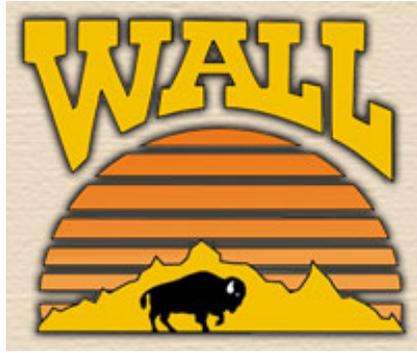




Wall Master Transportation Plan



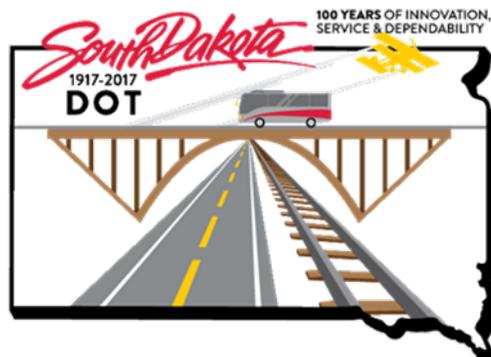


Wall Master Transportation Plan

South Dakota Department of Transportation
City of Wall

August 8, 2017

Prepared by: Scout Sudbeck – Intern





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Project Introduction

Under Fixing America's Surface Transportation (FAST) Act signed into law in December 4, 2015, a percentage of the federal transportation funds received by South Dakota must be designated for transportation planning and research activities through the State Planning and Research Program (SPR). Historically, the South Dakota Department of Transportation (SDDOT) used a portion of the SPR funds for transportation planning studies for counties and Class 1 cities (>5000) not within a Metropolitan Planning Area.

Transportation Alternatives (TA) is authorized by the Fixing America's Surface Transportation Act (FAST Act) and is a set-aside of Surface Transportation Block Grant (STBG) program funding. TA includes the Safe Routes to School, Scenic Byways and Recreation Trails Programs. These project types should all be submitted under this TA call for Letters of Intent. These set-aside funds include all projects and activities that were previously eligible under the Transportation Alternatives Program (TAP), encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historical preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

It became apparent during the first round of TAP applications that many of the small communities applying for the grant funds are lacking an overall community transportation plan. The absence of a community transportation plan may be a detriment in obtaining TAP and other transportation-related funds. It may also be a detriment to the community as a whole as it grows and changes. Not only will a community transportation plan be a benefit in many funding situations, but it will also help aid a community in developing a transportation network that provides better access to schools, business districts, residential districts, agricultural and industrial facilities, and parks and recreation attractions.

With that in mind, the SDDOT started dedicating a portion of its SPR funds to establish the Small Community Transportation Planning Program in 2014. The City of Wall was selected as the 2017 project for this program.

The City of Wall Master Transportation Plan intends to lay out a vision and set the direction for how people and goods move throughout the community. The transportation planning process has been a collaborative effort between the City of Wall and the SDDOT. The Plan's study team has worked with the Wall community to identify the expectations and goals of citizens, system stakeholders, and local officials for their multi-modal transportation system. The Plan addresses the study area in **Figure 1**.

The Transportation Plan report provides the City of Wall with a blueprint for achieving its vision for the transportation system through a series of recommended projects, programs, and policies.



Report Outline

The 2017 Wall Master Transportation Plan includes discussion of the following topics:

- **Goals and Objectives** that have served as a guide for the study team in the process of preparing the Plan. The Goals were set as overarching ideals to follow and reach, with objectives laid out as specific guides on how to accomplish them.
- **Procedures** that were followed by the study team in a carefully organized order to satisfy the objectives.
- **Background and Context** of the community of Wall and its influence on the preparation of the Plan.
- **Existing Transportation System** that serves as the basis upon which the improvements recommended by the Plan were reasoned and will serve in the future.
- **Public Involvement** through the course of stakeholder meetings, public open houses, and survey results.
- **Future Conditions** forecast to aid the plan in proposing recommendations that will meet the ever-changing needs of the community.
- **Action Procedure and Methodology** used by the study team in weighing possible alternatives and making recommendation decisions.
- **Recommended System Plan** of transportation alternatives that form the recommendations of the Plan.
- **Cost Estimates** of each proposed alternative.
- **Funding Availability** to enable local agencies to implement recommendations.



Goals and Objectives

Development of the goals and objectives is a critical initial step in the Transportation Plan because they define the general course of Plan development. They provide direction for the Study Advisory Team (SAT) as we evaluate how the system currently performs, and establish the framework for how we look at potential enhancements to Wall's overall transportation system.

Goals and objectives are connected concepts: *Goals* are far-reaching, generalized statements of intent or vision for the Plan, while *objectives* are more focused statements of specific approaches, measures or procedures related to attaining the established goals. The remainder of this section provides a set of preliminary goals and objectives for the SAT to consider and revise for use in the Wall Master Transportation Plan.

- Goal #1: Provide a safe and efficient automotive transportation system.
 - Evaluate to what extent the existing street system meets the needs of city businesses, industry, private citizens, and civic functions.
 - Identify frequent crash locations and evaluate appropriate actions to improve safety.
 - Identify high-risk, high-conflict areas and ways to reduce risk to motorists and pedestrians.
 - Evaluate emergency response routes and their relationship with the street system and suggest alternatives or changes where needed.
 - Evaluate the effectiveness of signage in the overall transportation system and provide solutions to possible problems.

- Goal #2: Provide a safe and efficient multimodal transportation system.
 - Review locations of automobile-pedestrian conflicts and evaluate potential safety improvements.
 - Identify sidewalk, trail, and on-street improvements that would enhance bicycle and pedestrian safety and connectivity across Wall.
 - Provide the community with potential safe pedestrian routes.
 - Establish bicycle and pedestrian connectivity between prominent city elements (e.g. pool, park, Ball Park, school, etc.).
 - Identify possible transit needs and propose solutions to meet those needs.

- Goal #3: Provide a transportation system that supports and enhances the area's economy.
 - Identify businesses' recurring transportation issues which may hinder their operation or rapport with customers, suggesting ways to rectify these issues.

- Review current truck routes and suggest alternatives or changes which better fit the economic needs of the community without compromising pedestrian, bicycle, and automotive safety or local roadway condition limits and specifications.
 - Create a more welcoming traffic environment for travelers with the goal of bringing more business into the City.
- Goal #4: Provide a plan for future expansion and maintenance of the transportation system.
 - Suggest a prioritized list of transportation needs based on their feasibility and necessity.
 - Prepare a plan for preserving, maintaining, and improving the existing multimodal transportation system.
 - Provide guidance for future expansion of the street system by coordinating land development and transportation planning and incorporating multimodal alternatives in new development.
 - Suggest ordinances or laws which better regulate the implementation and maintenance of new and existing transportation elements.
 - Identify sources of applicable funding through government grants and funds.
 - Provide a template which outlines the necessary financial input from public and private sectors.

Procedures

The study was completed using two paths, as shown in **Figure 2**. The work conducted in the field by the Study Advisory Team was done parallel to the compilation of input from officials and stakeholders, as well as the general public via individual and public meetings



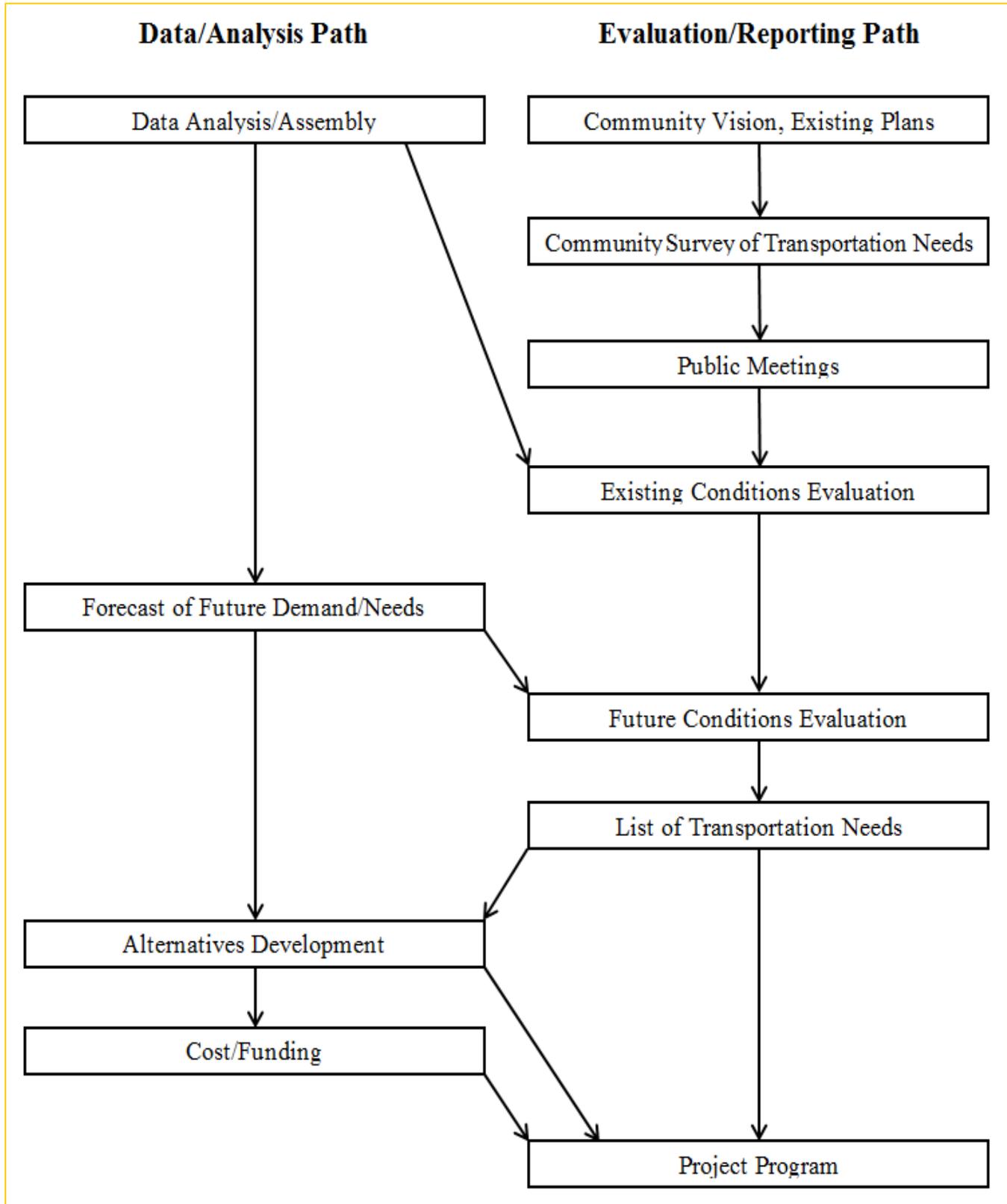


Figure 2 - Procedures



Background

Wall, a friendly town of 766 citizens, is located approximately 8 miles from Badlands National Park. The town is named after the Badlands wall that the town sits upon. Wall is part of Pennington County and is only 56 miles from Rapid City, the second largest city in South Dakota.

The community was founded in 1908 due to the Chicago and North Western Railroad extending through the region. The railroad tracks still get used on a day to day basis.

Tourism is a huge part of Wall economy. During the tourist months, May through September, Wall's streets find themselves full of people from all around the country. Whether it's to stop and take picture with the dinosaur, or eat some fresh maple donuts at Wall Drug. Wall Drug is located on Main Street in Wall, South Dakota, and is one of the biggest tourist attractions in the State of South Dakota.

Wall isn't just a tourist community. Its economy also depends heavily on agriculture.

Besides the Badlands bordering the town on the south, Wall is surrounded by ranch and farm land. Dakota Mill and Grain is located at the north end of Main Street, which sees over 100 to 200 trucks during the summer months.

Figure 3 shows Wall's census population since 1920. The population grew steadily up for the first part of the twentieth century, but since 1970 the population has been having it ups and downs. Future projections show the population will continue to grow at a very slow rate.

Additionally, as **Figure 4** demonstrates, the current age demographic is weighted more heavily toward the older generations, with a median age of 42.5 years. This is common among rural towns of Wall's size, and the senior population is likely to grow as time passes. In order to remain a vibrant and relevant place within South Dakota, Wall will likely benefit from an influx of younger residents and couples. This need was accounted for in considering transportation alternatives that better fit people of all generations.



Tourists on Main Street

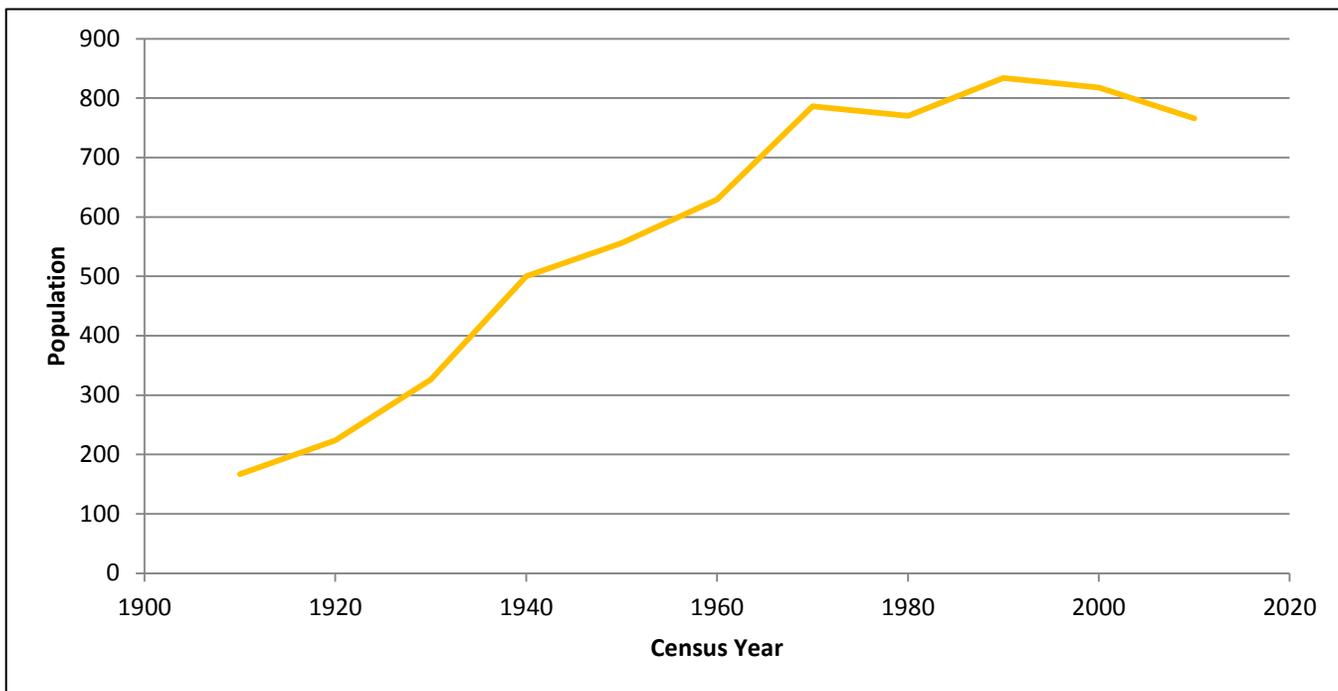


Figure 3 – Historic Population

Data: U.S. Census Bureau

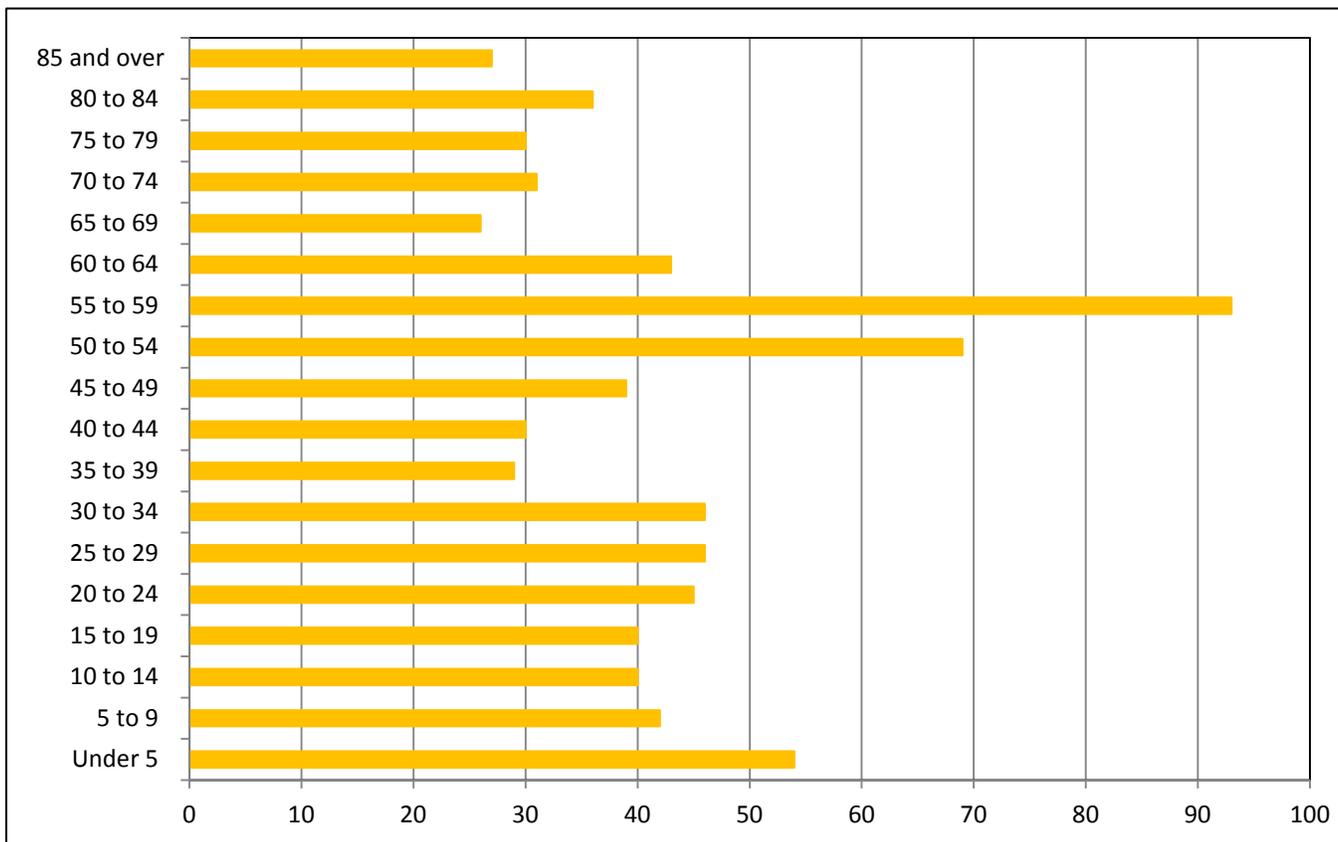


Figure 4 – Population by Age

Data: U.S. Census Bureau



Context

Wall is relatively isolated in relation to major cities within South Dakota. The closet Class 1 city (population >5000) is Rapid City, 56 miles away. Because a large city is so far away, Wall must be self-sufficient and provide most of the services for its residents. **Figure 5** shows Wall's proximity to Rapid City as well as the Capitol and other Class 1 cities.

Wall is served by regional utility companies. Wall's telecommunications service provider is Golden West Telecommunications located in town. Wall gets its electricity from West River Electric, based out of Wall.

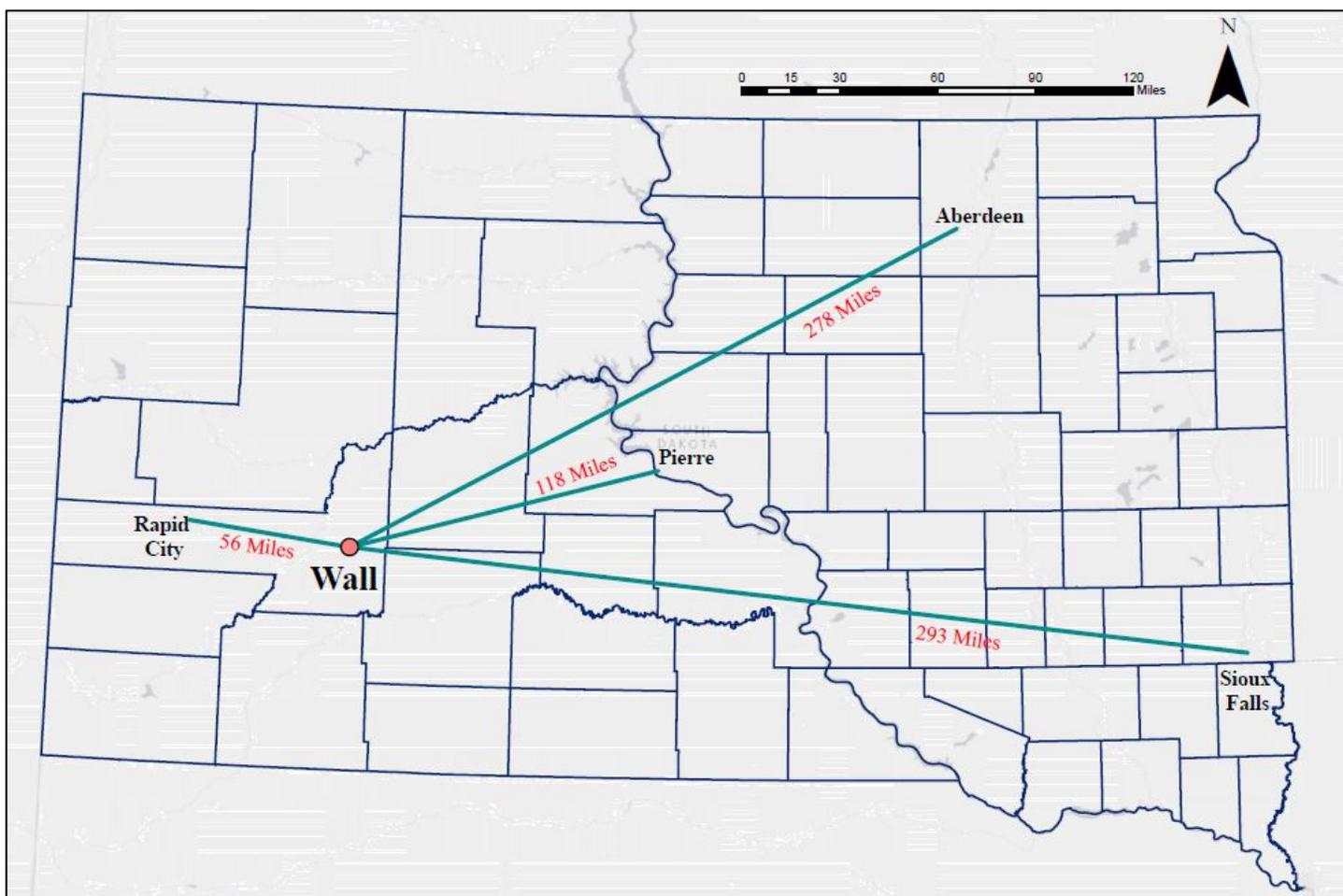


Figure 5 - Context



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Existing Transportation System

Overview

To gain a more complete understanding of what actions, policies, and improvements might be desired by the community and warranted for inclusion in the Plan, it is first important to consider the state of the current system. Current transportation system performance and issues are the underpinnings of future transportation system improvements.

I-90 runs through Wall almost splitting the town in equal halves. Its exits are mile reference markers (MRM) 109 and 110. The primary route for intrastate and interstate traffic that enter and exit Wall is SD Highway 240, or locally know as South Boulevard, an east-west route dividing the city into north Wall and south Wall. This is the rural major collector route through the area. In addition, 4th Avenue (rural local road), Glenn Street (rural major collector), Creighton Road (rural major collector) and Main Street (rural local road) are also heavily trafficked roads within Wall, South Dakota.

Apart from the roads mentioned about, there are no other streets of note within the city of Wall. The rest of the streets are classified as local roads, and are primarily used for property access. The streets of Wall closely follow a grid pattern, and most city streets are similar in style, size, and function.

Figure 6 shows the relationship between the functional classification of roads and their use. **Figure 7** is a map of the roads in Wall and their functional classification.

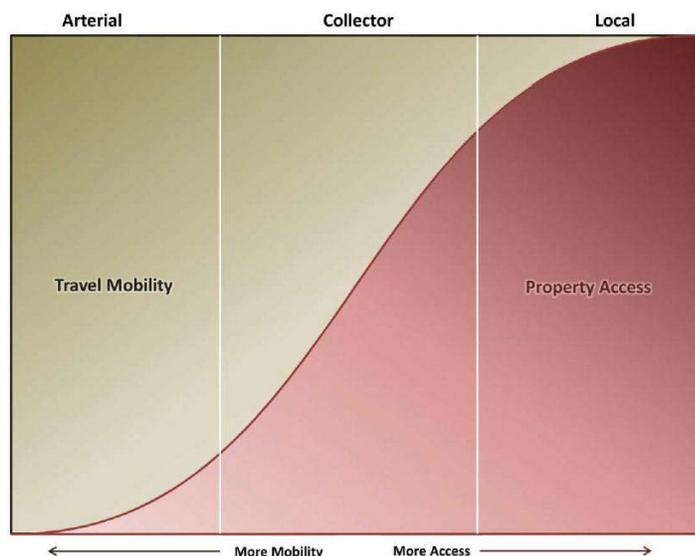


Figure 6 – Mobility and Access by Classification

Federal Functioning Classification

- Rural Interstate
- Rural Other Principal Arterials
- Rural Minor Arterial
- Rural Major Collector
- Rural Local Roads
- Study Area

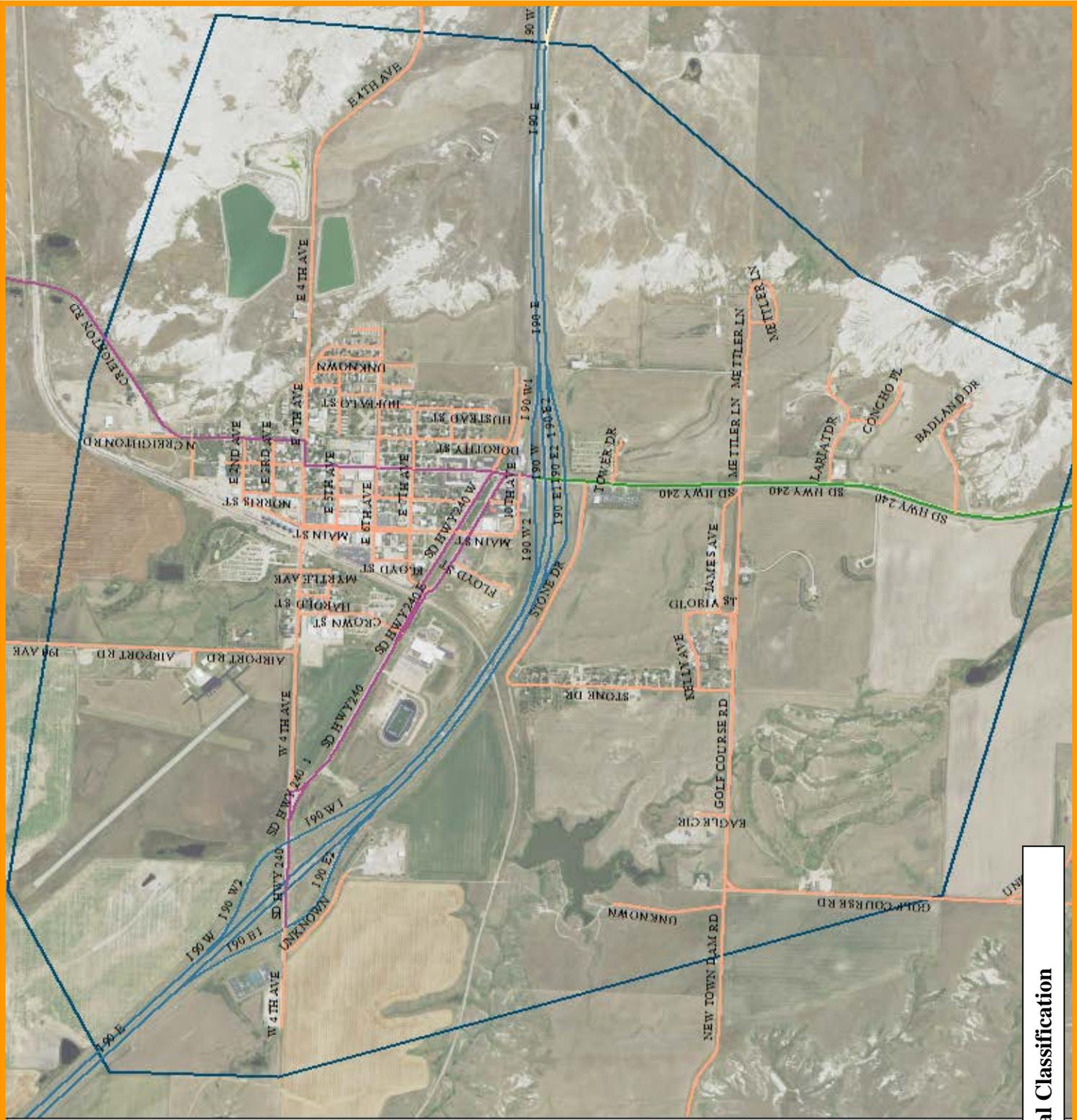


Figure 7 – Federal Functional Classification



Traffic Safety Assessment

Analysis of Wall traffic safety was based on evaluation of the crash/accident records available from the SDDOT for the years 2012-2017. (Note that accident records were only available if total property damage amounted to over \$1000.) Crash information is available through a geographic information system (GIS), and classifiable through a variety of factors, including date and time, location, accident severity, accident type, road conditions, driver contribution to the accident, and more.

A detailed analysis was conducted of the crash data in order to locate troublesome areas and common types of accidents. This information was used to make recommendations that suit the transportation system and make it safer for its users.

Table 1 shows the severity of accidents sorted by frequency. Note that the large majority of accident reports resulted in property damage only. The amount of injuries sustained in relation to the total number of incidents is an indication of the nature of the accidents – usually slow speeds and no reckless behavior on the part of the driver.

| Severity | Frequency (2012-2017) |
|---------------------------|-----------------------|
| Incapacitating Injury | 2 |
| Non-Incapacitating Injury | 7 |
| Property Damage Only | 58 |
| Wild Animal Hit – PDO | 7 |

Table 1 – Accident Severity Frequency

Figure 8 details the locations of these accidents within Wall, again sorted by severity. A cursory glance at this map will indicate that a high percentage of accidents occurred on Main Street within one block north and south of 6th Avenue. Most of the reports on Main Street are categorized as “angle”, “improper backing”, or “improper parking”. These are all descriptions of similar events, with nearly all events involving at least one car in the process of entering or exiting a parking space.

Existing Conditions

| | |
|---------------------------------------|----------------------|
| Crashes | <all other values> |
| Injury Severity | |
| ● | Incapacitating |
| ● | Non-incapacitating |
| ● | Property Damage Only |
| ● | Animal PDO |

*Crash Data collected from 2012-2017

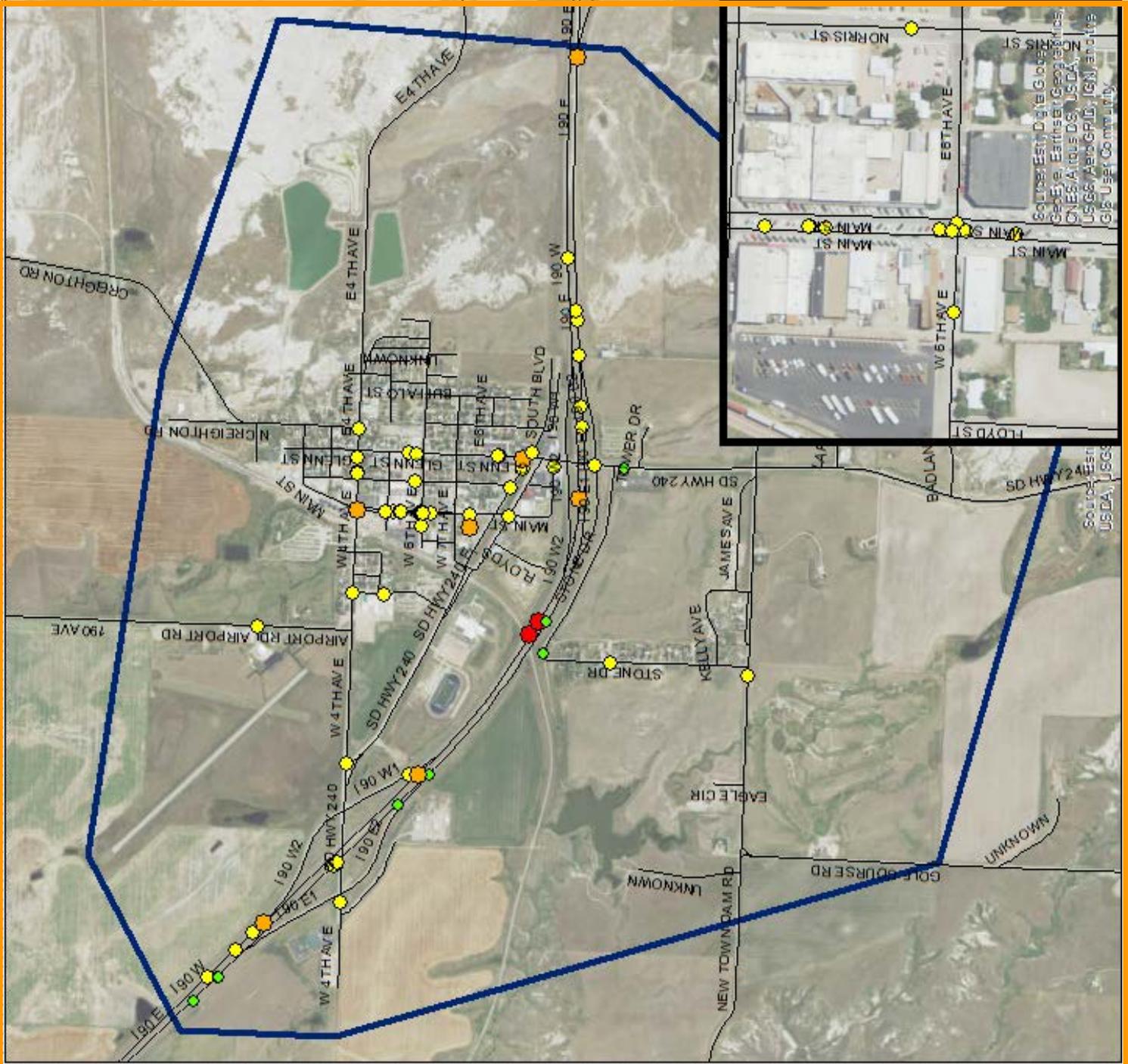


Figure 8 – Accident Locations

Signage

As with most municipalities, the City of Wall has implemented signage to direct, guide, and inform motorists in order to make the roadway as functionally efficient as possible. This is achieved using a variety of different means to varying degrees of success.

The Manual of Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration (FHWA), is the American standard for the specifications regarding signage, signals, and other traffic control means. These specifications include height, distance from roadway and intersection, size, color, light reflectivity and more. It is important that all roadways follow the same specifications so that motorists are more readily aware of their surroundings and can make safer traffic decisions. A full version of the MUTCD can be found at:



Uncompliant
Stop Sign.

<https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/mutcd2009r1r2edition.pdf>

Many of the signs within Wall have been observed via inventory to be uncompliant to MUTCD standards. Common reasons for this include height, location in relation to the roadway, and light reflectivity.

Additionally, a majority of Wall's intersections were observed to have signage, which is surprising for a community of Wall's size. There was one location with unclear signage at the intersection of 4th Ave. and Creighton Rd. where the three-way intersection has one stop sign for those going west on 4th Ave. **Figure 9** shows a map of traffic control signs within the City of Wall.



Curb Ramp

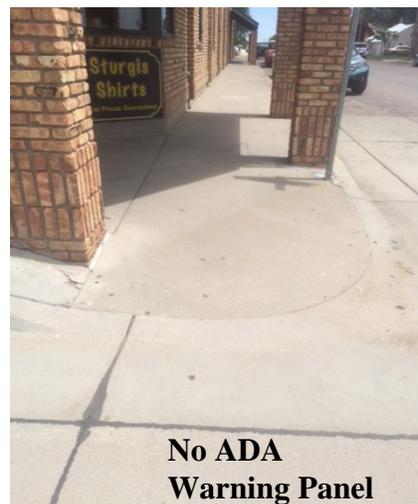
Curb ramps are an extension of the sidewalk. Curb ramps slope the sidewalk down to the roadway to make an easy transition from sidewalk to the roadway. Each curb ramp was inventoried and rated. The ratings were based on the ADA requirements and were assigned one of the following four ratings:

- **Good** – This rating was reserved for curb ramps that slope gradually to the roadway and meet ADA requirements. The curb ramps in this condition had truncated domes. The majority of these curb ramps are found along South Blvd.
- **No ADA Warning Panel** – This rating was used for curb ramps that are sloped down to the roadway but have missing truncated domes. A common place these curb ramps are found is on Glenn Street.
- **No Ramp** – this condition was used for sidewalk that goes up to the curb but does not slope down at all. This type of crossing can be dangerous to pedestrians and bicyclists because it presents a drop off and a step up.
- **Dangerous** – This condition was reserved for curb ramps that have steep drop offs on either side, a large drop due to a retaining wall, or steps up to the sidewalk.

Figure 10 shows the existing curb ramp locations and ratings



Good



**No ADA
Warning Panel**



No Ramp

Existing Conditions

| Curb Ramps | |
|---------------------|----------------------|
| Curb Ramp Condition | |
| ● | Good |
| ● | No ADA Warning Panel |
| ● | No Ramp |
| ● | Dangerous |

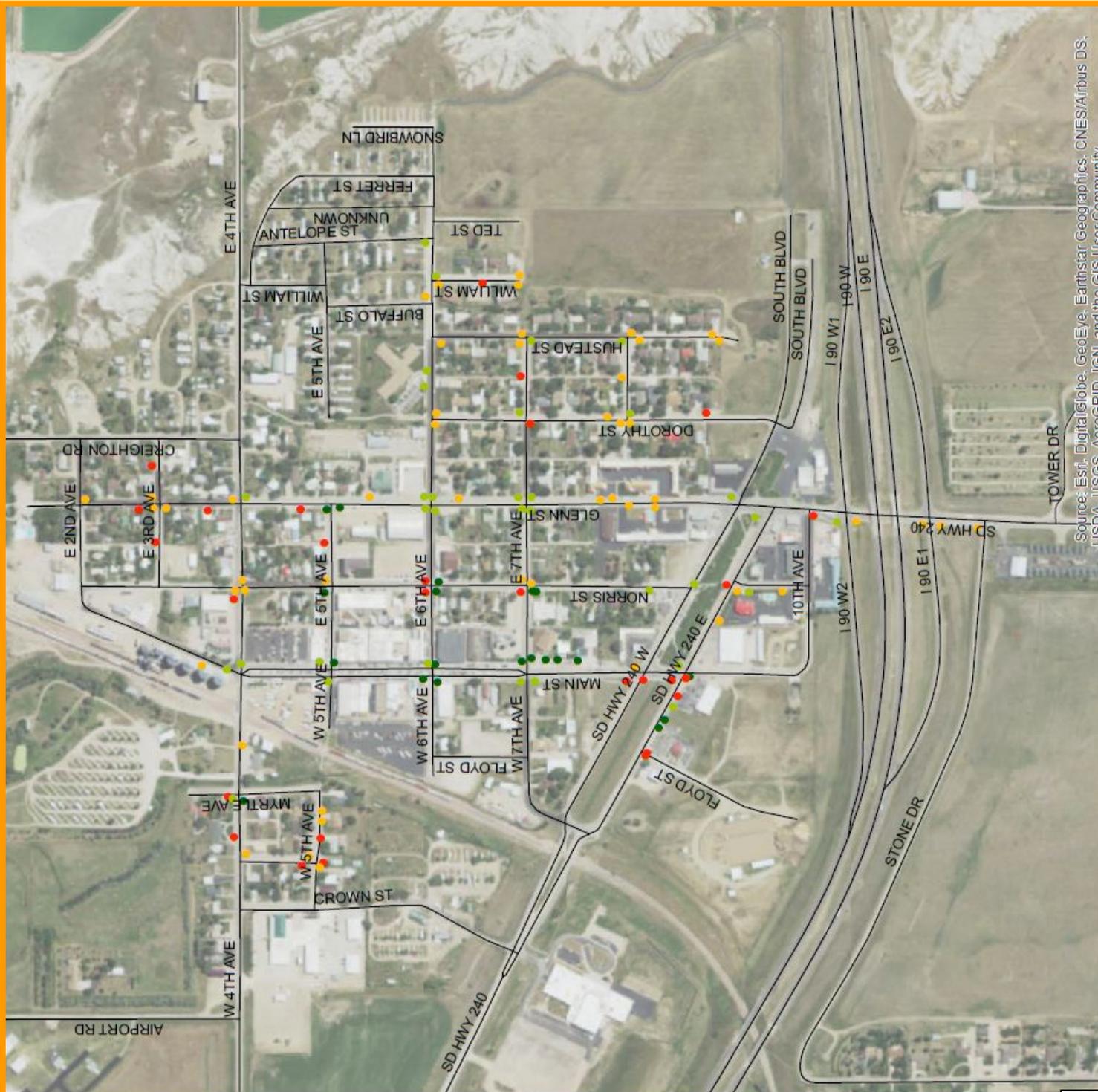
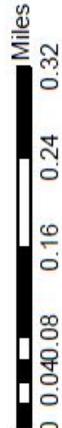


Figure 10 – Existing Curb Ramp

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Pedestrian Information

Pedestrian accessibility is an essential part of any transportation network. Every citizen is a pedestrian to some extent, and the facilities available for them are important to ensure a safe and healthy lifestyle for the community at large.

The heart of a healthy pedestrian network is a thorough and well-maintained sidewalk system. Unfortunately, Wall's is neither of these. Field inventory shows only approximately two – thirds of possible sidewalk locations actually have sidewalk installed. This inventory is shown in **Figure 11**, and is further divided by condition. The conditions are detailed as follows:

- **Good** – Appears to be in compliance with or is close to standards set by the Americans with Disabilities Act (ADA). All panels are in new or slightly worn condition. Easily walkable.
- **Fair** – Some maintenance required in order to meet ADA standards. Some panels are starting to distress, crack, or heave. Maintenance issues are not enough to prevent most people from using sidewalk, albeit with some extra effort.
- **Poor** – Does not comply with ADA standards in almost any category. Many panels are severely distressed, cracked, or heaved. The best maintenance option will likely be replacement of much of or the entire sidewalk. Many people may not be able to traverse past the disruptions in the pavement.

As evidenced by Figure 11, many segments of Wall's sidewalk system are in the "Fair" or "Poor" categories, meaning that many places, even many of those that are adjacent to a sidewalk, are inaccessible or inconvenient for pedestrians. As a result, many pedestrians have been observed walking in streets in areas where sidewalks are unavailable or in poor condition. This poses safety concerns for pedestrians and motorists alike.



Curb and Gutter

Curb and gutter is used to direct the flow of water as well as keep vehicles on the roadway. Curb and gutter can be used in conjunction with storm sewers to transport water out of the roadway thus making it a key component to the transportation system.

The curb and gutter was inventoried throughout the city. As seen in **Figure 12** the majority of the city has curb and gutter. However, half of the curb and gutter is in fair to poor condition. The curb and gutter was graded on a scale of good, fair or poor, based more on its ability to provide

drainage than its actual physical condition. The rating of good was designated to curb and gutter that was 100% visible and appeared to not hold water long after a storm. Curb and gutter that was rated fair were slightly silted in or had some damage that disrupted the flow of water. The rating of poor was given to curb and gutter sections that were completely damaged or were completely full of water.

The issue is that the city drains to the northwest portion of the town which causes water to stand near Myrtle Avenue and W 4th Avenue at places where curb and gutter is not good. Other locations throughout town that have poor or fair drainage also collect water.



Good Drainage



Poor Drainage

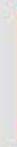


Drainage Issue on Husted St.



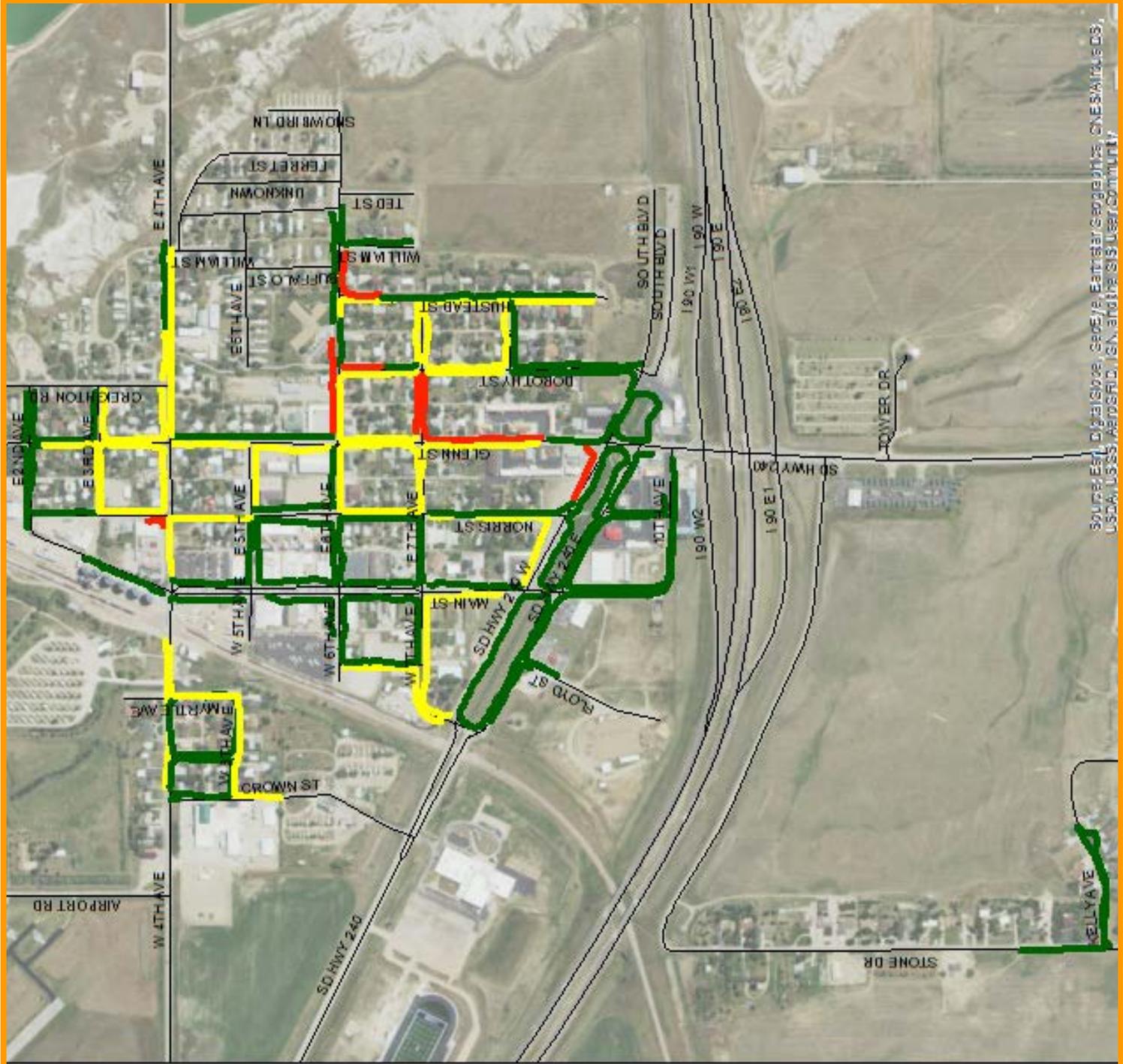
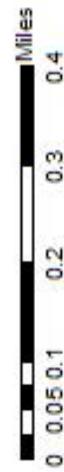
Drainage Issue on Myrtle Ave.

Existing Conditions

| Curb and Gutter | |
|-----------------|---|
| Condition | |
| Good |  |
| Fair |  |
| Poor |  |

*No existing curb and gutter where condition is not indicated

N



Source: Esri, DigitalGlobe, GeoEye, Earthstar/GeoEye, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 12 – Existing Curb and Gutter

Shared- Use Path

A shared-use path is a designated facility for non-motorized travel separated from roadway traffic. Common locations of shared-use paths are parallel to a motor vehicle roadway near the right-of-way line or on a separate alignment such as on abandoned railroad grade or through recreational areas. When available space is constrained due to limited right-of-way, water crossings, or other situations that restrict the available width, a side path may be constructed adjacent to the roadway that is an extension of the shared-use path.

Wall currently has a shared-use path, designated as a bike path, which connects the Badlands overlook near the southeast portion of the town to the City Park that is located at the end of Glenn Street. The path around the park and the loop are clearly signed, yet the path that runs through town, Dorothy Ave, 4th Ave, and Glenn St, is not signed clearly.

Figure 13 shows the existing bike path, signed and unsigned.



Signs at Badlands Loop



Bike Path

Existing Conditions

-  Bike Paths
-  Unsigned bike path



Figure 13 – Existing Bike Path

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Access Management

The SAT has found that the control of access at Exits 109 and 110 are not up to current standards. This will become an issue in the future when the interchanges that run through Wall are reconstructed. The reconstruction of the bridges is set for many years outside the life span of the Plan. Yet the SAT wants to inform the City of Wall of the issue and to be prepared for the issue in the future. The picture below shows where the Exits are located and the streets would need to move with reconstruction.





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Public Involvement

Throughout the study process, public input was continually sought as a means of getting a thorough and comprehensive perspective from people of all walks of life. A variety of methods of opinion gathering were employed by the SAT. They were:

Stakeholder Meetings

Performed in the months of May and June 2017, the stakeholder meetings were facilitated by members of the SAT. Stakeholders were identified as certain individuals within the community who may have more influence on the transportation system because of their involvement with civic, commercial, or industrial interests or because of the demographic they represent. Summaries of these meetings appear in **Appendix III**.

Public Open Houses

Open houses were held on June 26 and July 24, 2017. These meetings were an opportunity for the SAT to present to the community regarding the progress of the study, as well as for the public to voice their comments or concerns.

Public Survey and Comments

A ten-question public survey was open from June 26 to July 10, 2017. Questions were aimed at gauging public opinion regarding the existing transportation system as well as possible alternatives. Additionally, places for comments were added in the survey, as well as in a physical document which could be returned. A detailed breakdown of the survey and the results appears later in this section.



Figure 14: shows several of the needs presented to the SAT throughout the study process. They include speeding, parking, pedestrian, surface, drainage, intersection, and airport issues.



Community Survey

An online survey was conducted to get additional feedback from those not participating in the stakeholder meetings or public meetings. The survey was located at:

<https://www.surveymonkey.com/r/SF7MQBL>

The survey was also available through a link on the SDDOT Project Website (<http://www.sddot.com/transportation/highways/planning/specialstudies/Wall/default.aspx>), which could also be found via a link on the City of Wall website (www.wallsd.us). The survey was advertised online and in Wall's local newspaper, and was promoted at the public meetings and stakeholder meetings. The survey asked a series of questions asking how citizens travelled in Wall and looking for feedback and impressions of the transportation system. The survey was open from June 26 to July 10, 2017. A total of 19 unique responses were received from Wall area residents during the period. The survey provided a lot of additional information regarding transportation related issues and allowed the SAT to reach a greater amount of individuals than if only conducting just private and public meetings. The survey asked questions relating to several different facets of transportation and collected written responses to problem areas. Questions that required written answers are not included in this section due to the length but can be found in **Appendix III**. The questions that were exempt from the following section include questions 4,5,8,9, and 10. The follow section is a summarizes the responses to questions 1, 2, 3 ,6 and 7.



Question 1) What methods of transportation do you currently use in Wall? (Pick all that apply)

Figure 15 shows the current methods that respondents use to get around the study area. All the respondents drive alone with 63% (12 of 19) respondents walking and 26% (5 of 19) respondents biking. One respondent carpools and zero respondents use transit as a means of travel. Respondents to the question were allowed to choose as many options as they use, which is why the number of responses is higher than the 19 respondents that completed the survey.

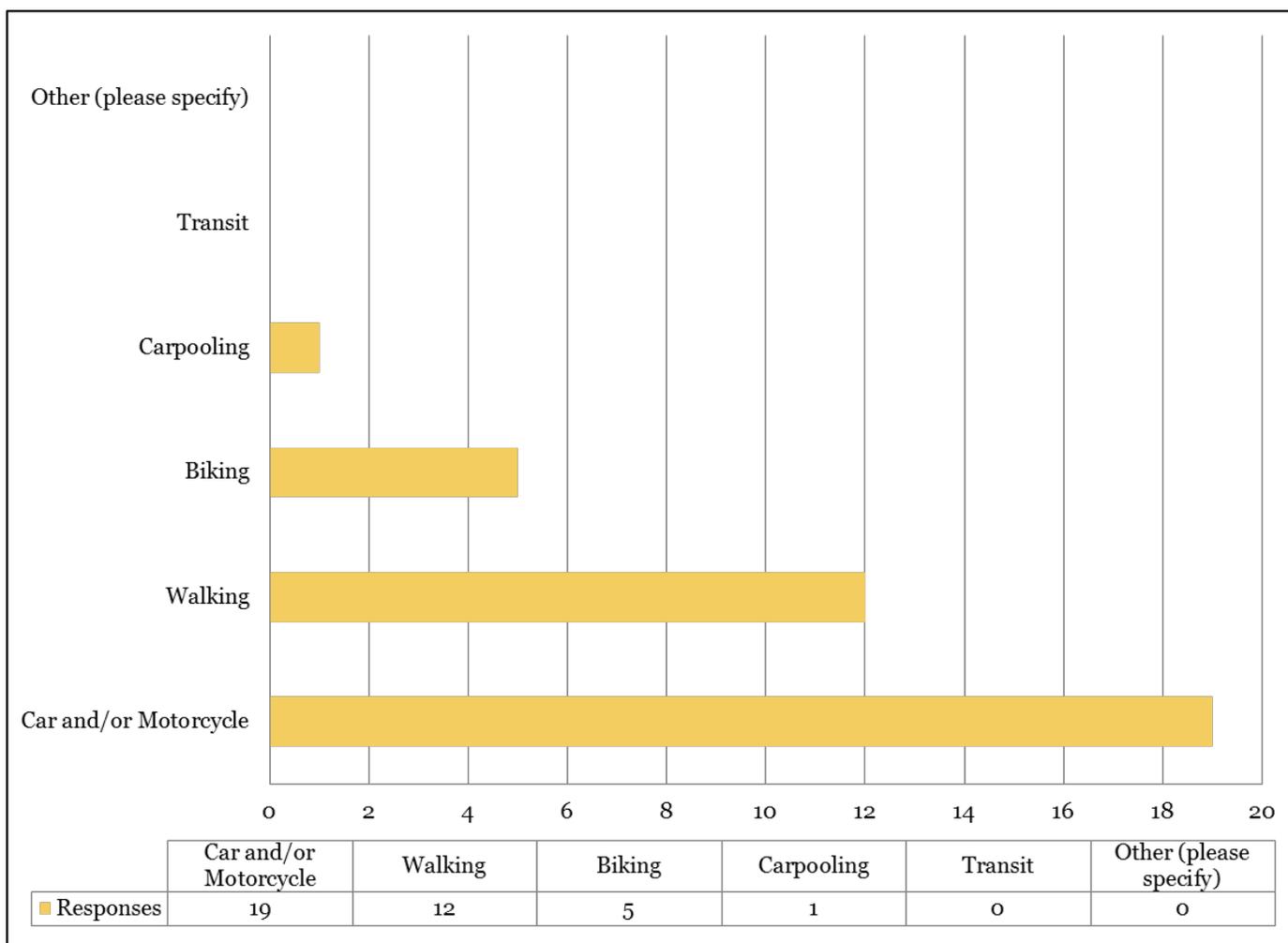


Figure 15 – Means of Transportation



Question 2) How would you rate traffic safety in Wall? If there are particular issues, please describe below.

Respondents were asked to rate the safety of traffic in Wall with five different ratings from Excellent being the best and Inferior being the worst. The majority of responses were Acceptable to Excellent accounting for 17 of the 19 responses. The rating of Needs Improvement had 1 response while no responses were received for Inferior. **Figure 16** below shows the chart with the table. One respondent chose to leave comments which can be found in Appendix III.

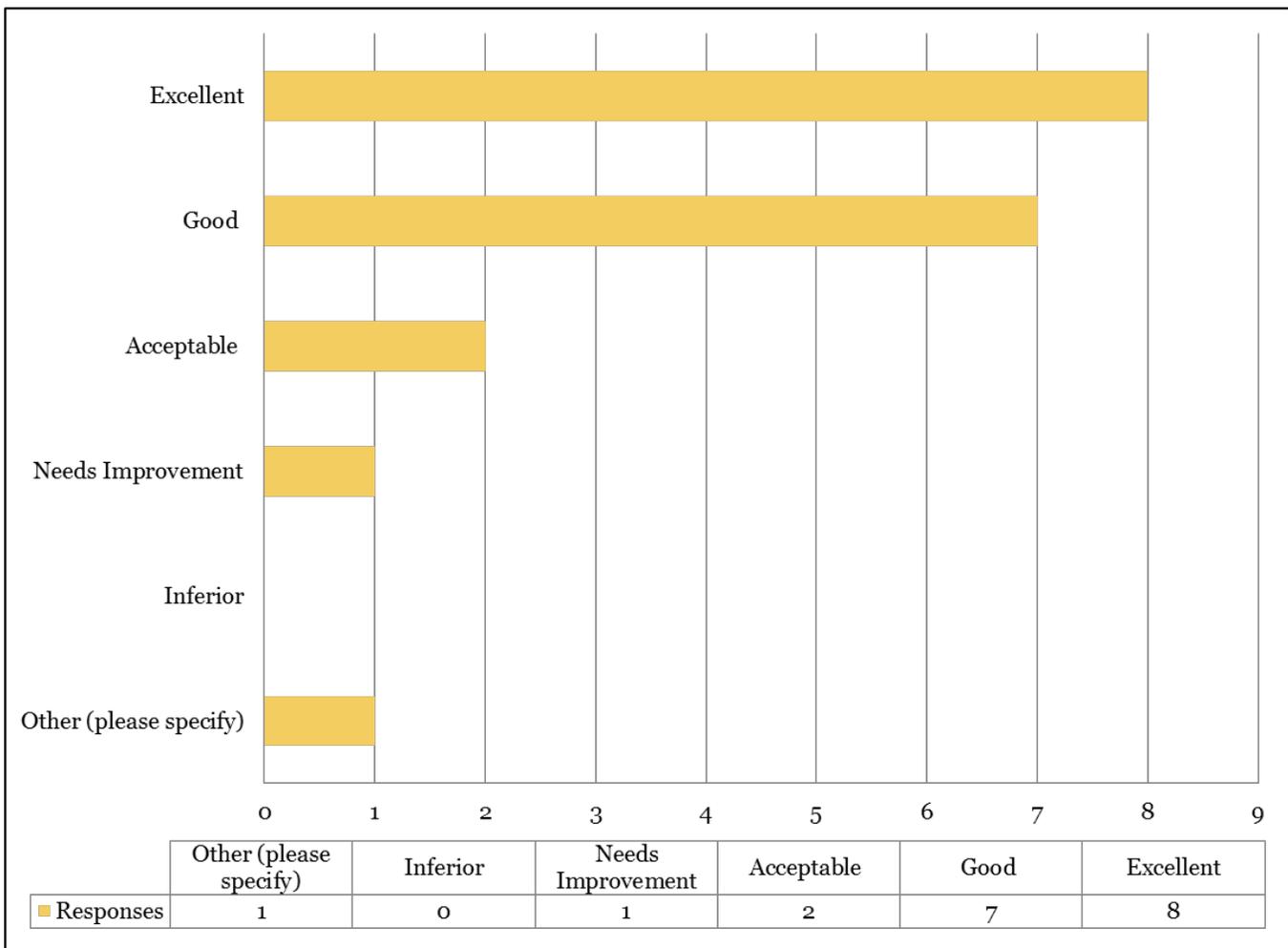


Figure 16 - Rating



Question 3) How would you rate the quality of safe walking and bike facilities in Wall?

Respondents were asked to rate the quality of safe walking and biking facilities in Wall with five different ratings from Excellent being the best and Inferior being the worst. The majority of responses (42%) were Needs Improvement with Acceptable and Good with 21% of the responses. The lowest categories were Excellent with 1% (1 of 19) and Inferior with 2% (2 of 19) of the responses. **Figure 17** below shows the chart and table for this question.

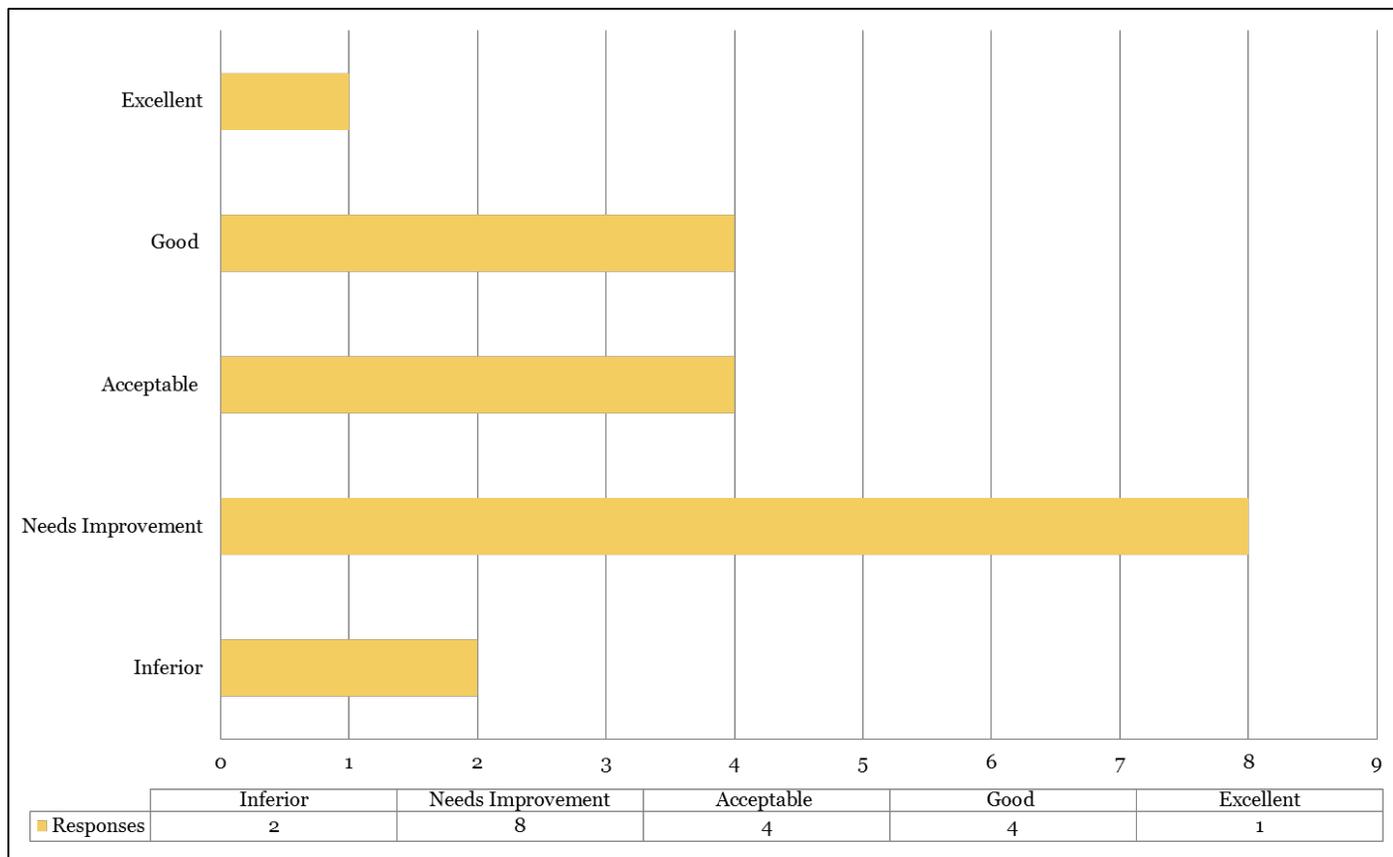


Figure 17 - Safety



Question 6) Select the options you feel are the most important:

Respondents were asked to rate which part of the transportation system they felt was the most important. The majority thought the improvement of sidewalk connectivity throughout the City of Wall and the increase the safety of pedestrians was the most important. Repair existing curb and gutter, improve street drainage, maintain current streets and repair and maintain sidewalk curb ramps at intersections were the next most popular responses, accounting for 37% (16 of 43) of the responses. The remaining three improvements were rated the lowest and that included improve the airport, repave streets through town, and improve transit availability.

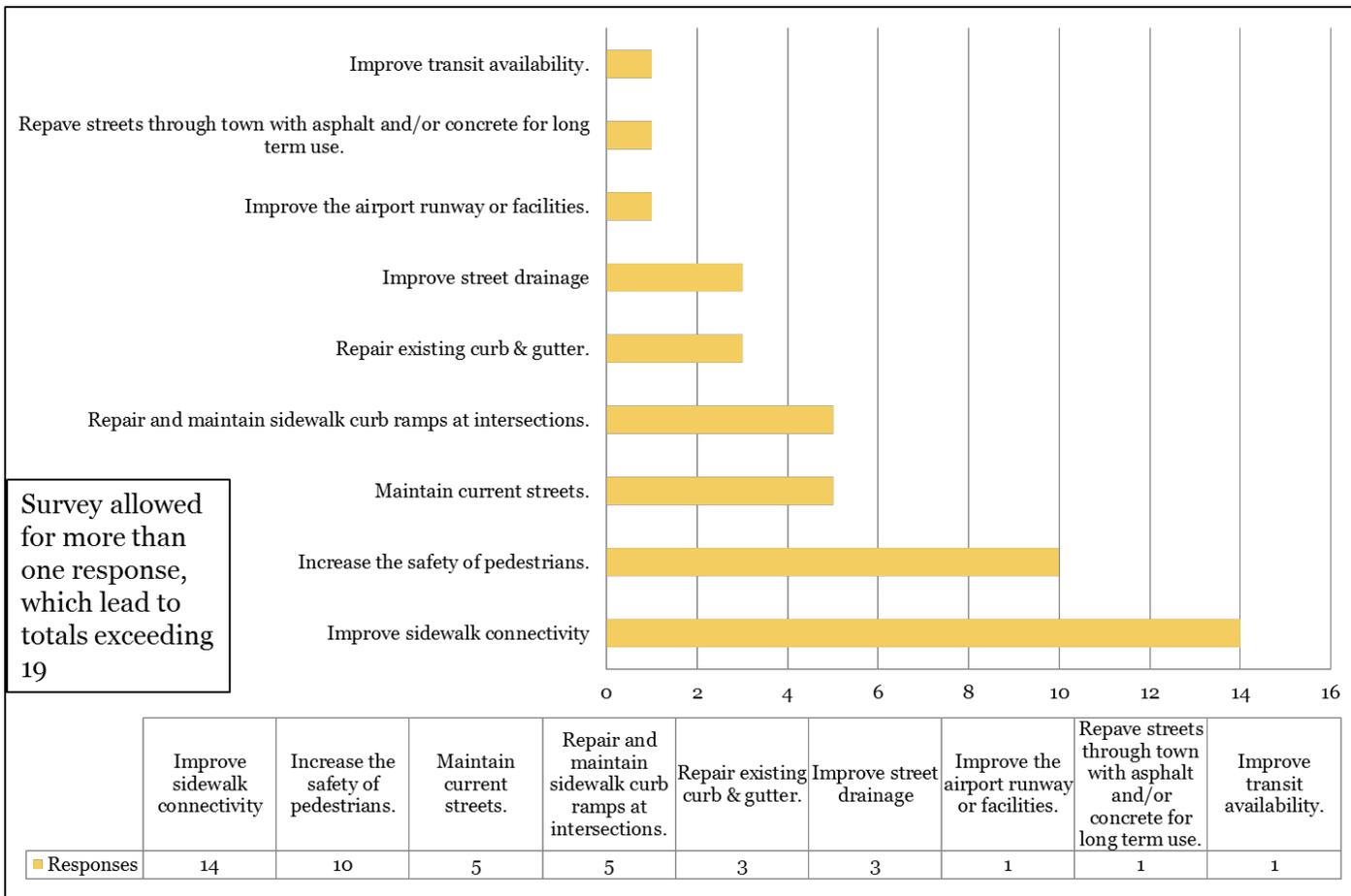


Figure 18 – Relative Importance



Question 7) To what extent would you support a slight increase in local taxes for transportation?

Respondents were asked to determine if they would support a slight increase in local taxes for transportation. A very large amount of respondents showed slight support, to some extent, an increase in taxes. A total of 74% (14 of 19) would support an increase while 26% (5 of 19) do not support a tax increase. **Figure 19** below shows the chart and table for this question.

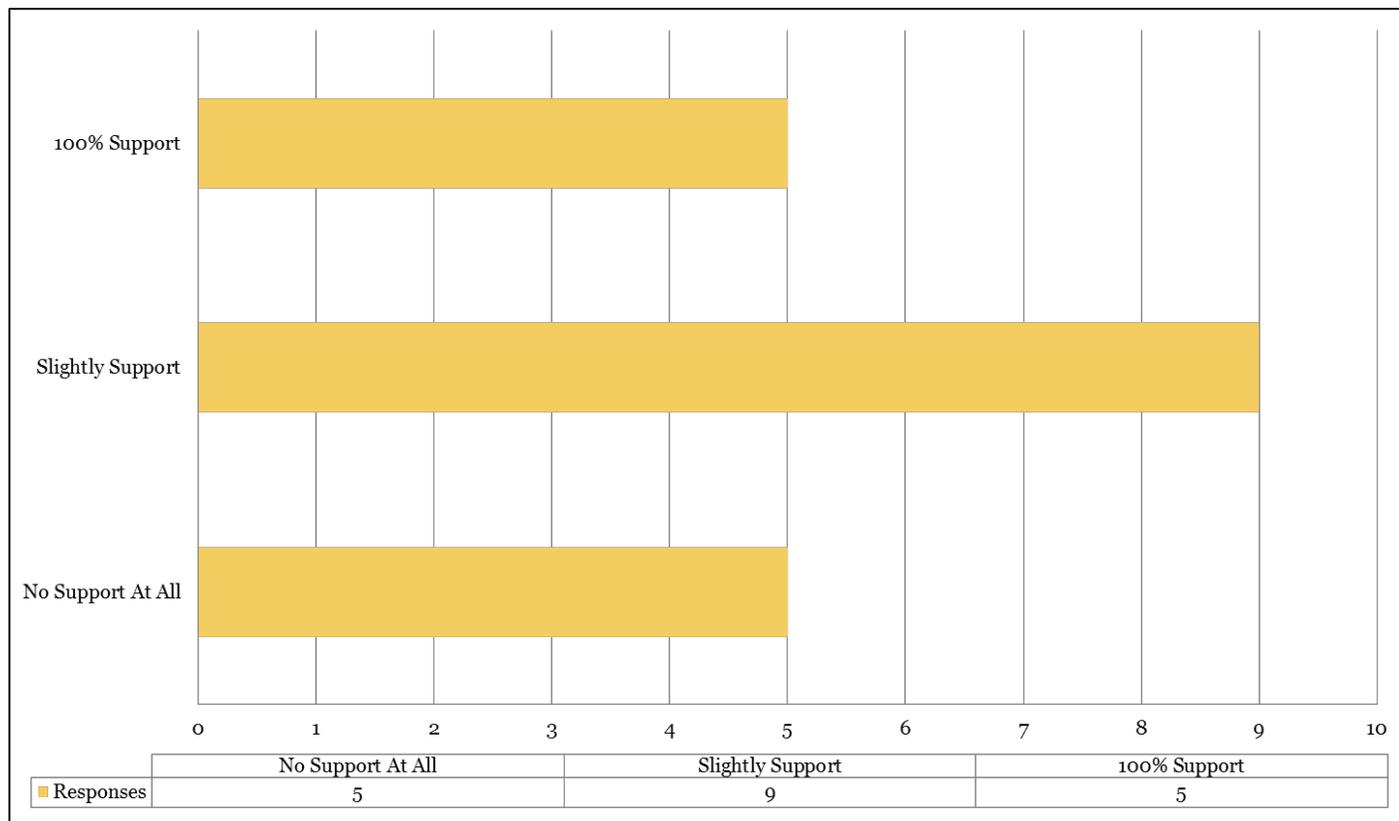


Figure 19 - Taxes



Traffic Analysis

Overview

Six intersections in Wall were monitored using traffic cameras and analyzed for their level of service. Level of service (LOS) is a term used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. The level of service of a facility is designated with a letter, A to F, with A representing the best operating conditions and F the worst.

Traffic counts were found and analyzed through the Highway Capacity Manual 7th Edition (HCM7). The HCM7 measures intersection operations in terms of control delay (average delay per vehicle) for signalized, two-way stop-controlled (TWSC), all-way stop-controlled (AWSC), and roundabout intersections.

Table 2 shows the level of service for the six intersections that were monitored. Rural collector intersections with a LOS of C or greater are considered a functional intersection by the SDDOT. Future projections were also done to predict the LOS for the intersection in 20 years. Traffic counts and projections can be found in the **Appendix –Part IV**.

Table 3 shows the LOS of Glenn St. and 6th Ave. as a possible two-way stop controlled intersection, with stop signs only on 6th Avenue. The LOS that was shown for the two-way stop was found to be worse off in the future PM hour than the existing conditions. With this being said the intersection should not be changed to a two-way intersection. Additionally, the traffic counts were analyzed for traffic warrants, and the intersection does not meet warrants.

Table 2 and Table 3 show the LOS of each stop sign at the intersection which is why they are categorized as northbound (NB), southbound (SB), eastbound (EB), and westbound (WB). The weighted average delay of each intersection gives a grade to the entire intersection as a whole, which gives us a better understanding of the LOS. The weighted average delay of each intersection was calculated and an average intersection LOS was determined. This can be found in the **Appendix- Part IV**.



| Intersection | 2017 | | | | 2037 | | | |
|--------------------------------------|---|---------|---------|---------|---|---------|---------|---------|
| | AM | | PM | | AM | | PM | |
| 4 th Ave. and Main St. | NB B | SB B | NB C | SB B | NB B | SB B | NB C | SB B |
| 6 th Ave. and Glenn St. | B | | B | | C | | E | |
| South Blvd. -N and Main St. | NB B | SB B | NB B | SB B | NB B | SB B | NB B | SB B |
| South Blvd. and Crown St. | NB B | SB C | NB A | SB B | NB C | SB D | NB A | SB B |
| South Blvd. – S and Main Street | NB A | SB B | NB A | SB B | NB B | SB B | NB B | SB B |
| South Blvd. and 7 th Ave. | One Single Peak Hour: NB SB A A | | | | One Single Peak Hour: NB SB A A | | | |

Table 2 – LOS per Intersection

| Intersection Alternatives | 2017 | | | | 2037 | | | |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| | AM | | PM | | AM | | PM | |
| Glenn St. and 6 th Ave. Two-Way | EB B | WB C | EB B | WB C | EB C | WB E | EB D | WB F |

Table 3 – LOS of Glenn St. and 6th Ave.



Future Conditions

Anticipating the future needs of Wall's transportation system can be difficult. Wall has been in population decrease since 1990, but projections currently show that Wall is coming out of the decline. However, the city should be doing what it can to help improve economic and social activity. There are currently platted lands south of the interstate near the Kelly addition for potential future growth of the town.

The school district is looking at future development of the old football stadium into either a drive in movie theater or baseball field. The city is looking to build a recreational center in-between 4th Ave. and South Blvd. and possibly a new city park in the Echo development, which would attract new, younger couples to the area. The younger generations are extremely into walking and biking as opposed to driving everywhere. To continue to attract younger populations to Wall, it is viewed as essential to provide the connectivity of sidewalks and shared use paths. The City of Wall currently has a bike path, but is extremely lacking in sidewalks connecting many locations within Wall.

Another issue that a lot of younger people prefer is curb and gutter. Several streets with Wall have curb and gutter but a standard on where the curb will be and how the curb will look needs to be established and a plan implemented to place new curb and gutter were it is missing, especially in the Kelly addition.



Action Procedures and Methodology

The alternatives analysis conducted as part of the Transportation Plan incorporated both quantitative and qualitative approaches to assessing the range of potential transportation improvement concepts. While it may be desirable to develop the Plan recommendations through purely quantitative methods, there are a broad range of factors to evaluate when reviewing transportation improvements and not all of them can be measured on a consistent basis. Furthermore, there are an equally broad range of perspectives and preferences across the Wall community. The priorities of the community are quite diverse in terms of what individuals and groups want to be done (build new roadway corridors, add sidewalks, create safer parking options, etc.), and there is no truly mathematical way of balancing conflicting priorities. For these reasons, qualitative assessment based on community input was brought into the process.

The alternatives were evaluated based on the goals, objectives and evaluation criteria established earlier in the study. Within that framework, each alternative is evaluated from the “SEE” approach. Through the SEE methodology, all potential transportation alternatives are assessed from the three following “perspectives”:

- **Social:** What are the impacts to adjacent land uses (residents and businesses) and cultural impacts? Can the community support the alternatives? What are the economic impacts?
- **Engineering:** Does the alternative provide the desired capacity and / or safety benefits? Does it fit with local or state design guidelines?
- **Environmental:** What are the impacts to the natural environment? How does the alternative affect fuel consumption, air quality or traffic noise?

The SEE methodology ties into Wall’s vision for its transportation system, which is to provide a system that:

- Supports mobility and economic development.
- Provides for an efficient transportation service, measured in terms of modal capacity, speed, convenience and safety.
- Provides for interconnectivity and use of all travel modes.
- Balances transportation service with the neighborhood and environmental impacts associated with construction.
- Fits with local land use.
- Reflects the values of the community.
- Has the support of the community.
- Is financially feasible.



Recommended System Plan

Proposed alternatives in this section have been organized by area of effect and suggested time of completion. Cost estimates and funding of these alternatives is covered later in the Plan.

Street Improvements

To address the safety of city streets, the following projects are proposed. The “No Action” option, **Alternative 1A**, is not recommended due to the wide variety of issues which would not be addressed

- Short-Term (2017-2022)
 - **Alternative 1B:** Adopt a formal street preservation plan. Keep newer pavement in better condition instead of letting it slip into a poor condition.
 - **Alternative 1C:** Contact GPS providers to solve the issue of vehicles taking 4th Ave. (old Hwy 14) to Quinn. More information about this process is located in **Appendix VI**.
- Long-Term (2022-2037)
 - **Alternative 1D:** Redesign and reconstruction of South Blvd. into a single, three lane road with the negotiation of the SDDOT. **Figure 20** shows a rough sketch of the possible new road. **Table 4** shows the LOS regarding a single intersection for South Blvd. and Main St. Reconstruction should be considered with these three options:
 - Entirely at the time line of the SDDOT. This option is unfavorable due to SDDOT’s current management system showing the next improvement as resurfacing in 2030 and reconstruction would be much (12 to 20 years) later.
 - *OR
 - Jurisdiction swap with the SDDOT. The SDDOT constructs the new road; City of Wall takes over jurisdiction upon completion. Earliest this could possibly be completed is 2025 given SDDOT’s seven to eight year design process for reconstruction projects.
 - *OR
 - Jurisdiction swap with the SDDOT. The SDDOT provides the City the funds for the reconstruction of the new road; City of Wall constructs the road within its own time line. The City takes over jurisdiction upon receipt of funds.



- **Alternative 1E:** Construction of a roundabout intersection at Main St. and South Blvd. **Table 4** shows the LOS of a roundabout intersection at this location and a rough sketch is also shown in the **Figure 20** inset. Recommendation is to construct the roundabout with the reconstruction of South Blvd. (Alternative 1E) if desired.
- **Alternative 1F:** Extend Airport Rd. to connect to South Blvd. This alternative will address the issue of a north-south connection on the west side of the railroad tracks and also help with future development of the area. **Figure 21** also shows the developer to build platted subdivision roads along with the extension alignment of Airport Rd.

| Alternate Intersections | 2017 | | | | 2037 | | | |
|-------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | AM | | PM | | AM | | PM | |
| South Blvd. and Main St. Roundabout | A | | A | | A | | A | |
| South Blvd. and Main St. Combined | NB B | SB B | NB B | SB B | NB B | SB C | NB B | SB C |

Table 4– LOS of Roundabout and Combined South Blvd. and Main St.



Figure 20 – South Blvd.

Possible Future Roads

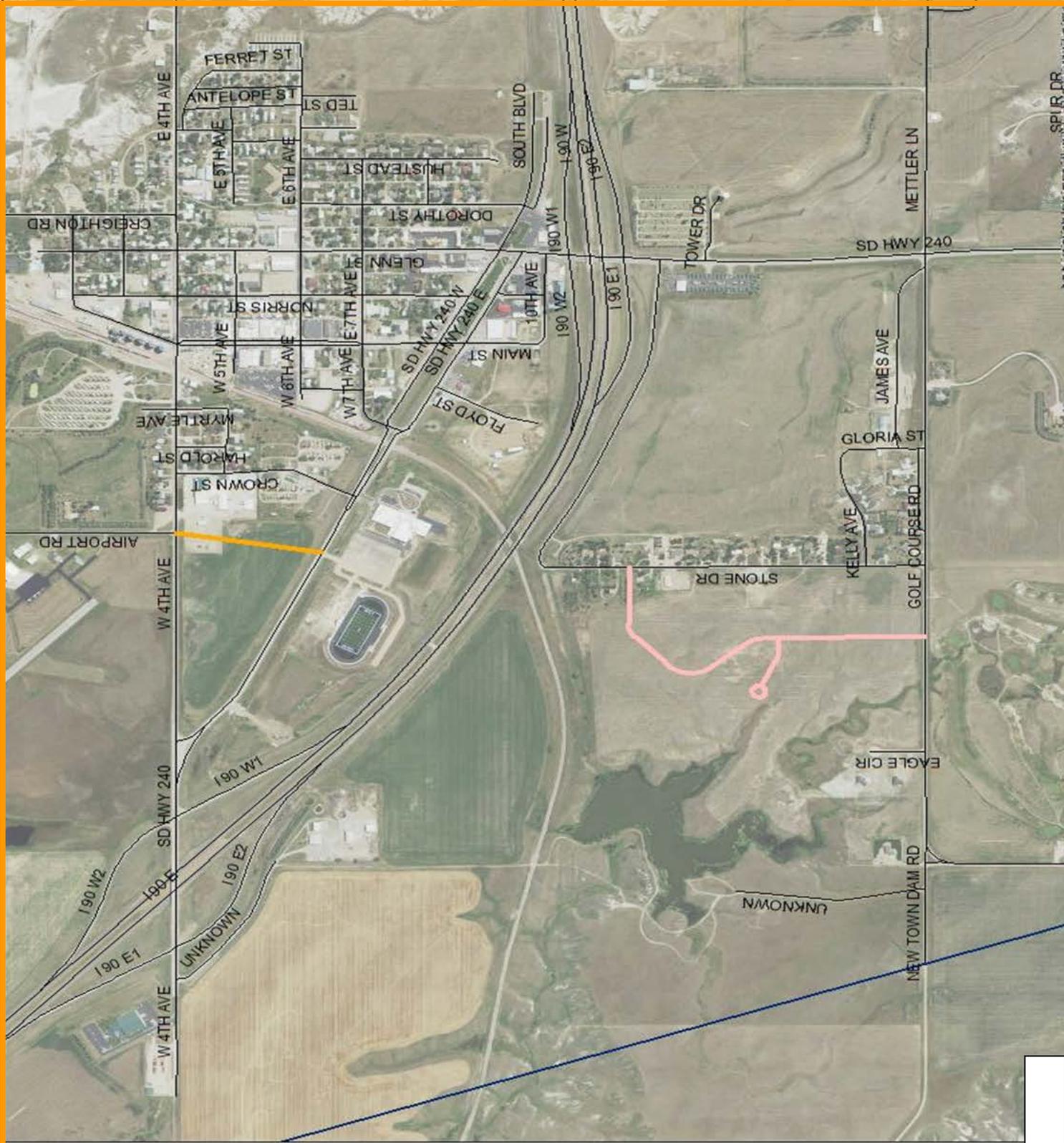
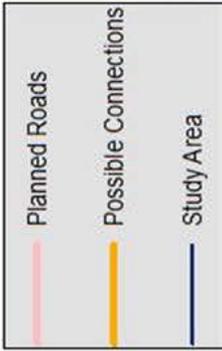


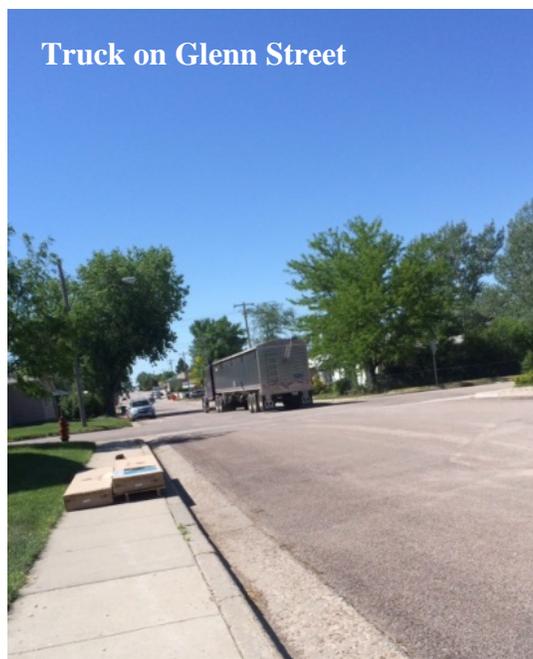
Figure 21 – Future Roads



Truck Routes

The following alternatives for improvements to the truck route system are proposed. The “No Action” option, **Alternative 2A**, is not recommended, but may be necessary for some time depending on the funding available to the City to complete other alternatives.

- Short-Term (2017-2022)
 - **Alternative 2B:** Designate and clearly sign truck routes according to the plan in **Figure 22**. The map shows a recommended truck route that provides a connection between all the major trucking industries in Wall. An ordinance would have to be drafted to implement the new truck route in accordance to this plan.
 - **Alternative 2C:** Adopt an ordinance regarding the construction standard to which truck routes must be built. The SAT recommends the specifications be kept as a policy with the City Superintendent. The policy should draw from existing construction standards such as the SDDOT Standard Specifications Book. Using a policy ensures the ability to be flexible, yet still maintain a binding standard. The ordinance can be found in **Appendix I**.
- Long-Term (2022-2037)
 - **Alternative 2D:** Rebuild the truck route network according to new construction standards. The process would likely happen gradually due to financial constraints, but the final goal is to implement a complete, structurally sound network that will be able to completely serve the City’s trucking needs by 2037.



Proposed Truck Route

| | |
|---|------------|
|  | Campground |
|  | Store |
|  | School |
|  | Gym |
|  | Elevator |
|  | Route |

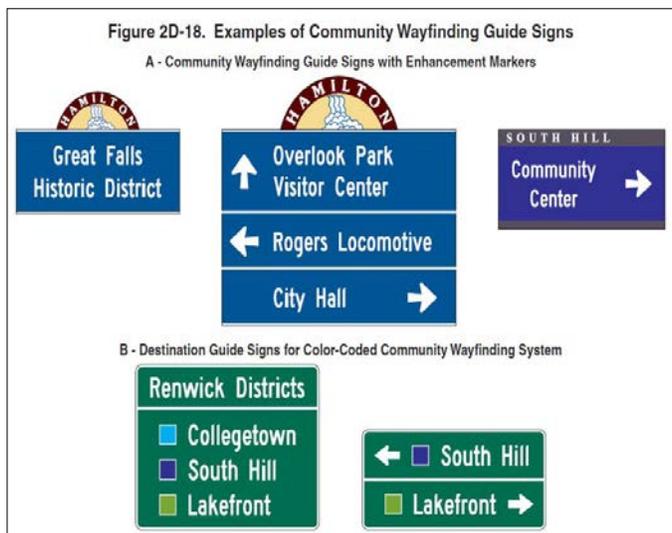


Figure 22 – Truck Route

Signage

The following alternatives are proposed to address signage issues within the study area. The **Alternative 3A**, “No Action”, is not recommended because it does not solve any of the current issues.

- Short-Term (2017-2022)
 - **Alternative 3B:** Draft ordinances regulating the size and location of billboards and business signs. Sight issues have been observed due to the location of billboards. The ordinance would help alleviate driver confusion and prevent future crashes that could occur due to these signs.
 - **Alternative 3C:** Paint stop ahead and install stop ahead signs on Glenn St. and 6th Ave. In the traffic analysis section of the Plan it was found that 158 traffic violations occur at this intersection. This would help to warn drivers of the upcoming stop and to also improve the safety of the intersection.





Signage (Continued)

- Mid-Term (2022-2027)
 - **Alternative 3C:** Implement MUTCD complaint wayfinding signs to help advise people to primary locations throughout Wall. Wayfinding signs to RV/Truck parking and Car parking would clear up issues of campers pulling onto the median divided Main St. which causes traffic problems. More information and diagrams can be found in the Appendix VI.
 - **Alternative 3D:** Replace or fix signs not compliant with MUTCD standards. These standards include size, color, height, and distance to roadways, reflectivity, and more. This replacement project would also include updating street name signage for both location and MUTCD standards. The replacement process can be done gradually as budget allows. This proposal is important because the standards to be met are proven to be beneficial to the safety and efficiency of traffic.



Pedestrian Facilities

The following projects are proposed to address the pedestrian network in Wall. The “No Action” option, **Alternative 4A**, is not recommended because of the severity of the issues with the current system and the necessity of having a completed network.

- Short-Term (2017-2022)

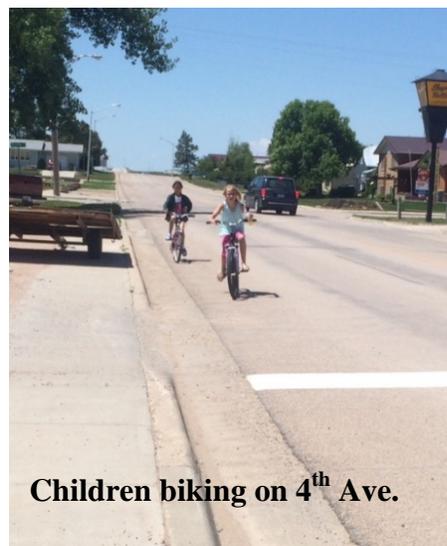
- **Alternative 4B:** Adopt an ordinance requiring anyone applying for a building permit for new construction to have to build sidewalk along their property. This is a required ordinance for several of the grant applications and helps the City get sidewalk put in everywhere.
- **Alternative 4C:** Update existing ordinance to set common design standards for sidewalk in accordance with ADA. The sidewalk should be five feet wide with a two-percent maximum cross slope.
- **Alternative 4D:** Enforce ordinance 12.08.060 to ensure sidewalk that is in fair and poor condition is reconstructed.



Pedestrians crossing Main St.

- Mid-Term (2022-2027)

- **Alternative 4E:** Improve sidewalk system with priority on those within the area bounded by Route 1 located in **Figure 23**. Using ordinances already established to provide the legal basis for funding, a sidewalk network serving all of the City’s major elements is achievable within ten years. While implementing sidewalk it would be a good time to evaluate potential locations for crosswalks. These potential locations include areas downtown, near the school, across South Blvd. and on Glenn St.



Children biking on 4th Ave.

- Long-Term (2027-2037)

- **Alternative 4F:** Implement sidewalk on all city streets. This goal will take effort and resources from both citizens and the City, but if all parties reach a consensus about the importance of pedestrian safety, a complete network can be accomplished within 20 years.



Pedestrian Facilities (Continued)

- **Alternative 4G (A&B):** Implement a multi-use trail within and around the perimeter of the city. Some citizens have inquired about the possibility of this option and, as a long-term goal, it can be achievable. A trail would connect residents to community amenities, provide a safe facility for residents with active lifestyles, and help draw people young and old to the community. Two trails are being proposed. This system would likely include a combination of dedicated trails, existing sidewalks, and on-street lanes. **Figure 24** shows possible routes of a trail system around Wall. The City should look into both options before making a decision:

- **4GA:** Route 1- Connects the northern parts of Wall. Leads to school, park, and badlands overlook. Does not require negotiation with SDDOT or FRA, but would be up to the City to implement.

*OR

- **4GB:** Route 2- Connects the southern development to the north part of Wall. The trail requires the negotiation with SDDOT to develop an area underneath the interstate bridge to accommodate. If this is not feasible, would need to negotiate with SDDOT to widen the opening under a new set of bridges when those bridges come due for replacement. Unfortunately, the SDDOT's bridge management system is showing that the existing bridges are in very good condition and should not need replacement before 2050. The Rapid City, Pierre and Eastern Railroad has stated that they will not allow a multipurpose path to be developed in their ROW. Additionally, the railroad does not recommend a secondary pedestrian crossing to the school.



Curb and Gutter

The following alternatives are proposed to address curb and gutter within the study area. The **Alternative 5A**, “No Action”, is not recommended due to the need for better drainage throughout the study area.

- Short-Term (2017-2022)
 - **Alternative 5B:** Adopt an ordinance requiring any work on streets to build curb and gutter. At first, this will have some disjointed sections, but will help the City build a better curb and gutter system.
 - **Alternative 5C:** Continue to maintain the existing curb and gutter and replace as needed. This alternative should be continued through the mid and long terms.
- Mid-Term (2022-2027)
 - **Alternative 5D:** Start putting in curb and gutter at a predetermined amount of blocks each year. The cost of this can become expensive and it is advised to assess landowners a percentage of the cost to help make this feasible and get the curb and gutter implemented faster.
- Long-Term (2027-2037)
 - **Alternative 5E:** Continue to put in curb and gutter throughout the city until all streets are complete. As new streets are added, require curb and gutter to be built with storm sewer, where needed.



Railroad

The following alternatives are proposed relative to the railroad that runs through Wall. The “No Action” option, **Alternative 6A**, is not recommended due to the public’s interests.

- Short-Term (2017-2022)
 - **Alternative 6BA:** Set into motion the process of legalizing the current pedestrian crossing that connects Myrtle Ave. and Wall Public Parking on 5th Street. The crossing is in need of railroad crossing signs, warning signs, a hard surface rail crossing, and pedestrian gates. In addition, the crossing will need to obtain a DOT number. The processes could be long and costly, so this alternative should be continued through the mid and long terms.
 - **Alternative 6BB:** Remove the sidewalk leading up to the railroad. This will deter pedestrians from crossing over the railroad tracks and into railroad ROW. This alternative is cost efficient and requires little work to be done.
- Mid-Term (2022-2027)
 - **Alternative 6C:** Address the rail structure to see if quiet zone is a possibility. Estimated cost can be found in the Cost Estimation section of the Plan.
 - **Alternative 6D:** Install fence alongside the railroad right of way (ROW) to help keep pedestrians off the tracks. This would help solve the issue of getting children safely to and from school. Fencing would also more than likely be required for the implementation of a traditional quiet zone.
- Long-Term (2027-2037)
 - **Alternative 6E (A&B):** Determine the need and want of a quiet zone. The quiet zone would need installation of a four quadrant gate. The Federal Railroad Administration (FRA), SDDOT, and Rapid City, Pierre, and Eastern (RCP&E) will not assume the cost of the quiet zone. The City of Wall would need to initiate the process of implementing a quiet zone. Steps to do this can be found in the **Appendix VIII**. The City should consider these factors when choosing a quiet zone:
 - **6EA:** Traditional quiet zone. No horns will sound as a train goes through the quiet zone; exceptions are made when the engineer believes there is a possibility there is something or someone on the tracks.
 - *OR
 - **6EB:** Directional Horns. Horns are placed at the rail crossing and sound when a train passes through them. The noise is minimized outside the street area. Additionally, the cost of directional horns is substantially lower than a traditional quiet zone.



The SAT recommends that the City of Wall look into **Alternative 6EB** for their quiet zone. This Alternative is both cost efficient and safe. It helps minimalize the noise caused by horns but still keeps the community safe.

The SAT does not recommend anything be done at this time for cart shifting relocation due to the fact that the relocation of the shifting is a direct correlation with the location of Dakota Grain and Mill. As a result, until Dakota Grain and Mill relocates, the possibility of eliminating cart shifting in town is slim. Additionally, the estimated cost of new siding for the relocation would be \$5 million per mile, which would take a huge toll on the City's finances.



Transit

The following alternative is proposed relative to transit in the City of Wall. The “No Action” option, **Alternative 7A**, is recommended due to the fact that the current transit provider, River City Transit, is a functioning transit system in Wall. The rest of this section will list facts about the transit system in Wall.

- River City Transit has two vehicles that currently provide transportation to the area.
- There have been over 1500 rides given since October 1, 2016.

Additional information about rides and services can be found on River City Transits website:

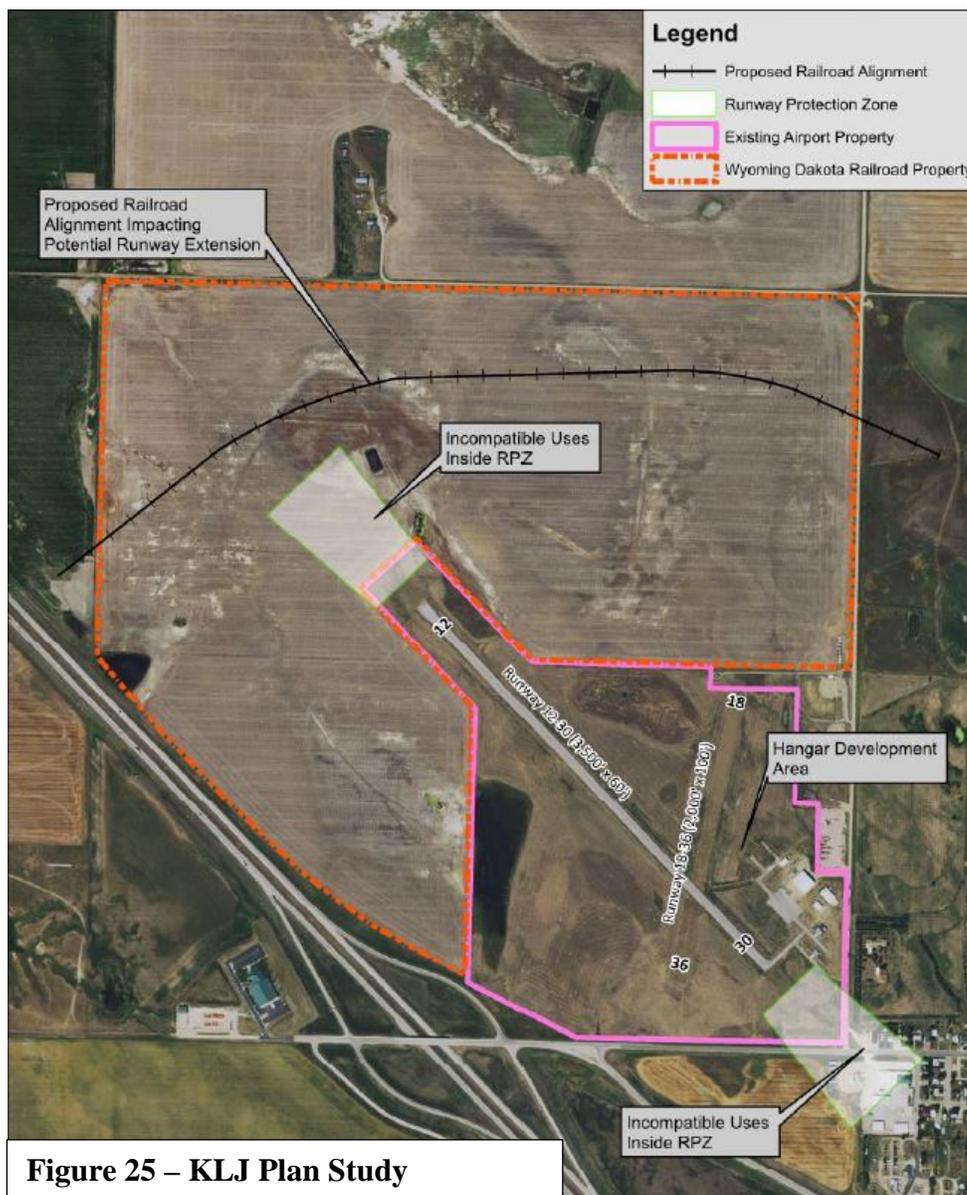
<https://www.rcptransit.com/about-us/>



Airport

The following alternative is proposed to address the airport within the study area. The **Alternative 8A**, “No Action”, is not recommended but may be done for now to save money.

- Long-Term (2027-2037)
 - **Alternative 8B:** Consider the recommendations in the Wall Municipal Airport Master Plan Study by KLJ and the needs of the community to prioritize projects and update the plan, as needed





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Cost Estimates

Table 5, shown below, details cost estimates for each project recommended in the plan. The figures show total costs and, depending on the project, are not necessarily intended to be entirely completed immediately or at one time. Additionally, the costs are capital improvement costs only and many not necessarily represent a total cost estimate. Other expenses such as engineering consultation or design fees, utilities and right of way may increase the total cost to the city. However, the city may be able to lessen expenses by using an area cost with the ability to implement the projects at lower rates than SDDOT estimates.

| Project ID | Description | Treatment | Estimated Cost |
|----------------|--|--|---|
| Alternative 1B | Adopt street preservation plan | Documentation | 0 |
| Alternative 1C | Contact GPS providers | Documentation | 0 |
| Alternative 1D | Redesign and reconstruct South Blvd. into a single, three lane road | Variable; dependent on design and construction | \$2,800,000 |
| Alternative 1E | Construction of roundabout intersection at South Blvd. and Main St. | Variable; Dependent on design and construction | \$1,200,000-2,200,000 |
| Alternative 1F | Extension of Airport Rd. to South Blvd. | Construction | \$675,000 |
| Alternative 2B | Designate truck route and add signage | Documentation and add 8 signs | \$2,400 |
| Alternative 2C | Adopt ordinance setting standards for truck route construction | Documentation | Engineering costs to develop standards |
| Alternative 2D | Rebuild all the roads to truck route standards | Unknown. Dependent upon the results of 2C | Unknown. Dependent upon the results of 2C |
| Alternative 3B | Draft ordinance regulating billboard and business signing size and location | Documentation | 0 |
| Alternative 3C | Implement MUTCD complaint wayfinding signs | Installation of signs | \$200 per sign |
| Alternative 3D | Replace signs not in MUTCD compliance | Replacement of signs | \$200 per sign |
| Alternative 4B | Adopt ordinance requiring building permits to new construction to include sidewalk | Documentation | 0 |
| Alternative 4C | Update existing ordinance to be ADA compliant | Documentation | 0 |
| Alternative 4D | Enforce ordinance 12.08.060 to ensure sidewalk is repaired | Documentation | 0 |
| Alternative 4E | Improve sidewalk system prioritizing those within the Bike Path: Route 1 | Variable | Variable |



| | | | |
|-----------------|--|--|----------------------------------|
| Alternative 4F | Implement sidewalk on all city streets | 44064' of sidewalk 105 ADA curb ramps | \$4,000,000 |
| Alternative 4GA | Implement option 1 of the shared use path | 11,510' of path | \$590,000 |
| Alternative 4GB | Implement option 2 of the shared use path | 9,261' of path | \$480,000 |
| Alternative 5B | Adopt ordinance requiring any work on street to build curb and gutter | Documentation | 0 |
| Alternative 5C | Continue to maintain the existing curb and gutter and replace as needed | Repair and replace as needed | Variable |
| Alternative 5D | Start putting in curb and gutter at predetermined amount each year | Install curb and gutter | \$24,000 per one 400' block |
| Alternative 5E | Implement curb and gutter on all streets in the city | 17,488' of curb and gutter | \$1,000,000 |
| Alternative 6BA | Start the process of legalizing the current pedestrian rail crossing | Documentation | 0 |
| Alternative 6BB | Remove the Pedestrian crossing from Myrtle Ave. and 5 th Street | Sidewalk Removal | Variable |
| Alternative 6C | Address rail structure | Contact with FRA and RCP&E | \$400,000 |
| Alternative 6D | Install fence alongside the south railroad ROW | Contact with FRA and RCP&E | Variable |
| Alternative 6EA | Determine the need and want of a quiet zone | Install a quiet zone | \$800,000-1,000,000 per crossing |
| Alternative 6EB | Determine the need and want of directional horns | Install directional horns | \$30,000- 40,000 |
| Alternative 8B | Consider KJL study for future airport expansion | Wall Municipal Airport Master Plan Study | Undisclosed |

Table 5 – Cost Estimations



Funding Availability

Financial planning is a vital component of the Transportation Plan. The availability of funding, designation of funds and future financial planning will often be the elements that make or break the implementation of the projects identified in this Plan. Therefore, it is just as important to identify the financial needs for the future as it is to identify the transportation needs of the community. South Dakota transportation projects are generally funded with Federal, State or Local funds. Funding for transportation may come from federal and state fuel tax, local general funds, wheel tax, vehicle registration fees or property tax. In addition, SDDOT has special programs for community access, industrial park roads and transportation alternatives or non-motorized transportation networks.

Because of the three jurisdictions responsible for the transportation network within Wall, there are three types of funding that may be used on the network. On Highway 240, the State may designate funds from state and federal fuel taxes and state vehicle excise tax for such items as state road maintenance and highway reconstruction. Pennington County may also designate their federal Surface Transportation Program (STP) funds or funding from the county's general fund for maintenance and improvements to Creighton Road as it passes through the study area. Unfortunately, most local transportation improvements are often limited to funding designated from the City's general fund or received through state, federal or private grant programs.

As the City budgets for transportation projects, it is important to know the priorities of the community. Although these priorities should be evaluated from time to time, the long term goals of the community will develop the long range Plan needed to budget for large projects in the distant future as well as small, annual transportation projects that either maintain the existing system or accomplish a large scale project built in a series of phases.

Potential local funding sources for City transportation network projects may include:

- Sales tax funds
- Property tax funds
- Assessment of adjacent property owners
- Funds raised through local fundraising efforts, including private or corporate donations
- Funds generated through Business Improvement Districts or other tax districts



In addition, the City may apply for a variety of grant or special program funding administered by the State of South Dakota. These sources may include:

- Transportation Alternatives Program funds for non-motorized transportation projects including safe routes to school, safe routes for non-drivers, shared use paths and others. (SDDOT)
- Community Access Road Grant funds, for cities less than 5,000 in population, for the construction or reconstruction of major streets, such as Wall's Main Street or the roads to the school or elevator. (SDDOT)
- Agri-Business Grants for the development of access to new or expanding agri-business industries. (SDDOT)
- Industrial Park Grants for the development of new or expanding access for new industry located with industrial parks. (SDDOT)
- Recreational Trails Grants for the development and maintenance of non-motorized and motorized trails for recreational purposes. (SDGF&P)
- Walking Audit Grants, Active Transportation and other healthy lifestyle related grants for the development of transportation networks supporting walking, biking and other active transportation facilities. (SDDOH)
- Federal Transit Administration Section 5310, 5311, 5339 Grants Program for capital, administrative, operating assistance and training for local governments and nonprofit organizations providing rural public transportation services. (SDDOT)
- Federal Aviation Administration Airport Improvement Program for airport improvement projects. (SDDOT)
- Safety Funds for safety improvement projects. (SDDOT)
- U.S. Department of Transportation Discretionary Programs (many of these were discontinued with the latest Federal funding bill, but something to consider in the future when new bills are approved)
- Federal Bicycle and Pedestrian Funding Opportunities for multi-modal transportation related projects.
- Bicycle and Pedestrian Grants for bike and pedestrian transportation related projects. Many are available, competitive, and fund projects at various levels.



Addressing Goals

| Goals & Objectives | Accomplished By: |
|---|--|
| Goal #1: Provide a safe and efficient automotive transportation system. | |
| Evaluate to what extent the existing street system meets the needs of city businesses, industry, private citizens, and civic functions. | Inventoried street condition, talk with stakeholders, and citizens during public meetings. |
| Identify frequent crash locations and evaluate appropriate actions to improve safety. | Using an accident location database, areas of high crash frequency were located and managed via several alternatives in the Plan. |
| Identify high-risk, high-conflict areas and ways to reduce risk to motorists and pedestrians. | Developed crash map as well as talk with citizens to determine problem areas. Then observed those areas during high-traffic times. |
| Evaluate the effectiveness of signage in the overall transportation system and provide solutions to possible problems. | Inventoried all street signage and constructed a map of current locations. Addressed the problems in the recommendations. |
| Goal #2: Provide a safe and efficient multimodal transportation system. | |
| Review locations of automobile-pedestrian conflicts and evaluate potential safety improvements. | Determined conflict areas through meetings with citizens and went and observed areas to determine possible recommendations. |
| Identify sidewalk, trail, and on-street improvements that would enhance bicycle and pedestrian safety and connectivity across Wall. | Inventoried sidewalk condition and determined common areas used by citizens. Recommendations included fixing curb ramps that are currently a safety concern. |
| Provide the community with potential safe pedestrian routes. | Developed a map showing the suggested safe routes through town connecting key locations within the study area. Including the school, pool, and park. |
| Identify possible transit needs and propose solutions to meet those needs. | Talked with current transit drivers and stakeholders about current transit uses. It was determined to continue the use of the transit system. |
| Table 6 – Addressing Goals | |



Goal #3: Provide a transportation system that supports and enhances the area’s economy.

| | |
|--|--|
| Identify businesses’ recurring transportation issues which may hinder their operation or rapport with customers, suggesting ways to rectify these issues. | Stakeholder meetings were held with several business owners and employees. Their input has shaped the final recommendations of the Plan. |
| Review current truck routes and suggest alternatives or changes which better fit the economic needs of the community without compromising pedestrian, bicycle, and automotive safety or local roadway condition limits and specifications. | No current truck route could be located. A proposed truck route was drafted on map to access all the properties that currently have heavy truck traffic. |
| Create a more welcoming traffic environment for travelers with the goal of bringing more business into the City. | Recommended adding sidewalk and curb and gutter to the entire city. As well as adding a shared use path for a safer area to exercise. |

Goal #4: Provide a plan for future expansion and maintenance of the transportation system.

| | |
|--|--|
| Suggest a prioritized list of transportation needs based on their feasibility and necessity. | Each alternative in the Plan is classified as either Short-, Mid-, or Long-Term. |
| Prepare a plan for preserving, maintaining, and improving the existing multimodal transportation system. | The City of Wall will be able to use this Plan for transportation improvements for up to 20 years into the future. |
| Suggest ordinances or laws which better regulate the implementation and maintenance of new and existing transportation elements. | Sample ordinances as detailed in Appendix I approach the implementation and maintenance of roads and sidewalks. |
| Identify sources of applicable funding through government grants and funds. | A list of funding sources can be found under the section Funding Availability and Appendix IX. |
| Provide a template which outlines the necessary financial input from public and private sectors. | Sample ordinances as detailed in Appendix I outline the financial responsibilities for parties involved in transportation improvements |



| Project ID | Goal #1: Provide a safe and efficient automotive transportation system. | Goal #2: Provide a safe and efficient multimodal transportation system. | Goal #3: Provide a transportation system that supports and enhances the area's economy. | Goal #4: Provide a plan for future expansion and maintenance of the transportation system. |
|-------------------|--|--|--|---|
| Alternative 1B | | | | ✓ |
| Alternative 1C | ✓ | | ✓ | |
| Alternative 1D | ✓ | | ✓ | ✓ |
| Alternative 1E | ✓ | | ✓ | ✓ |
| Alternative 1F | ✓ | | ✓ | ✓ |
| Alternative 2B | ✓ | | | ✓ |
| Alternative 2C | | | | ✓ |
| Alternative 2D | ✓ | | ✓ | ✓ |
| Alternative 3B | ✓ | | | ✓ |
| Alternative 3C | ✓ | ✓ | | ✓ |
| Alternative 3D | ✓ | | | ✓ |
| Alternative 4B | | ✓ | ✓ | ✓ |
| Alternative 4C | | ✓ | | ✓ |
| Alternative 4D | | ✓ | ✓ | ✓ |
| Alternative 4E | | ✓ | | ✓ |
| Alternative 4F | | ✓ | | ✓ |
| Alternative 4GA | | ✓ | | ✓ |
| Alternative 4GB | | ✓ | ✓ | ✓ |
| Alternative 5B | | | | ✓ |
| Alternative 5C | | | | ✓ |
| Alternative 5D | | | | ✓ |
| Alternative 5E | | | | ✓ |
| Alternative 6B | | ✓ | | ✓ |
| Alternative 6C | | | | ✓ |
| Alternative 6D | | ✓ | | |
| Alternative 6EA | ✓ | | | ✓ |
| Alternative 6EB | ✓ | | | ✓ |
| Alternative 8B | | ✓ | | ✓ |

Table 7 – Goals Overview



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