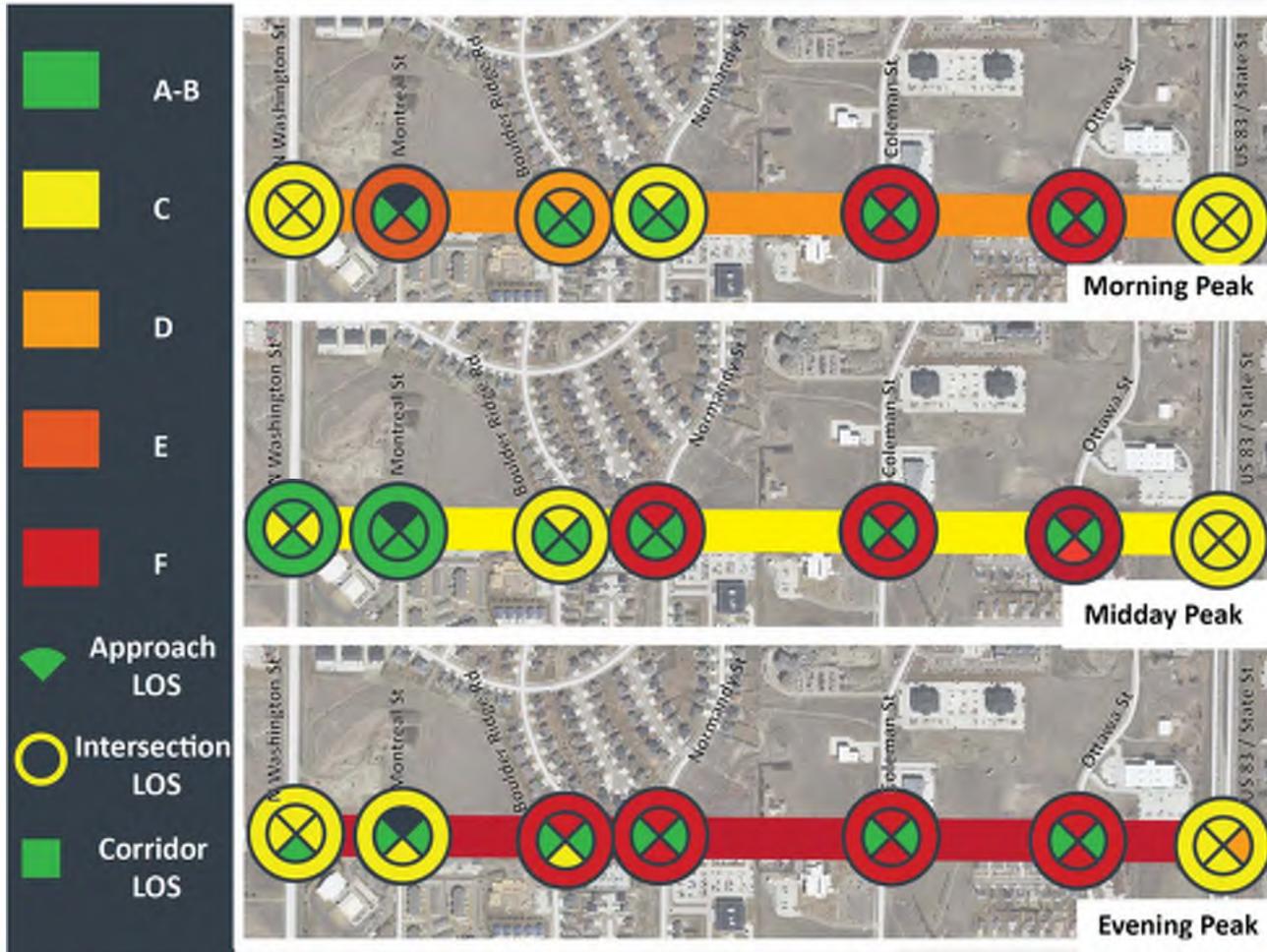


CAPACITY	TRAFFIC FLOW	DESCRIPTION	LEVEL OF SERVICE
Under		FREE FLOW Low volumes and no delays.	A
		STABLE FLOW Low volumes and speeds dictated by travel conditions.	B
		STABLE FLOW Speeds and maneuverability closely controlled due to higher volumes.	C
Approaching		RESTRICTED FLOW Higher density traffic restricts maneuverability and volumes approaching capacity.	D
At		UNSTABLE FLOW Low speeds, considerable delays, and volumes at or slightly over capacity.	E
Over		FORCED FLOW Very low speeds, volumes exceed capacity, and long delays with stop-and-go traffic.	F

Existing Operations



2045 Operations



Other Key Considerations



EMERGENCY SERVICES

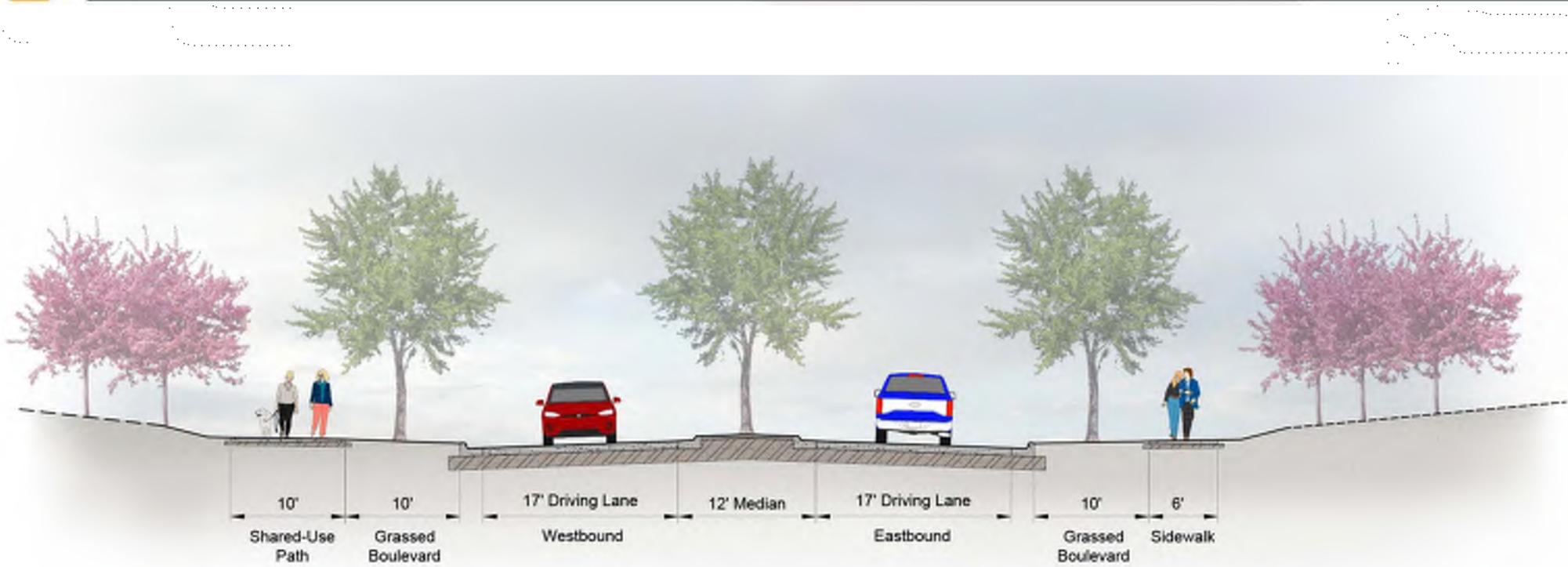


Alternatives



- » *Alternative A*: No Build
- » *Alternative B*: Three-Lane Section with Roundabout Intersections
- » *Alternative C*: Five-Lane Section with Future Signalization
- » *Intersection Access Control Options*

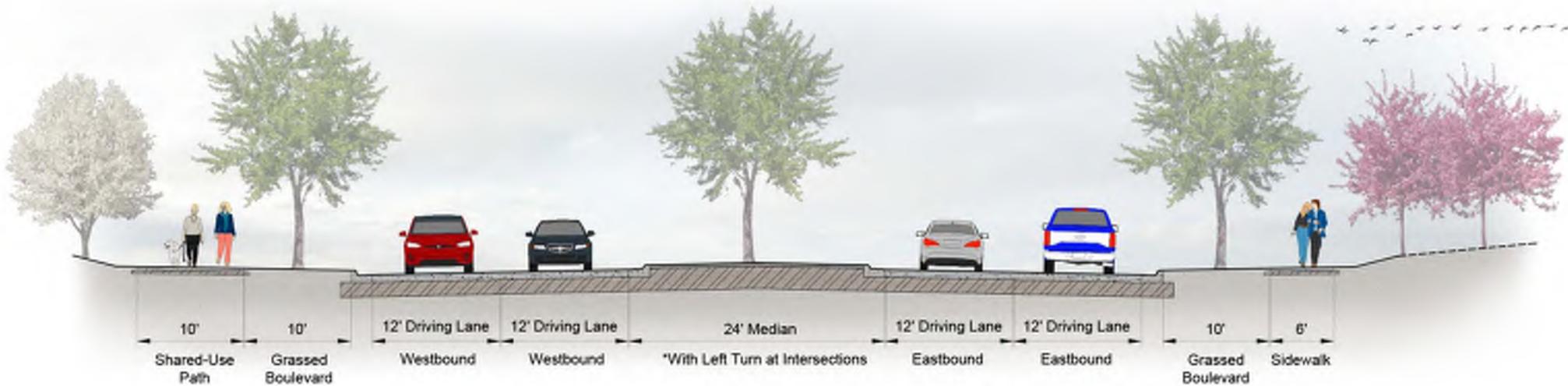
Alt B – 3 Lane Section/Roundabouts



Alt B – 3 Lane Section/Roundabouts



Alt C – 5 Lane Section/Future Signal



Alt C – 5 Lane Section/Future Signals



3 Lane Section with Roundabouts



-56%

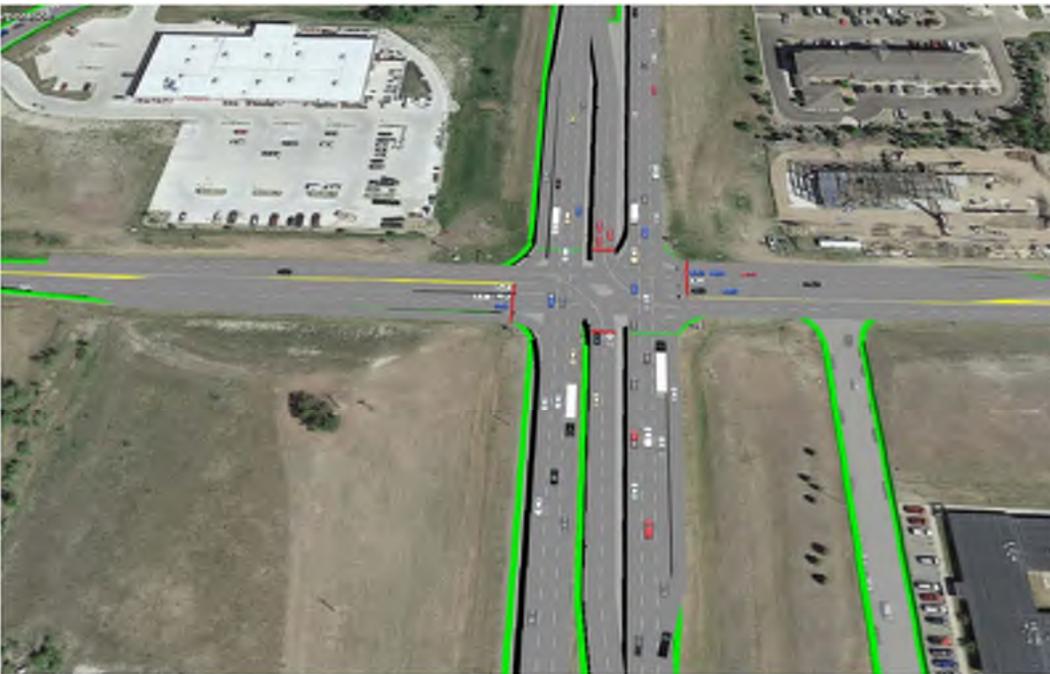
Change in Total Delays

-57%

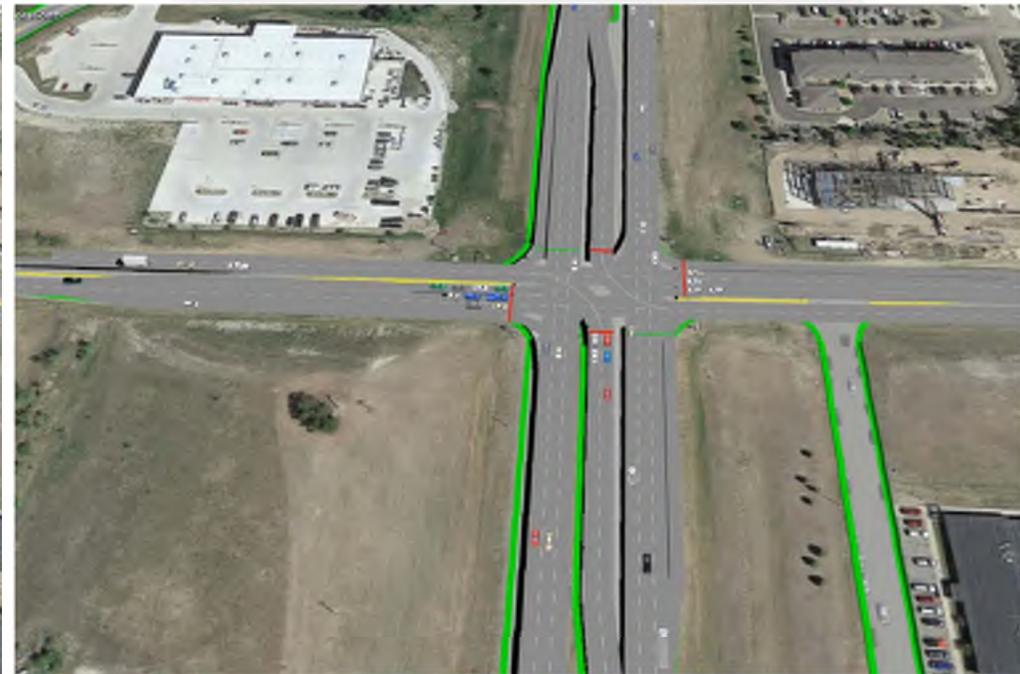
Change in Total Conflicts

+15 sec

Change in Travel Time



2045 No Build



2045 Build

5 Lane Section with Traffic Signals



-55%

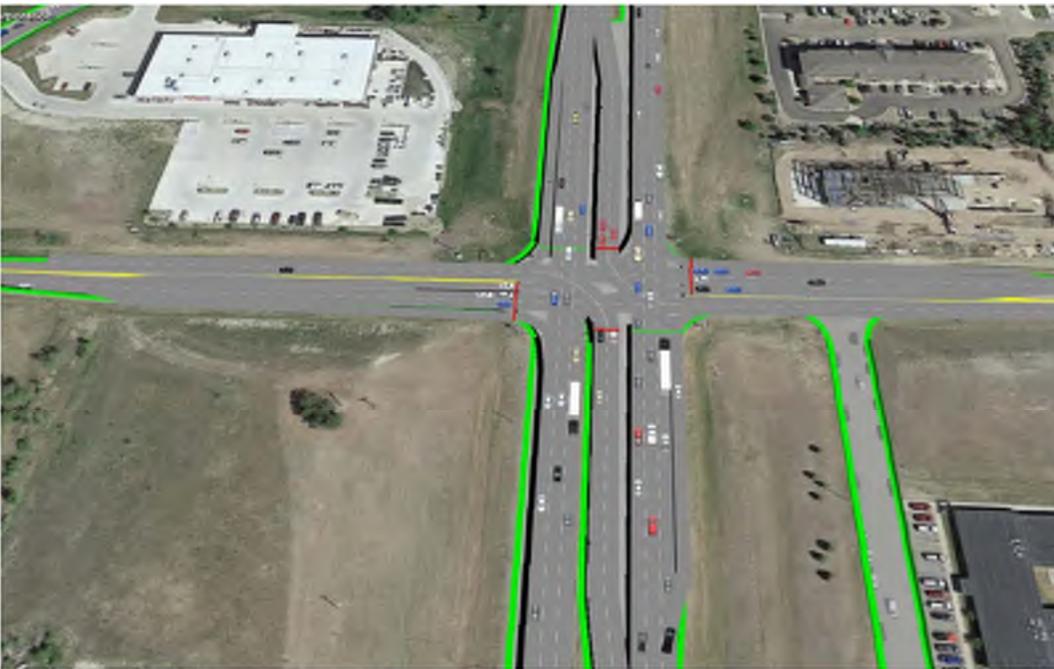
Change in Total Delays

-23%

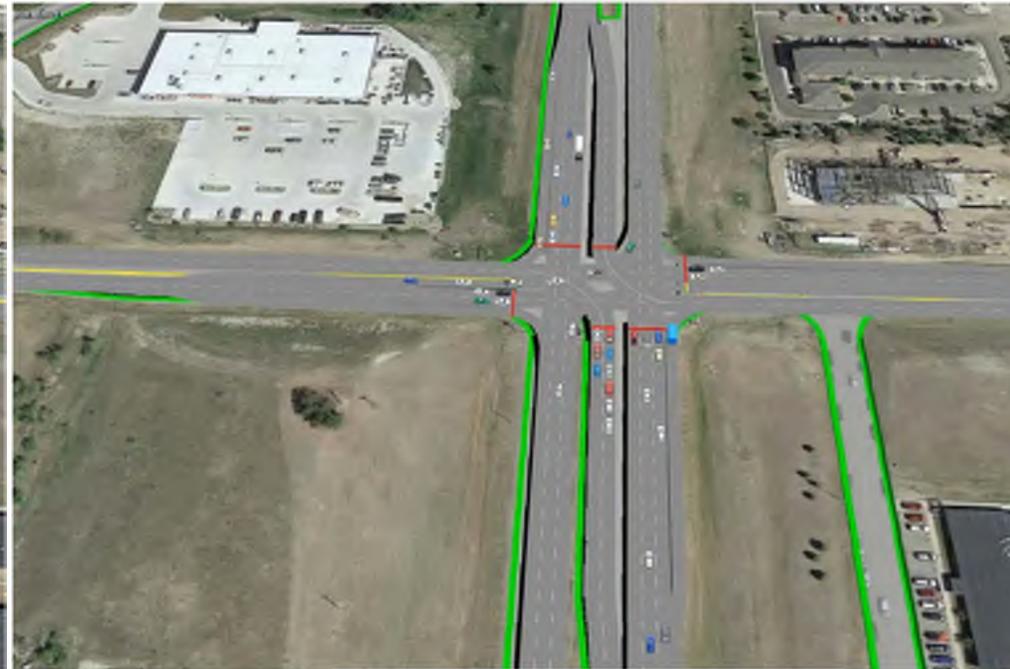
Change in Total Conflicts

-5 secs

Change in Travel Time



2045 No Build



2045 Build

2045 Traffic Safety/Alt Comparison



2045 Daily Safety Conflicts



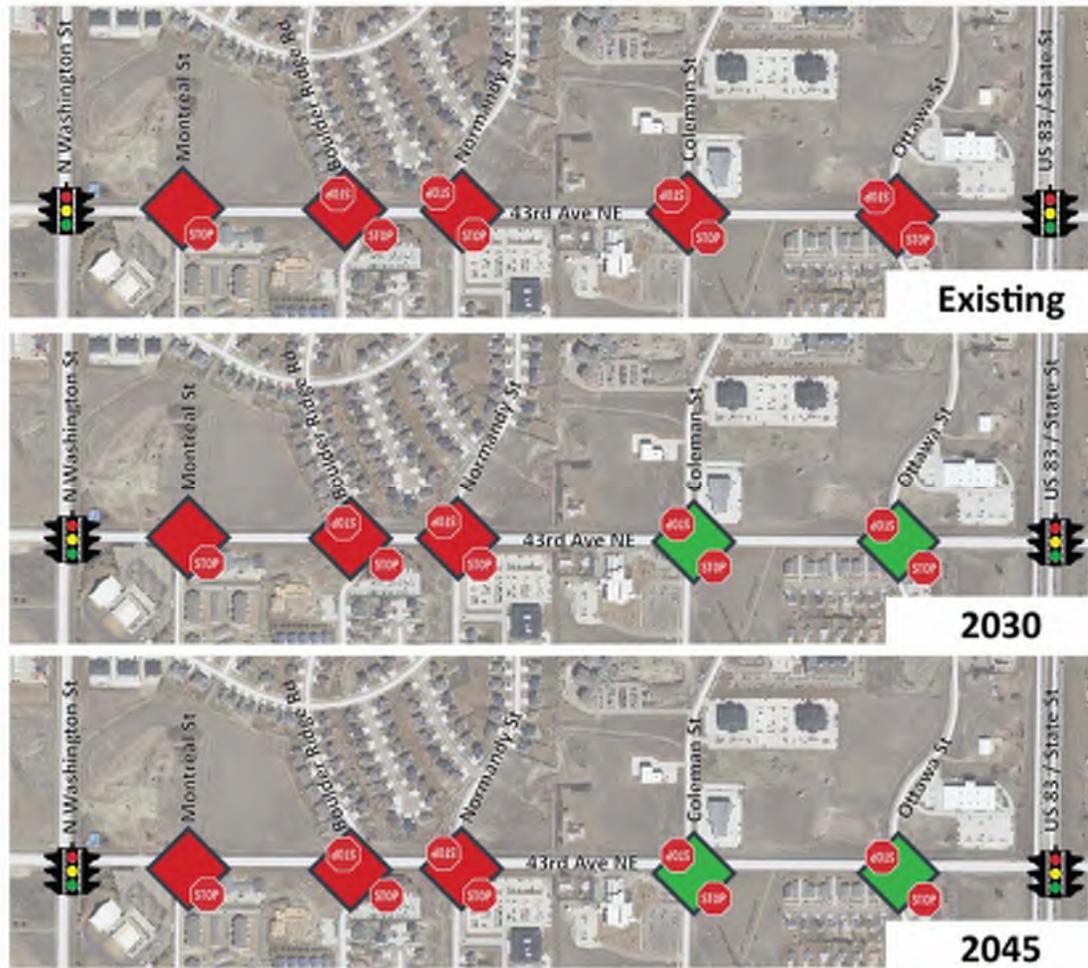
Signal Warrant Analysis



Warranted



Unwarranted



Intersection Options



MONTREAL STREET & BOULDER RIDGE ROAD – FULL ACCESS



Intersection Options



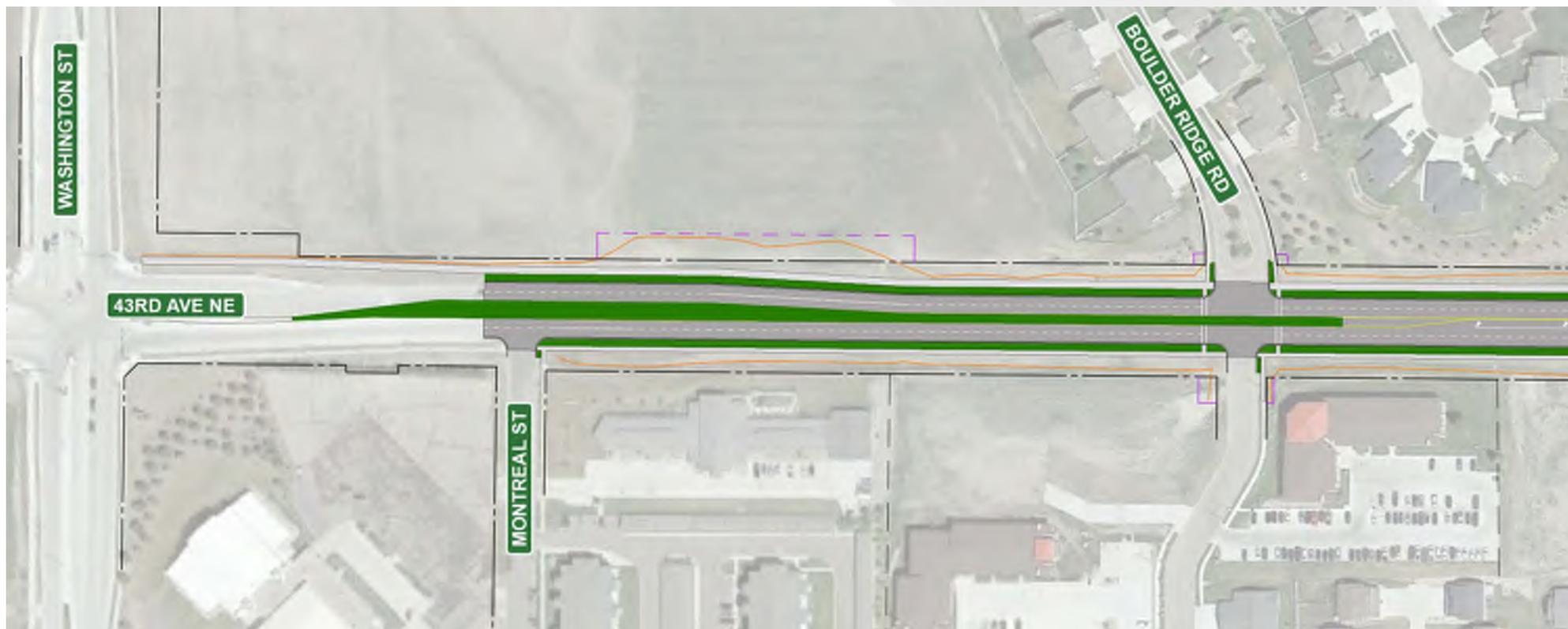
MONTREAL STREET & BOULDER RIDGE ROAD – 3/4 ACCESS



Intersection Options



MONTREAL STREET & BOULDER RIDGE ROAD – RIGHT IN/RIGHT OUT



Intersection Options



OTTAWA STREET/LOCKPORT – FULL ACCESS (ALT C)



Intersection Options



OTTAWA STREET/LOCKPORT – 3/4 ACCESS (ALT B&C)



State Street Intersection



Noise Impacts

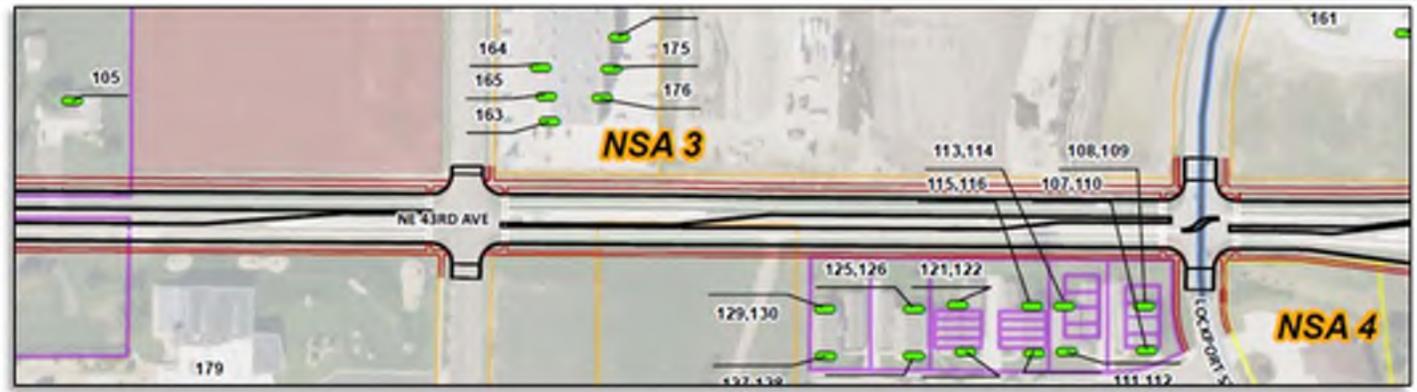


Existing dBA Range = 53.6 - 63.0

Build dBA Range = 56.1 - 64.7

FHWA Impact Threshold for Residential = 66 dBA

Receptor	Existing dBA	Build dBA
105	53.6	56.1
108	60.6	62.4
109	63.0	64.7
113	58.3	60.6
114	61.7	63.9
115	58.9	61.5
116	61.8	64.1
121	58.0	60.7
122	61.6	63.9
125	57.7	60.3
126	61.2	63.6
129	57.3	59.9
130	61.1	63.5



Construction Phasing



Project Cost



Project Budget \$ 9,100,000

Potential Federal Share (80%) \$ 7,280,000

2022 Funding

Local Cost (20%) \$ 1,182,000

» *Alternative B:* \$9.0 - \$9.1 Million

Three-Lane Section with Roundabout Intersections

» *Alternative C:* \$8.8 - \$9.0 Million

Five-Lane Section with Future Signalization

Summary



No decisions have been made. We appreciate your input!

Submit comments by June 28, 2019

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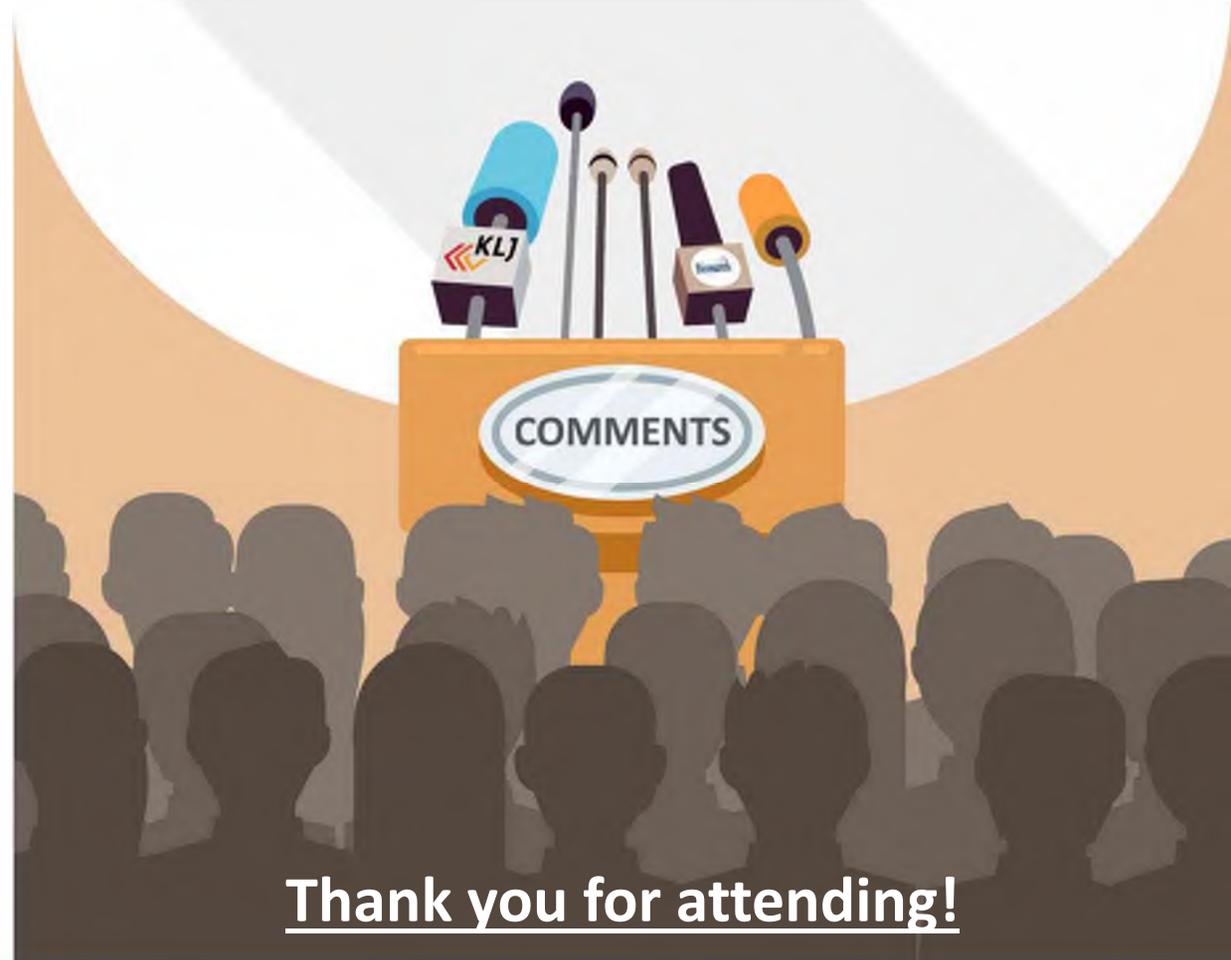
Project Website: www.bismarcknd.gov/streets

Questions/Comments



> Speaker Guidelines

- › State name and organization (if applicable)
- › Describe issue or ask question
- › Offer solutions
- › Be concise



Thank you for attending!