

Highway 46 Public Input / Comments:

- Roadway lighting & other improvements won't be upgraded unless the roadway is changed to a 3-lane
 - A total reconstruction will allow for many improvements, such as new roadway lighting, storm sewer upgrades, new and additional sidewalks, city water and sewer upgrades, etc.
- School turning traffic will get too congested during morning and afternoon with a 3-lane
 - Design will incorporate eastbound right turn lanes at both the main entrance to the school and at Walnut Avenue. Please see attached document for further information.
- Please provide before and after accident statistics from SD towns that went from a 4-lane to a 3-lane highway.

> Sisseton:

2015-2019 (five years prior) – 59 crashes including 45 PDO, 13 injury, and 1 fatal – 3.56 Weighted Crash Rate

2021 (one year after) – 4 crashes including 2 PDO and 2 injury – 1.48 Weighted Crash Rate

Milbank:

2004 (one year prior to restriping) – 23 crashes including 16 PDO, 6 injury, and 1 fatal – 11.25 Weighted Crash Rate

2016-2020 (five years after all reconstruction) – 9 crashes including 8 PDO and 1 injury – 0.41 Weighted Crash Rate

Ipswich:

2007-2011 (five years prior) – 20 crashes including 13 PDO and 7 injury – 6.79 Weighted Crash Rate 2014-2019 (five years post) – 13 crashes including 11 PDO and 2 injury – 3.25 Weighted Crash Rate

- Large farm equipment will not be able to make it thru town due to the narrowed width
 - Compared to the existing roadway, the overall width of the roadway will be decreased by 2.5 ft on each side of the center of the roadway. This will provide adequate space for farm machinery to navigate thru. See attached document for further information. Please see attached document for further information.
- First responders will not be able to get thru down with the 3-lane section

Additional buffer along the curb and the 14-ft. driving lane will allow room for the traveling public to park along the curb to allow the emergency vehicle to pass using most of the driving lane along with the entire center turn lane. Please see attached document for further information.

3-Lane section is needed West of town and at 393rd Avenue for safety of turning vehicles

A project has been added to the STIP to extend the 3-lane section from the west edge of Wagner to just West of 393rd Avenue to accommodate left turning vehicles at all the approaches and also at 393rd Avenue.

Traffic needs to slow down coming into town from the West

A speed study will be done after reconstruction to determine appropriate speed zones and will determine if speed mitigation measures need to be addressed with the new configuration.

3-lane section will cause too much congestion thru town and travelers will avoid Wagner

A 3-lane configuration in other communities with similar or more traffic volumes handles the traffic volume with a "Level of Service A". See attached document for further information.

3-lane section will make it hard to maneuver around wide loads and large farm machinery

➤ The existing 4-lane section consists of 2-12 ft lanes in both directions. A typical width of farm machinery is 18 ft. If an individual maneuvers around that piece of equipment, they have to cross centerline and encroach into the opposing set of lanes. The proposed 3-lane section has a 14 ft driving lane and a 2.5 ft shoulder. In this case, the individual would extend into the center turn lane, but not in the lane of oncoming traffic. See attached document for further information.

3-lane section will make it harder to cross traffic and go the opposite direction

➤ A 3-lane configuration creates larger gaps and with cross traffic navigating in one lane reduces the decision time process and reduces the width for crossing traffic, reducing potential incidents.

• Current 4-lane section is working for us and we like it so leave it a 4-lane

An analysis and lane configuration of a reconstruction project includes many factors. Safety, capacity, and condition of existing pavement are some of the most important aspects reviewed. We acknowledge that some people like the existing 4-lane and it works for them, but our duty is to evaluate and design a corridor that incorporates all factors and best fits the needs for everyone.

Elderly drivers, some of which shouldn't be driving will get confused and cause accidents with a 3-lane

- All communities have elderly drivers and communities that have been modified to a 3-lane configuration have actually experienced a decrease in accidents in those communities. Please see attached document for further information.
- Residents, especially elderly ones living along Highway 46 won't be able to back out of their driveways safely with the narrowed width of the 3-lane.

All communities that have been modified to a 3-lane configuration have both business and residential accesses to the highway. Those communities function as they should and have also seen a decrease in accidents in their communities. Please see attached document for further information.

Safety Hazzard – Traffic turning into a business will have to cross traffic, causing more accidents

> The current 4-lane configuration requires an individual to cross two lanes of oncoming traffic, while waiting in an active lane of traffic. The 3-lane configuration reduces that to one set of lanes that an individual needs to cross and reduces the distance to cross while waiting in a dedicated turn lane.

• If there is enough money for a 3-lane, there should be enough money for a 4-lane

➤ Cost is always a factor that is looked at during the scoping of a reconstruction project, but is not the decisive factor. Safety, capacity, and condition ultimately prevail in the final decision. A 3-lane configuration provides the greatest benefit cost ratio of all options considered.

• Wagner has a lower average accident rate so why change it from a 4-lane to a 3-lane

> The goal of the department is to make every attempt to reduce the statewide accident rate as close to zero as possible. Statistics have shown that the 3-lane configuration reduces the accident rate and will help in our attempt to try and achieve that goal. See attached document for further information.

As is, I don't feel safe walking on the sidewalks adjacent to HW 46 thru Wagner. Need a buffer between driving lane and walking path for safety of pedestrians.

➤ The 3-lane configuration provides a 2.5 ft colored concrete buffer between the top of the curb and the sidewalk along with a 2.5 ft buffer between the driving lane and the curb. This will provide 5 ft. of additional buffer between the driving lane and the sidewalk, increasing the safety of pedestrians walking along the highway.

A boulevard is needed to pile snow in winter so sidewalks can be kept clean during winter months.

➤ The 3-lane configuration will provide a 2.5 ft. colored concrete buffer between the top of the curb and the sidewalk along with a 2.5 ft. buffer between the driving lane and the curb. This will provide 5 ft of additional buffer between the driving lane and the sidewalk. This buffer will be used for snow storage during the winter and allow the sidewalks to be easily maintained.

• Currently, I find myself switching lanes to avoid turning vehicles and am afraid of side collisions. A 3-lane would eliminate this concern. I am in support of the 3-lane.

The 3-lane configuration requires thru traffic to stay in one lane, eliminating the opportunity to switch lanes and reducing the chance of side collisions.

• Any reconstruction will be detrimental to businesses during construction.

During the initial scoping of the project, it was determined that the existing concrete surfacing was in such poor condition, that a rehabilitation project or an overlay project was not a feasible option. The condition of the existing surfacing and need for upgrades to other facilities drove the necessity of a reconstruction project.

- I was concerned about the change to a 3-lane at first but the additional improvements and addressing pedestrian safety will be beneficial for all in our community.
 - Please see attached document for further information.
- Public has not been informed of what is going on and have not had a chance to provide input.
 - In total, 25 scheduled meetings, discussions, input sessions have been held to discuss and provide input for the project. Nine of these meetings were with city or individuals discussing specific items regarding the project. Sixteen of these meetings were open to the public, where public input and comments were gathered regarding the project.
- Garbage pickup will be a concern for residents living along Highway 46 if change to a 3-lane
 - The additional buffer along the shoulder will allow garbage pickup along the highway. Please see attached document for further information.
- Currently speeding on Highway 46 thru Wagner is a major problem. A 3-lane will help control the speed thru town. I am 100% in support of the 3-lane to help control the speeding issue and for the pedestrian safety benefit.
 - A speed study was completed on Highway 46 thru Wagner at two locations in both the eastbound and westbound directions. They were completed in front of the Armory and near the school. Of the 400 vehicles checked, 211 or over 50% of the vehicles were traveling over the speed limit. The 85th percentile speed was 34.5 mph.
- Trucks will have trouble turning onto and off the highway due to the narrowed width of the 3-lane section.
 - ➤ Wider turning radiuses are being incorporated into many of the intersections thru town to allow for the trucks turning onto the highway. The additional width between the curb and the driving lane along with the 14-ft. lane width will also help that concern.
- Currently there are two approaches into my business, original plan shows I only get one back. Converting
 the highway to a 3-lane is fine and will work ok for my business but would like the state to consider
 allowing my two approaches to stay.
 - ➤ We have addressed concerns like this and have worked with individual landowners regarding access issues as they come up. Solutions to this concern, along with many others concerns, have been worked out between the landowner and the DOT, resulting in workable solutions for both parties.
- Traffic will back up at the stoplight at main street if changed to a 3-lane
 - > Please see attached document for further information
- Pedestrians / Children crossing HW 46 at Walnut and near the park need to be addressed
 - > The 3-lane section will accommodate pedestrian crossing traffic easier and safer than the existing 4-lane section. It is part of the project to analyze crossing locations to see if additional measures are needed to further accommodate pedestrians crossing the highway.

- We are a low-income rural town, a lot of people have no vehicles and have to walk year-round. Sidewalks that are safe to use are a blessing.
 - > Please see attached document for further information
- Some people say that speed and accidents increase in towns that converted from a 4-lane to a 3-lane and
 that statistics show that the accident rate did go down but that is because the accidents are not reported
 since the city handles those accident reports.
 - The DOT can't control what accidents get reported and which ones don't. However, this is most likely true for all communities even before or after a construction project.
- With the new shared use path going from the school to the boys and girls club, we don't need sidewalks along HW 46.
 - It is standard to place sidewalks along both sides of the highway thru a community. The current design will provide safe pedestrian access to all parts of Wagner along the highway.
- A petition with over 1,500 signatures was submitted in support to save the 4-lane
 - ➤ We acknowledge a petition in support of the 4-lane was distributed. In response to that petition, another public meeting was held in Wagner on Nov. 4, 2021, to gather additional public input. Also, a letter was distributed during that meeting outlining and addressing prior public concerns. All the comments received prior to, and after the petition, and been taken into consideration.



Division of Planning & Engineering

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dot.sd.gov

November 4, 2021

Re: NH 0046(69)288, Charles Mix County, PCN 05JN

SD46 in Wagner

Grading, Surfacing, Storm Sewer, Curb & Gutter, Sidewalk, Lighting, Signals

This document is provided to the Community of Wagner to assure its citizens that the SDDOT has reviewed and carefully considered comments expressed at the July 19, 2021 City Council Meeting and after.

Two years of construction will kill the businesses in Wagner.

The project consists of 2.1 miles of urban reconstruction. Due to the length and complexity of urban reconstruction, it is not possible to complete construction in one construction season. SD Highway 46 will be constructed in phases and will be open to traffic. Signage will be provided during construction directing travelers to specific businesses. Entrances to businesses will remain open, except for short periods of time when a specific entrance is being constructed. At those times, every effort will be made to provide an alternate access.

The Mt. Rushmore Road Group in Rapid City is made up of member businesses along Mt. Rushmore Road (US Hwy 16) and was established specifically to promote improvements to Mt. Rushmore Road and to manage the effects of multi-year reconstruction of Mt. Rushmore Road (3 phases over 5 years from 2014 through 2018). Regular meetings, updates on the construction activities and making every effort to maintain access resulted in satisfied businesses along the corridor during all three phases. More information can be found at www.mountrushmoreroadgroup.org, and on the Mount Rushmore Road Group Facebook page.

Our crash data is well under the statewide average so why do we have to change?

The SDDOT works to enhance safety with each project. While the 2015-2020 crash rate of 1.16 is lower than the statewide weighted crash rate of 1.92 for a similar roadway, studies have proven that 3-lane roadways are safer than 4-lane roadways by as much as $47\%^1$. A predictive crash analysis of this corridor shows that this roadway would benefit from a 28% to 37% reduction in annual crashes, depending on type of crash. The 3-lane roadway, with the center continuous two way left turn lane significantly reduces rear-end, sideswipe and left-turn crashes.

 Oversized equipment will have trouble due to the decreased pavement width – houses, farm equipment, slow moving vehicles, etc...

On a 4-lane roadway, any vehicle (load) or equipment 12 feet or wider will have to use both travel lanes, effectively eliminating the ability to legally pass the vehicle/equipment. The 14-foot-wide lanes of the 3-lane roadway better accommodate wide(r) loads.

¹ FHWA, Road Diet Informational Guide, 1st Edition, 2014

Farmer owned and operated equipment is exempt from width and height limitations. No equipment wider than 8'6" may be operated on a State highway between one-half hour after sunset and one-half hour before sunrise. All farm machinery designed for travel at speeds of 25 mph or slower must display a slow-moving vehicle emblem.

The maximum allowable width of any vehicle without permit is 8'6". Vehicles wider than 20 feet travelling on a State Highway require an escort vehicle.

The slower speeds on this roadway allow a driver time to negotiate oncoming wide vehicles.

• Emergency Vehicles will have trouble getting through town with the 3 lane

On a 4-lane roadway, drivers of emergency vehicles must rely on traffic moving to the right to allow room to proceed. On a 3-lane roadway, the emergency vehicle can utilize the Two-way Left Turn Lane to negotiate around/through traffic².

SDCL 32-26-15. Yielding right of way to emergency vehicles – Duty of driver of emergency vehicle not to exercise right of way arbitrarily – Violation a misdemeanor.

The driver of a vehicle upon a highway shall yield the right-of-way to police and fire department vehicles and ambulances if they are operated upon official business and the drivers give an audible signal by bell, siren, or exhaust whistle or visual signal by flashing, oscillating, or rotating beams of red light or combinations of red, blue, or white light visible one hundred eighty degrees to the front of the vehicle. The provisions of this section do not relieve the driver of a police, fire department vehicle, or ambulance from the duty to drive with due regard for the safety of all persons using the highway nor does it protect the driver of any such vehicle from the consequence of an arbitrary exercise of such right-of-way. A violation of this section is a Class 2 misdemeanor.

Garbage pickup – Currently Hwy 46 is the only way to pick up garbage for houses along Hwy 46.

SDCL 32-26-7 states "Upon a roadway which is divided into three lanes, a vehicle may not be driven in the center lane except when overtaking and passing another vehicle where the roadway is clearly visible and such center lane is clear of left turn...". Using the two way left turn lane to pass a garbage truck stopped for collection is lawful and common on other 3-lane roadways.

Traffic counts – When/where and how were they taken?

New counts were obtained to address concerns at the school, the Walnut Avenue intersection, and the Main Avenue intersection. The counts were taken:

- Main Ave and SD Hwy 46 intersection (Tuesday) August 31, 2021 and (Friday through Sunday) September 3, 4 and 5, 2021
- Walnut Ave and SD Hwy 46 intersection (Tuesday) August 24, 2021
- Wagner School north entrance onto SD Hwy 46 (Thursday) September 2, 2021

All counts were obtained between 6:00 AM and 6:00 PM using Miovision video equipment to record traffic. The videos were sent to a 3^{rd} party vendor to determine counts.

High volume events such as high school sporting events, parades or large funerals are not typically analyzed. Driver expectations during high volume events are different than normal day to day driving – drivers expect delays and congestion during these events and drive accordingly.

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² FHWA, Road Diet Mythbusters, 2016

Traffic studies are completed to determine basic number of lanes needed based on traffic volumes and a desired level of service for a specific design year (a minimum of 20 years beyond the anticipated year of project construction). For this project the design year is 2045.

• Traffic backup at the stoplight at Main Street and Hwy 46 – Will block vehicles getting on Hwy 46 East & West of light.

The traffic study analysis for a signalized intersection at Main Avenue and SD Hwy 46 indicates eastbound traffic would queue 5 to 7 cars and westbound traffic would queue 4 to 6 cars. The cycle length time for a red signal on SD Hwy 46 would last approximately 60 seconds. A signal at this intersection would be set up to provide continuous free flow traffic for SD Hwy 46. The yellow/red/green cycle would be actuated by vehicles on Main Avenue as they pass over detector loops in the Main Avenue pavement. Pedestrians wanting to cross SD Hwy 46 would utilize push buttons to actuate the "WALK" signal.

• School congestion at Hwy 46 & Walnut Avenue – Need to address with stop light or change school traffic flow. Traffic data collected indicates very minimal congestion at Hwy 46 & Walnut Avenue and minimal/short durations of left turn queueing at the SD Hwy 46 school entrance. Observed traffic patterns and analysis of data do not indicate any additional roadway/turning movement improvements are warranted for either location. Construction of a 3-lane roadway with a two way left turn lane would allow traffic turning left into the school to queue in the TWLTL without blocking through traffic.

Pedestrian/children crossing Hwy 46 at Walnut Avenue along with near the park.

There are existing marked crosswalks at Walnut Avenue, High Avenue and Main Avenue. Those crosswalks will be replaced with the construction project. In addition, the SDDOT will install with the project, a marked crosswalk on the west leg of the SD Hwy 46/Sheridan Avenue intersection.

The SDDOT will also install with the project, pedestrian activated Rectangular Rapid Flashing Beacons (RRFBG) at Walnut Avenue and at Sheridan Avenue. The RRFB's use a high intensity strobe pattern of light to alert drivers of pedestrians crossing and have been shown in numerous national studies to increase safety.

Pedestrian foot traffic during winter months – Pedestrians have to use highway during winter.

The design of the 3-lane roadway includes a new sidewalk separated from the back of curb (boulevard). The boulevard will allow for snow storage and will reduce the throwing of snow onto the sidewalk, which will make sidewalk snow clearing operations much easier. Snow removal from sidewalks is governed by City ordinance.

The project is extending the sidewalks to the west and to the east, providing additional pedestrian facilities. Sidewalk will be installed from Wagner Building & Supply to Valley Pump & Casino on the south side and from Family Dollar to Valley Pump & Casino on the north side.

Semis turning south on Front & High Avenues.

The 3-lane design includes larger radii at Front Avenue and High Avenue intersections to accommodate a typical semi pulling a 53' long trailer.

Speed of semis through town, and

• Traffic needs to slow down coming into town from the west.

3-lane roadways with 11 foot or narrower lanes, calm traffic speeds by 3-5 miles per hour; however, case studies have shown that 3-lane roadways with wider lanes (12' or more) can encourage faster speeds³. Following construction, speeds through town will be reviewed and any necessary adjustments to speed limits will be made.

³ FHWA, Road Diet Informational Guide, 1st Edition, 2014

Speeds coming into town from the west are incrementally reduced as the number of businesses and residences increases. Radar feedback signs are also in place to encourage adherence to posted speed limits.

- Loss of business due to vehicles not being able to get in and out easily, and
- 3-lane will cause more congestion and make the roadway more dangerous.

The traffic study referenced above also analyzed the overall road segment Level of Service (roadway efficiency). For the traffic volumes on this roadway, the Level of Service for a 3-lane roadway is determined to be "A" for the design year 2045. The minimum Desirable Level of Service for this roadway segment (Multilane Principal Arterial) is "C".

Table 15-2 Multilane Principal Arterial Level of Service Definitions⁴

Principal Arterial – Multilane Facility			
LOS	Description	Free-Flow Speed	Density
		(mph)	(passenger cars / mile / lane)
Α	Free-flow operation	All	≤ 11
В	Reasonably free- flow operation;	All	> 11 - 18
	minimal restriction on lane		
	changes & maneuvers		
С	Near free-flow operation;	All	> 18 - 26
	noticeable restriction on lane		
	changes & other maneuvers		
D	Speed decline with increasing	All	> 26 - 35
	flows; significant restriction on		
	lane changes & other maneuvers		
Е	Facility operates at capacity; very	60	> 35 – 40
	few gaps for lane changes &	55	> 35 – 41
	other maneuvers; frequent	50	> 35 – 43
	disruptions & queues	45	> 35 - 45
F	Unstable flow; operational	60	> 45
	breakdown	55	> 41
		50	> 43
		45	> 45

• Travelers will find another route to get to (Missouri) river because of the congestion caused by 3-lane. See previous discussion regarding traffic study analysis and Level of Service for a 3-lane through Wagner.

It is conceivable that traffic from outside the Wagner area may use an alternate route <u>during construction</u>.

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⁴ SDDOT, Road Design Manual, Chapter 15 – Traffic, 2019

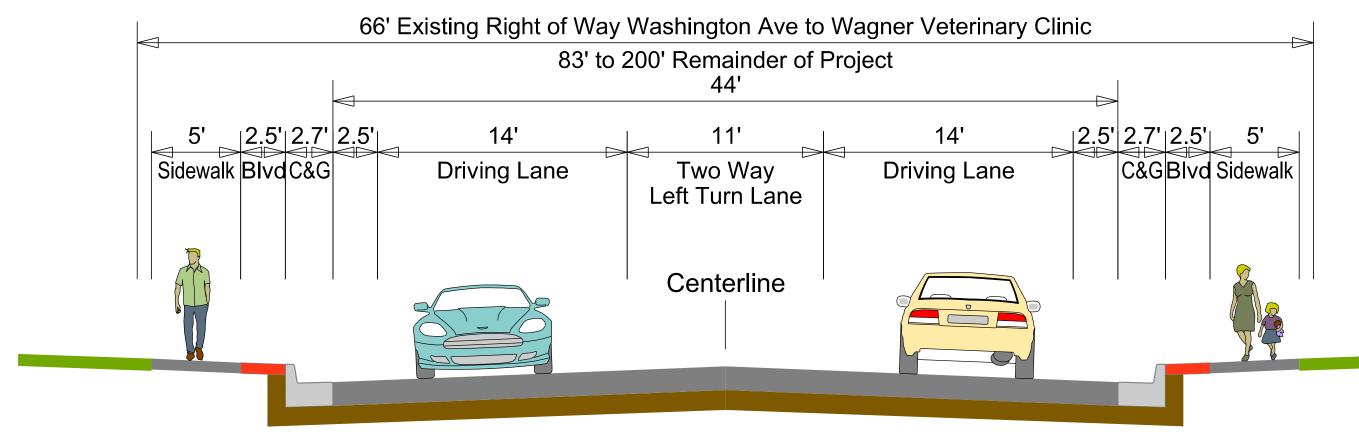
HW 46 Reconstruction Meetings / Discussions / Public Input – Timeline

4/24/2015	City of Wagner Meeting / Discussion – City / DOT
6/23/2015	On Site Design Inspection – City / DOT
7/20/2016	On Site Design Inspection – City / DOT
11/7/2016	HW 50 & HW 46 City Council Meeting – Public
11/17/2016	Wagner Council Meeting - Public
1/17/2017	HW 50 & HW 46 Public Meeting - Public
3/29/2017	Final Design Inspection – City / DOT
5/1/2017	Wagner Council Meeting - Public
5/22/2017	Wagner City Council Meeting – Public
7/13/2018	Wagner City Utility Upgrade Meeting – City / DOT
7/25/2018	Wagner City Council Meeting – Public
8/14/2018	Wagner Rotary Club Meeting – Project Presentation
7/10/2019	STIP Meeting in Mitchell - Public
11/20/2019	Final Design Inspection – City / DOT
3/24/2020	Virtual Project Information / Public Input Meeting – Public
7/8/2020	STIP Meeting in Sioux Falls (Virtual) - Public
8/13/2020	In-person Project Information / Public Input Meeting – Public
3/23/2021	In-person Project Information / Public Input Meeting – Public
4/16/2021	Project Discussion Meeting – Yankton Sioux Tribe / DOT
4/16/2021	Project Landowner Meetings – Adjacent Landowners / DOT
7/14/2021	STIP Meeting in Sioux Falls - Public
7/19/2021	Wagner City Council Meeting – Public
10/20/2021	Project Discussion Meeting – Wagner School Admin / DOT
11/4/2021	In-person Project Information / Public Input Meeting – Public
7/13/2022	STIP Meeting in Mitchell – Public

Total HW 46 Reconstruction Meetings / Discussions / Public Input Sessions = 25

Total Public Input Meetings / Discussions = 16

Total Individual / City Coordination Meetings = 9



Proposed 3 Lane