Sisseton-Wahpeton Oyate

2019 Long Range Transportation Plan



Sisseton-Wahpeton Oyate
LAKE TRAVERSE RESERVATION
P.O. Box 509
12554 BIA Hwy. 711
Agency Village, South Dakota 57262
Phone: (605) 698-3911

TRIBAL COUNCIL RESOLUTION NO. SWO-20-001

Recognition and Adoption of the Long Range Transportation Plan (LRTP)

WHEREAS, The Sisseton-Wahpeton Oyate is organized under a Constitution and By-laws adopted by the members of the Tribe on August 1-2, 1966, and approved by the Commissioner of Indian Affairs on August 25, 1966, and last amended effective November 15, 2006; and

WHEREAS, The Constitution ARTICLE III, Section 1, states that, the Sisseton-Wahpeton Oyate shall be governed by a Council, and ARTICLE VII, Section 1, states that, the Council shall have the following powers: (a) to represent the Tribe in all negotiations with Federal, State and local governments; (b) to acquire, own, use, manage, lease and otherwise encumber and to dispose of Tribal property, both real and personal, wherever situated; (c) to engage in any business that will further the economic development of the Tribe and its Members, and to use Tribal funds or other resources for such purposes; (d) to make rules governing the relationship of the members of the Tribe, to Tribal property, and to one another as members of the Tribe; (e) to hire employees and agents, including legal counsel, directly or as independent contractors, and to compensate them for their services; (f) to deposit Tribal funds to the credit of the Tribe, without limitations of the amount in any account; (g) to take any action by ordinance, resolution, or otherwise which are reasonably necessary through committees, boards, agents or otherwise, to carry into effect the for-going purposes; (h) to promote public health, education, charity, and such other services as may contribute to the social advancement of the members of the Sisseton-Wahpeton Oyate; (i) adopt resolutions regulating the procedures of the Tribal Council, its officials and committees in the conduct of Tribal Affairs; and

WHEREAS, The SWO DOT working through the Sisseton-Wahpeton Oyate Tribal Council Resolution No. SWO-16-033, dated March 2016 approving the Tribal Transportation Program Agreement – Fixing America's Surface Transportation (FAST) Act, between the Sisseton-Wahpeton Oyate of the Lake Traverse Reservation and the United States Department of the Interior, Bureau of Indian Affairs Division of Transportation; and

WHEREAS, The 25 CFR Part 170 which is the governing legislation for the Tribal Transportation Program (TTP) states the TTP funds are available to Tribes to support transportation planning and associated activities such as developing the Tribal priority list TTIP and LRTP; and

WHEREAS, The Long Range Transportation Plan (LRTP) is a 20-year plan which clearly develops strategies to address future land use, economic development, traffic demand, public safety and health and social needs for the Sisseton-Wahpeton Oyate of the Lake Traverse Reservation; and

WHEREAS, The Sisseton-Wahpeton Oyate Department of Transportation has successfully updated the LRTP which is a twenty year planning document to be reviewed annually and updated every five years.

NOW, THEREFORE BE IT RESOLVED, That the Tribal Council of the Sisseton Wahpeton Oyate of the Lake Traverse Reservation hereby approves the 2019 Long Range Transportation Plan (LRTP) as developed by the SWO DOT utilizing the guidelines set forth in the 25 CFR part 170 sections 170.412 and 170.413; and

FURTHER, BE IT RESOLVED, That the Tribal Council of the Sisseton-Wahpeton Oyate of the Lake Traverse Reservation hereby adopts the 2019 Long Range Transportation Plan (LRTP) to be submitted to the Department of the Interior Bureau of Indian Affairs Division of Transportation.

CERTIFICATION

We, the Undersigned duly elected Tribal Chairman and Tribal Secretary of the Sisseton-Wahpeton Oyate Tribal Council, do hereby certify that the above resolution was duly adopted by the Sisseton-Wahpeton Oyate Tribal Council, which is composed of 10 members (representing a total of 15 Tribal Council weighted votes and two Executive Committee votes for a total of 17 votes) of whom 10 constituting a quorum, were present at a Tribal Council meeting, duly noticed, called, convened and held at the TiWakan Tio Tipi, Agency Village, South Dakota, January 7, 2020, by a vote of 15 for, 0 opposed, 0 abstained, 2 absent from vote, 1 not voting, and that said Resolution has not been rescinded or amended in any way.

Dated this 7th day of January 2020.

Donovan White, Tribal Chairman
Sisseton-Wahpeton Oyate

ATTEST:

Myrna Thompson, Tribal Secretary
Sisseton-Wahpeton Oyate

TA BLE OF CONTENTS

CHAPTER 1 - INTRODUCTION 1

- PLAN PURPOSE 3
- RECENT AND CONCURRENT STUDIES OR ACCOMPLISHMENTS 3
- STUDY AREA 4
- CULTURE AND HISTORY 4
- ECONOMY 5
- TOPOGRAPHY 5
- LAND OWNERSHIP 6
- TRIBAL DISTRICTS 6
- ATTRACTIONS 17

CHAPTER 2 - INVENTORY AND DATA ANALYSIS 19

- ROAD OWNERSHIP AND INVENTORY 19
- FISCAL YEAR 2019 RIFDS INVENTORY UPDATE 27
- EXISTING AND PROJECTED TRAFFIC 27
- ROADWAY CAPACITY AND TRAFFIC OPERTATIONS 30
- 2019 SWO TRANSPORTATION SAFETY PLAN UPDATE 30
- CRASH AND SAFETY ANALYSIS 34

CHAPTER 3 - PUBLIC INVOLVEMENT 37

CHAPTER 4 - EXISTING CONDITIONS AND RECOMMENDATIONS 39

- ROADSIDE ELEMENTS 39
- PAVED & NON-PAVED ROADS 43
- PAVEMENT MANAGEMENT PROGRAM 52
- FREIGHT AND TRUCKING 55
- BRIDGE AND CULVERT CONDITIONS 60
- AIRPORTS 81
- TRANSIT CONDITIONS 82
- UTILITIES 84

CHAPTER 5 - POLICY RECOMMENDATIONS 86

- SYSTEM MANAGEMENT PRIORITIES 86
- ROADWAY CROSS-SECTION STANDARDS 86
- DEVELOPMENT REVIEW 89
- ENVIRONMENTAL CONSIDERATIONS 89
- CULTURAL CONSIDERATIONS 90
- JURISDICTIONAL CONSIDERATIONS 90

CHAPTER 5– PROJECTING FUNDING ALTERNATIVES 94

- TRIBAL FUNDING USE LIMITATIONS 94

- TRIBAL TRANSPORTATION PROGRAM FUNDS 101
- TRIBAL TRANSPORTATION PROGRAM SAFETY FUNDS 101
- TRIBAL BRIDGE PROGRAM FUNDS 102
- NATIONALLY SIGNIFICANT FED. LANDS AND TRIBAL PROJECTS (NSFLTP) 103
- TRANSPORTATION ALTERNATIVE/RECREATION TRAILS FUNDING 103
- BUILD GRANTS 104
- FEDERAL TRANSPORTATION AUTHORITY (FTA) TRIBAL TRANSIT GRANTS 105
- SD TRANSPORTATION ECONOMIC DEVELOPMENT PROGRAMS 105
- LOCAL FEES AND TAXES 105
- RECOMMENDED FUNDING STRATEGY 106

CHAPTER 6 - PROJECT PRIORITIZATION PLAN 108

- SHORT- AND LONG-RANGE PROJECT RECOMMENDATIONS 108
- RECOMMENDED STUDIES 112
-

CHAPTER 7 - APPENDICES 113

- Appendix A – Public Involvement 113
- Appendix B – Housing Plan 121

List of Figures and Tables

FIGURE 1: LAKE TRAVERSE RESERVATION STUDY AREA 2
FIGURE 2: SWO TRIBAL DISTRICTS 7
FIGURE 3: SWO TRIBAL HOUSING LOCATIONS 8
FIGURE 4: AGENCY VILLAGE & BARKER HILL 9
FIGURE 5: DAKOTA MAGIC & FINLEY HEIGHTS 10
FIGURE 6: INDIAN HEALTH & LAKE TRAVERSE 11
FIGURE 7: LONG HOLLOW & NEW EFFINGTON 12
FIGURE 8: PEEVER FLATS & TOWN HOUSING 12
FIGURE 9: RED IRON & SISSETON 13
FIGURE 10: SUMMIT & TOKA NUWAN ENEMY SWIM 14
FIGURE 11: SACRED HILL'S & VEBLEN TOWN HOUSING 15
FIGURE 12: WAUBAY HOUSING 16
FIGURE 13: MAJOR ATTRACTIONS 18
FIGURE 14: ROAD JURISDICTION 20
FIGURE 15: REGIONAL FUNCTIONAL CLASSIFICATION 24
FIGURE 16: SDDOT FUNCTIONAL CLASSIFICATION MAP 24
TABLE 1: FUNCTIONAL CLASS BY SURFACE TYPE 25
FIGURE 17: ROAD CLASSIFICATION BY JURISDICTION 26
FIGURE 18: EXISTING TRAFFIC VOLUMES 28
FIGURE 19: PROJECTED TRAFFIC VOLUMES 29
FIGURE 21: COLLISIONS REDUCTION WITH ROUNDABOUTS 41
TABLE 2: ROAD SURFACE TYPE 44
FIGURE 22: ROAD TYPE 45

TABLE 3: BIA ROAD SURFACE CONDITION 46
FIGURE 23: ROAD SURFACE CONDITIONS.....47

TABLE 4: COST OF ROAD MAINTENANCE 48
FIGURE 24: BENEFITS OF PREVENTIVE MAINTENANCE 50
TABLE 5: PAVEMENT PRESERVATION SCHEDULE 53
TABLE 6: LONG RANGE GRAVEL PROJECTS 54
FIGURE 25: RAILROADS 57
FIGURE 26: TRUCK TRAFFIC VOLUMES 59
FIGURE 25: BRIDGE CONDITIONS 61
FIGURE 28: AIRPORT LOCATIONS 82
FIGURE 29: STANDARD HIGH-SPEED BIA PAVED ROAD TYPICAL SECTION 87
FIGURE 30: STANDARD HIGH-SPEED GRAVEL ROAD TYPICAL SECTION 87
FIGURE 26: STANDARD LOW SPEED GRAVEL ROAD TYPICAL SECTION 87
FIGURE 27: STANDARD TRIBAL RESIDENTIAL STREET TYPICAL SECTION - RURAL 88
FIGURE 28: STANDARD TRIBAL RESIDENTIAL STREET TYPICAL SECTION - URBAN 88
FIGURE 29: STANDARD SEPARATED SHARED USE PATH TYPICAL SECTION 88
FIGURE 30: STANDARD SIDEWALK TYPICAL SECTION 89
TABLE 7: ON-RESERVATION COUNTY ROADS BY ROUTE 92
FIGURE 31: COUNTY-OWNED ROADS ON THE SWO RESERVATION 93
FIGURE 32: ANNUAL TRIBAL BRIDGE PROGRAM FUNDING 102
FIGURE 38: FUNDING MECHANISMS BY PROJECT TYPE 106
FIGURE 39: FUNDING 107
TABLE 8: SHORT TERM PROJECTS 109
TABLE 9: LONG RANGE PROJECTS 110



DEFINITION OF ACRONYMS

AADT – Average Annual Daily Traffic
AADTT – Average Annual Daily Truck Traffic
ADA – Americans with Disabilities Act
BIA – Bureau of Indian Affairs
CFR - Code of Federal Regulations
DEMD – Division of Energy and Mineral Development
DUI – Driving Under the Influence
DWI – Driving While Intoxicated
FAA – Federal Aviation Administration
FAST Act – Fixing America's Surface Transportation Act
FHWA – Federal Highway Administration
GIS – Geographic Information System
IRR – Indian Reservation Roads
LED – Light-Emitting Diode
LRTP – Long Range Transportation Plan
MAP-21 – Moving Ahead for Progress in the 21st Century Act
MOA – Memorandum of Agreement
MOU – Memorandum of Understanding
MUTCD – Manual on Uniform Traffic Control Devices
OWI – Operating While Intoxicated
PASER – Pavement Surface Evaluation and Rating
PM – Particulate Matter
PMP – Pavement Management Program
RSA – Road Safety Audit
RIFDS – Road Inventory Field Data System
SDDOT – South Dakota Department of Transportation
SD LTAP – South Dakota Local Transportation Assistance Program
SDDPS – South Dakota Department of Public Safety
SWO – Sisseton-Wahpeton Oyate
TA – Transportation Alternatives
TraCS – Traffic and Criminal Software
TTIP – Tribal Transportation Improvement Program
TTP – Tribal Transportation Program
TTSP - Tribal Transportation Safety Plan
USDOT – United States Department of Transportation

CHAPTER 1 - INTRODUCTION

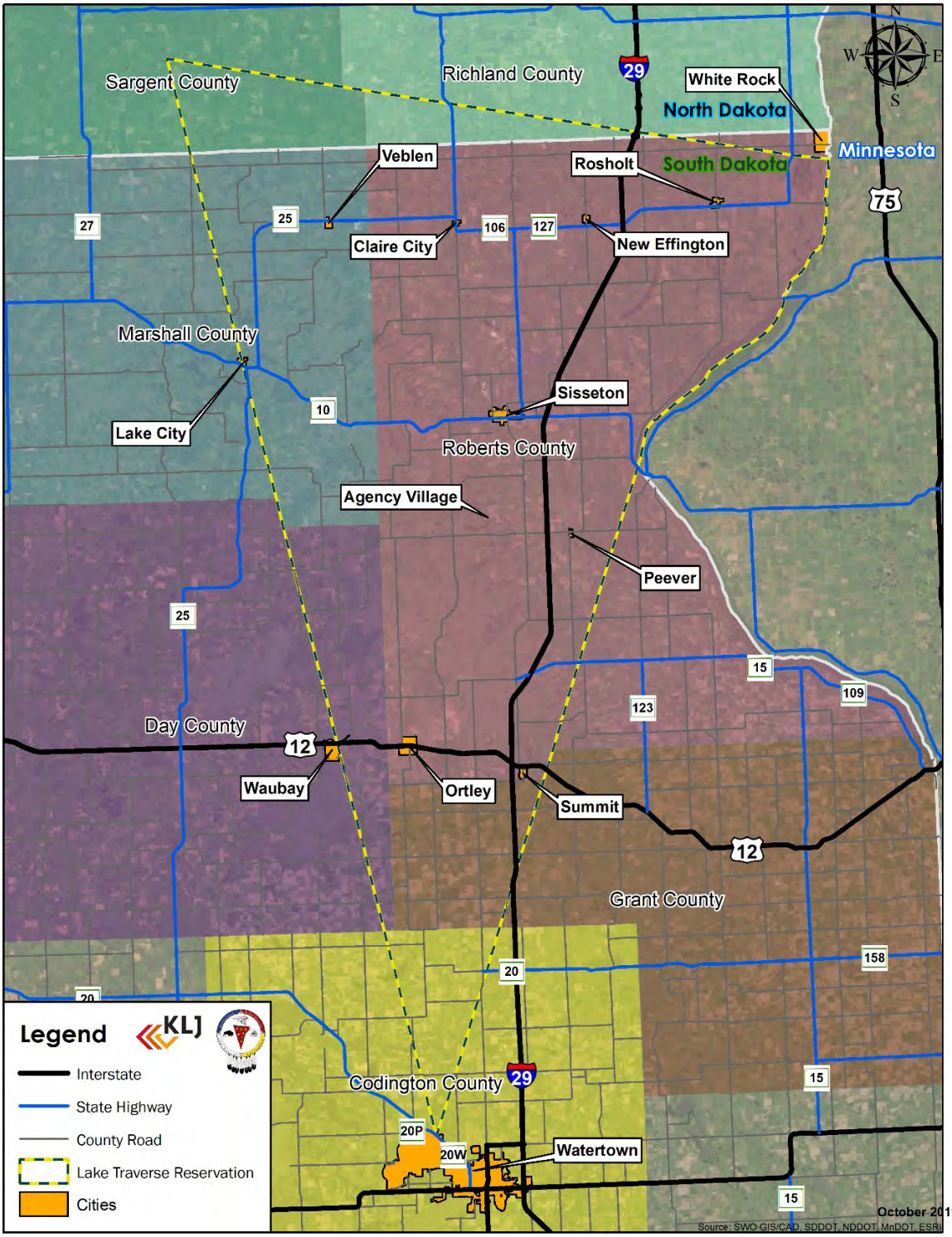
The Lake Traverse Indian Reservation is home to the Sisseton-Wahpeton Oyate (SWO), located between North and South Dakota. The reservation is shaped like a triangle and is in Codington, Grant, Day, Roberts and Marshall Counties in South Dakota, and Richland and Sargent Counties in North Dakota (Figure 1). U.S. Highway 12 crosses east-west through the reservation. Interstate 29 runs north and south through the mid-section of the Lake Traverese Reservation.

The Long-Range Transportation Plan (LRTP) is a master transportation plan that researches and provides guidance on all modes of travels while presenting needs and alternatives for the Tribe ranging from maintenance to new facility construction. This plan will provide guidance to the Tribe as they plan and build a transportation system that safely and efficiently moves people and goods and provides quality access to Tribal housing, services, and employment.

In order to develop an effective Tribal Transportation Improvement Program, the Tribe needs to have a framework and foundation upon which to build. The LTRP provides the framework and foundation for that plan by creating a LRTP plan that while comprehensive in nature takes a high-level systematic approach rather than a project detailed level of analysis. In a project-by-project basis where additional analysis or studies are needed, the LTRP provides guidance as to the nature of the analysis or studies that should be undertaken in the future.

The Tribe last passed a LRTP plan in 2006. This 2019 supersedes the 2006 Sisseton-Wahpeton Oyate LRTP. It fulfills the requirements outlined in the November 7th, 2016 Federal Register, 25 CFR Part 170, Tribal Transportation Program; Final Rule. In compliance with those directives, this LRTP is a 20+ year strategy and capital improvements program developed to guide the effective investment of Tribal Transportation Program (TTP) funds and other funding programs, and to identify the strong candidates for grant funding applications submitted for multimodal transportation facilities. The short-range element applies to the years 2020 through 2024. The long-range element applies to the years 2025 through 2045. The Federal Register suggests that this plan be updated every 5 years

Figure 1: Lake Traverse Reservation Study Area



PLAN PURPOSE

The Code of Federal Regulations (CFR), outlines the requirements and purpose of a Tribal LRTP which is to clearly demonstrate and to fulfill Tribal goals by developing strategies to meet those goals. These strategies should address future land use, economic development, traffic demand, public safety, and health and social needs.

SWO officials needed a strategic approach to respond to existing and anticipated future transportation issues. As a result, the Tribe has undertaken this effort to develop a master plan for transportation infrastructure. The purposes of this plan are:

- To develop and update the 2006 Long Range Transportation Plan (LRTP) in conformance with Federal Register 25 CRF Part 170.
- To collect and examine information on current and future transportation improvement needs.
- To consider the needs of all modes of travel and develop strategies and recommend projects to accommodate them. This Plan examines the existing system of roads, sidewalks, bridges, airports, and transit facilities and considers opportunities for future improvements.
- To develop a strategy to maintain the transportation system.
- To review the current transportation system maintenance strategy and consider opportunities to improve it.
- To provide a basis for future transportation improvement programming that is sustainable and is tied to project costs and potential funding. This Plan considers existing and potential funding sources, the costs of maintenance, rehabilitation, and new construction, and provides guidance on effective use of limited funding

RECENT AND CONCURRENT STUDIES OR ACCOMPLISHMENTS

The Tribe received a $300,000 grant from the Tribal Transit Program 2014-2015, to initiate a public shuttle service between the Community of Sisseton and Agency Village to increase mobility options for tribal members and the surrounding communities in Northeast South Dakota, including bus stops built to shelter passengers from extreme weather conditions

Sisseton-Wahpeton Oyate Transportation Safety Plan was last updated in 2014. The plan analysis and recommendation contained within the (TTSP) are incorporated into the LRTP. The plan is currently in the process of being updated by a consultant. The Tribe received a $7,500 grant to fund the study.

Sisseton-Wahpeton Oyate Roadway Safety Improvement Program – 2016 This plan conducted an analysis to improve roadway safety on Indian Reservations and provided recommendations for the SWO.

STUDY AREA

To plan for the transportation needs of the community for the future, it is essential to understand the history and the area being studied. The Sisseton-Wahpeton Oyate resides in northeastern South Dakota within the boundaries of the former Lake Traverse Reservation, with a small portion located in the southeastern corner of North Dakota. The Lake Traverse Indian Reservation was set up in 1869. Gabriel Renville moved there from Minnesota. The Sisseton and Wahpeton Sioux (Dakota) Tribes moved there with him. Located seven miles south of Sisseton is Agency Village, the site of the headquarters of the SWO. Nestled amidst the rolling hills of northeastern South Dakota and a small portion of North Dakota lies the home of the Sisseton-Wahpeton Oyate Sioux Tribe. Its resident population of 10,408 persons was counted during the 2000 census. About one-third of its inhabitants claim to be of solely Native American heritage. Its largest community is the city of Sisseton, South Dakota.

Train, bus, and truck lines stop in Sisseton (on the reservation) and in nearby Webster. Sisseton is the seat of Roberts County, South Dakota. The Sisseton-Wahpeton Sioux makes up much of the culture and geography of Roberts County. The City of Sisseton within Roberts County serves as the nearest trade center for the reservation as it provides access to many goods and services. The land is divided into areas of residential, agricultural, commercial, industrial, open space, and rangeland uses. The Tribal government is centered in Agency Village. The Tribal lands contain some of South Dakota's most scenic and plentiful recreation areas.

CULTURE AND HISTORY

The Sisseton-Wahpeton Dakotas are members of the Great Sioux Nation, whose members call themselves Dakota, friend or ally. Several treaties between the Great Sioux Nation and the U.S. government between 1865 and 1868, defined the Nation's land base, which once stretched from Wisconsin to the Bighorn Mountains. Gold exploration that violated the 1868 treaty led to a gold rush into the sacred Black Hills. After defeating General George A. Custer and his 7th Cavalry at the Battle of the Little Big Horn in Montana in 1876, large numbers of Sioux dispersed to reservations or to Canada. Over time, reservation lands were allotted or otherwise reduced in size. Residents of the Lake Traverse Reservation endured land loss, financial hardship, and federal paternalism. While the initial reservation amounted to nearly one million acres, the approximately 2,700 Tribal members were allotted just over 300,000 acres with the remainder purchased for non-Indian settlement. Over the years, Tribal members sold off their allotments for survival, and by 1952 they retained only about 117,000 acres. In 1946 the Tribe adopted its constitution and bylaws.

During the Depression, Tribal members survived through subsistence farming, trapping, hunting, fishing and federal trust fund payments until the New Deal program came along. The Civilian Conservation Corps was especially helpful in providing employment to the reservation. By the 1960's, cultural renewal had generated changes in Tribal education and government. Congress funded two new schools, one in Sisseton and one in Peever, to provide integrated instruction.

In 1975 Tribal councilors chartered the Sisseton-Wahpeton Community College and the Tiospa Zina High School to furnish education with an emphasis on Tribal values.

From 1946 to 2002, the federally recognized Tribe was known as the Sisseton-Wahpeton Sioux Tribe. For a brief period in 1994, they identified as the Sisseton-Wahpeton Dakota Nation. During their 2002 Tribal general elections, they approved a measure changing the name to Sisseton-Wahpeton Oyate, the latter word in the Dakota language meaning "people or nation".

ECONOMY

The region's economy, based primarily on agriculture and cattle grazing, has long supported substantial numbers of Tribal members through fieldwork. By the 1980's, however, the Tribe had successfully established a manufacturing base on the reservation, and by the early 1990s it had developed a highly lucrative gaming industry. The Tribe operates Dakota Western, which manufactures plastic trash bags, and film and sheeting roll stock and whose major client is the U.S. Government General Services Administration. Dakota Crossings is a grocery store owned and operated by the Tribe in Sisseton. The Tribe also brings in revenue from leasing land to non-members for crop production and grazing in addition to hunting programs. In addition, the Tribe operates the Sisseton-Wahpeton College.

The economic development viability of these businesses and agriculture wouldn't be possible without a transportation system that supports and grows to support the future development of the community. Limited resources impact the ability to maintain and improve the existing transportation system and as such it important to plan out where the investments will have the greatest impact to support future development.

TOPOGRAPHY

The Lake Traverse Reservation is framed by a series of glaciated hills known as Cotaeu des Prairies that bisect the area and separate Big Sioux and James watershed complexes which drain into the Missouri, from the Minnesota on the east which flows into Big Stone Lake, and eventually into the Mississippi. A low, divide in the northern portion of the area and terminating in the division of Lake Traverse and Big Stone Lake separates that portion of the area which is in the Red River drainage from that of the Mississippi and Missouri complex.

The topography of the region divides the study area into three rather specific climatic and land use regions. These regions are (1) the lowland region of the Minnesota and Bois de Sioux River Valleys in the east; (2) the hills or Cotaeu des Prairies area in the central area characterized by parkland type vegetation with interspersions of lakes, grasslands and scrub timber; (3) and the high plains area of the western portion.

LAND OWNERSHIP

The boundaries of the reservation extend across North and South Dakota and cover an area over 400 square miles within seven counties. The area encompasses 250,000 acres of which the Tribe owns 27,046 acres and individual Tribal members own 81,875 acres for a total of 108,902 acres of total Tribal land.

TRIBAL DISTRICTS

The reservation is made up of seven districts, which include Enemy Swim, Old Agency, Big, Coulee, Long Hollow, Heipa (Veblen), Lake Traverse, and Buffalo Lake (**Figure 2**). The Tribal Districts contain the following communities and the housing locations which are shown in **Figure 3** with aerial images of the locations provided in **Figure 4** through **Figure 12**.

These include Agency Village, Barker Hill Housing, Dakota Magic Apartments, Finley Heights Housing, Indian Health Quarters, Lake Traverse, Long Hollow, New Effington, Peever Flats Housing, Peever Town Housing, Red Iron housing, Sisseton housing, Summit Housing, Toka NuWan Enemy Swin, Sacred Hill's Housing, Veblen Town Housing, Waubay Housing. Included in the appendix b is the housing plan for the Tribe. The plan was received during the public comment period and has been attached as a comment received.

Provision of transportation facilities for these housing communities is a central component to the LRTP. Economic sustainability and quality of life are all enhanced when a strong transportation system is provided to meet the needs of all users within a community.

Figure 2: SWO Tribal Districts

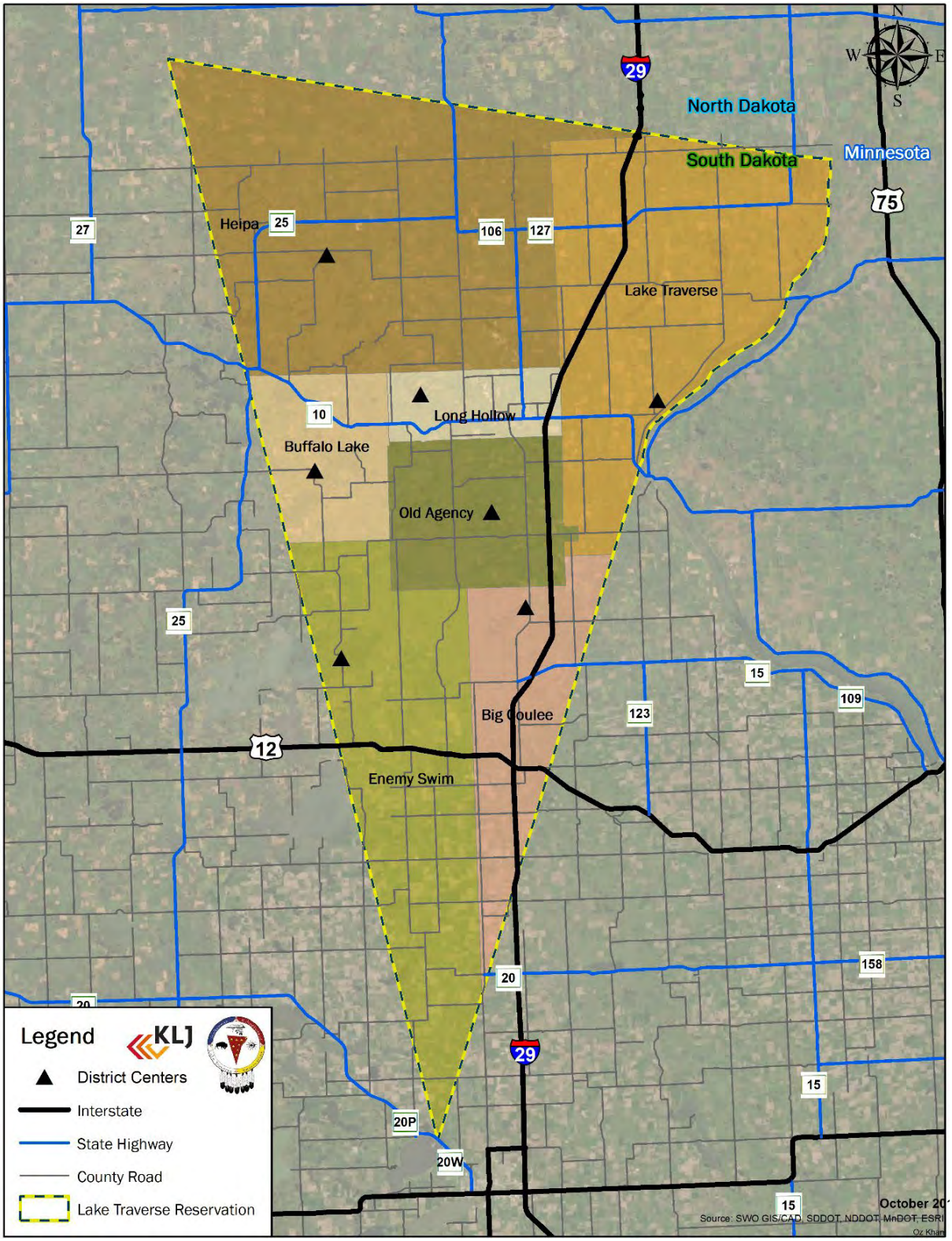


Figure 3: SWO Tribal Housing Locations

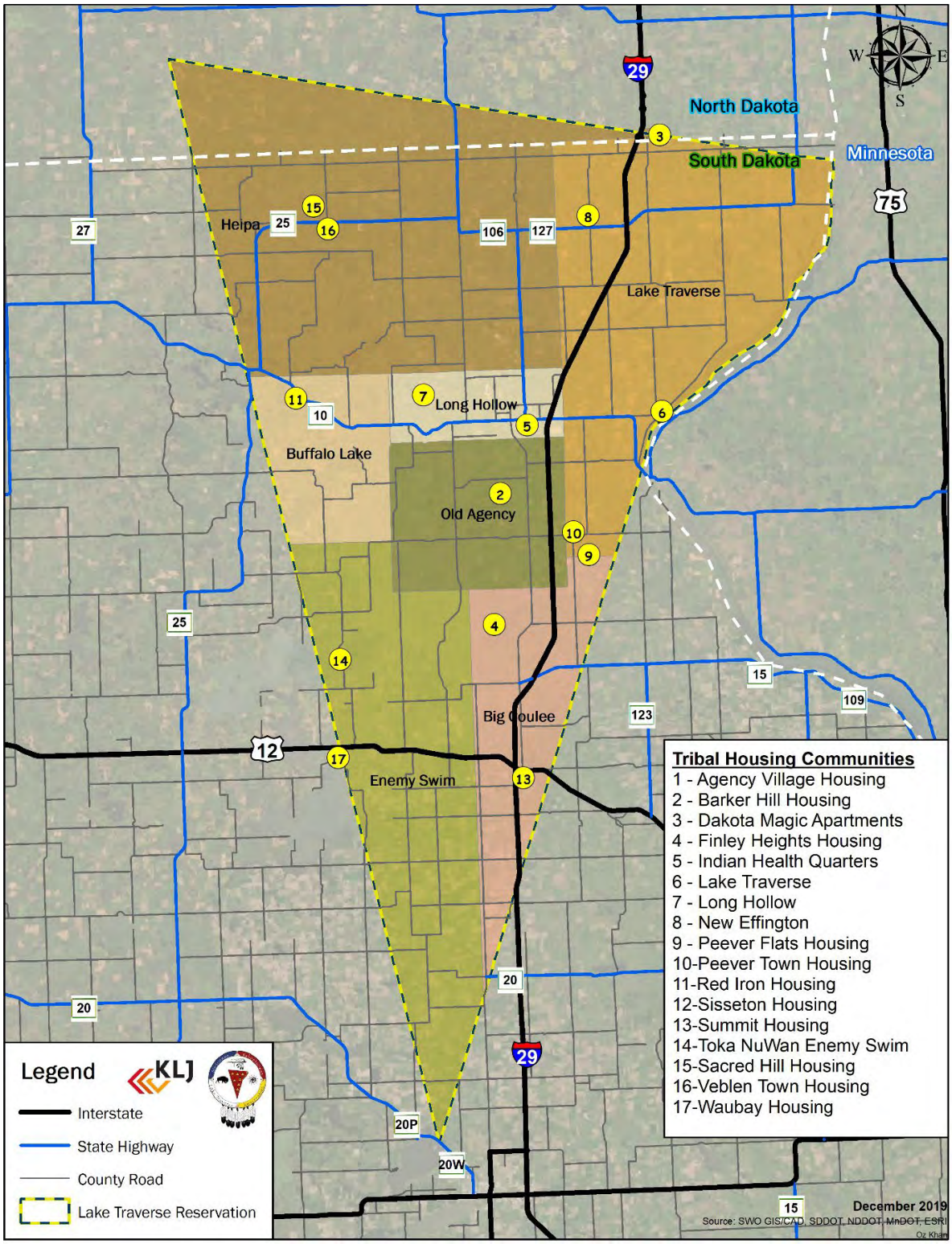


Figure 4: Agency Village & Barker Hill



Figure 5: Dakota Magic & Finley Heights



Figure 6: Indian Health & Lake Traverse



Figure 8: Peever Flats & Town Housing



Figure 9: Red Iron & Sisseton



Figure 10: Summit & Toka NuWan Enemy Swim



Figure 11: Sacred Hill's & Veblen Town Housing



Figure 12:Waubay Housing



ATTRACTIONS

The Lake Traverse Reservation is a beautiful area with a variety of attractions that drive traffic to the area which in turn brings a positive economic impact to the area. The community relies on the transportation infrastructure to facilitate the transport of goods, residents, and visitors. This economic impact is only possible when safe and well-maintained roads provide access to Tribal Communities and attractions. Therefore, it's important for the Tribal Government to finance and maintain roads that account for the economic development of the Tribe.

Pickerel Lake State Park, which is noted for its cool, spring-fed waters and has one of the deepest natural lakes in the state. The park's name means "where you spear long fish" and is located to the north of Enemy Swim. Sica Hollow State Park in Sisseton has earned a nationwide reputation for its attractions. The Park is home to the Trail of the Spirits which is an interpretive foot trail and is on the national recreational trail list.

Located to the west of Sisseton is the Sisseton-Wahpeton Sioux Veterans Cemetery. The cemetery was opened in 2016 to honor the veterans who have served. The cemetery was made possible by the donation of land from the tribe and a $3 million-dollar grant from the Department of Veterans Affairs and the National Cemetery Association. The Cemetery honors veterans regardless of racial background.

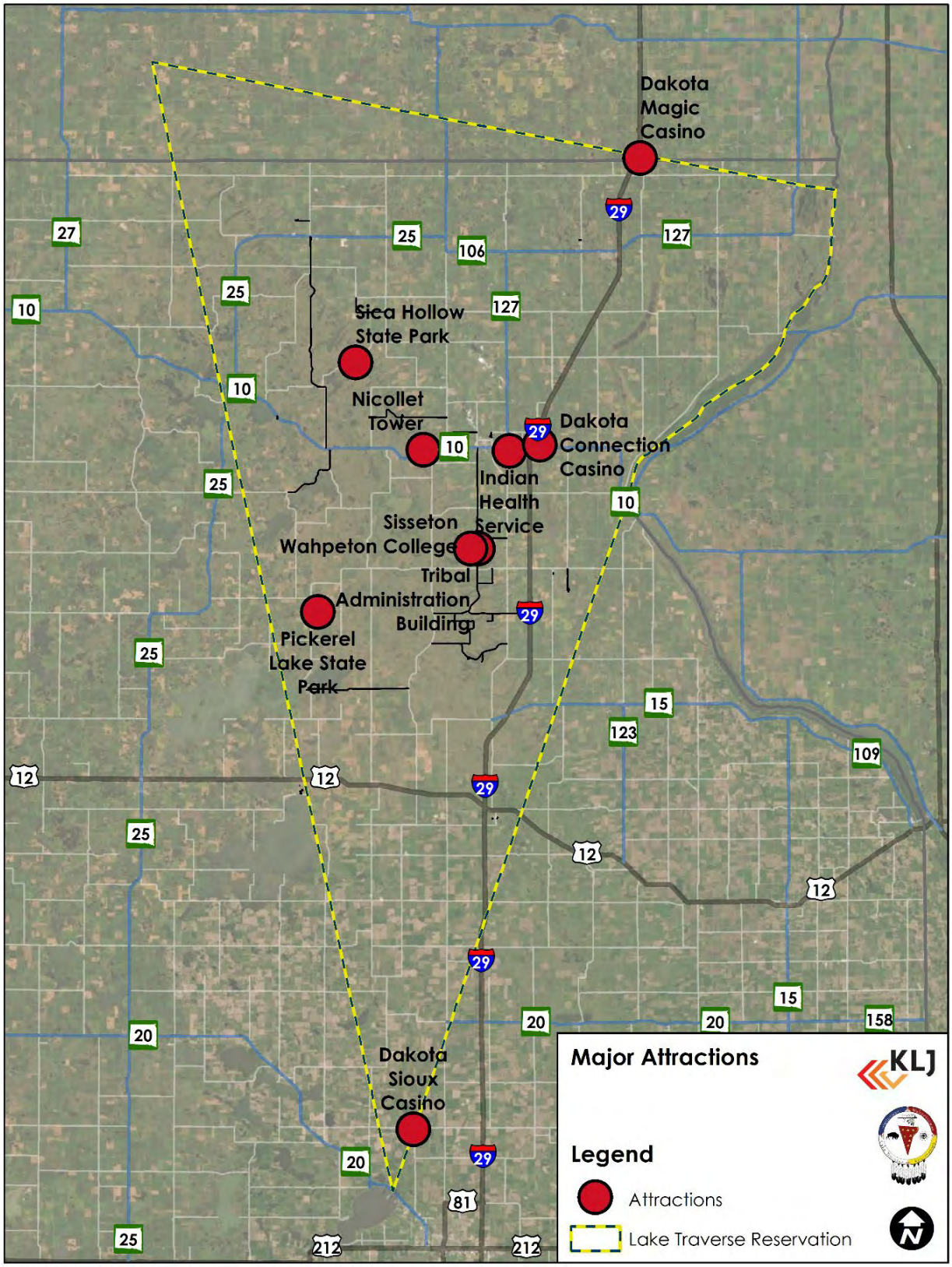
To the north of the cemetery is the Joseph N. Nicollet Tower which showcase views of the Coteau des Prairies and views of three states. The tower is open year-round for visitors to see the beauty of prairie.

The SWO owns three casinos: the Dakota Sioux Casino and Hotel in Watertown, the Dakota Connection Casino and C-Store in Sisseton, and the Dakota Magic Casino and Golf Resort near Watertown. The Sisseton and Wahpeton Bands have erected seven torches in front of the Dakota Magic Casino's entry, and each torch is representative of each of the seven bands among the Dakota, Lakota and Nakota people. These seven torches are also representative of the seven district council communities on the Lake Traverse Reservation.

The Sisseton-Wahpeton Oyate maintains a herd of buffalo located at the Tribal farm in the Enemy Swim District. The Sisseton-Wahpeton Oyate Ceremonial Grounds is located 7.5-miles south of Sisseton on Old Agency Road. And hosts the annual SWO Wacipi and Pow Wow which is over 152 years old.

There are two major health care facilities in the reservation: Coteau Health Care System hospital in Sisseton, and Woodrow Wilson Keeble Memorial Health Care Center, east of Sisseton. The Tiospa Zina Tribal School, and Sisseton-Wahpeton College are in Agency Village. The Tiospa Zina Tribal School is designed in the shape of an eagle. The Sisseton-Wahpeton College is designed in the shape of four drummers sitting around a drum and can be seen from Interstate 29.

Figure 13: Major Attractions



CHAPTER 2 - INVENTORY AND DATA ANALYSIS

A transportation system evaluation was conducted to determine the breadth of transportation deficiencies and improvement opportunities within the study area. To complete this evaluation, available aerial photography and data inventories were analyzed and mapped using Geographic Information System (GIS) technology.

Perhaps some of the greatest benefits of the plan development process was the preparation of mapped resources, which help Tribal planners, technicians, and officials to better understand the strengths and weaknesses of their transportation system.

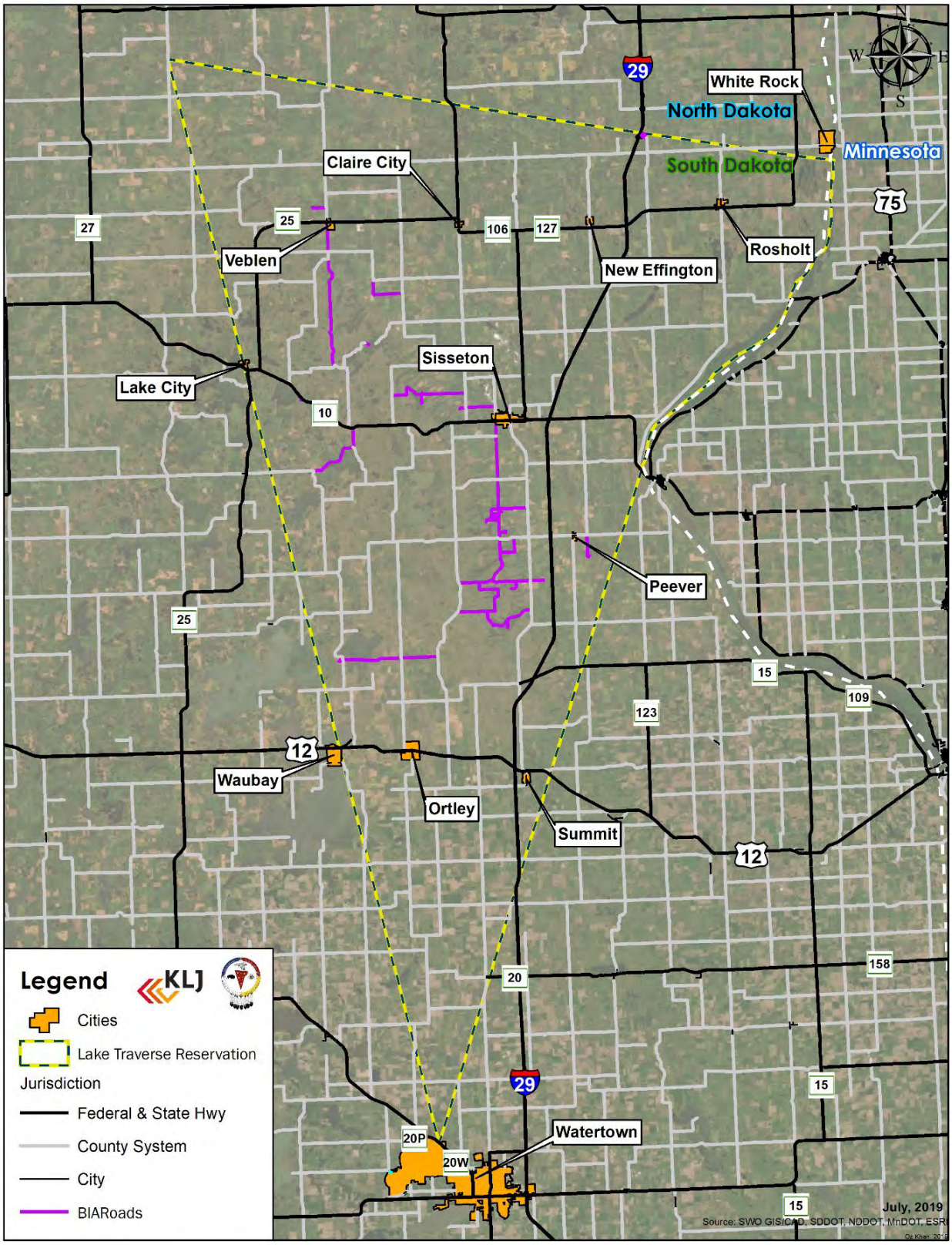
ROAD OWNERSHIP AND INVENTORY

This section of the report summarizes the existing road ownership, inventory, and functional classification of roadways on the Reservation.

ROADWAY OWNERSHIP

As this plan pertains mainly to the roads owned by SWO and BIA it's important to start with an understanding of the roads under their jurisdiction. Figure 14 shows the roads that are owned by the SWO and the BIA on the Lake Traverse Reservation. The figure also shows roads owned by other jurisdictions such as the SDDOT, NDDOT, Counties, and municipalities.

Figure 14: Road Jurisdiction



Within the IRR system there are two types of road classifications: State Highway Classifications and BIA/Tribal Road Classifications. Both the state and the BIA/Tribal systems utilize functional classification as the basis for classifying their roads. However, the criteria used to determine specific classifications differ between the state and the BIA.

State highway Classification

Functional classification refers to a hierarchy of roads. It supports the concept that roads are designed for different purposes. Primary and secondary state highways or arterials, for example, are designed to serve higher volumes of traffic at high speeds and over greater distances, while collectors are designed to facilitate some land access at the expense of higher speeds or high traffic volume.

From a residential standpoint, most people prefer to live along quiet local roads with frequent land access points (driveways). At the same time, residents typically desire a relatively direct driving path at higher speeds to reach their destination.

The highest volume roads and roads most capable of handling truck traffic are identified as arterials. Volume alone does not determine arterials. It is desirable that residents can travel north/south and east/west across the Reservation on arterials or major collectors and communities within the Reservation and beyond with arterial roads.

The BIA cannot maintain all paved roads in top condition unless significantly more funding is found. Therefore, future priority for maintenance on any road should generally be given to arterials, followed by collectors, then local roads, parking, and other paved facilities.

The state highways and some key BIA routes will continue to serve regional trips entering and exiting the Reservation. Other highways are planned to serve shorter distance trips based on classification.

BIA Roads Functional Classification

The BIA road system has 11 classes of routes: seven vehicular, and four non-vehicular. Functional classification is used by the BIA to group roads into a specific vehicular class based on the existing or anticipated function of the road. The road classes are then combined with the traffic characteristics of the road to select criteria and standards for the adequate design of the facility. As a part of the IRR Inventory system management, all IRR transportation facilities included on or added to the IRR Inventory are classified according to the following functional classifications:

Class 1: Major arterial roads providing an integrated network with characteristics for serving traffic between large population centers, generally without stub connections and having

average daily traffic volumes of 10,000 vehicles per day or more with more than two lanes of traffic. There are no BIA Class 1 roads on the Lake Traverse Reservation system.

Class 2: Rural minor arterial roads provide an integrated network having the characteristics for serving traffic between large population centers, generally without stub connections. They may also link smaller towns and communities to major resort areas that attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement. Generally, they provide for at least inter-county or inter-State service and are spaced at intervals consistent with population density. This class of road will have less than 10,000 vehicles per day. There are no Class 2 roads on the Lake Traverse Reservation system, however, State highways are typically classified as minor arterial roads.

Class 3: Streets that are located within communities serving residential areas. These roads correspond to the Local Roads category in the state highway classification. There are 9.4 miles of Class 3 roads on the Lake Traverse Reservation system.

The following BIA routes are designated as Class 3 in the 2018 Inventory update:

- Route 153
- Route 171
- Route 201
- Route 502
- Route 703
- Route 704
- Route 705
- Route 707
- Route 708
- Route 709
- Route 710
- Route 711
- Route 802
- Route 902
- Route 1000
- Route 2000
- Route 3000
- Route 4000
- Route 4300
- Route 5000

Class 4: Rural Major Collector Road is a collector to rural local roads. There are 31.5 miles of Class 4 roads on the Lake Traverse Reservation system.

The following BIA routes are designated as Class 4 in the 2018 Inventory update:

- Route 3
- Route 4
- Route 5
- Route 7
- Route 12
- Route 121

Class 5: Rural Local Road that is either a section line and/or stub type road that collect traffic for arterial type roads, make connections within the grid of the IRR System. This class of road may serve areas around villages, into farming areas, to schools, tourist attractions, or various small enterprises. Also included are roads and motorized trails for administration of forest, grazing, mining, oil, recreation, or other use purposes. There are 45 miles of Class 5 roads on the Lake Traverse Reservation system.

The following BIA routes are designated as Class 5 in the 2018 Inventory update:

- Route 1
- Route 2
- Route 8
- Route 11
- Route 15
- Route 151
- Route 152
- Route 202
- Route 701
- Route 702
- Route 706
- Route 801
- Route 9

Class 6: City Minor Arterial Streets that are located within communities and serve as access to major arterials. There are no Class 6 roads on the Lake Traverse Reservation system.

Class 7: City Collector Streets that are located within communities and serve as collectors to the city local streets. There are no Class 7 roads on the Lake Traverse Reservation system.

Class 8: This classification encompasses all non-road projects such as paths, trails, walkways, or other designated types of routes for public use by foot traffic, bicycles, trail bikes, snowmobile, all-terrain vehicles or other uses to provide for the general access of non-vehicular traffic. There are no Class 8 roads on the Lake Traverse Reservation system.

Class 9: This classification encompasses other transportation facilities such as public parking facilities adjacent to IRR routes and scenic byways, rest areas, and other scenic pullouts, ferry boat terminals, and transit terminals. There are no Class 9 roads on the Lake Traverse Reservation system.

Class 10: This classification encompasses airstrips that are within the boundaries of the IRR System grid and are open to the public. These airstrips are included for inventory and maintenance purposes only. There are no Class 10 roads on the Lake Traverse Reservation system.

Class 11: This classification indicates an overlapping of a previously inventoried section or sections of a route and is used to indicate that it is not to be used for accumulating needs data. This class is used for reporting and identification purposes only. There are no Class 11 roads on the Lake Traverse Reservation system.

The following figures showcase the functional classification of the Lake Traverse Reservation by the South Dakota Department of Transportation. In **Figures 15 and 16**, green is minor arterial, blue is interstate, red is principal arterial, purple is major collector, yellow is minor collector

Figure 15: Regional Functional Classification



Figure 16: SDDOT Functional Classification Map

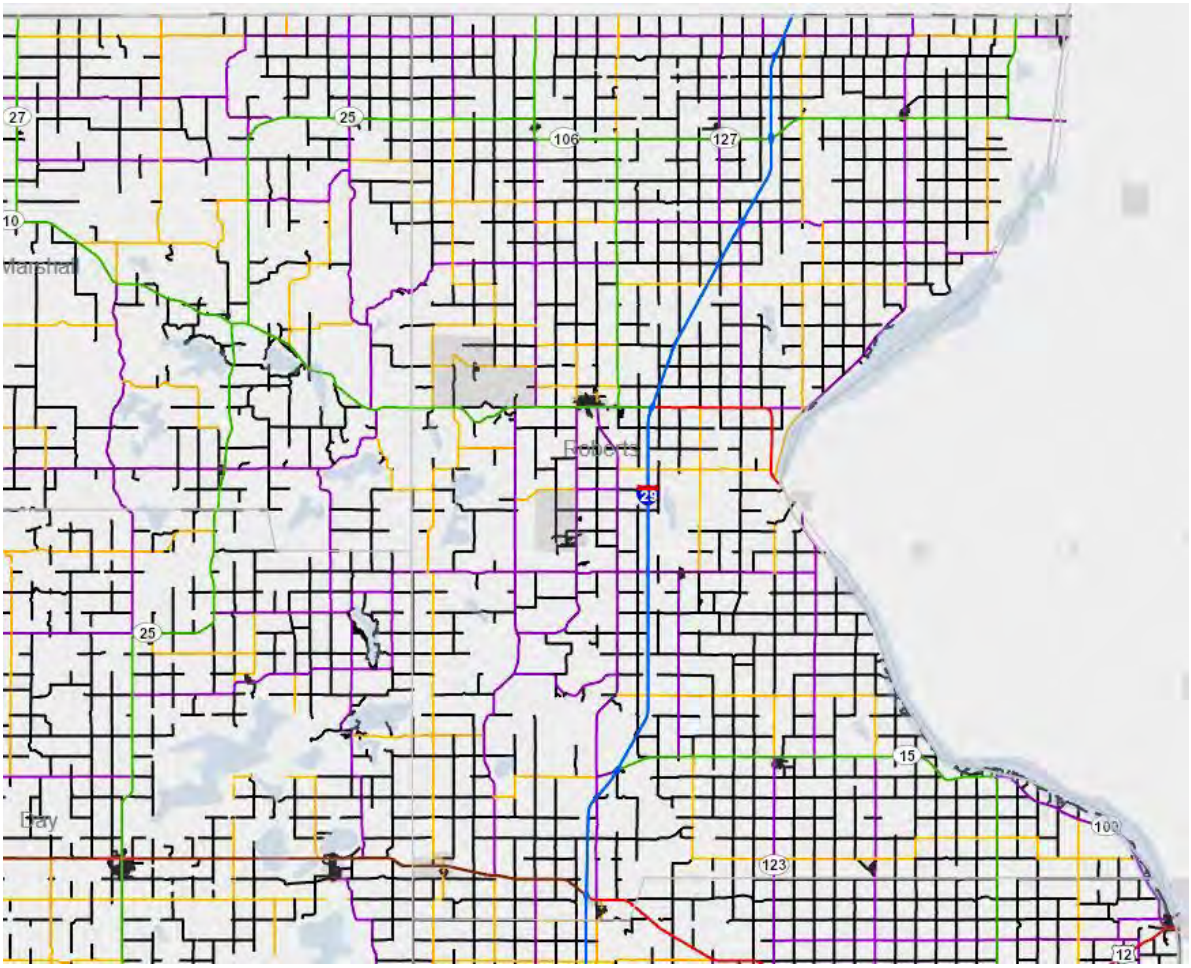


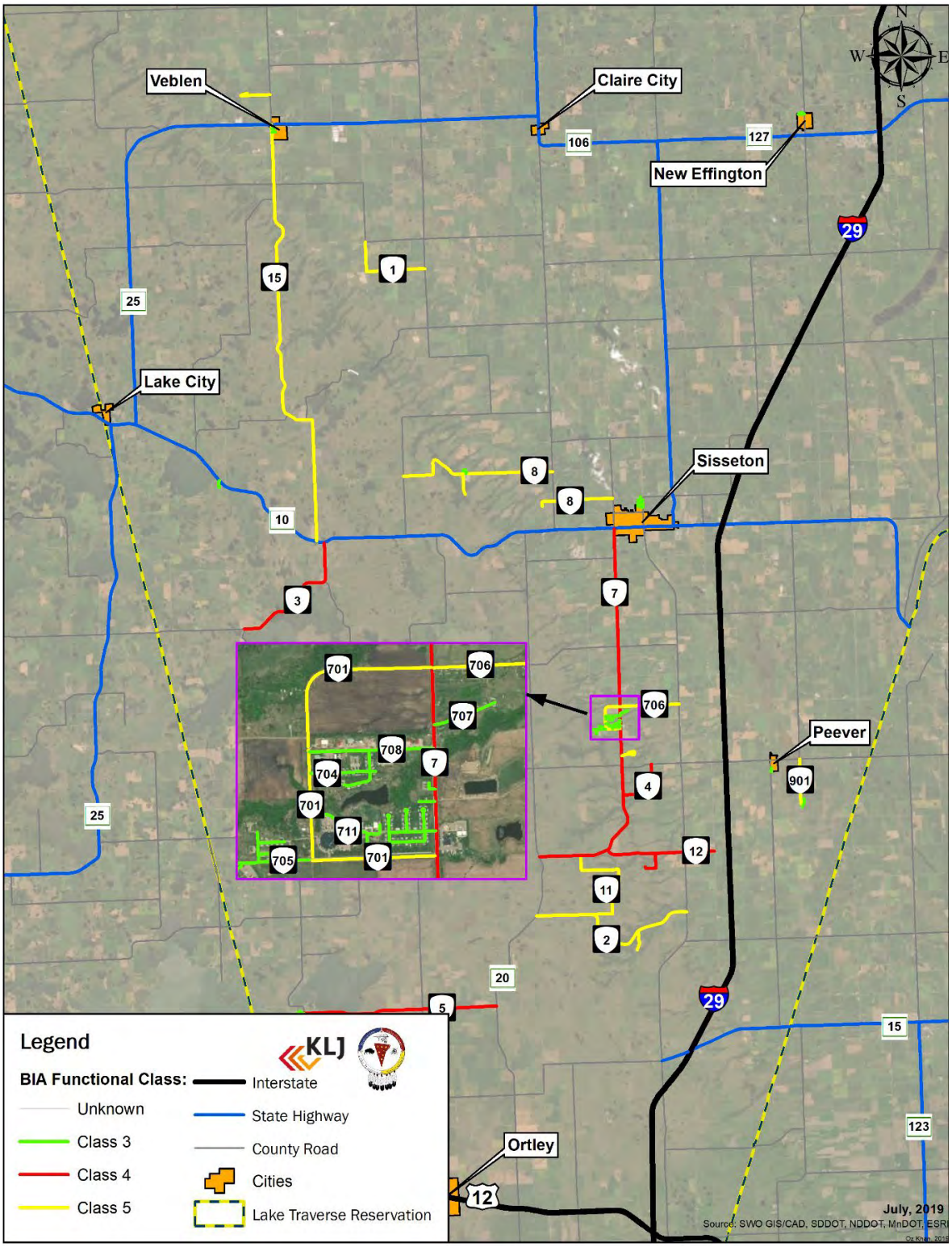
Table 1 shows the number of miles for each surface type by functional classification. The data was obtained from RIFDS Class.

Table 1: Functional Class by Surface Type

Functional Class by Surface Type	Surface Type						
RIFDS Class	Proposed	Earth/ Dirt	Gravel	Asphalt (<2")	Asphalt (>2")	Concrete	Grand Total
Rural Minor Arterial			15.3		12.9		28.2
Community Residential Streets		1.4	1.5	1.8	13.9	1.2	19.8
Rural Major Collector to Local Roads	14.7	79.7	915.3	29.6	9.5		1048.8
Rural Local and Recreation Roads	0.7	53.4	28.8	0.1	0.8		83.8
(blank)				8	87.7		95.7
Grand Total	**15.4**	**134.5**	**960.9**	**39.5**	**124.8**	**1.2**	**1276.3**

Figure 17 shows the road classifications by jurisdictional ownership.

Figure 17: Road Classification by Jurisdiction



FISCAL YEAR 2019 RIFDS INVENTORY UPDATE

The RIFDS needs corrections as there are items missing in the inventory as of October 2019. The Tribe is conducting an inventory update after the conclusion of the LRTP. The LRTP found the following roads missing in the inventory and recommends their addition to the inventory.

- Woodland Park Drive
- Gill Road
- 134A St
- E Lake Dr
- 456th Ave
- Sisseton IHS housing
- 125th St
- Dakota Dr
- Dakota Ave
- Lake Traverse Drive
- Big Coulee Drive
- Sweet Corn Dr
- 118th St Browns Valley

EXISTING AND PROJECTED TRAFFIC

Traffic volumes show how many vehicles travel on the road on an average day. Traffic volume counts are the most common measurement of roadway use and are a required component of most traffic engineering analyses. The LRTP development effort included traffic volume counts along key roadway segments in the Reservation. This data is used to update the road inventory files, determine capacity deficiencies, and identify potential roadway improvement projects.

ADT counts for selected BIA routes were collected in June 2019. The rest were sourced from the SDDOT GIS database with the most recent counts from 2018. Most of the trips within the Reservation are generated by towns and subdivisions and there is a considerable number of pass through trips generated by the US and State highway systems. The existing traffic volumes are shown in **Figure 18.**

Projected future traffic volumes were estimated by applying SDDOT multipliers to existing traffic data. The calculation suggests that the traffic volumes on the non-state corridors will remain relatively the same with limited growth due to new developments and traffic from the state highway system running through the Reservation. **Figure 19** showcases the projected traffic volumes to the year 2045.

Figure 18: Existing Traffic Volumes

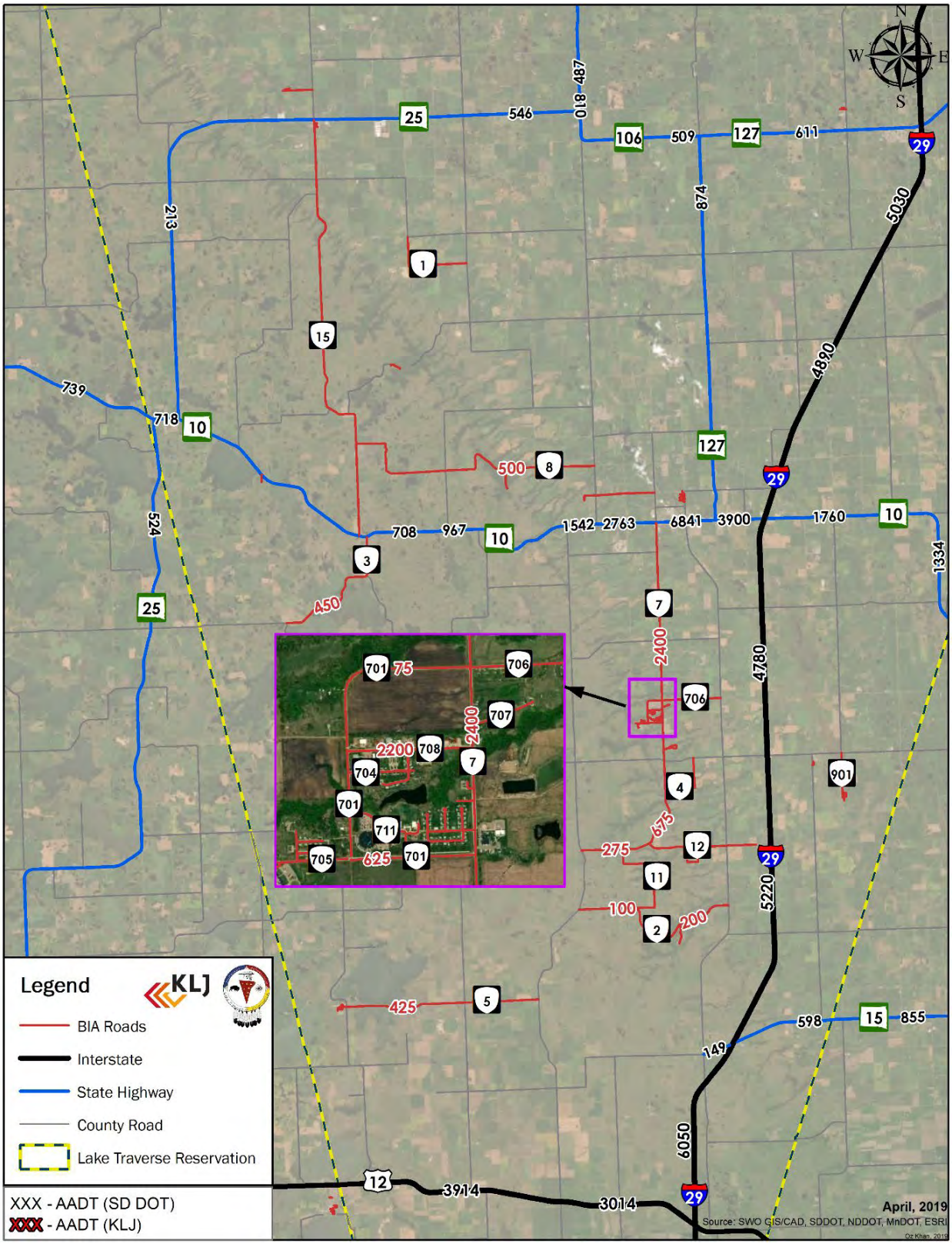
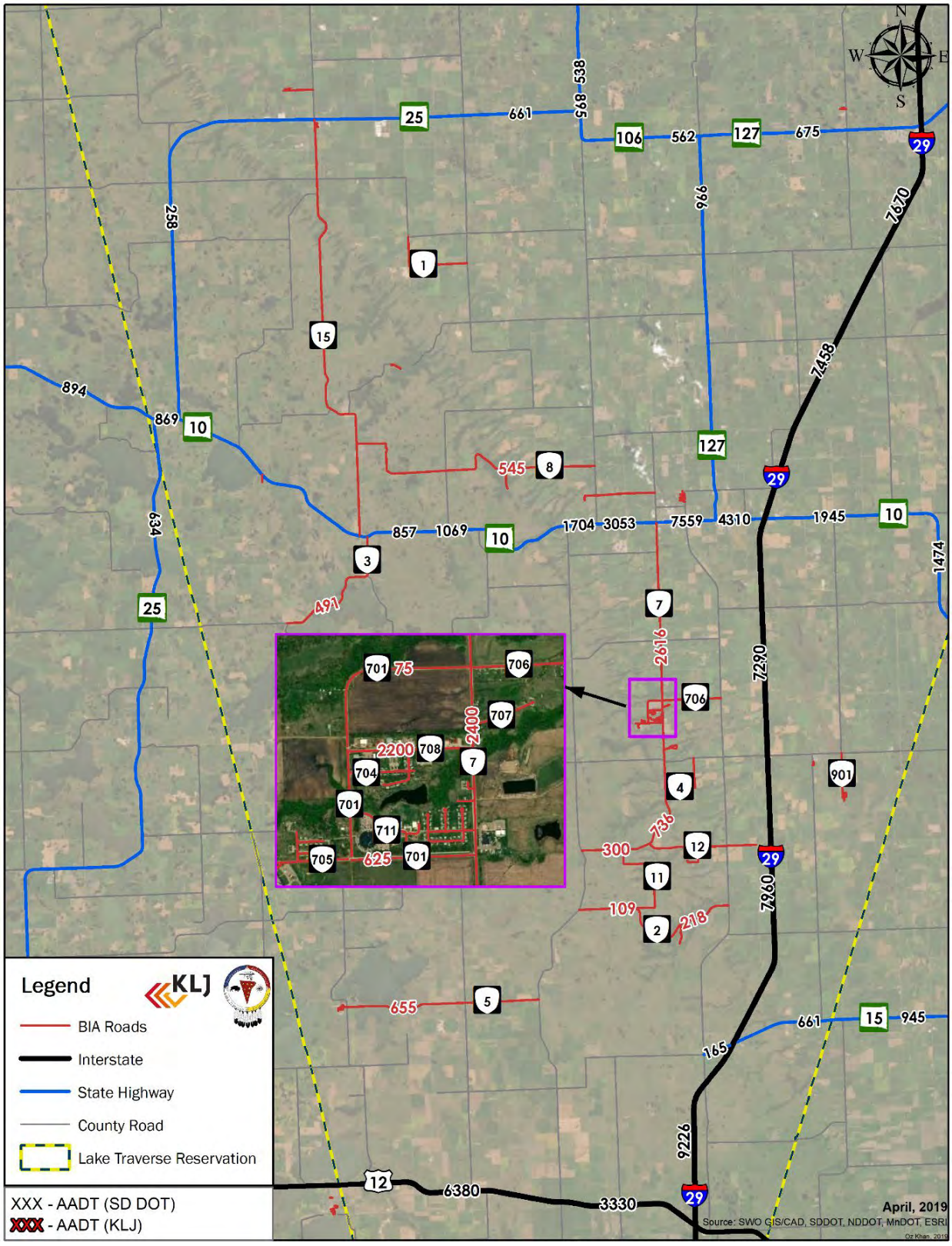


Figure 19: Projected Traffic Volumes



ROADWAY CAPACITY AND TRAFFIC OPERTATIONS

It was beyond the scope of this report to prove an in-depth analysis of intersection capacity at any location within the reservation. However, based on a review of existing daily traffic volumes on the major corridors, and considering projected growth, no traffic capacity issues exist or are expected to occur within the foreseeable future. If at some point in the future this scenario changes, the Tribe is encouraged to conduct intersection or corridor studies along any affected roads.

2019 SWO TRANSPORTATION SAFETY PLAN UPDATE

The Sisseton-Wahpeton Oyate (SWO) have committed to placing the safety of all the Tribal members, and non-tribalmembers alike, within the Lake Traverse Reservation as a top priority. This includes all people which may travel on the Tribal, Bureau of Indian Affairs, State, County and Township transportation systems. The SWO has a history of successful safety efforts, using the 4Es (educational, environmental, engineering and enforcement) efforts through a collaboration of Tribal Programs aimed at safer roadways.

FHWA has emphasized the development of a Tribal Transportation Safety Management Plan (TSMP) as a first step in implementing a comprehensive safety program. This is clearly seen in the funding emphasis on safety planning and the ranking criteria that requires any safety project application be linked to a transportation safety plan.

A Tribal TSMP is a community based, multi-disciplinary approach to identify transportation safety issues and potentialimplementation strategies with the goal of improving transportation safety on Tribal Lands. The FHWA describes themas:

> "Tribal Transportation Safety Plans are a tool used to identify and address transportation risk factors that have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk and can cover multiple transportation modes (roads, maritime, trails, air travel, and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (using an engineering study or Road Safety Audit).
>
> A Tribal Safety Plan should not be developed with a focus on any one funding source. Instead, a Tribal Safety Plan should demonstrate the safety concerns in a community and the strategies that will be explored to implement the plan. To the greatest extent possible, the concerns demonstrated by a safety plan should be selected based on incident history (data). Data allows funding entities to understand the needs and may even compel the funding of the community's needs. Safety Plans can provide a forum for utilizing data sets that are not otherwise considered by funding agencies such as public testimony when formal crash data does not exist."

The benefits of developing safety plans have been well documented and include the opportunity to leverage resources, work toward a common goal, and consider all road users, resulting in reduced deaths and injuries in tribal and other communities.

The original SWO safety plan was developed by the Sisseton-Wahpeton Oyate Transportation Safety Committee (recognized and given authorization by Sisseton-Wahpeton Executive Resolution 14-10 on April 23, 2014). This updated safety plan is a summary of the SWO's accomplishments from recent efforts, evaluation of priorities that were previously stated but are not yet complete, as well as additional needs and tactics for addressing transportation safety for the future.

From 2016-2018, our Law Enforcement have responded to 170 motor vehicle crashes with 15 fatalities. 11 of those fatalities were alcohol related. The Sisseton-Wahpeton Oyate is targeting motor vehicle crashes as a priority for the next three years. By 2023, we would like our overall motor vehicle crash rate to decrease by 15% (from 170 in years 2016-2018 to 144 in years 2020-2023); our fatalities will decrease by 20% (from 15 in years 2016-2018 to 12 or fewer in years 2020-2023); and our alcohol related MVC's will decrease by 50% (from 11 alcohol related MVC's in years 2016- 2018 to 6 in years 2020-2023).

The Tribe is committed to improving transportation safety to reduce the risk of death and serious injury that result from incidents on ALL of our transportation systems. This plan will evaluate and summarize the existing safety deficiencies—not only those supported by data and statistics, but other vital system-wide safety and design deficiencies that need to be addressed to prevent serious injuries or deaths from occurring. Implementation of the plan will improve transportation safety for the tribe, its people, and its visitors. As part of an ongoing effort to make safety improvements, this Strategic Transportation Safety Plan was developed with input from several safety partners.

VISION

"Working together to keep the public safe."

Through a collaboration of a multidisciplinary team, the goal of this safety plan is to

SAFETY PARTNERS

The Sisseton-Wahpeton Oyate Transportation Safety Committee is fortunate to have several safety partners committed to working towards our vision of "Working together to keep the public safe." The partners include the following:

- Sisseton-Wahpeton Oyate Tribal Council
- Sisseton-Wahpeton Oyate Department of Transportation
- Sisseton-Wahpeton Oyate Injury Prevention
- Sisseton-Wahpeton Oyate Tribal Police
- Sisseton-Wahpeton Oyate Education Department
- Roberts County Commissioners and Highway Department

- Codington County Commissioners and Highway Department
- Indian Health Service
- Bureau of Indian Affairs
- Day County Commissioners and Highway Department

PROCESS

The Sisseton-Wahpeton Oyate Department of Transportation (SWO-DOT) manages the Tribal Transportation Program for all planning, design, road maintenance, and construction projects related to transportation. With the present guidelines under the TTP and the FAST Act, SWO-DOT has developed a 5-year Tribal Transportation Improvement Plan (TTIP) for the various types of projects and program expenditures. One of the main priorities and focus has been on improving the safety on the Tribal and Bureau of Indian Affairs routes. With that focus, it must also be acknowledged that the tribal membership travels daily on not only these routes, but the many State, Township and County routes. Thus, and the safety focus will be expanded to incorporate all public transportation safety needs.

In 2011, SWO-DOT (called SWO Construction Management at the time) created a committee, comprised of Construction Management, Law Enforcement, Safety Officer (position since eliminated), Planning, and Injury Prevention. The purpose of this committee was to keep each other informed about transportation safety efforts happening on the lake Traverse Reservation. The committee met several times, but then stopped meeting by the beginning of 2012. In 2014 the committee was reactivated and Construction Management then began reaching out to the various Tribal programs, County Commissions and Highway Superintendents, and local Township boards to begin the process of meeting to develop not only a safety plan and focus, but to develop and create new working relationships with other programs and entities that also have the same safety concerns and lack of available funding resources.

In 2018, SWO-DOT applied for, and was awarded, a grant to update their Tribal Transportation Safety Plan. These grants are awarded to tribes whose safety plan is at least three years old. The committee was again reactivated to reflect on past efforts, shape both new and on-going strategies, and ensure continued focus, attention, and collaboration in the future.

EXISTING EFFORTS

The Tribe has been active at pursuing the goals of the previous safety plan. Many of the Tribal programs involved in the transportation safety plan efforts have implemented activities and programs that address safety concerns such as: drunk driving, texting and driving, restraint use and awareness. Many of these safety efforts are ongoing and directed by the Tribal Police and Injury Prevention Program.

The Tribe received grants from the BIA Indian Highway Safety Program, Indian Health Service's Tribal Injury Prevention Cooperative Agreements Program, and the Centers for Disease Control's Tribal Motor Vehicle Injury Prevention Programs. These grants funds provide for extended hours for law enforcement staff, an extra officer position for Law Enforcement to focus directly on

highway safety, as well as two Injury Prevention positions. The Injury Prevention staff coordinates enforcement efforts and promotes enforcement activity, they plan all media campaigns related to highway safety, and provide education to the community.

Finally, Law Enforcement and Injury Prevention have collaborated on drafting and presenting proposed law changes relating to seat belts, car seats, and impaired driving. Although the Tribe has seen some successes and increases in measures such as seatbelt usage rate, we are far from State and Nationalrates.

The highway safety efforts are, in many ways, still just beginning to make changes in our community. As far as engineering safety principles, SWO-DOT maintains a 5-year Tribal TTIP that will correct the road safety deficiencies through either individual safety projects (Reservation Wide Striping & Replacement of BIA Route Signing) or through new construction or reconstruction projects.

SWO-DOT is continually seeking additional grant and funding resources and opportunities to support transportation safety efforts. Multiple TTP Safety Fund (TTPSF) grants were awarded to the tribe. In 2014, SWO received nearly half a million dollars for two grants for public education materials and law enforcement equipment. More recently, SWO was awarded two grants in 2018 for rumble strips and intersection safety improvements and to assist with the update of this safety plan. The TTPSF grant program experienced a change in eligible project types. Enforcement, Education, and EMS are no longer eligible to receive TTPSF funding.

Other SWO-DOT funding application efforts include constructing new pathways/sidewalks through the South Dakota Department of Transportation - Transportation Alternatives Program and BUILD Grants from the Federal Highway Administration for completion of reconstruction projects for Housing Streets, additional Pathways Projects and Shoulder Widening and Re-Surfacing on narrow routes. Numerous unmet needs remain.

DATA SUMMARY

One of the important factors in the development of a Tribal Safety Plan is for the available crash data to be analyzed and used to identify issues and develop strategies. This data is also an important resource as Tribes apply for federal and state safety funding; as many, if not all, request data to support the grant application.

For the development of the 2019 plan, data was gathered from the State of South Dakota. An annual data summary was able to be gathered from the tribal law enforcement, so the data presented may not be a complete picture of crashes that are occurring.

Sisseton-Wahpeton Law Enforcement tracks motor vehicle crashes (MVC) and enforcement efforts. The following is a chart detailing the total number of MVC's, the MVC's that resulted in injury or fatality, and enforcement efforts in three areas: seatbelt citations, car seat safety citations and driving under the influence arrests. In looking at MVC's with fatalities, 65% of all fatalities are alcohol related.

The Sisseton-Wahpeton Oyate has had some success in raising the seatbelt usage rate using a combination of high visibility law enforcement such as checkpoints and saturation patrols. The TSP provides several strategies based upon the 4Es (Education, Enforcement, Engineering, and Emergency Care) and amongst those is the goal to provide safety education which is listed below. The goal listed below is from the 2014 SWO Safety Plan.

Goal for Emphasis Area 7: Safety Education

Provide and coordinate safety education and training to children, parents and community members annually.

Strategies for Emphasis Area 7: Safety Education

- Provide a driver's education program to include all resources, equipment and supplies for SWO young adults 14 - 18 years old.
- Host bike, scooter, skateboard, etc. safety courses in each of the seven districts annually.
- Provide safety equipment i.e., bike helmets, knee pads, etc.
- Implement Ride Safe program at Head Start.
- Provide seatbelt safety education to all children Kindergarten to eighth grade.
- Provide bus safety training courses to all students Head Start through eighth grade according to each schools' rules and transportation protocol.
- Provide a mock crash emergency exercise annually engaging community members for each of the seven districts and Tiospa Zina School.
- Provide training regarding impaired driving i.e., texting, cell phone usage, substance use and abuse.
- Provide car seat training to parents and caregivers in each of the seven districts.

This is just one of many goals and strategies that the plan outlines and these have been analyzed and incorporated into the LRTP. With the 2019 Safety Plan update it will include new findings that will create other projects that may be added to the TTP as safety project.

CRASH AND SAFETY ANALYSIS

The South Dakota Department of Public Safety (SD DPS) manages the crash records in South Dakota. The law enforcement departments of the respective agencies around the state are responsible for reporting crashes to the SD DPS. The SD DPS claims that they receive very little data from tribal and BIA law enforcement for the various tribes around the state. South Dakota publishes crash data which contains personal information on individuals involved in the crash.

This presents a problem with many tribes who feel that they do not want such personal information publicized.

SD DPS provided access to the five-year raw crash data between 2014 and 2018. The crash analysis compared the crashes within the reservation boundaries with all roads on the reservation except Interstate and US highway roads. **Figure 20** represents the density of crashes on and within 500-feet from BIA Routes in the Reservation.

There were 48 crashes on or within 500-feet from BIA route in the five-year analysis period that corresponds to a crash rate of 9.6 crashes per year. This includes three non-incapacitating injury crashes, five possible injury crashes, 29 property damage crashes, and 11 crashes related to hits by animals. The area around SD Hwy 10 between 451st Avenue and 463rd Avenue generally experiences high frequency of crashes in the reservation.

In Lake Traverse Reservation, SWO Law Enforcement tracks motor vehicle crashes (MVC) and enforcement efforts. As discussed earlier, not all crashes are reported by the SWO Law Enforcement to the SD DPS. The BIA and Indian Highway Safety Program (IHSP) reports crash statistics once every two years. The SWO Law enforcement provided crash reports for the fiscal year 2016 and 2018.

2014 Crashes

There were 90 motor vehicle crashes recorded in 2014. There was a total of 2,734 traffic citations issued, of which 178 were related to DUI/DWI/OWI, and 1,151 were speed violation related.

2016 Crashes

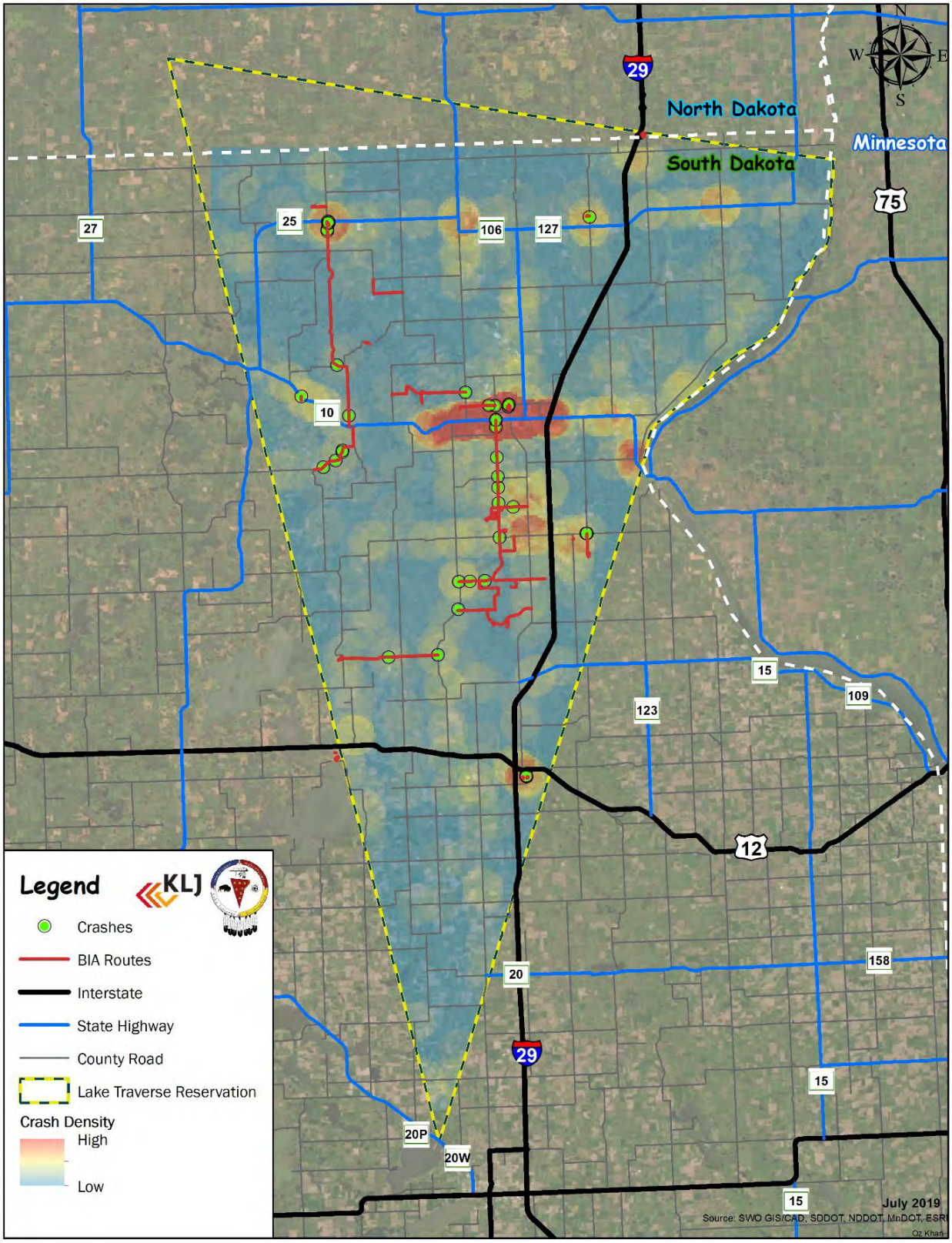
There were 75 motor vehicle crashes recorded in 2016, of which one crash resulted in death, and 11 crashes were resulted in injury. There was a total of 1,839 traffic citations issued, of which 121 were DUI/DWI/OWI related and 775 were speed violation related.

2018 Crashes

There were 53 motor vehicle crashes recorded in 2018, of which three crashes resulted in death, and seven crashes were resulted in injury. There was a total of 595 traffic citations issued, of which 94 were DUI/DWI/OWI related and 72 were speed related.

Since 2014 the Reservation has seen a 41% decline in the number of crashes on Tribal and BIA routes. In addition, there has been a decline 47% decline in the number of DUI/DWI/OWI incidents. The Tribe should continue it efforts in reducing crashes through design and education to continue and further the progress that has been made.

Figure 20: Lake Traverse Indian Reservation Crashes 2014-2018



CHAPTER 3 - PUBLIC INVOLVEMENT

Three meetings were held as part of the SWO LRTP update. These meetings sought input from Tribal and other officials on portions of the plan. Input from these meetings was incorporated into the process of producing the plan.

Public comments on the draft plan will be given a 30-day period upon public notice, with the Executive Summary posted online and the full draft available at SWO DOT offices. After such notice, this plan is eligible to be adopted by the Tribal Council by resolution.

A kickoff meeting for this Plan was held on April 24th, 2019, at the Dakota Magic Casino and Hotel near Hankinson. The agenda included the following discussion items:

- Overview of Tribal Transportation Programs
    - Legislation
    - Regulations
    - Funding
- Long Range Transportation Plan Development
    - Current LRTP, need to update
    - Existing Infrastructure
    - Transportation system goals
    - Transportation system needs
- LRTP
    - Transit needs
    - Roadway needs
        - Paved
        - Gravel
    - Pedestrian needs
    - Short- and long-term project listings
- Development of Transportation Improvement Plan
    - Current Project Priorities
    - Funding Levels and Projections
    - New or Revised Project Priorities

As part of necessary BIA input, a mid-point review was held on July 25, 2019 with BIA officials. Comments from the BIA review were incorporated into this report.

A second public meeting was held October 21st, 2019 at the Tribal administration building in Agency Village. Invitations were sent to area public officials. The purpose of the meeting was to review a draft of the plan. Several corrections were made as well as a few significant additions/changes:

- An added project to inventory culvert needs
- A greater emphasis on coordination with other area governments
    - Working with the counties on the reservation to coordinate road maintenance

    - Working with townships
    - Working with counties and townships on bridge maintenance
- Stress the need to update the RIFDS inventory

CHAPTER 4 - EXISTING CONDITIONS AND RECOMMENDATIONS

Chapter 4 of the report evaluates the transportation infrastructure that is in place on the Reservation by reviewing the existing conditions and then providing recommendations based upon the analysis. The following elements were evaluated: roadside elements, paved and non-paved roads, freight and trucking, bridges and culverts, bicycle and pedestrian, airports, transit, and utilities.

ROADSIDE ELEMENTS

EXISTING CONDITIONS

Traffic control analysis is based upon standards outlined in the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration. The MUTCD includes standards for all-way stop control, traffic control signals and pedestrian hybrid beacons. The MUTCD does not have warrants for two-way stop control, roundabouts or pedestrian beacons.

Selecting the appropriate traffic control device is specific to traffic patterns, volumes, roadway geometrics and lane configurations. As traffic increases, patterns change, and improvement scenarios evolve, the appropriate traffic control device for a location may vary.

Substantial research has been conducted to determine the conditions under which various types of traffic control operate most effectively. This research has been accounted for in the guidance found in the MUTCD. Implementation of a traffic control device under conditions where another device would be better suited can lead to increased delays and a reduction in safety. Therefore, it is recommended that traffic devices only be installed following engineering study and in accordance with the MUTCD.

It was beyond the scope of this plan to conduct a review of intersection traffic control devices across the reservation. This effort may be completed in the future as part of a separate study if prioritized by the tribe. If undertaken, it should include a system-wide inventory of traffic control signs and their conditions, so that signing decisions can be consistently applied. A brief explanation of common traffic control devices and their applications is provided in the following paragraphs.

Traffic Signals

The MUTCD traffic signal standards include warrants for varying data thresholds ranging from pedestrian and vehicular volumes to crash frequency.

All-Way Stop Control

The MUTCD includes All-Way Stop Control(AWSC) warrants based upon traffic volumes, motorist delay and crash frequency. The AWSC control increases delay on major approaches by forcing vehicles to stop on the primary streets regardless of whether a vehicle is present on the minor approaches. Studies have found AWSC sites with great disparities between major and minor approach volumes typically experience high levels of traffic control noncompliance. Further analysis is needed to determine whether the AWSC is the best form of traffic control at these locations.

Pedestrian Hybrid Beacons

A pedestrian hybrid beacon (PHB) is a special type of beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. This type of beacon is activated by pedestrians when needed. MUTCD standards for this type of traffic control require consideration of vehicular traffic volumes, pedestrian crossing volumes and crosswalk lengths. The pedestrian volume threshold required for this type of control is a minimum of 20 pedestrians in the peak hour.

Rectangular Rapid Flashing Beacons (RRFB) is a type of PHB found to exhibit a high rate of motorist compliance due to their visual characteristics. A RRFB was installed at TZ school and on Day County 1 at Enemy Swim.

Pedestrian Flashing Beacons

Flashing beacons may be used at pedestrian crosswalks to enhance pedestrian visibility and induce vehicle stoppages. The MUTCD does have warrants for these types of traffic control. However, due to the construction, maintenance and operating costs; installation of these types of control should be judiciously selected based upon a traffic study. Additionally, installation of traffic control devices at unjustified locations results in reduced motorist compliance.

If selected for installation, it is recommended that installation of flashing beacons be coupled with pavement markings and signage to increase motorist compliance. Additionally, it is recommended that these beacons be fully pedestrian actuated. Studies have found that motorists become desensitized to pedestrian beacons that flash throughout the entire day.

Two-Way Stop Control

The MUTCD guidance for Two-Way Stop Control (TWSC) installation is based upon either traffic volume thresholds, sight distance limitations or crash frequency thresholds. Two-way stop control should also be considered at intersections where at least one of the legs is functionally classified as a collector or greater. The TWSC should be installed on the lower classified roadway to promote unrestricted progression along the major roadways.

Roundabouts

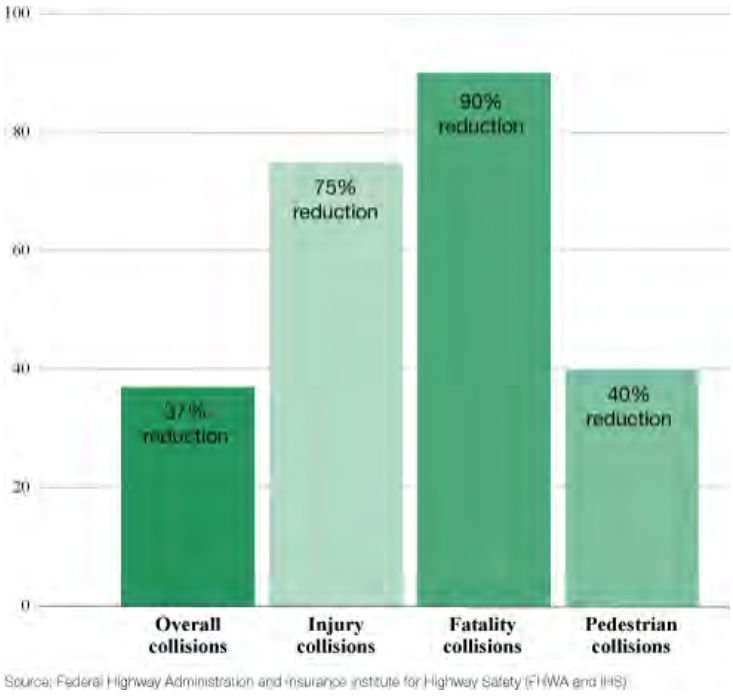
Roundabouts are a traffic control measure that offers potential traffic operational benefits when implemented at the proper location. Roundabouts offer the following safety benefits:

- Roundabouts have fewer vehicular conflict points in comparison to conventional intersections. The potential for high-severity conflicts, such as right angle and left-turn head-on crashes, is greatly reduced with roundabout use.
- Low speeds generally associated with roundabouts allow drivers more time to react to potential conflicts, also helping to improve the safety performance of roundabouts. Low vehicle speeds help reduce crash severity, making fatalities and serious injuries for vehicles and pedestrians uncommon at roundabouts.
- Pedestrians need only cross one direction of trafficat a time at each approach as they traverse roundabouts (i.e., crossing in two stages) as compared with the existing intersections, reducing exposure and delay by reducing vehicular gap requirements.

Roundabouts can reduce the number of crashes at an intersection in comparison to traffic signal use. There has been a higher density of crashes along Highway 10 and in and around Sisseton. This area could be a good location for the placement of roundabouts and the Tribe should work with the local municipalities to advocate for the construction of roundabouts.

As of now there are two roundabouts in construction by the SDDOT on SD 10 near Sisseton. The SDDOT currently is not approving installation of new roundabouts on State highway facilities. It is anticipated that this policy will change at some point in the future.

Figure 21: Collisions Reduction with Roundabouts



Source: Federal Highway Administration and Insurance Institute for Highway Safety (FHWA and IIHS)

Access Conditions

High levels of access exist along Highway 10, and along various highways and street segments within the Lake Traverse Indian Reservation. Research has shown that high levels of access increases the probabilities for crashes. A skewed intersection is an example of a potentially substandard access location. The Tribe would benefit from providing better access for hunting, fishing, tourism and development in various locations throughout the Reservation.

On-Street Parking

Parking is an essential component to transportation systems and land development. Although many businesses and residents have off-street parking, some of them rely on abutting on-street parking

Street Lighting

A review of existing lighting was not undertaken as part of the LRTP. However, there is a need for improved lighting in towns and subdivisions, at busy intersections, and along existing and future sidewalks and shared use paths.

RECOMMENDATIONS -ROADSIDE ELEMENTS

Traffic Control

A formal engineering study of traffic conditions and pedestrian and location characteristics was not conducted as part of the LRTP. The following recommendations are based on traffic and crash data obtained from the NDDOT and SDDOT websites, observations made during the LRTP process, and information from SWO's TTPSP and LRSP, both written in 2015.

- Pedestrian Flashing Beacons – This type of beacon is popularly requested due to the belief that it will motivate vehicle drivers to slow down. Due to construction, maintenance, and operating costs, installation of this control should only be completed after a traffic study has been conducted.

- There are currently no roundabouts in the study area. Because of the reduced collisions and safety benefits offered by roundabouts, and the high pedestrian traffic generated on the Reservation, it is recommended that the Tribe considers this measure for future construction at any location having a high level of traffic and identified safety concerns.

  Of course, any proposal for roundabouts on the State highway system should be delayed until such time as there is a change in the State's policy which prohibits construction of roundabouts.

Access Conditions

In locations where access management is considered undesirable; access management strategies should be utilized to improve access conditions. Access management allows for the control of access on streets and highways and it focuses on collector and arterial roads. It reduces the number of accesses or increases the space between accesses on major thoroughfares. It can also include aligning offset intersections.

The Tribe should make efforts to reduce access in locations where it is excessive. The best time to address access conditions in an efficient and safe manner is during the planning phase of new road projects. In addition, during the planning phase of new developments plans should be reviewed to ensure they will not interfere with safety or mobility along an adjacent highway.

Parking Lots

As needed the Tribe should consider the case by case evaluation of parking lots added to the RIFD inventory. Parking lots additions are expensive to build and maintain and should only be added in areas in which parking is in demand and the quality of the unpaved parking lot is causing issues.

PAVED & NON-PAVED ROADS

EXISTING CONDITIONS

Roadway surface types and conditions are perhaps the most frequently cited area of concern by motorists and the traveling public. They vary significantly throughout the reservation, ranging from unimproved trails to gravel roads to paved highways. The transportation network on the Lake Traverse Reservation includes over 2,450 miles of roadway.

Main travel routes on the reservation have paved surfaces, but the total also includes many miles of gravel and dirt roadways. The BIA is responsible for the maintenance of the existing roadways on the BIA system. Of the 2,450 miles of roads on the Lake Traverse Reservation, there are 89.7 miles of BIA Roads that represent 3.6% of the total road miles. 51% (45.8 miles) of the BIA roads are paved with the remaining non-paved. **Table 2** and **Figure 22** summarize the surface types of the BIA routes on the reservation.

Table 2: Road Surface Type

Surface Type	Length (mi)	Percentage
Bituminous	42.1	46.9%
Concrete	3.7	4.1%
Gravel	42.3	47.2%
Earth	1.6	1.8%
TOTAL	**89.7**	**100%**

There are five surface types identified in the plan: bituminous, concrete, gravel, earth, and primitive-2 track. The type of surface that a route has is often reflective of the intended use.

Bituminous

A road surface which is composed of gravel, stone, sand or similar material mixed with bituminous material under partial control as to grading proportions. This is generally seen in high volume traffic areas or in industrialized areas. There are 35-miles of bituminous roads, that comprises of 40-percent of all BIA system in the Reservation.

Concrete

A concrete surface is composed of cement, sand, and gravel or other fine and coarse aggregate. High truck volumes are better suited to concrete roads, as they hold up better under the weight and pressure. There are four-miles of concrete roads, that comprises of 4.2-percent of all BIA system in the Reservation.

Gravel

A gravel road comprises of a mix of stone, sand and fine-sized particles used as a sub-base, base or surfacing on a road. There are 47-miles of gravel roads, that comprises of 54.4-percent of all BIA system in the Reservation.

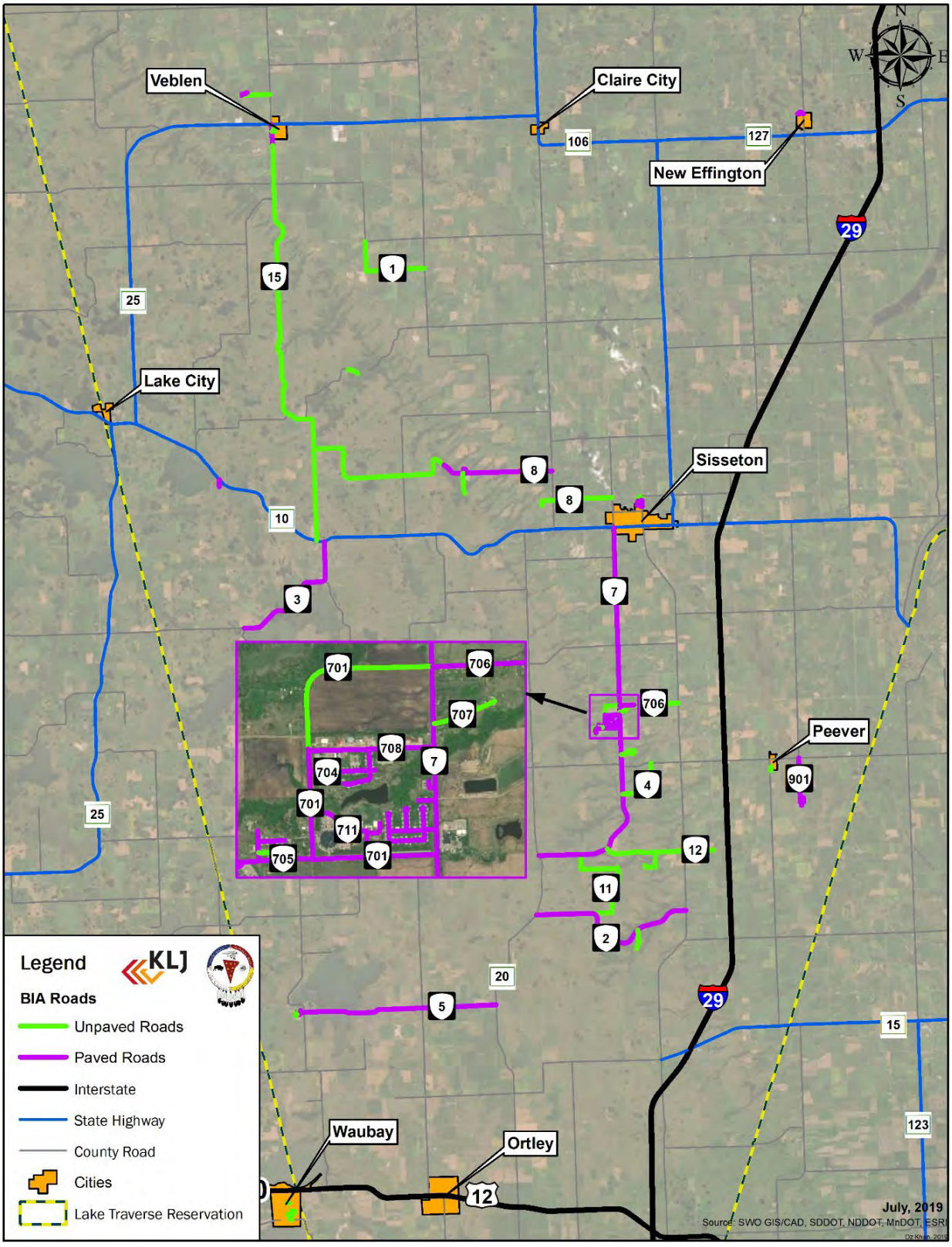
Earth

A road of earth that is aligned and graded to permit use by motor vehicles. The road will have a drainage system that will prevent impairment of the road by normal surface water. There are 0.25 miles of earth roads. They comprise 0.3-percent of all BIA system roads in the Reservation.

Primitive

A road using the natural surface and maintained to permit bare passability for motor vehicles, but not conforming to the requirements for an Earth road. The road may have been bladed and minor improvements may have been made locally. There are 0.70-miles of primitive roads, that comprise 0.8-percent of all BIA system in the Reservation.

Figure 22: Road Type



The Surface Condition Index (SCI) is a measurement of road surface condition that is used to identify and prioritize maintenance needs. Road conditions are generally evaluated in one to four years. There is no requirement in BIA's coding guide to specify how often the SCI should be updated.

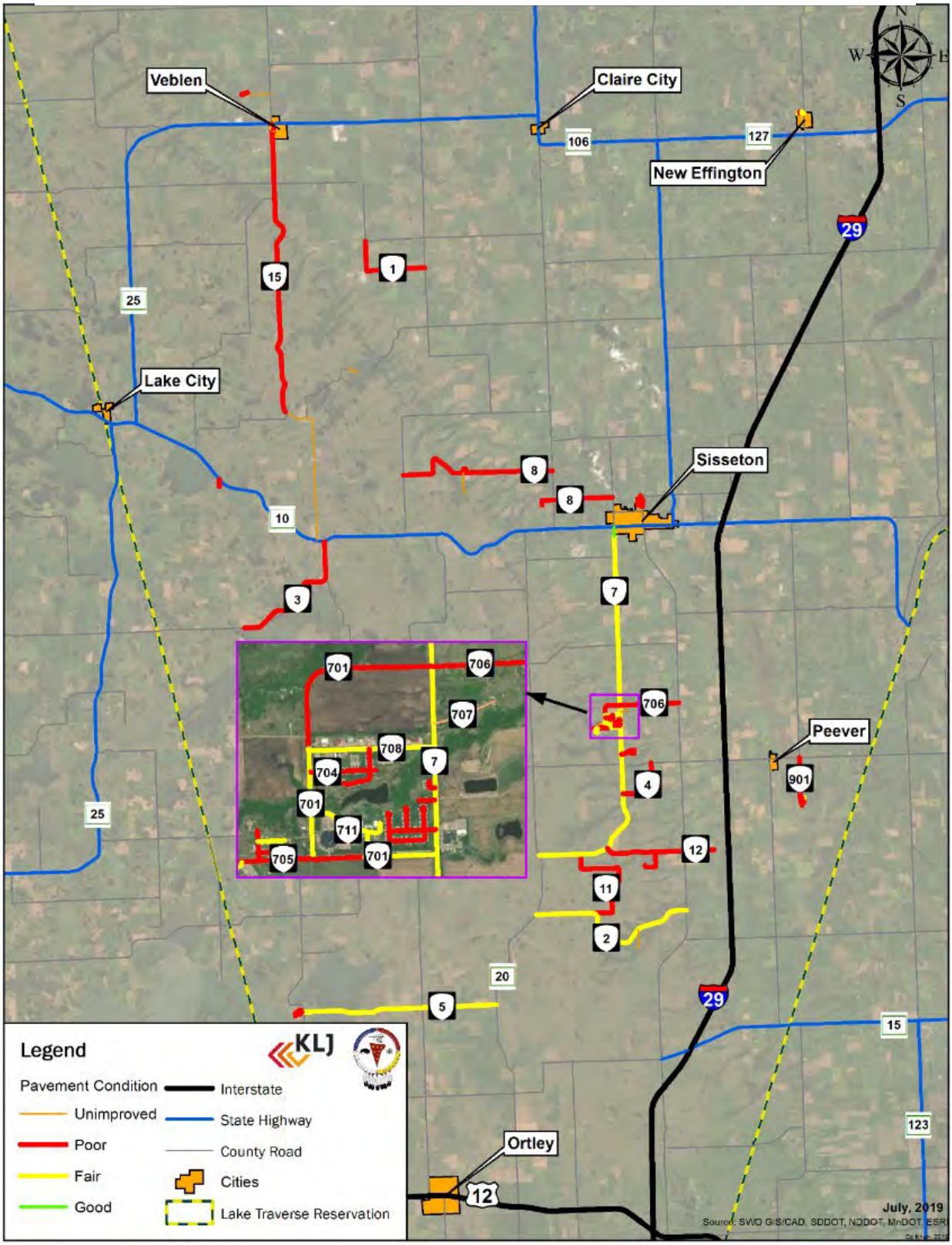
Table 3 shows the road surface condition scores for BIA roads on the Reservation. A SCI score of 1 to 39 is generally considered 'poor', a SCI score of 40 to 79 is generally considered 'fair', while a SCI score of 80 or above is generally considered 'good'. An SCI score of zero indicates that the road has no wearing surface, i.e. is unimproved.

Table 3: BIA Road Surface Condition

SCI Score	Condition	Length (mi)	Percentage
0	Unimproved	9	10.4%
0 - 39	Poor	48	55.7%
40 - 79	Fair	29	33.6%
80 +	Good	0.25	0.3%
TOTAL		**86**	**100%**

Figure 23 shows the roads with designations of good, fair, and poor based on the SCI scores they were given. It is clear from the graphic that most of the roads on the reservation have a surface condition rated at poor.

Figure 23: Road Surface Conditions



This section provides strategies to maintain and improve upon the existing paved roads in which the SWO is responsible. The plan will focus on strategies that will maintain current transportation infrastructure before using available funding on new construction.

Maintenance Prioritization

Due to the finite resources that belong to the Tribal Government it is recommended that SWO focus most of its money on maintaining the infrastructure that is in place. While a newly paved road is desirable it comes at a prohibitive cost of $1,700,000 per mile. In addition, providing a structural overlay on the paved road can cost $500,000 per mile.

General maintenance on the paved roadway system primarily consists of pavement marking, crack sealing, and pothole patching. Maintenance often includes ancillary needs within the right-of-way, including mowing, repair or replacement of culverts and signs. Funding is set aside for equipment repairs and acquisition.

Because of limited funding, some reconstruction projects may wait years for funding to be available. Therefore, it would be beneficial for the maintenance program to include funds needed to repair potholes and to patch sections of roadway that become a safety hazard.

By using a proactive Pavement Preservation and Maintenance schedule the Tribe will be able to extend the design life of the BIA and Tribal Roads at a reduced maintenance costs versus the more expensive new pavement construction.

General maintenance on the paved roadway system primarily consists of pavement marking, crack sealing, and pothole patching. Maintenance often includes ancillary needs within the right-of-way, including mowing, repair or replacement of culverts and signs. Funding is set aside for equipment repairs and acquisition. **Table 4** showcases the approximate costs for major maintenance tasks on the Reservation by priority.

Table 4: Cost of Road Maintenance

Road Improvement Priority	Cost Per Mile*
#1 Crack Filling and Sealing	$2,000
#2 Chip Seal	$35,000
#3 Non-Structural Overlay	$275,000
#4 Structural Overlay	$500,000
#5 Reconstruction	$1,700,000

*Costs include TERO fees, engineering design and construction observation. Crack seals should be performed before chip seals and non-structural overlays.

The estimated costs are assumptions in 2019 US Dollars for contracting purposes. These are estimates based on recent similar projects and Average Bid Prices. For planning and budgeting purposes, construction costs should be expected to increase at a 5 to 6 percent annual inflation rate.

There is a saying that you shouldn't want to improve the worst roads first. This is backed up by research. It is more cost efficient to keep a good road in operating condition than to replace an aging road. By putting money upfront into seal coating, crack sealing, etc., the roadway's life can be extended far more efficiently than waiting until structural improvements are required (overlays, milling, reconstruction, etc.).

Pavement Preservation

Pavement Preservation refers to activities associated with pavement maintenance, including chip seals, crack filling and sealing, and overlays. A pavement Preservation program has been initiated for key BIA routes on the Reservation roadway system.

The pavement Preservation program is intended to meet public expectations for safe, smooth, and well-maintained roads by applying cost-effective treatments to correct minor pavement deficiencies before the problems become major. Pavement Preservation departs from traditional strategies that had focused on reactive maintenance and reconstruction.

It is critical that pavement Preservation, when feasible, receive priority over roadway reconstruction. Maintaining and rehabilitating infrastructure at appropriate times saves public dollars in the long-term. These improvements will help prolong the life of the roadways and decrease chances of premature failure.

Pavement Preservation postpones costly reconstruction or rehabilitation activities by extending the service life of the original pavement. The challenge is to ascertain the right time to apply a treatment to achieve maximum benefit or return on investment.

Figure 24 provides a simplified depiction of the life-extending benefit of a treatment. The graph shows a typical deterioration curve interrupted when a preventive maintenance treatment is applied to a pavement in good condition. The preventive maintenance improves the condition for a period, until the pavement returns to the condition before the treatment. The time the pavement condition was improved by the treatment is the life extension given to the original pavement, or the extended service life.

The pavement management system's measurements of pavement condition over a period before and after the application of preventive maintenance makes it possible to determine the extended service life of a treatment.

With no service life remaining, pavements are candidates only for rehabilitation and reconstruction. Corrective and emergency repairs occur when the roads are more deteriorated or have lower PASER ratings and require costly structural overlays or reconstruction. Large surges in construction can be devastating to overall maintenance. First, large fluctuations in

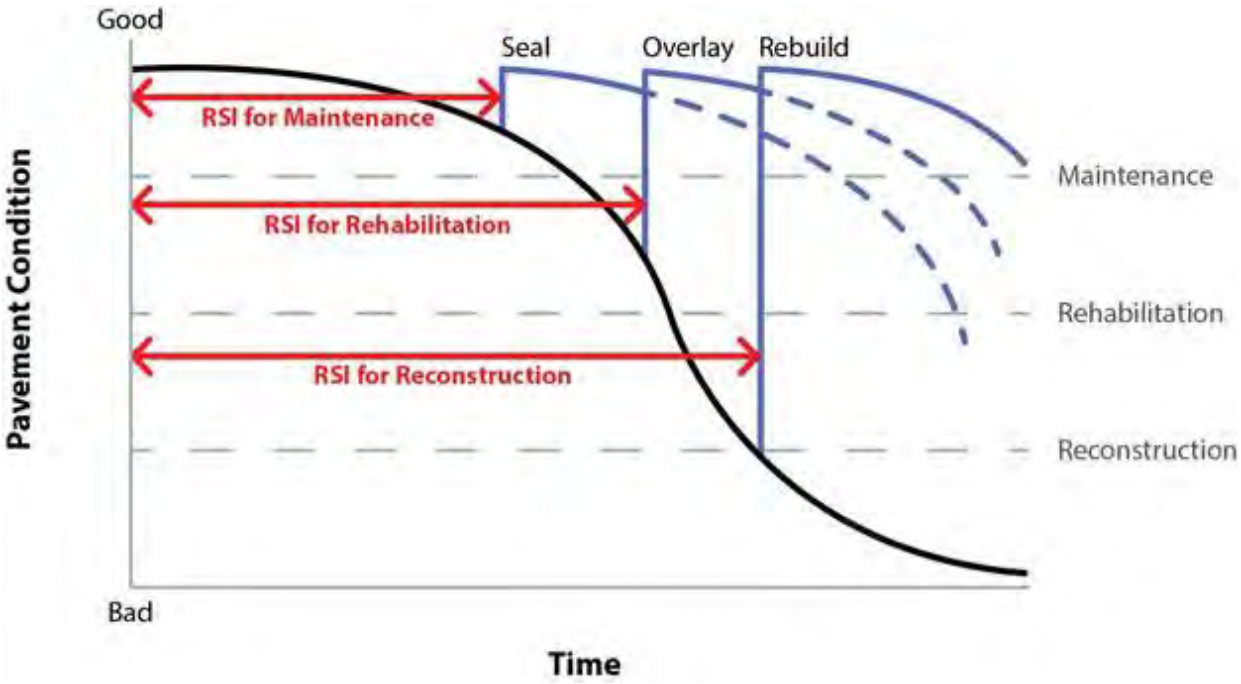
funding are required and are not supported by available funds. Second, the variation in construction activities from year to year impacts the steady flow of projects.

Preventive maintenance can alter the distribution of a pavement's remaining service life. By targeting large concentrations of pavements with similar remaining service lives, preventive maintenance treatments can balance projected workloads before a management problem develops. Balancing the remaining life of the network pavements will ensure manageable workloads at available funding.

The "pavement Preservation and maintenance first" approach helps optimize available funds to meet network condition needs. Integrating pavement preservation with reconstruction and rehabilitation produces dramatic results in the network's condition. Pavement Preservation is the only cost-effective means to improve overall pavement condition.

Some roads within the Reservation towns and subdivisions are paved. This is good if money is available to maintain them. A PASER analysis of the conditions of these roads would be beneficial. Those that are in adequate condition should be included in the crack filling and sealing, and chip seal programs. Locations that are not in good condition should be addressed through patching and eventual major rehabilitation or reconstruction as funding allows.

Figure 24: Benefits of Preventive Maintenance



Listed below is the priority of road maintenance by type of improvement and an example of the type of work each entail.

Priority 1: Cracking Filling and Sealing

Timing on treatments is particularly important to maintain an effective pavement management budget. Crack sealing is best performed when temperatures are moderately cool, such as the spring or fall months. Cooler temperatures are generally when the cracks are fully open, allowing for the entire crack to be sealed. More in-depth maintenance (minor overlays, chip seals, etc.) can be done in the summer months; generally, between May 1st and August 31st so that minimum temperature guidelines can be followed for quality purposes.

Crack sealing can also be performed with less labor involved, so a smaller crew can handle these in the fall and spring, whereas the more intensive maintenance plans can be done in the summer when contractors and maintenance departments typically have seasonal manpower as well. Higher temperatures also lessen the cure time required, thus allowing the roadway to be opened in a shorter period. Full reconstruction and structural overlays are generally more labor and equipment intensive and are much more expensive.

Sealing needs to be performed in moderation. Extensive sealing operations can result in a loss of pavement friction, which would then lead to a chip seal for the roadway to function properly in winter months. It is also extremely important to keep weather factors in mind, as excessive moisture can prohibit the sealant from bonding properly.

Priority 2: Surface Treatments

Surface treatments for flexible pavement surfaces include chip seals, slurry seals, and crack sealing. Sand seals can be applied to asphalt bike paths for their maintenance.

Priority 3: Non-Structural Overlays

A non-structural overlay is used to improve ride, texture, cross-slope drainage, and weatherproofing and is a can utilized to help preserve the pavement. Treatments for flexible pavement surfaces include micro surfacing, 3/4-inch overlays of ultrathin hot-mix asphalt, and 1.5-inch hot-mix asphalt overlays. In some situations, it is cost-effective to treat curb and gutter pavement sections by cold milling and resurfacing with a 1.5-inch hot-mix asphalt overlay.

Priority 4: Structural Overlays

Rehabilitation applies road base and structural enhancements to improve a pavement's load-carrying capability and extend the service life. Most rehabilitation projects are designed to last 10 to 20 years. Although less costly than reconstruction, rehabilitation to improve the overall network condition still requires a prohibitive level of investment. Combined with a reconstruction program, rehabilitation can provide a marginal increase in pavement performance, but the results are not optimal.

Priority 5: Reconstruction

Reconstruction involves the complete replacement of the pavement structure and subgrade with a new equivalent. This improvement is designed to last at least 20 years. Most favorable to the traveling public, reconstruction is also the most expensive fix. Like most transportation agencies, The SWO does not have sufficient funds to sustain the level of investment for continual reconstruction of the highway network. In addition, directing available funds to highway reconstruction neglects most of the network.

PAVEMENT MANAGEMENT PROGRAM

A pavement management program allows for the scheduling of maintenance in order to extend the life of the SWO roads. This program will be based upon the conditions of the roads and it is recommended to update the road conditions with a PASER Study. This method was developed by the University of Wisconsin to help rural and small cities to effectively manage their road system. To effectively manage local roads cities, need to:

1. Inventory all local roads and streets.
2. Periodically evaluate the condition of all pavements.
3. Use the condition evaluations to set properties for projects and select alternative treatments.

The PASER method uses a 1 to 10 rating scale, with a value of 10 representing a new road and a value of 1 representing a failed road. This data is collected based on several road characteristics including roughness (ride), surface distress (condition), surface skid characteristics, and structure (pavement strength and deflection). It is recommended that the Tribe conduct a PASER study.

The PMP includes creating a schedule that is designed to provide the public with safe, smooth, and well-maintained roads by utilizing cost-effective treatments to correct minor problems before they become major.

The life cycle of asphalt pavement under moderate stress is generally a 20-year life cycle. With a 20-year life cycle the asphalt should be treated with asphalt overlays every 15 years to minimize the deterioration that would require costly reconstruction. Freight traffic is low on BIA Tribal routes and as such pavement life may extend beyond 20 years if maintained properly.

Given there are 39 miles of asphalt BIA and Tribal roads on the Reservation, using 20 years as the overlay cycle would require an average 1.95 miles be overlaid yearly. In addition, the Tribe should implement a seal coat program that covers their entire paved system. Roadways should be seal coated approximately every 7-10 years. In other words, the Tribe should be placing an average of about 3.9-5.5 miles of chip seal per year (assuming the entire 39-mile pavement system is included in the rotation). This is shown is **Table 5**.

Table 5: Pavement Preservation Schedule

SWO 20 Year Pavement Preservation Plan			
Year	Miles Crack Sealing	Miles Seal Coat	Miles Non-Structural Overlay
2024-2028	19.5	19.5	9.75
2029-2033	19.5	19.5	9.75
2034-2038	19.5	19.5*	9.75
2039-2043	19.5	19.5**	9.75

*Complete approximately 7 years after seal coats performed in 2024-2028

*Complete approximately 7 years after seal coats performed in 2029-2033

NON-PAVED ROADS EXISTING CONDTIONS

Approximately 49% of the roads on the Reservation are not paved. In total there are 43.9 miles of gravel, earth and primitive-2 track roads on the Reservation. Most of these roads (42.3 miles) are made up of gravel. Non-paved roads have issues with narrowness, limited or no surface aggregate, poor cross section, lack of proper ditches and drainage, rutting and dust.

The Tribe has $100,000 for their gravel road maintenance program each year from the TTP and additionally sets aside money for gravel surfacing projects such as Barse Trail. For Barse Trail, the Tribe will conduct a culvert rehab and gravel surfacing at a cost of $487,661. Current maintenance includes blading, adding gravel, mowing, and snow removal.

RECOMMENDATIONS NON-PAVED ROADS

Recommendations for non-paved roads come from the FHWA Gravel Roads Construction & Maintenance Guide published in in August 2015 and the SD LTAP Gravel Roads Maintenance and Design Manual published in November 2000.

Surface and Base Materials

Gravel roads conditions vary greatly based upon the materials used in its construction and by utilizing better materials the roadway surface condition can be improved. It is important to utilize better quality gravel materials in Tribe projects. Currently the Tribe has a gravel program in which they utilize Tribal owned gravel pits and contract out for crushing services.

In addition to the base materials that can be improved upon surface treatments can be applied to reduce dust and to stabilize loose surface gravel. Magnesium chloride is a chemical effective in dust control. It costs about $8,000 per mile for the first treatment and $5,000 per mile for additional treatments. These treatments need to be applied once or twice a year as needed. Generally, this is only applied when there are air quality issues occurring next to residences.

Gravel Rehabilitation

Some existing gravel roads need significant effort to improve them to function as a quality gravel road. When the gravel surfacing needs to be removed and the subgrade needs to be improved, and changes to the ditch cross section are needed, a gravel rehabilitation project should be planned.

This type of work falls well beyond the typical gravel maintenance project and is therefore more expensive. However, without proper drainage and a good cross section, addition of gravel will often have less than the desired impacts on fixing the problem

Maintenance

Effective roadway maintenance techniques are outlined in the USDOT Gravel Roads Maintenance and Design Manual. Non-paved roadways will perform better if they are maintained with a 4 percent crown. Improper grading can remove valuable surface materials and grading must account for intersecting roads and driveways, as well as other site conditions. Training may be recommended for road grader operators to improve their ability to maintain various non-paved road surfaces and to respond to varying conditions.

The ability for roadway shoulders and ditches to keep the surface and subgrade free from water and ice is also important. Mowing operations should be included in the annual maintenance budget. Ditch in slopes should be mowed. This will also improve visibility, resulting in improved safety. Whenever possible, ditches should be provided to allow good drainage to occur and to provide additional snow storage.

Ditch improvements should be considered along roadways where drainage issues exist. The FHWA Gravel Roads Construction & Maintenance Guide published August 2015, reports that a survey of operators in the State of Iowa indicated mowing the shoulders on gravel roads ranked as one of four primary functions needed to maintain a good gravel road. Keeping proper shape, drainage, and straight cutting edges were the others.

Conversion of primitive roads to gravel roads is desirable wherever practical and as funding allows. Priorities should be roads with higher usage. Funding can also be set aside annually to upgrade equipment to bolster the gravel maintenance program.

Table 6 showcases the long-range gravel projects that the tribe has prioritized in its plan.

Table 6: Long range Gravel Projects

Gravel Projects			
Project Number*	**Cost**	**Project Type**	**Project Name**
1	$ 640,000.00	Gravel Construction	BIA 15-20 (Veblen South)
15	$ 376,800.00	Gravel Construction	Multi-Route Gravel Surfacing, BIA 4, 701, 706
18	$ 190,000.00	Gravel Construction and Drainage	BIA 151-10, Sacred Hills Housing gravel surfacing
22	$ 320,000.00	Gravel Construction	BIA 11-10, Barse Trail gravel surfacing

SCENIC BYPASS

The State of South Dakota has five designated Scenic Bypasses including the Native American Scenic Byway that passes through the Reservations of the Lakota Sioux, Crow Creek, Lower Brule, Cheyenne River, and Standing Rock. This trail allows visitors and to experience the rich history and sacred sites of the Sioux Nation.

A potential route would connect the history of the Tribe with the topography of the area and specifically with the history of the Coteau des Prairies. This route would run along Hwy 10 showcasing the glacier lakes and the Indian History including burial mounds from the Woodland Culture. This route would continue and make stops such as at the Nicollet Tower to see the Coteau des Prairies. After this the trail could include several stops on the Reservation and explore the prehistoric glacier history of Lake Traverse.

The Sisseton-Wahpeton Oyate may want to consider applying for the scenic byway designation through the Native American Tourism and Improving Visitor Experience (Native) Act.

FREIGHT AND TRUCKING

EXISTING CONDITIONS

Freight is defined as the transportation of goods in bulk by truck, train, ship, or aircraft. The efficient movement of goods is a fundamental prerequisite for growth in jobs and a strong economy. Trucking and train modes of transportation represent the two-primary means of freight movement within the Lake Traverse Reservation. The municipal airports located in Sisseton and Watertown are not typically used to for hauling freight.

Train

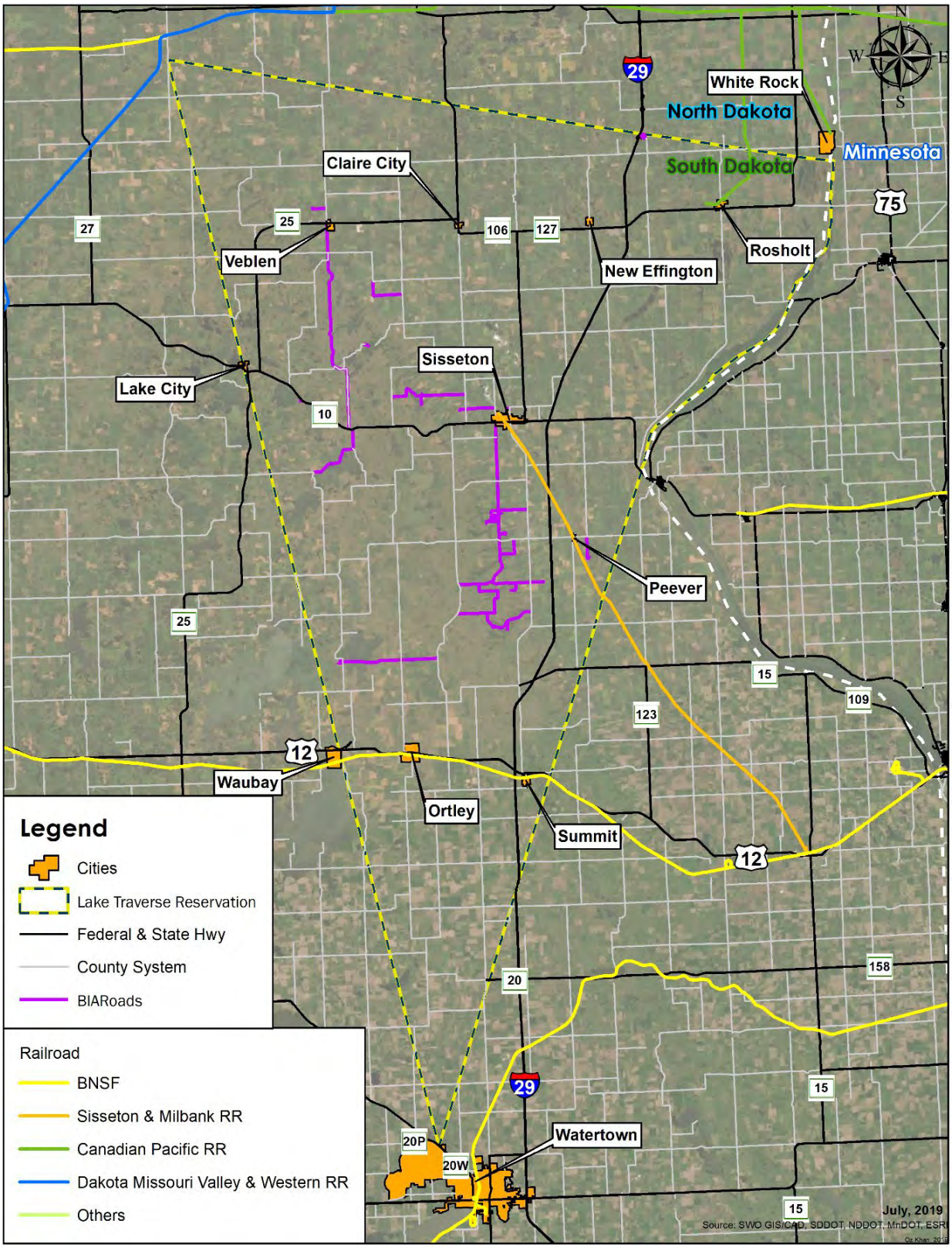
There are three railroad companies that provide freight services in SWO. The Burlington Northern Santa Fe (BNSF) railroad has nearly 900 miles of track in South Dakota and crosses the cities of Waubay, Ortley and Summit in the Lake Traverse Reservation.

The Twin Cities and Western Railroad (TCWR) is a regional railroad operating over 229 miles of track from the Twin Cities area of Minnesota west into South Dakota. The TCWR does not own any track in South Dakota directly, but does own a subsidiary – the Sisseton Milbank Railroad (SMRR) – which owns and operates 37.1 miles of track in the State between the communities of Milbank and Sisseton. Of the 37.1 miles, 10.7 miles are in South Dakota and the remaining in Minnesota.

The railroad is an essential factor in the shipping of grain in Northeast South Dakota. The TCWR operates two to three trains weekly outbound from Appleton to Milbank. The TCWR shares common ownership but is separately managed with another large Class III railroad – the Red River Valley and Western (RRVW), which is based in Wahpeton, North Dakota.

The Sunflour Railroad (SFR) consists of one 19.4-mile railway in the far northeastern corner of the State in Roberts County. The SunFlour Railroad operates a branch line from Claire City to Rosholt and connects with the Canadian Pacific Railway at Rosholt.

Figure 25: Railroads



Trucking

Truck traffic data was obtained from the SDDOT 2018 Statewide Traffic Flow Map. Truck traffic on the Reservation ranged from an Annual Average Daily Truck Traffic (AADTT) of 153 trucks per day along Hwy 10 on the eastern border to 75 trucks per day on Hwy 10 on the western border west of Sisseton.

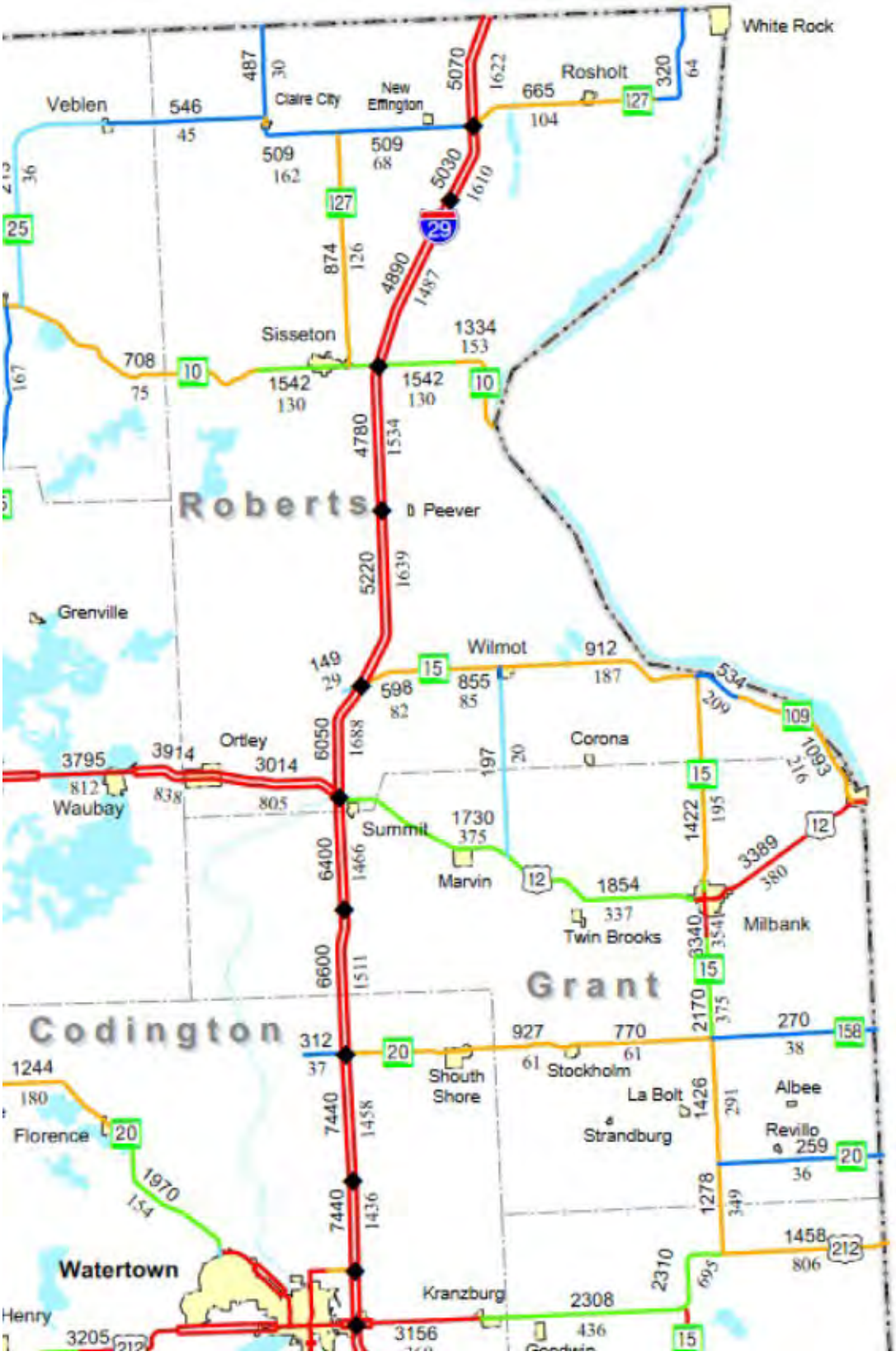
AADTT's for the major corridors were documented:

Route	**AADTT**
Interstate 29	1436-1688
SD Hwy 50	805-838
SD Hwy 46	75-153

Figure 26 shows the AADTT on the Sisseton-Wahpeton Oyate Indian Reservation. Values for the AADTT are the bottom numbers in the figure. For example, the values shown by the City of Sisseton are 1542/130. The AADTT is 130.

The Tribe has raised concerns that trucks exceeding the load limits are utilizing Tribal roads during the spring season when counties raise the limit on its roads. The impacts of trucks exceeding load limits can have a significant negative impact on the condition of these Tribal roads. The trucking companies sometimes divert traffic through tribal roads to avoid weight checks on State roads or Interstate. The hauling of hazardous materials is also a potential issue that is associated with freight.

Figure 26: Truck Traffic Volumes



Trucks with heavy loads cause a greater impact on the road system compared to passenger vehicles, and the heavier the load, the greater the damage caused increasing exponentially. It is recommended that the Tribe looking future policies that include requiring hauling permits and levying fines for all overweight vehicles that use BIA and Tribal roads. This would help ensure that freight companies, contractors, and major businesses would be held responsible for the damage caused to roads on the Reservation.

BRIDGE AND CULVERT CONDITIONS

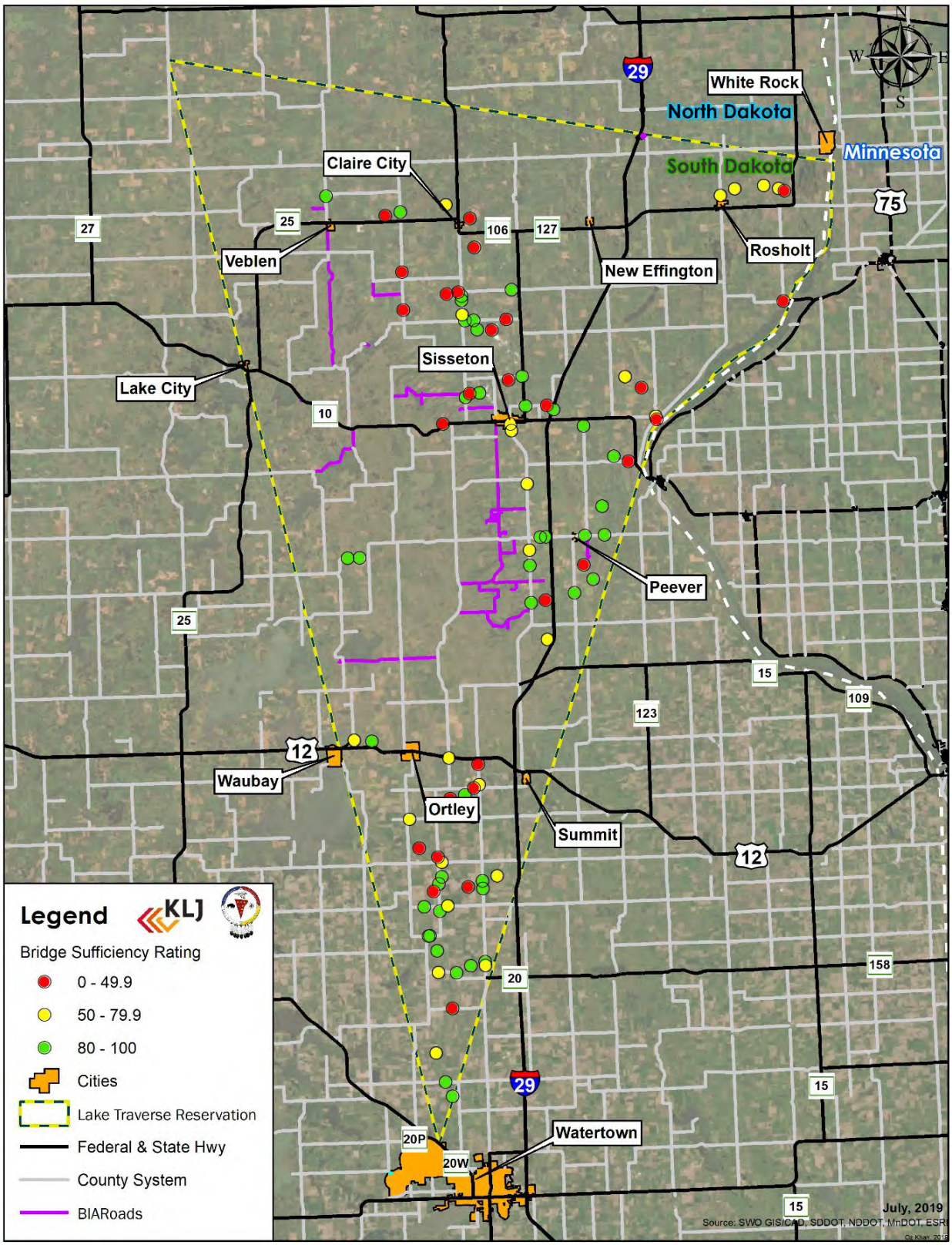
The SWO-DOT prepares and adopts uniform standard plans and specifications for the establishment, construction, and maintenance of bridges within the reservation. There are 66 bridges in the Lake Traverse Reservation that are maintained by the respective county. There is one BIA identified bridge located on the Lake Traverse Reservation on BIA Route 121.

A bridge's sufficiency rating measures a bridge's overall condition, based on regular required inspections. The ratings are used to determine when a bridge is eligible for rehabilitation or replacement. A bridge with sufficiency rating greater than 80 is generally considered in good condition. A new bridge will have a sufficiency rating of 100, whereas a sufficiency rating of less than 50 is candidate for replacement.

It is likely there are hundreds if not thousands of culverts that are undocumented in the Reservation. Although some of the culverts are likely in good condition, it is likely that culverts with no maintenance over the years have become aged with broken inlet flares and expansive outlet scours. Tribe should implement asset management program to inventory, inspect and repair all culverts on BIA within reservation, as necessary.

The Tribe is looking to use TTP BP funds to repair the bridge on Peever Flats and wants to work with Roberts County to match the required 20% in funds. This would be a 10% Tribe and 10% Roberts County match.

Figure 25: Bridge Conditions



RECOMMENDATIONS

It is recommended that the Tribe work with the Counties to help facilitate maintenance and repairs on existing bridges as shown in the map.

The Tribe should implement a program to inspect and inventory all culverts located on BIA and Tribally owned roads within the Reservation. Those culverts which are damaged, and aging should be repaired or replaced. The inventory will help the Tribe in assessing the condition and priority of the culverts and allow for a prioritized list of to be implemented. It may also be useful in identifying locations where there is insufficient drainage and placement of a culvert is desired. As applicable applications for FEMA and ERFO funding should be submitted.

PEDESTRIAN AND BICYLE CONDITIONS

Walking and biking is an important component of the transportation system. Enhancing the ability of travelers to walk or bike involves not only providing the infrastructure but also linking design, streetscapes and land use to encourage walking and biking. Safety is also critical when developing an appealing pedestrian and bicycle network. According to national studies, pedestrians represent a disproportionate percentage of road-related fatalities, and thus, special focus should be given to addressing these safety concerns.

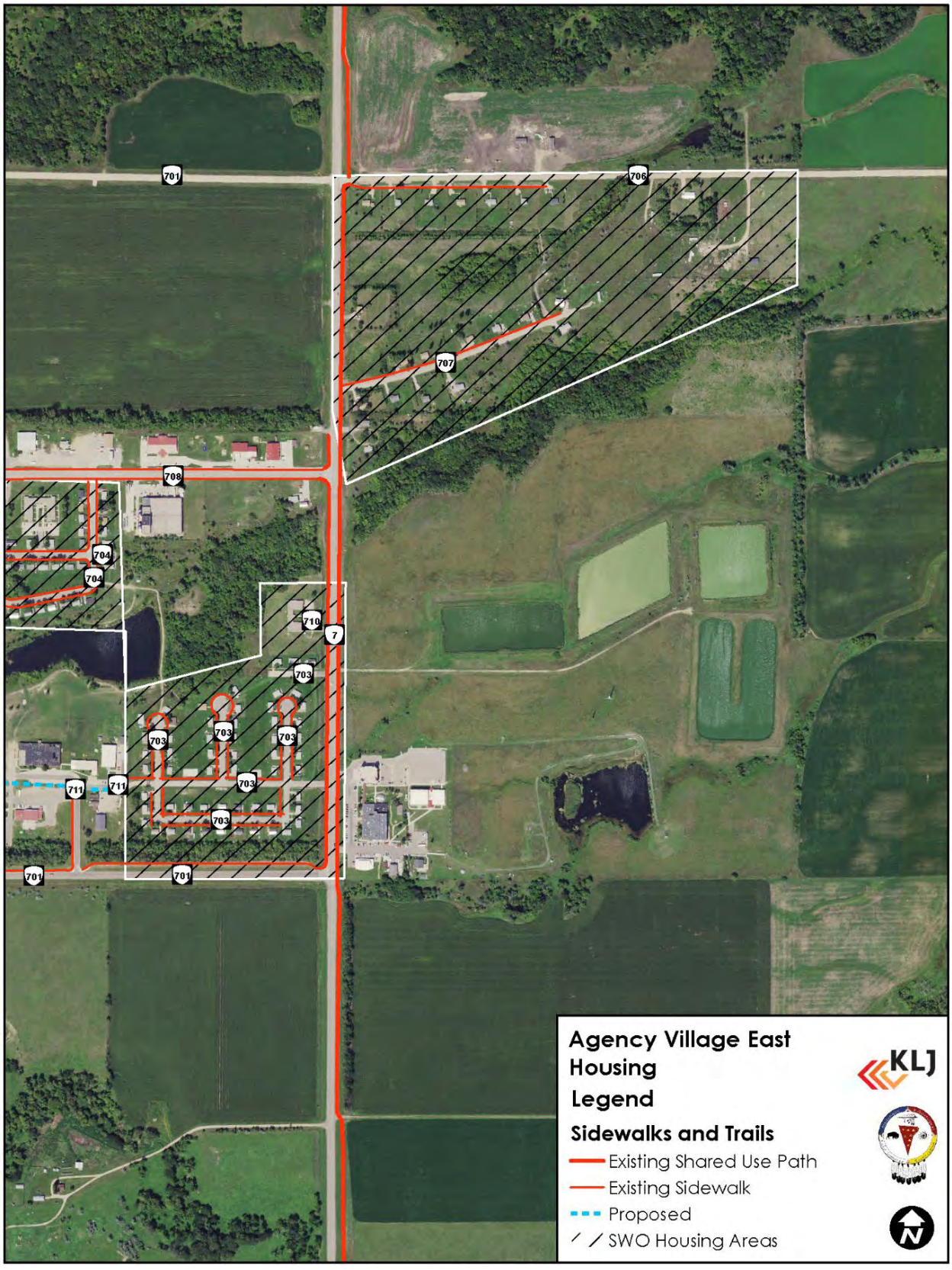
Most pedestrian and bicycling activity within the reservation occurs on the roadway facility, ideally along the shoulder if one exists. The area has several parks in which residents have access to hiking trails. These include the Sica Hollow Horse Trails, Ponderosa Hiking Trails, Glacial Mounds Trail, and the Trail of Spirits. Some sidewalks are available in Agency Village, Barker Hill Housing, Finley Heights Housing, Indian Health Quarters, Long Hallow, New Effington, Peever Flats Housing, Peever Town Housing, Red Iron Housing, Sisseton Housing, Summit Housing, Toka NuWan Enemy Swim, Sacred Hills Housing, Veblen Town Housing, and Waubay Housing.

An aerial-imagery based inventory of sidewalks in tribal housing areas was conducted. In addition to existing sidewalks and shared use paths, new sidewalks were proposed in areas with gaps or the potential for better connectivity to other housing, parks, schools, etc. An example gap is in Agency Village. The area between tribal headquarters and the housing to the east has no sidewalk connection.

The following communities were evaluated. Where proposed sidewalks exist, recommendations for each community are shown in the figures.

Agency Village Housing West and East




Agency Village East
Housing
Legend
Sidewalks and Trails
Existing Shared Use Path
Existing Sidewalk
Proposed
SWO Housing Areas
KLJ
701
706
707
708
704
710
7
703
711

Barker Hill Housing

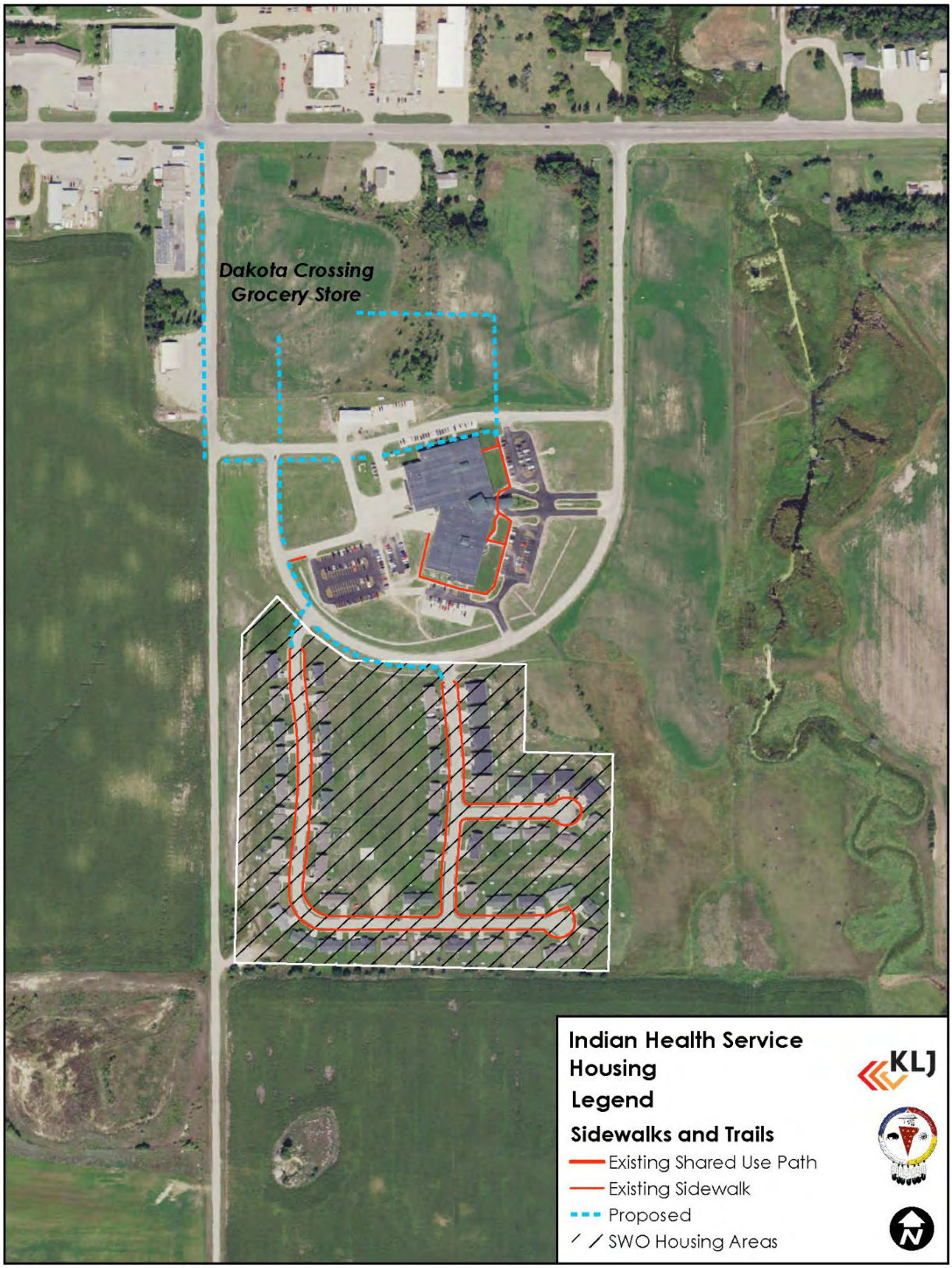



Dakota Magic Housing
KLJ
Legend
Sidewalks and Trails
Existing Shared Use Path
Existing Sidewalk
Proposed
SWO Housing Areas

Finley Heights Housing



Indian Health Quarters



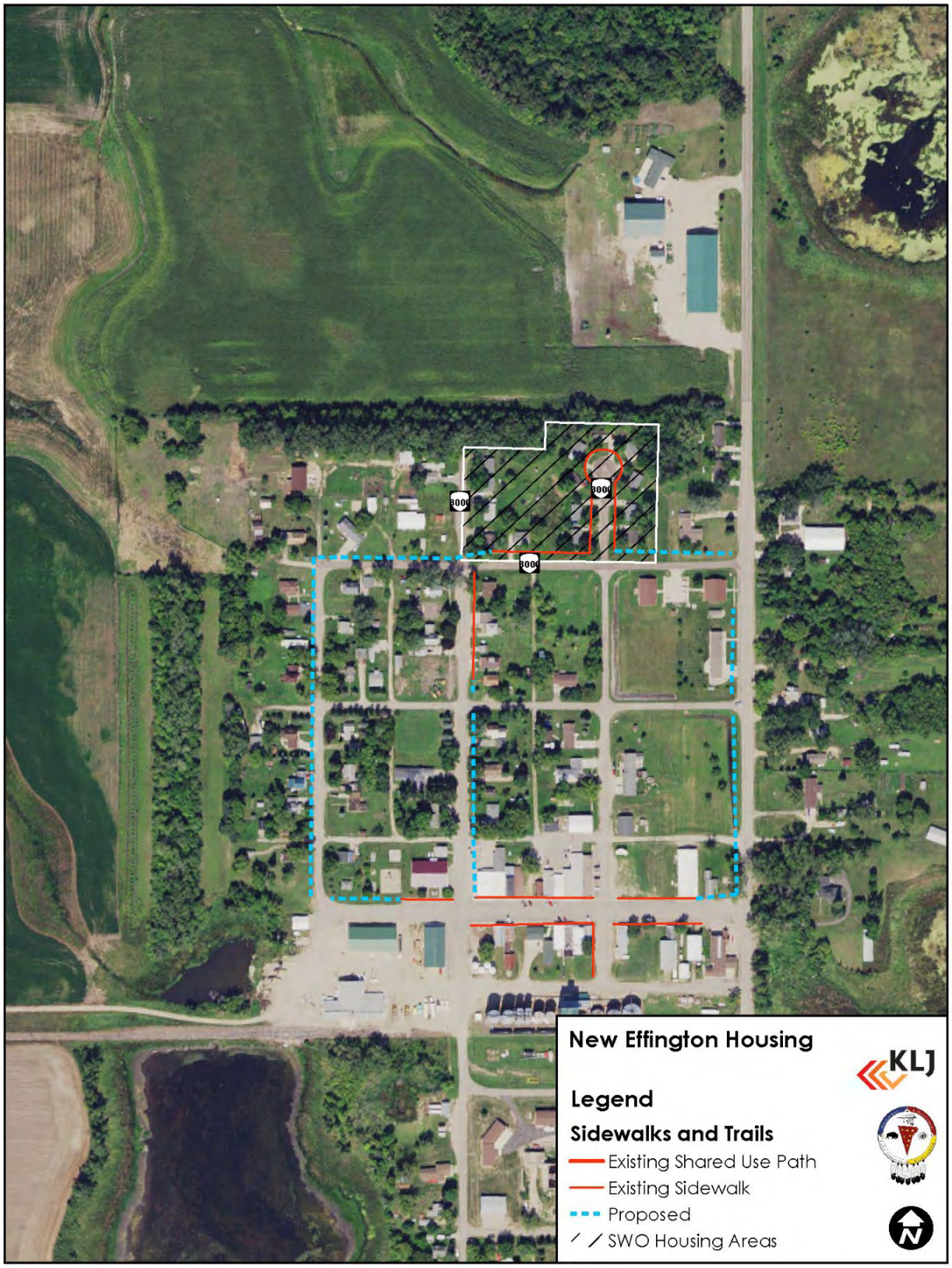
Lake Traverese



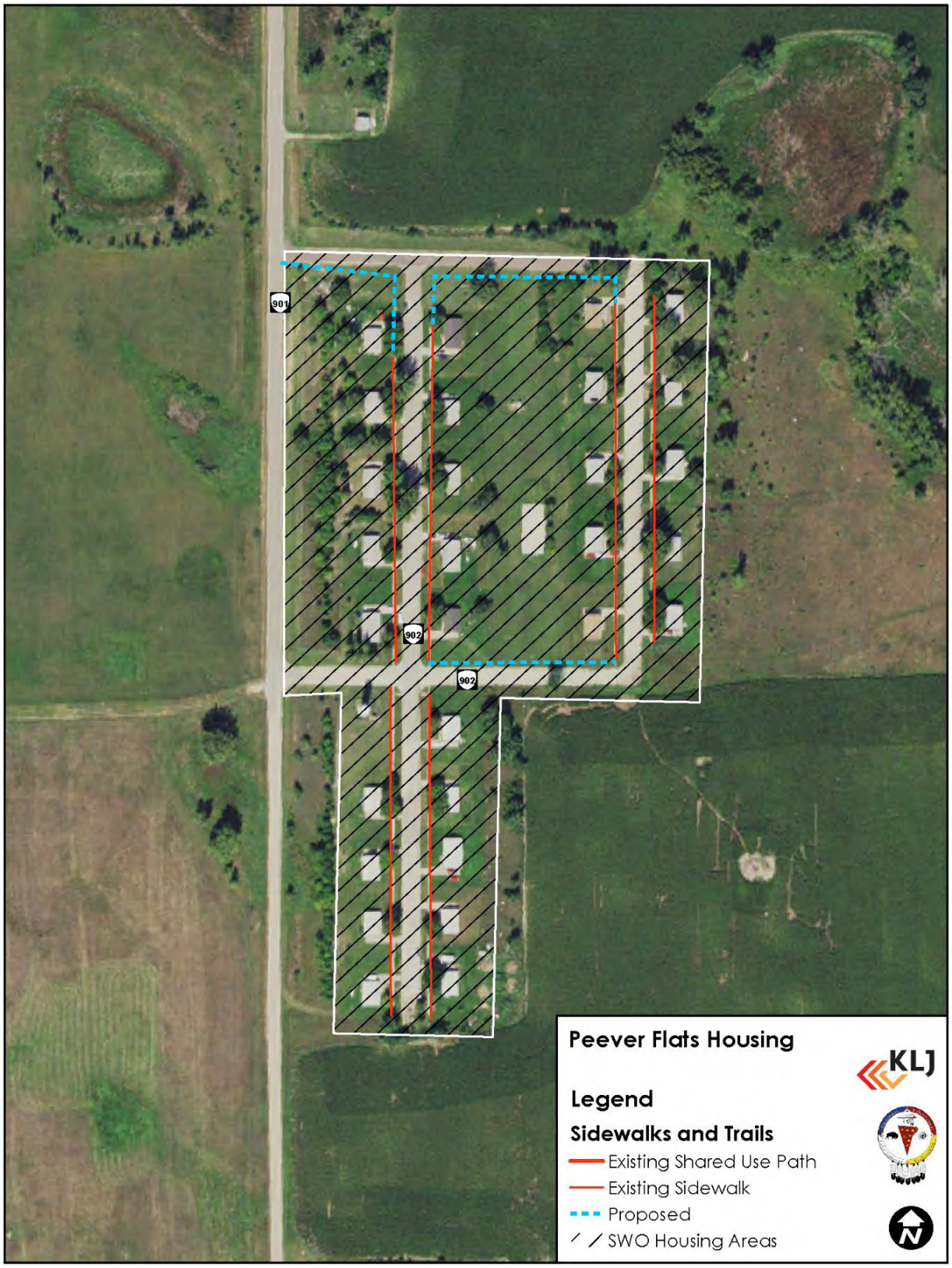
Long Hollow


802
802
802
802
8
801
Long Hollow Housing
KLJ
Legend
Sidewalks and Trails
Existing Shared Use Path
Existing Sidewalk
Proposed
SWO Housing Areas

New Effington



Peever Flats Housing



Peever Town Housing



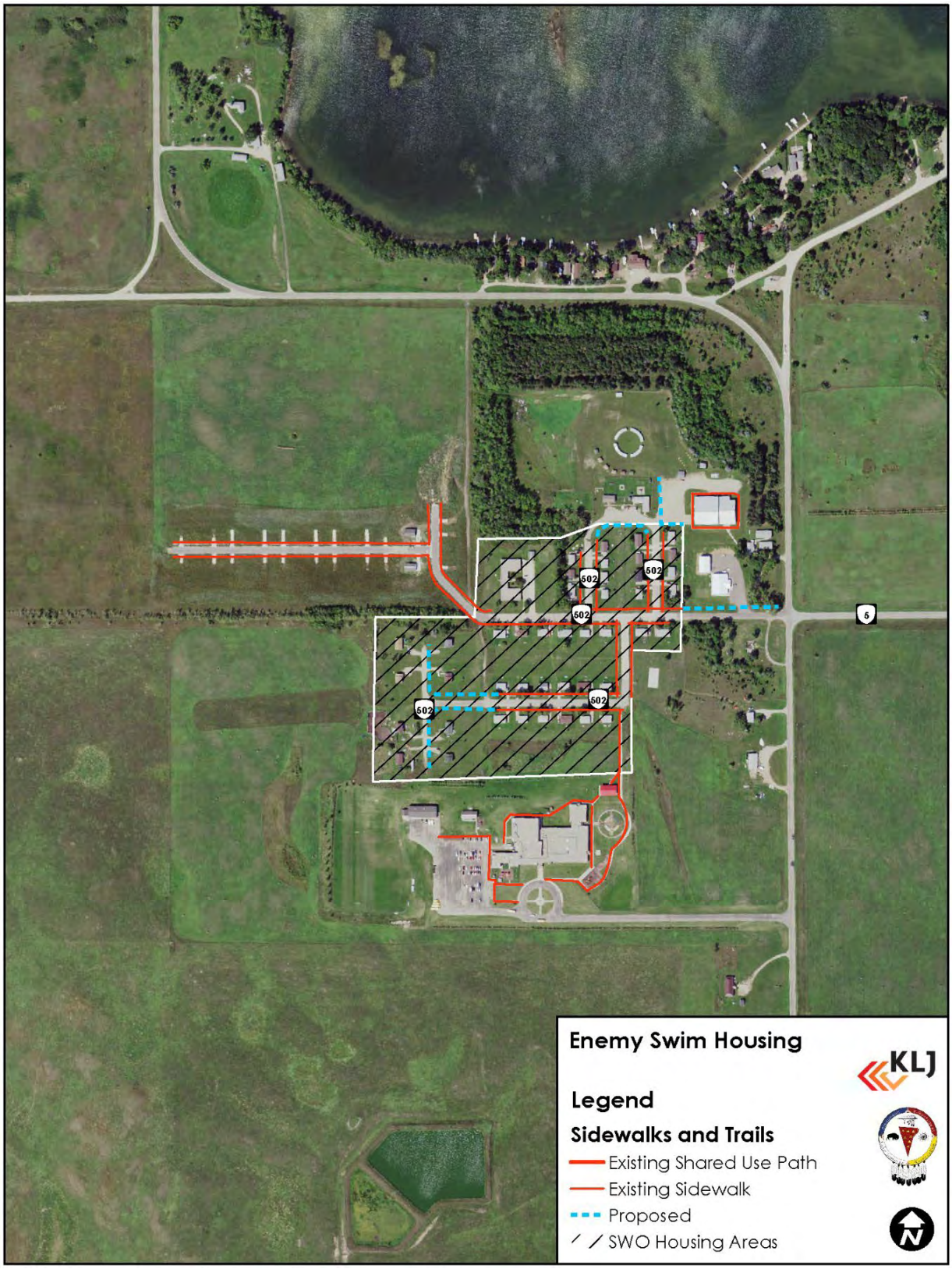
Red Iron Housing




Sisseton Housing
KLJ
Legend
Sidewalks and Trails
Existing Shared Use Path
Existing Sidewalk
Proposed
SWO Housing Areas

Summit Housing




Enemy Swim Housing
KLJ
Legend
Sidewalks and Trails
Existing Shared Use Path
Existing Sidewalk
Proposed
SWO Housing Areas
502
6

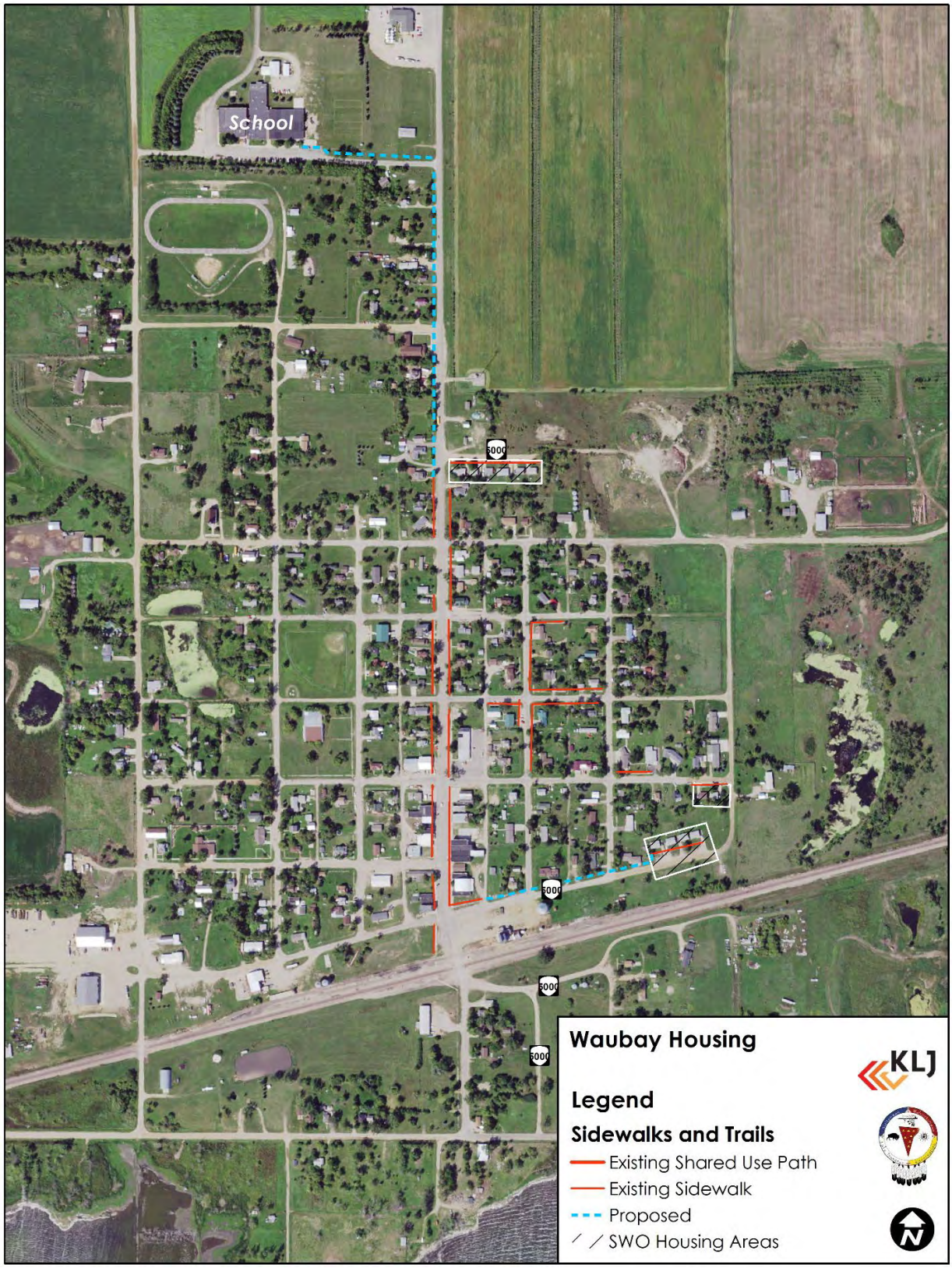
Sacred Hills Housing



Veblen Town Housing



Waubay Housing



AIRPORTS

EXISTING CONDITIONS

Sisseton Municipal Airport

Sisseton Municipal Airport (8D3), owned by the City of Sisseton, is located approximately eight miles to the northwest of Agency Village. The unattended general aviation airport has two runways. Runway 16-34 is the primary runway and is made of asphalt and is 3400 x 60 feet. Runway 04-22 is the secondary runway made from turf and is 1932 x 50 feet. The airport is used predominately for medical and aerial agricultural. Over the past few years, the airport has averaged over 500 air ambulance flight operations.

Watertown Regional Airport

Watertown Regional Airport (ATY), owned by the City of Watertown, is located approximately 45 miles southwest of Agency Village. The airport has two concrete runways the primary 17-35 is 6893 x 100 and the second runway 12-30 is 6897-100 feet. Boasting some of the longest runways in South Dakota and providing two non-stop air services via Northwest Air to Minneapolis and Pierre daily.

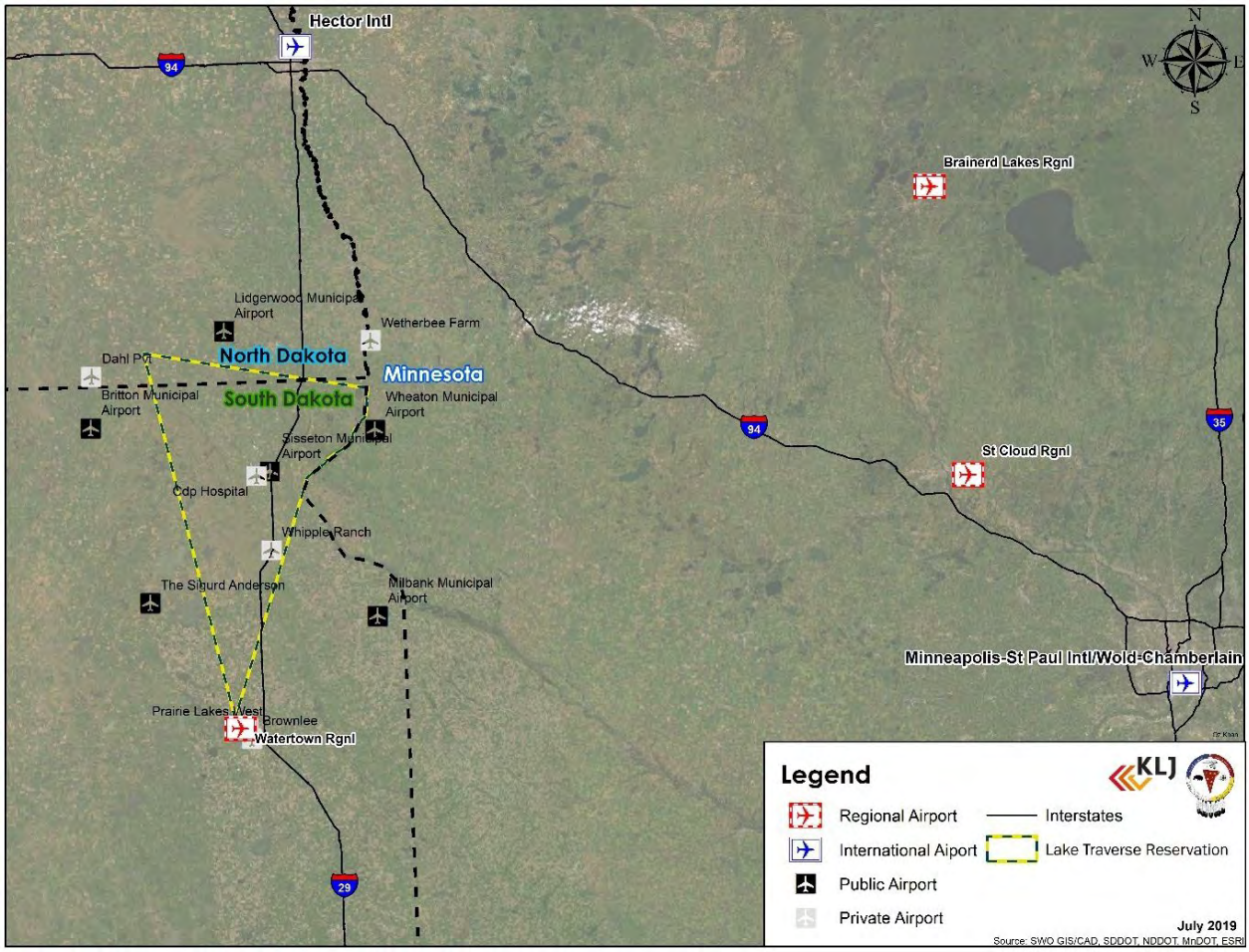
The Watertown Regional Airport is a full-service commercial airport as well as providing top quality general aviation services with a Fixed Base Operator, Priority Air. The airport averages around 1,250 commercial airline flights a year. The other main areas are Air Cargo and aerial agricultural.

Additional Airports

Wheaton Municipal Airport is a public-use airport in Wheaton, Minnesota located 20 miles east from Sisseton. Hector International Airport in Fargo, North Dakota is the closest International airport from the Reservation. The Minneapolis-Saint Paul International Airport (MSP) is located 230-miles east from Sisseton.

Figure 28 shows the location of International, Regional, and public and private airports within 25-miles from the Reservation.

Figure 28: Airport Locations



RECOM M ENDATIONS

The Tribe should coordinate with the local governments which own the airports to facilitate improvements that will help with the dispatch of emergency air flights to Tribal communities. This could include working with the local governments to improve roads connecting to the airport to enhance the safety and welfare of its citizens.

TRANSIT CONDITIONS

EXISTING CONDITIONS

Transit has been increasingly recognized as an element of livability and economic progress in communities. Transit is considered a basic public service and a means of enhancing access to facilities and reducing traffic congestion. For many members of the Tribe the transit service is their primary means of transportation and without transit access it would restrict their ability to enhance their lives and increase their economic progress.

The tribe entered into an agreement with Community Transit based out of Sisseton in May of 2018. They originally ran on a routine schedule with twenty stops in the Reservation running five runs over a twelve-hour period. Due to lack of demand this was changed to an on-demand model which requires residents to request a ride from the service. The service runs from the hours of 6:30 am till 6:30 pm and is only available Mon-Fri. The service has different pricing options depending on distance with Agency Village to Sisseton being $5 round trip. The common trips are within Old Agency and Sisseton and with less trips to the outlying Tribal Districts due to the distance of the trips.

The Community Transit Program covers approximately 4,000-5,000 miles per month. They provide service to about 450-500 passengers per month. The Tribe has two buses dedicated to the program with only one bus running at a time. There is a desire to expand transit services within the Lake Traverse Reservation. This is being considered with the second bus by providing fixed routes to the outlying Tribal Districts.

The Sisseton Community Transit services is combining with the Watertown Area Transit and is becoming the Community Transit of Watertown-Sisseton Inc. The change will not affect the day-to-day services of the transit services available to the Tribe.

The FAST Act authorizes the Public Transportation on Indian Reservations Program (Tribal Transit Program (TTP) for Fiscal Years 2016-2020. This program consists of a $30 million formula program and a $5 million competitive grant program subject to the availability of appropriations.

A 10-percent local match is required under the competitive program, however, there is no local match required under the formula program. This program is available to federally recognized Tribes that are eligible recipients under the Tribal Transit Program. Funding may be used for capital, operating, planning, and administrative expenses for public transit projects that meet the growing needs of rural Tribal communities.

The Grants for Buses and Bus Facilities Program (49 U.S.C. 5339) makes federal resources available to states and direct recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technologicalchanges or innovations to modify low or no emission vehicles or facilities. This grant is a competitive process; however, other tribes have had success in obtaining these funds. The Oglala Sioux Tribe in South Dakota received $262,000 to purchase accessible transit vehicles equipped with ITS technology. The project will help replace older vehicles with newer, more reliable models to improve service.

Coordinated community transit systems serving both the rural public and human service agencies are preferred applicants for FTA Section 5311 grants. The Rural Transit Assistance Program (RTAP) available under Section 5311 provides grants for training at 100% federal share. Eligible subgrantees for RTAP training grants include administrative and operating personnel providing rural transit services to areas in South Dakota.

SCHOOL BUS ROUTES

School bussing is provided to students throughout the reservation, including to schools off the reservation (such as Brown's Valley, MN). There are 8 reservation school bus routes: #9, #7, #21, #18, #19, #6, #14, and #34. Routes may vary according to student pickup and drop-off locations.

RECOMMENDATIONS

Continue to coordinate with surrounding school districts to fulfill transportation needs of students on the reservation and in tribal housing and allocate routing accordingly.

The Tribe is looking to start its own Transit Service when the current contract with Community Transit Program expires in 2022. To do that the Tribe will need to set aside funds to facilitate the construction of transit bus shelters, acquisition of new rolling stock, and various other costs such as training and employing staff to run the service. The Tribe will need to start competing for grants that are recommended above in order to pay for the costs of running the service. It is recommended that the money currently given to Community Transit continue to be allocated to transit services after the contract expires.

According to 25 CFR 170, tribal TTP allocations from FHWA can be used towards state transit activities. Since these funds can be used to assist state agencies, the tribe could use TTP funds at times when transit programming needs aid.

UTILITIES

EXISTING CONDITIONS

Utility conditions have an important part to play in the maintenance of roads and in the cost of construction or reconstruction. When undertaking roadway improvements, it is essential that the age, condition, and capacity of utilities under the road be considered and addressed.

During the planning for this document, efforts were made to gather information on the types, locations, and conditions of utilities within the Reservation. Much of this information is either unknown or has never been documented and mapped. Like planning for roads, good utilities planning and a program for maintenance can help Tribal leaders to prepare for costly utility projects and to be alerted to utility costs that will accompany roadway improvement projects.

RECOMMENDATIONS

It is recommended that future utilities planning, and mapping be completed. It is also recommended that the Tribe work with utility providers when updating roads. The work can be done concurrently for example while IHS is fixing pipes, BIA could replace the road above it.

CHAPTER 5 - POLICY RECOMMENDATIONS

This chapter is to identify recommended policies to support an efficient and safe future transportation system.

SYSTEM MANAGEMENT PRIORITIES

The Tribe in deciding where to prioritize its funding must consider the limited funding it receives and the priority of the future needs of the system and the past backlog of maintenance issues that need to be addressed. Now the Tribe allocates most of its funding to maintaining the asphalt pavements that exist on the Reservation and the construction of new asphalt roads.

This LRTP recommends that the Tribe continue in its efforts to get all roads on a preventive maintenance schedule of crack sealing and seal coat maintenance. As such the Tribe will need to improve the condition of roads in bad conditions up to a point where they can enter a preventive maintenance schedule. This will be done by utilizing structural overlays or reconstruction on those roads found in bad condition. For the roads in good condition they will be properly maintained and put on the 7 to 10-year schedule of crack sealing and seal coats and every 20 years as needed an overlay.

It is recommended that the SWO develop project priorities based upon the following:

- Priority 1: Prioritize the creation of a pavement management program that emphasizes the normal maintenance and needed upgrades and/or repairs on existing bridges, culverts, guardrails, and cracking sealing and seals coats on BIA and Tribal facilities.
- Priority 2: Conduct a PASER Study to evaluate condition of the road surface.
- Priority 3: Conduct a gravel roads conditions survey to compile data for prioritizing road needs. Included in this is an inventory of the culvert in the Tribal road system.
- Priority 4: Complete overlays or reconstruction on paved BIA highways based upon PASER ratings.
- Priority 5: Correct gravel road surface deficiencies on primary routes
- Priority 6: Construct new routes

It is recommended that the Tribe prioritize crack sealing and seal coats on paved BIA and Tribal facilities. This will allow for the Tribe to extend the life of its transportation system and reduce the overall cost. This will allow the Tribe to allocate more funding to projects such as the Transit Service.

ROADWAY CROSS-SECTION STANDARDS

Roadway, path and sidewalk cross-section standards have been used, though no clear standards have been adopted. These should be adopted for future projects and should serve as guidance for future housing and development projects. It is recommended that these standards be used on all future projects. The proposed cross-sections are shown in **Figures 29 through 35**.

Figure 29: Standard High-Speed BIA Paved Road Typical Section

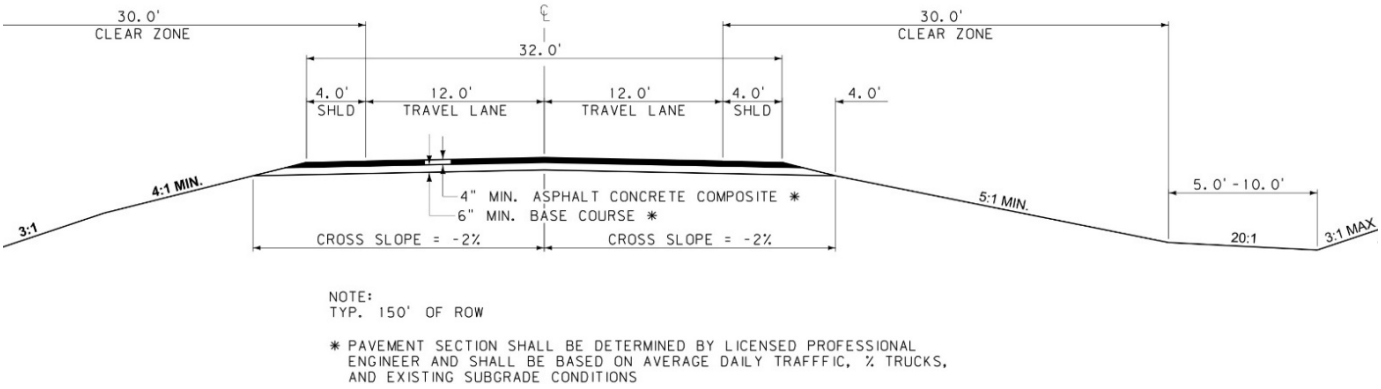


Figure 30: Standard High-Speed Gravel Road Typical Section

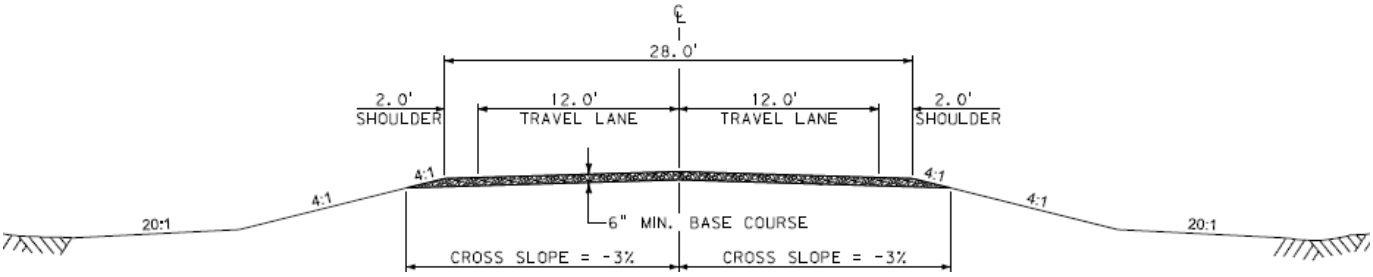


Figure 26: Standard Low Speed Gravel Road Typical Section

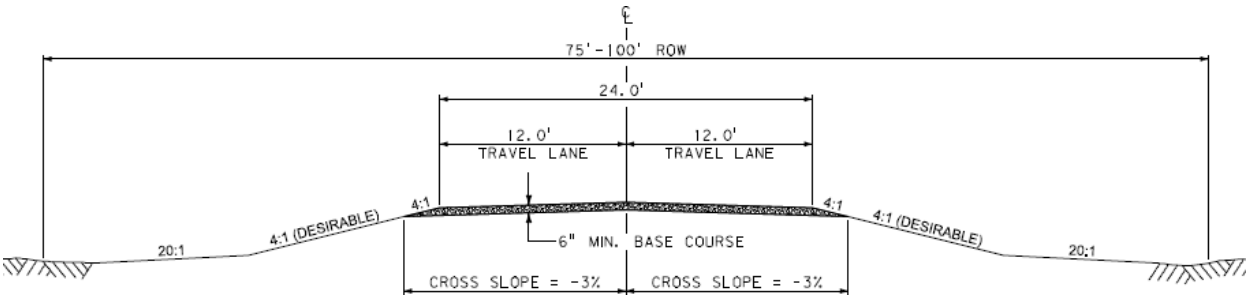
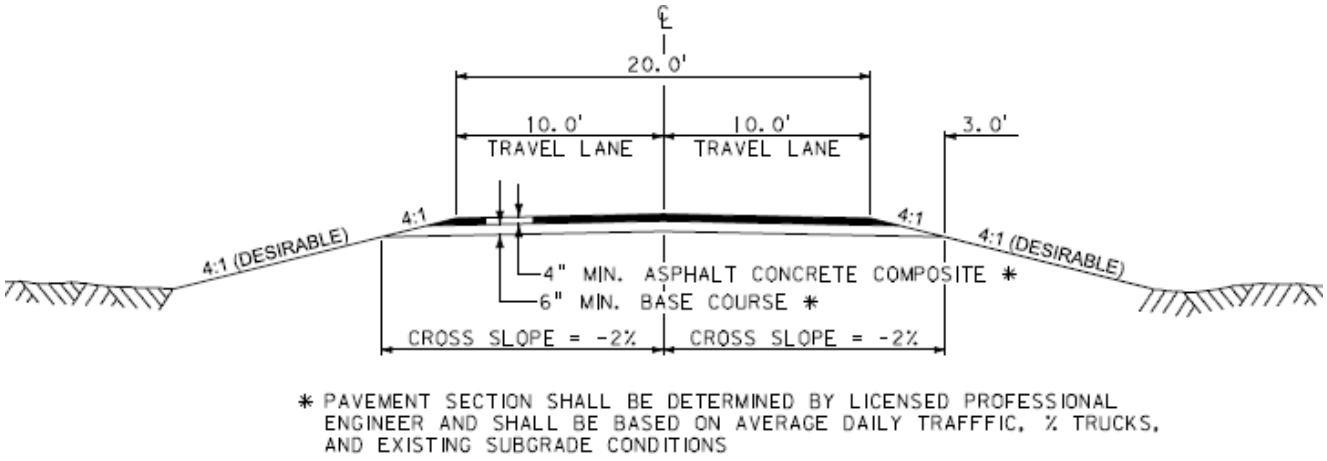
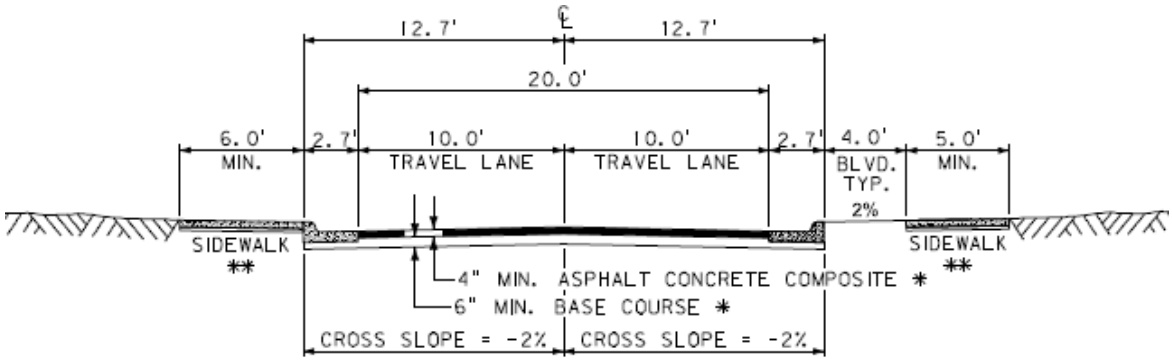


Figure 27: Standard Tribal Residential Street Typical Section - Rural



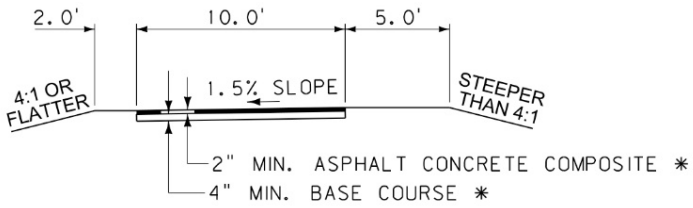
* PAVEMENT SECTION SHALL BE DETERMINED BY LICENSED PROFESSIONAL ENGINEER AND SHALL BE BASED ON AVERAGE DAILY TRAFFFIC, % TRUCKS, AND EXISTING SUBGRADE CONDITIONS

Figure 28: Standard Tribal Residential Street Typical Section - Urban



* PAVEMENT SECTION SHALL BE DETERMINED BY LICENSED PROFESSIONAL ENGINEER AND SHALL BE BASED ON AVERAGE DAILY TRAFFFIC, % TRUCKS, AND EXISTING SUBGRADE CONDITIONS

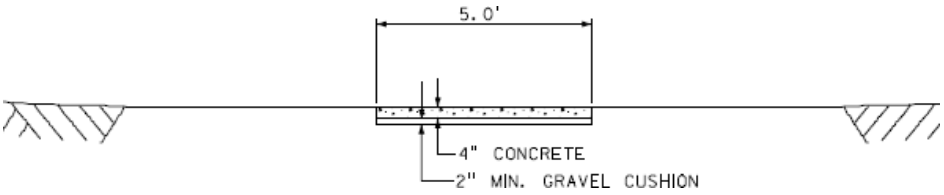
Figure 29: Standard Separated Shared Use Path Typical Section



NOTE:
2" MIN. ASPHALT CONCRETE COMPOSTIE OVER 4" MIN. BASE COURSE
OR
4" MIN. CONCRETE OVER 2" MIN. GRAVEL CUSHION

* PAVEMENT SECTION SHALL BE DETERMINED BY LICENSED PROFESSIONAL ENGINEER

Figure 30: Standard Sidewalk Typical Section



DEVELOPMENT REVIEW

Future development proposals have the potential for impacts on the SWO transportation system. It is recommended that future development proposals be submitted to SWO Transportation for review and comment before approval. This will increase Tribal leaders' information and their ability to make the best decisions pertaining to the development and potential impacts to the transportation system.

ENVIRONMENTAL CONSIDERATIONS

The primary environmental impacts associated with the existing transportation system include dust-related impacts on air quality, erosion, and wild animal hits by automobiles. There are impacts associated with future transportation improvement projects, as well as impacts to undeveloped land and wetlands.

In accordance with NEPA regulations, the SWO is encouraged to consider and mitigate these impacts as is customary in future projects, and to apply for and take full advantage of grants and additional funding that can be applied to address these issues. Current practices to mow ditches is a useful method to improve visibility resulting in fewer wild animals hit. Where appropriate, fencing should also be considered to further reduce interaction with livestock.

CULTURAL CONSIDERATIONS

The Sisseton-Wahpeton Oyate has a Tribal Historic Preservation Office (THPO) and cultural resource considerations must be a part of the SWO long range transportation plan. Compliance with the National Historic Preservation Act as well as National Environmental Policy Act are an essential part of the tribe's commitment to preserve and protect irreplaceable cultural and natural resources. Coordination with THPO is important to ensure compliance with federal regulations and mandates.

JURISDICTIONAL CONSIDERATIONS

Roadway jurisdiction determines maintenance responsibility and eligible funding sources for roadway projects. Several government agencies operate roads in Lake Traverse Reservation. It is important that the Tribe build cooperation and coordination among state and local jurisdictions. This will allow for the Tribe to seek opportunities to coordinate with the counties, state, and local municipalities when roadway improvements that involve these entities are considered. The Tribe should work with the government entities in the Reservation to consider logical jurisdictional modifications among affected governments. This can lead to a process of cooperative intergovernmental maintenance activities that will increase the efficiency and effectiveness of services for all the governmental entities.

Benefits of Collaboration

The government entities working together can benefit by collaborating and creating strong regional partnerships. Some of the benefits of intergovernmental collaboration include:

- Cost Savings due to increased efficiency and avoiding unnecessary duplication. Coordinating design standards between jurisdictions.
- The ability to address regional issues with communication and coordination through actions.
- Reduce litigation by resolving issues before they become mired in litigation or unwanted outcomes.
- Consistency between roadway jurisdiction, designation, and functional classification.
- Predictability by jurisdictions cooperating to provide greater predictability to residents, developers, businesses, and others.
- Understanding as jurisdictions, communicating on issues of mutual interested to become aware of other governmental agencies' needs and priorities.

The list below contains the government entities that operate within the Lake Traverse Reservation. Note that the list does not contain all the agencies that exist in the state and federal government. By cooperating and working with the government entities The Tribe will be able to stretch its resources by cooperating in a manner that enhances the life of all people on the Reservation by acting in the best interest of the region. The Tribe can work with these

government entities by creating memorandums of understanding (MOUs) that will layout the agreement for maintenance cooperation on various roads on the Reservation.

Governmental Entities

- Codington
- Day
- Grant
- Marshall
- Richland
- Roberts
- Sargent
- North Dakota
- South Dakota
- First District Association of Local Governments
- Lake Agassiz Regional Council
- Federal Government
- Local Municipalities
- Agency Township
- Alto Township
- Becker Township
- Bossko Township
- Bryant Township
- Drywood Lake Township
- Easter Township
- Enterprise Township
- Garfield Township
- Geneseo Township
- Goodwill Township
- Grant Township
- Harmon Township
- Hart Township
- Lake Township
- Lawrence Township
- Lee Township
- Lien Township
- Lockwood Township
- Long Hollow Township
- Minnesota Township
- Norway Township
- One Road Township
- Ortley Township
- Sisseton Township
- Spring Grove Township
- Springdale Township
- Summit Township
- Victor Township
- White Rock Township

County Roads

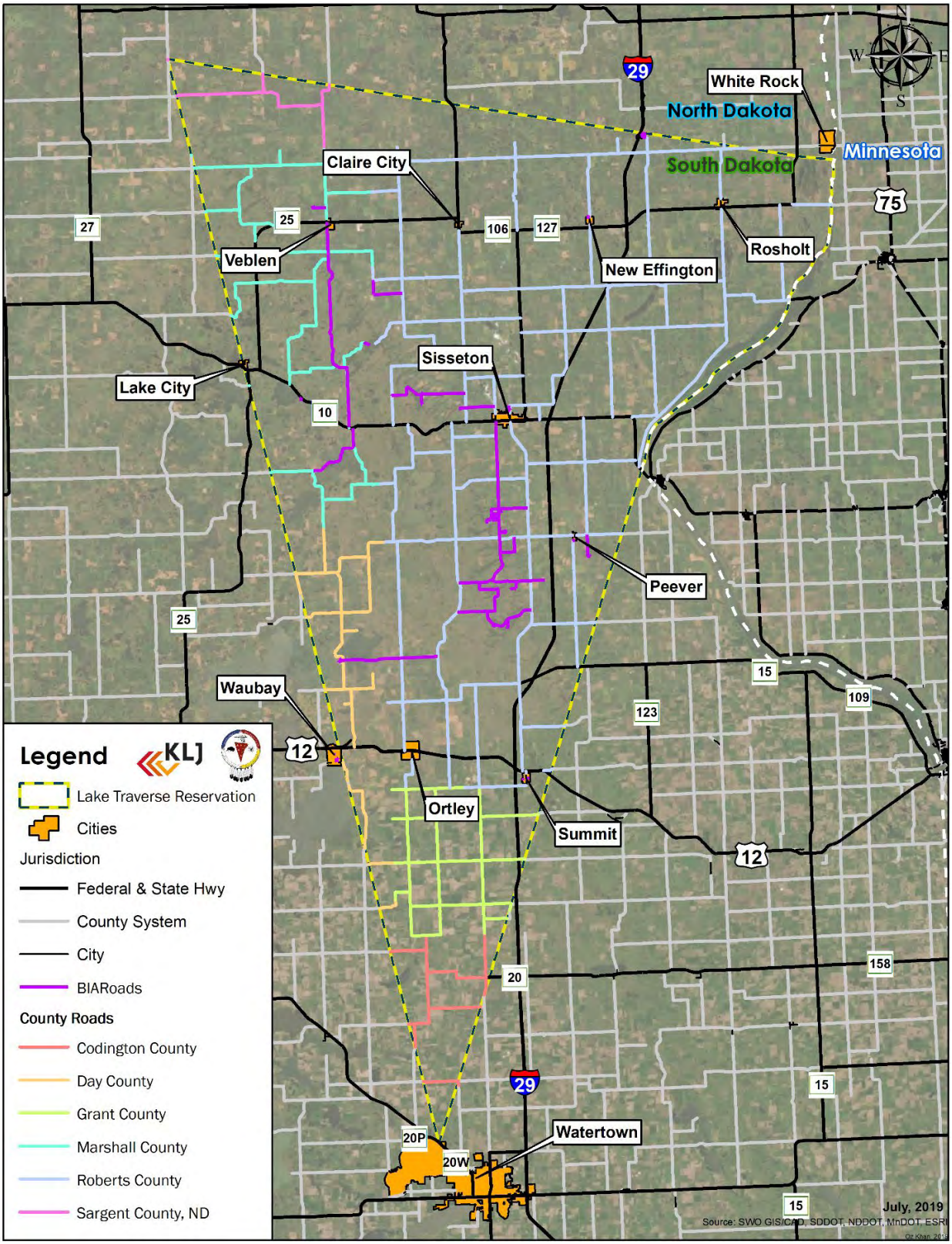
There are 637.7 miles of county jurisdiction roads on the SWO reservation according to the RIFDS inventory. Of these, 55% are in Roberts County, which also has the largest share of land of any county within reservation boundaries. County-owned and -maintained roads are important facilities for day-to-day transportation needs for people living on the reservation, both for tribal members and non-tribal residents. County roads can be seen in Figure 31. A list of county roads can be seen in **Table** .

Table 7: On-Reservation County Roads by Route

County	Route	Miles
Codington	2	8.6
Codington	6	3.9
Codington	11	7
Codington	13	2
Codington	17	9.8
Codington County Total		**31.3**
Day	1	24.7
Day	4	11.3
Day	6	10.8
Day County Total		**46.8**
Grant	1	10
Grant	3	8.1
Grant	6	10.1
Grant	8	9.6
Grant	14	8.8
Grant	41	11
Grant	81	10.1
Grant County Total		**67.7**
Marshall	1	16.8
Marshall	2	12.1
Marshall	3	4.6
Marshall	4	15.8
Marshall	5	1.1
Marshall	6	21.2
Marshall	16	11.9
Marshall County Total		**83.5**
Richland	**1**	**10**
All Counties		

County	Route	Miles
Roberts	1	12.4
Roberts	2	24
Roberts	3	17.8
Roberts	5	16.4
Roberts	6	13.1
Roberts	8	18.4
Roberts	9	7.7
Roberts	12	25
Roberts	13	7.1
Roberts	14	6.3
Roberts	15	30.3
Roberts	16	4.9
Roberts	17	9
Roberts	19	4.7
Roberts	20	8
Roberts	21	6.7
Roberts	22	2
Roberts	23	24.2
Roberts	25	28.8
Roberts	26	9
Roberts	27	10.2
Roberts	28	25.9
Roberts	30	7
Roberts	32	5.2
Roberts	33	7.4
Roberts	34	24.7
Roberts County Total		**356.2**
Sargent	7	14.1
Sargent	12	17.8
Sargent	14	10.3
Sargent County Total		**42.2**
637.7		

Figure 31: County-Owned Roads on the SWO Reservation



CHAPTER 5– PROJECTING FUNDING ALTERNATIVES

US and State highways on the Reservation are currently funded and maintained by the SDDOT. There are multiple funding sources available for roads, bridges, sidewalks, trails, and transit which are not on the state highway system. The SWO DOT makes extensive efforts to apply for funding through available sources and has done so with great success. If funding is awarded, the tribe will use its tribal transportation allocation share for match. Funding source alternatives are discussed in the following sections.

TRIBAL FUNDING USE LIMITATIONS

Before providing a description of all the funding programs that are available, it is important to point out that there are requirements that apply to the use of those funds.

Perhaps the two most important requirements for use of transportation funding are:

1. No state or federal funding can be spent on roads or portions of roads, or private driveways that are not part of the RIFDS inventory. Only roads with at least 3 housing units are eligible to go into the NTTFI and RIFDS.
2. No state or federal funding can be spent on any project that is not programmed for funding in the TTIP. Before a project can be programmed in the TTIP, it must be listed in the NTTFI and the LRTP.

These requirements are outlined in 25 CFR Part 170. Eligible project activities and funding levels are summarized as follows:

(a) TTP funds can be used for the following planning and design activities:

(1) Planning and design of Tribal Transportation Facilities.

(2) Transportation planning activities, including planning for tourism and recreational travel.

(3) Development, establishment, and implementation of Tribal transportation management systems such as safety, bridge, pavement, and congestion management.

(4) Tribal transportation plans and transportation improvement programs (TIPS).

(5) Coordinated technology implementation program (CTIP) projects.

(6) Traffic engineering and studies.

(7) Identification, implementation, and evaluation of data-driven safety needs.

(8) Tribal transportation standards.

(9) Preliminary engineering studies.

(10) Interagency program/project formulation, coordination and review.

(11) Environmental studies and archeological investigations directly related to transportation programs and projects.

(12) Costs associated with obtaining permits and/or complying with Tribal, Federal, State, and local environmental, archeological and natural resources regulations and standards.

(13) Development of natural habitat and wetland conservation and mitigation plans, including plans authorized under the Water Resources Development Act of 1990, 104 Stat. 4604 (Water Resources Development Act).

(14) Architectural and landscape engineering services related to transportation programs.

(15) Engineering design related to transportation programs, including permitting activities.

(16) Inspection of bridges and structures.

(17) Tribal Transportation Assistance Centers (TTACs).

(18) Safety planning, programming, studies and activities.

(19) Tribal employment rights ordinance (TERO) fees.

(20) Purchase or lease of advanced technological devices used for transportation planning and design activities such as global positioning units, portable weigh-in-motion systems, hand-held data collection units, related hardware and software, etc.

(21) Planning, design and coordination for Innovative Readiness Training projects.

(22) Transportation planning and project development activities associated with border crossings on or affecting Tribal lands.

(23) Public meetings and public involvement activities associated with transportation projects and planning.

(24) Leasing or rental of equipment used in transportation planning or design programs.

(25) Transportation-related technology transfer activities and programs.

(26) Educational activities related to bicycle safety.

(27) Planning and design of mitigation impacts to environmental resources caused by a transportation project, including, but not limited to, wildlife, habitat, ecosystems, historic properties, and wetlands.

(28) Evaluation of community impacts such as land use, mobility, access, social, safety, psychological, displacement, economic, and aesthetic impacts.

(29) Acquisition of land and interests in land required for right-of-way, including control of access thereto from adjoining lands, the cost of appraisals, cost of surveys, cost of examination

and abstract of title, the cost of certificate of title, advertising costs, and any fees incidental to such acquisition.

(30) Cost associated with relocation activities including financial assistance for displaced businesses or persons and other activities as authorized by law.

(31) On-the-job education including classroom instruction and pre-apprentice training activities related to transportation planning and design.

(32) Other eligible activities as approved by FHWA.

(33) Any additional activities identified by TTP Coordinating Committee guidance and approved by the appropriate Secretaries (see § 170.137).

(34) Indirect general and administrative costs; and

(35) Other eligible activities described in this part.

(b) TTP funds can be used for the following construction and improvement activities:

(1) Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for Tribal transportation facilities.

(2) Construction or improvement of Tribal transportation facilities necessary to accommodate other transportation modes.

(3) Construction of toll roads, highway bridges and tunnels, and toll and non-toll ferry boats and terminal facilities and approaches thereto (except when on the Interstate System) to the extent permitted under 23 U.S.C. 129.

(4) Construction of projects for the elimination of hazards at railway-highway crossings, including the separation or protection of grades at crossings, the reconstruction of existing railroad grade crossing structures, and the relocation of highways to eliminate grade crossings.

(5) Installation of protective devices at railway-highway crossings.

(6) Transit facilities, whether publicly or privately owned, that serve Indian reservations and other communities or that provide access to or are located within an Indian reservation or community (see §§ 170.131 through 170.134 for additional information).

(7) Engineered pavement overlays that add to the structural value and design life or increase the skid resistance of the pavement.

(8) Tribally-owned, post-secondary vocational school transportation facilities.

(9) Road sealing.

(10) The placement of a double bituminous surface and chip seals during the construction of an approved project (as the non-final course) or that form the final surface of low volume roads.

(11) Seismic retrofit, replacement, rehabilitation, and painting of road bridges.

(12) Application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and de-icing compositions on road bridges and approaches thereto and other elevated structures.

(13) Installation of scour countermeasures for road bridges and other elevated structures.

(14) Special pedestrian facilities built in lieu of streets or roads, where standard street or road construction is not feasible.

(15) Standard regulatory, warning, guide, and other official traffic signs, including dual language signs, which comply with the MUTCD that are part of transportation projects. TTP funds may also be used on interpretive signs (signs intended for viewing only by pedestrians, bicyclists, and occupants of vehicles parked out of the flow of traffic) that are culturally relevant (native language, symbols, etc.) that are a part of transportation projects.

(16) Traffic barriers and bridge rails.

(17) Engineered spot safety improvements.

(18) Planning and development of rest areas, recreational trails, parking areas, sanitary facilities, water facilities, and other facilities that accommodate the traveling public.

(19) Public approach roads and interchange ramps that meet the definition of a Tribal Transportation Facility.

(20) Construction of roadway lighting and traffic signals.

(21) Adjustment or relocation of utilities directly related to roadway work, not required to be paid for by local utility companies.

(22) Conduits crossing under the roadway to accommodate utilities that are part of future development plans.

(23) Restoration of borrow and gravel pits created by projects funded from the TTP.

(24) Force account and day labor work, including materials and equipment rental, being performed in accordance with approved plans and specifications.

(25) Experimental features where there is a planned monitoring and evaluation schedule.

(26) Capital and operating costs for traffic monitoring, management, and control facilities and programs.

(27) Safely accommodating the passage of vehicular and pedestrian traffic through construction zones.

(28) Construction engineering including contract/project administration, inspection, and testing.

(29) Construction of temporary and permanent erosion control, including landscaping and seeding of cuts and embankments.

(30) Landscape and roadside development features.

(31) Marine facilities and terminals as intermodal linkages.

(32) Construction of visitor information centers, kiosks, and related items.

(33) Other appropriate public road facilities such as visitor centers as determined by the Secretary of Transportation.

(34) Facilities adjacent to roadways to separate pedestrians and bicyclists from vehicular traffic for operational safety purposes, or special trails on separate rights-of-way.

(35) Construction of pedestrian walkways and bicycle transportation facilities, such as a new or improved lane, path, or shoulder for use by bicyclists and a traffic control device, shelter, or parking facility for bicycles.

(36) Facilities adjacent to roadways to separate modes of traffic for safety purposes.

(37) Acquisition of scenic easements and scenic or historic sites provided they are part of an approved project or projects.

(38) Debt service on bonds or other debt financing instruments issued to finance TTP construction and project support activities.

(39) Any project to encourage the use of carpools and vanpools, including provision of carpooling opportunities to the elderly and individuals with disabilities, systems for locating potential riders and informing them of carpool opportunities, acquiring vehicles for carpool use, designating existing highway lanes as preferential carpool highway lanes, providing related traffic control devices, and designating existing facilities for use for preferential parking for carpools.

(40) Fringe and corridor parking facilities including access roads, buildings, structures, equipment improvements, and interests in land.

(41) Adjacent public parking areas.

(42) Costs associated with obtaining permits and/or complying with Tribal, Federal, State, and local environmental, archeological, and natural resources regulations and standards on TTP projects.

(43) Seasonal transportation routes, including snowmobile trails, ice roads, overland winter roads, and trail markings. (See §170.117.)

(44) Tribal fees such as employment taxes (TERO), assessments, licensing fees, permits, and other regulatory fees.

(45) On-the-job education including classroom instruction and pre-apprentice training activities related to TTP construction projects such as equipment operations, surveying, construction monitoring, testing, inspection and project management.

(46) Installation of advance technological devices on TTP transportation facilities such as permanent weigh-in-motion systems, informational signs, intelligent transportation system hardware, etc.

(47) Cultural and environmental resource monitoring, management, and mitigation for transportation related activities

(48) Mitigation activities required by Tribal, State, or Federal regulatory agencies and 42 U.S.C. 4321, et seq., the National Environmental Policy Act (NEPA).

(49) Purchasing, leasing or renting of construction or maintenance equipment. All equipment purchase request submittals must be accompanied by written cost analysis and approved by FHWA or BIA. When purchasing construction or maintenance equipment, a Tribe must:

(i) Construction - Develop a lease/purchase cost analysis that identifies the overall benefit of purchasing the piece of equipment versus leasing. This analysis must be submitted to BIA or FHWA for approval per § 170.113. If approved, the funding must be identified on a FHWA-approved TTIP in order to be expended in accordance with 23 U.S.C. 202(b)(4)(B).

(ii) Maintenance - The equipment costs are considered part of the funding identified in 23 U.S.C. 202(a)(8) and must be identified on a FHWA-approved TTIP in accordance with 23 U.S.C. 202(b)(4)(B) in order to be expended.

(50) Coordination and construction materials for innovative readiness training projects operated by entities such as the Department of Defense (DOD), the American Red Cross, the Federal Emergency Management Agency (FEMA), other cooperating Federal agencies, States and their political subdivisions, Tribal governments, or other appropriate non-governmental organizations.

(51) Emergency repairs on Tribal Transportation Facilities.

(52) Public meetings and public involvement activities.

(53) Construction of roads on dams and levees.

(54) Transportation alternative activities as defined in 23 U.S.C. 101(a).

(55) Modification of public sidewalks adjacent to or within Tribal transportation facilities.

(56) Highway and transit safety infrastructure improvements and hazard eliminations.

(57) Transportation control measures such as employer-based transportation management plans, including incentives, shared-ride services, employer sponsored programs to permit flexible work schedules and other activities, other than clause (xvi) listed in section 108(f)(1)(A) of the Clean Air Act, (42 U.S.C. 7408(f)(1)(A)).

(58) Environmental restoration and pollution abatement activities in order to construct a transportation project or to mitigate impacts caused by a transportation project.

(59) Trail development and related activities as identified in §§ 170.123 through 170.126.

(60) Development of scenic overlooks and information centers.

(61) Natural habitat and wetlands mitigation efforts related to TTP projects, including:

(i) Participation in natural habitat and wetland mitigation banks, including banks authorized under the Water Resources Development Act, and

(ii) Contributions to Tribal, statewide and regional efforts to conserve, restore, enhance, and create natural habitats and wetland, including efforts authorized under the Water Resources Development Act.

(62) Mitigation of damage to wildlife, habitat and ecosystems caused as a result of a transportation project.

(63) Construction of permanent fixed or moveable structures for snow or sand control.

(64) Cultural access roads (see §170.115).

(65) Other eligible items as approved by the Federal Highway Administration (FHWA).

(66) Any additional activities proposed by a Tribe or the TTP Coordinating Committee and approved by the appropriate Secretaries (see §§ 170.113 and 170.136).

(67) Other eligible activities identified in this part (c) TTP funds can be used for maintenance activities as defined in subpart G of this regulation.

(c) Each of the items must be interpreted in a manner that permits, rather than prohibits, a proposed use of funds.

Per 25 CFR Part 170, the following activities are not eligible for TTP funding:

(a) Structures and erosion protection unrelated to transportation and roadways;

(b) General or Tribal planning not involving transportation;

(c) Landscaping and irrigation systems not involving transportation programs and projects;

(d) Work or activities that are not listed on an FHWA-approved TTPTIP;

(e) Condemnation of land for recreational trails;

(f) Salaries and/or other incidental costs of any Federal employee or contractor not performing Federal TTP stewardshipand oversight, work identified in the appendix to subpart E, or project-related activities identified on an approved TTIP; or

(g) Direct and/or incidental costs associated with the Federal Government's acquisition of goods, services, or construction unrelated to the program.

TRIBAL TRANSPORTATION PROGRAM FUNDS

The Tribal Transportation Program (TTP) is the primary source of Tribal transportation funding. It is estimated that these funds will total about $3.1 million annually based on 2018 funding. It is uncertain whether these funds will increase or decrease moving forward. TTP funds are expected to account for roughly 80-90% of total Tribal transportation funding over the next few years.

The purpose of the TTP is to provide access to basic community services to enhance the quality of life in Indian country. The TTP replaces the former Indian Reservation Roads (IRR) program. Prior to distribution to Tribes, the following amounts may be deducted from the overall federal program:

Up to 6% for program administration, including funding for Tribal Technical Assistance Centers (TTAPs). These funds may be used by the Secretary or the Secretary of the Interior for program management and oversight and project-related administrative expenses.

Up to 2% per year for transportation planning, to be allocated among Indian Tribal governments.

Up to 3% per year for a nationwide priority program for improving eligible deficient bridges.

Up to 2% per year for safety projects, to be allocated to applicant Tribal governments for eligible projects.

Unless additional funding resources can be tapped, funding for transportation improvements is limited to those resources identified in the Sisseton-Wahpeton Oyate Tribal Transportation Improvement Program (TTIP). The TTIP is a 5-year document which describes the funding received by the SWO and the projects and efforts undertaken to use those funds.

TRIBAL TRANSPORTATION PROGRAM SAFETY FUNDS

Tribal Transportation Program Safety Funds (TTPSF) are available to federally recognized Indian Tribes through a competitive, discretionary program. Awarded annually, projects are chosen whose outcomes will address the prevention and reduction of death or serious injuries in transportation related crashes. Eligible projects for the TTP Safety Fund under the FAST Act include development and revision of transportation safety plans, crash data improvement, road safety audits, and other title-23 eligible activities, primarily infrastructure improvements.

TRIBAL BRIDGE PROGRAM FUNDS

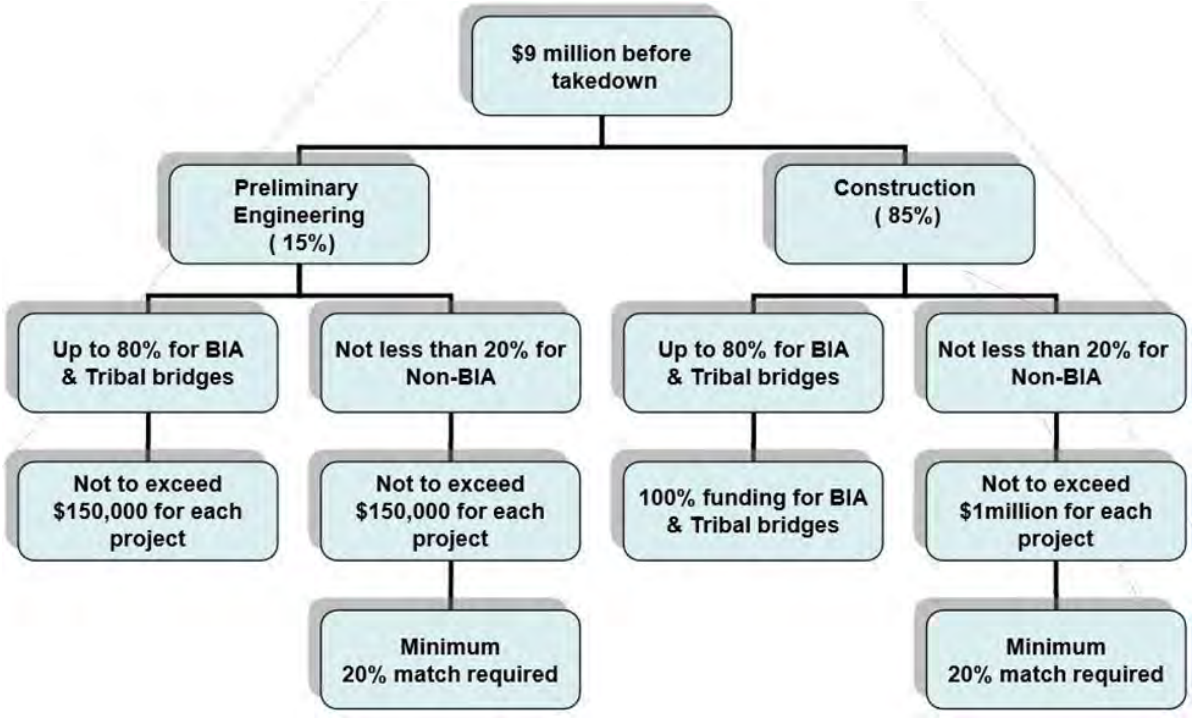
Applications for bridge project funding can be submitted under the Tribal Transportation Bridge Program (TTBP). All projects are ranked and prioritized based on the following criteria:

- Bridge sufficiency rating (SR);
- Bridge status with structurally deficient (SD) having precedence over functionally obsolete (FO);
- Bridges on school bus routes;
- Detour length;
- Average daily traffic
- Truck average daily traffic.

TTBP funds may be used for planning, design, engineering, preconstruction, construction, and inspection of a project to replace, rehabilitate, seismically retrofit, paint, or for anti-icing and deicing, or to implement any countermeasures (including multiple-pipe culverts) for eligible Tribal transportation facility bridges.

The FAST ACT requires the inspection of all public bridges including Tribal bridges be performed at least every 2 years, and the reporting of data into the FHWA National Bridge Inventory. To be eligible for funding, a bridge must have an opening of at least 20 feet, be classified as a Tribal transportation facility, and be structurally deficient or functionally obsolete. **Figure 37** shows the annual Tribal bridge program funding that the SWO can compete for on a national level.

Figure 32: Annual Tribal Bridge Program Funding



NATIONALLY SIGNIFICANT FED. LANDS AND TRIBAL PROJECTS (NSFLTP)

Administered by the USDOT, Federal Highway Administration, this funding opportunity was established by the FAST Act and provides Federal funding to projects of national significance for construction, reconstruction, or rehabilitation of transportation facilities within, adjacent to, or providing access to Federal or Tribal lands. The Secretary of Transportation may award up to $300M. Eligible projects must have an estimated construction cost of at least $25M, with projects equal to or exceeding $50M receiving priority consideration in the selection process. There are other requirements that must be met, and eligible applicants are:

- Tribe
- Federal Land Management Agency
- If sponsored by a FMLA or Tribe, the following applicant types can apply:
    - State
    - Local
    - Transit agencies
    - Port authorities
    - Metropolitan planning organizations
    - Other political subdivisions of State or local governments

TRANSPORTATION ALTERNATIVE/ RECREATION TRAILS FUNDING

Transportation Alternatives is authorized by the Fixing America's Surface Transportation Act (FAST Act) which provides funding for a variety of alternative transportation projects, including many that were previously eligible under separately funded programs. The Transportation Alternatives (TA) Program replaces funding from previous programs authorized under MAP-21, including Transportation Enhancements, Recreational Trails, Safe Routes to School, and other discretionary programs. The Federal share for these projects is 86.58%, with the non-Federal share covered by the responsible jurisdiction. The award maximum is $400,000.

Eligible categories include:

- On-road and off-road trail facilities for pedestrians and bicyclists, including ADA improvements;
- Historic preservation and rehabilitation of transportation facilities;
- Archeological activities relating to impacts for a transportation project;
- Any environmental mitigation activity, including prevention and abatement to address highway related stormwater runoff and to reduce vehicle/animal collisions including habitat connectivity;
- Turnouts, overlooks, and viewing areas;
- Conversion/use of abandoned railroad corridors for trails for non-motorized users;
- Inventory, control, and removal of outdoor advertising;
- Vegetation management in transportation right of way for safety, erosion control, and controlling invasive species;

- Construction, maintenance, and restoration of trails and development and rehabilitation of trailside and trailhead facilities;
- Development and dissemination of publications and operation of trail safety and trail environmental protection programs;
- Educations funds for publications, monitoring, and patrol programs and for trail-related training;
- Planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school; and
- Non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns, outreach to press and community leaders, traffic education and enforcement school vicinities, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training.

BUILD GRANTS

The Department of Transportation provides funding through the Better Utilizing Investments to Leverage Development (BUILD) program. The funds are awarded on a competitive basis for capital investments in transportation projects that will have a significant local or regional impact.

The April 2018 release of the new BUILD program made available $1.5 billion in discretionary funding to support roads, bridges, transit, rail, ports or intermodal transportation. Not less than 30 percent (or $450 million) of the funds provided shall be used for projects located in rural areas. Additionally, the FY2018 Appropriations Act allows for up to $15 million to be awarded as grants for the planning, preparation or design of eligible projects, known as BUILD Transportation Planning Grants.

Projects for BUILD will be evaluated based on merit criteria that include safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-Federal revenue for future transportation infrastructure investments.

Competition for BUILD grants is anticipated to be very high, and the right project, a strong strategy and supporting local funding is needed for grant applications to have a reasonable chance at being approved. While a successful grant application can prove challenging, the rewards of a successful grant application is generally a project of significant value.

FEDERAL TRANSPORTATION AUTHORITY (FTA) TRIBAL TRANSIT GRANTS

The FAST Act authorizes the Public Transportation on Indian Reservations Program (Tribal Transit Program (TTP) for Fiscal Years 2016-2020. This program consists of a $30 million formula program and a $5 million competitive grant program subject to the availability of appropriations.

A 10-percent local match is required under the competitive program, however, there is no local match required under the formula program. This program is available to federally recognized Tribes that are eligible recipients under the Tribal Transit Program. Funding may be used for capital, operating, planning, and administrative expenses for public transit projects that meet the growing needs of rural Tribal communities.

SD TRANSPORTATION ECONOMIC DEVELOPMENT PROGRAMS

The SDDOT administers a grant program to foster economic development and enhance community access in South Dakota. The program has three categorical purposes, each category providing for 60 percent of construction costs of the project, not including engineering or utility work. The grant size under each program is limited to $400,000.

Industrial Park grants will be made to any local unit of government for the development of new or expanded access for new industry located within industrial parks. Applications are due April 15, July 15, or October 15.

Agri-Business grants will be made to any local unit of government for the development of new or expanded agri-business industries. Applications are due April15, July 15, or October 15.

Community Access Grants are state funds for towns less than 5,000 in population and are for the construction or reconstruction of major streets in each town such as Main Street, the road to the elevator, schools, hospitals, etc. Applications are due July 15.

LOCAL FEES AND TAXES

The SWO has very limited resources for raising local funds. Some items that have been discussed include assessing a wheel tax on venders, fines for overweight vehicles, fees associated with haul road agreements. Success in any of these ventures is tied to the ability to get Tribal attorneys to draft the regulations and laws, and for law enforcement and Tribal courts to provide needed enforcement.

RECOMMENDED FUNDING STRATEGY

In creating a recommendation for funding strategy, it is important that the Tribe conduct the PASER study. This will allow the Tribe to prioritize its funding based upon the conditions of the roads. Overtime it likely that the Tribe will add more roads and its needs will grow and as such it will need a greater source of funding. It is imperative that the Tribe spend its money wisely and compete for funding from competitive funding projects.

Figure 38 provides a general guide for project types and funding mechanisms. It should be consulted on an annual basis to determine potential projects that fit within competitive programs. Once projects are identified, the Tribe should determine the appropriate timing to initiate funding applications.

Figure 38: Funding Mechanisms by Project Type

Funding Program	Abbreviation	Funding Mechanism	Typical Project Type
Tribal Transportation Program Funds	TTP	Allocation	Roads
Tribal Safety Funds	TTPSF	Application	Studies, guard rail, hazard reduction
Tribal Bridge Program Funds	TTBP	Application	Bridges
Transportation Alternative Funding	TA	Application	Sidewalks and Multi-Use Trails
Better Utilizing Investments to Leverage Development Funds	BUILD	Application	Variety tied to economic development
Congestion Mitigation and Air Quality Funds	CMAQ	Application	Maintenance equipment
Transit	FTA	Application	Transit buses, transit shelters

Strategic decisions on where to use available funds must recognize that use of funds to address one need often impacts the ability to resolve another need. **Figure 39** shows annual averages of available and used funding from the 2019-2023 TTIP. It also shows how the balance of funding may be applied to new construction and reconstruction, major rehabilitation, pavement preservation and maintenance.

This table is intended to serve as a guide, so that when, for example, decisions are made to spend more on one type of project, additional decisions are needed to spend less on another type of project. Alternative funding covering bike paths, bridges and transit are not shown as these will generally be dependent upon success in submitting applications and competition against other submittals.

Figure 39: Funding

Available Funds (With Estimated Grants)	Annual Average	Recommended Average	Other Est. Annual Funds	
Est. TTP Formula Funds	$3,137,042.00	$3,137,042.00	TTP Safety Funds	$52,966.00
Other Est. Annual Funds	$52,966.00	$52,966.00	TTP Bridge Funds	$0.00
Total	**$3,190,008.00**	**$3,190,008.00**	TA Funds	
			BUILD Grants	$0.00
			Transit Funds	$0.00
			Total	**$52,966.00**

Approximate Funding Use (TTIP)	Annual Average	Recommended Average
Planning and Design	$176,690.00	$176,690.00
Transit	$135,000.00	$135,000.00
Bridge and Culvert	$9,400.00	$26,000.00
Safety Projects	$32,000.00	$50,000.00
TA Projects	$0.00	$50,000.00
New Construction and Reconstruction	$976,013.00	$976,013.00
Major Rehabilitation	$367,012.00	$367,012.00
Maintenance & Pavement Preservation	$184,650.00	$184,650.00
BIA 7 Flexiable Funding	$761,600.00	$761,600.00
Total	$2,642,365.00	$2,726,965.00

Available Funds (Without Grants)	Annual Average	Recommended Average
TTP Formula Funds	$3,137,042.00	$3,137,042.00
Total	**$3,137,042.00**	**$3,137,042.00**

Funding Use	Annual Average	Recommended Average
Planning and Design	$176,690.00	$176,690.00
Transit	$135,000.00	$135,000.00
Projects and Maintenance	$2,601,103.00	$2,601,103.00
Total	**$2,912,793.00**	**$2,912,793.00**

New Construction and Reconstruction	Cost/Mile	Priority Miles	Miles/Year	Annual Cost
Street Construction/Reconstruction	$1,700,000.00	46	0.5	$850,000.00
Lighting	$300,000.00	5	0.50	$150,000.00
Sidewalks (TA Match)	$200,000.00	5	1.00	$40,000.00
Shared Use Paths (TA Match)	$300,000.00	5	1.00	$60,000.00
			Subtotal	**$1,100,000.00**
Major Rehabilitation				
Major Surface Rehabilitation	$750,000.00	46	1	$750,000.00
Gravel Rehabilitation	$150,000.00	42	1.5	$225,000.00
			Subtotal	**$975,000.00**
Pavement Preservation				
Chip Seal	$35,000.00	42	4.2	$147,000.00
Crack filling and sealing	$2,000.00	42	4	$8,000.00
4-Inch Structural Overlay	$500,000.00	0	0	$0.00
1-1/2 Inch Non-Structural Overlay	$275,000.00	42	2	$550,000.00
			Subtotal	**$705,000.00**
Maintenance				
Patching (In Square Yards)	$20.00	42	50	$1,000.00
Gravel Blading & Maintenance	$5,000.00	42	5	$25,000.00
Conversion of Primative to Gravel	$82,000.00	0.7	0.7	$57,400.00
Multi-Route Pavement Striping	$2,000.00	46	46	$92,000.00
Bridge and Culvert Maintenance	$26,000.00	1 LS	1	$26,000.00
Equipment Acquisition and Repairs	$150,000.00	1 LS	1	$150,000.00
Dust Control	$8,000.00	0	0	$0.00
			Subtotal	**$351,400.00**
			Project Improvemer	**$3,131,400.00**

CHAPTER 6 - PROJECT PRIORITIZATION PLAN

Projects were prioritized in line with available funding, anticipated success in applying for competitive funding, proposed policies and identified project needs.

State highway improvements will be implemented based upon state and federal funding availability and based upon their own prioritization methodology. Project prioritization may vary based upon other infrastructure needs. For example, if a major water main is to be installed under a roadway, it is more cost effective to improve this roadway in combination with the underground utility improvements rather than restoring the road and improving it in subsequent years. At the time this report was completed, a utility implementation strategy was unavailable.

SHORT- AND LONG-RANGE PROJECT RECOMMENDATIONS

Long range projects are those anticipated to be completed after the year 2024. While many of these projects are desired sooner, funding limitations indicate that it may not be possible to complete them during the short-range element of the plan. Some of these projects may become short range projects if the Tribe is able to pull from alternative funding sources described earlier.

Short range projects are anticipated to be completed by the end of the year 2024. These projects will have to funding carefully spread amongst them to address the most critical needs. Short range projects and costs are shown in **Table 8**.

Long range projects and costs are shown in **Table 9**. They are currently considered long range because current and projected funding doesn't indicate the ability to initiate or complete them prior to 2024. If funding becomes available or if priorities change, it is possible some of these projects may move into the short-range element of the LRTP.

Table 8: Short Term Projects

	FY 2020	FY 2021	FY 2022	FY 2023
Funding Sources:				
Carry Over	$500,000.00	$692,112.00	$365,454.00	$1,751,946.00
TTP Formula Funds	$3,137,042.00	$3,168,492.00	$3,168,492.00	$3,168,492.00
TTP Safety Funds			$265,000.00	
TTP Bridge Funds				
Other (SD TAP Grant)				
Take Downs:				
Program Administration & Operation				
- SWO Planning	$85,000.00	$85,000.00	$85,000.00	$85,000.00
Maintenance Gravel Program				
Equipment Purchase				
Road Maintenance	$100,000.00	$100,000.00	$100,000.00	$100,000.00
Projects:				
Barker Hill Phase 2	$800,000.00			
Big Coulee Road	$900,000.00	$600,000.00		
Owens Road		$493,800.00		
Owens Bridge Replacement		$1,000.00		
Buffalo Lake Road Chip Seal		$181,250.00		
Enemy Swim Road Chip Seal		$242,850.00		
Old Agency Road Chip Seal		$499,150.00		
Lawrence Township Bridge		$46,000.00		
Smokey Road		$155,100.00	$344,000.00	
IHS Pathway			$265,000.00	
Old Tiospa Zina Road			$1,019,000.00	
Pow Wow Road			$25,000.00	$900,000.00
Barse Trail				$487,661.00
Long Hollow South				$335,000.00
Barse Trail Culverts				$1,400,000.00
Reservation Wide Housing Streets Reh				$750,000.00
Lake Traverse District Center Access				
BIA 15-20 (Veblen South) Gravel Recon.				
Agency Village Pathways				
Multi Route Chip Seal				
Flexible Financing BIA 7	$952,000.00	$952,000.00		
Sand and Gravel Assessment	$1,000.00			
Design:				
Big Coulee Road	$31,000.00			
Owens Road	$27,100.00			
Lawrence Township Bridge	$9,830.00			
Smokey Road	$19,000.00			
Multi Route Chip Seal	$20,000.00			$20,000.00
Old Tiospa Zina Road		$35,000.00		
Pow Wow Road		$45,000.00		
Reservation Wide Housing Streets Reh		$59,000.00	$59,000.00	
IHS Pathway			$30,000.00	
Lake Traverse District Center Access			$20,000.00	
Barse Trail			$100,000.00	
Long Hollow South				$25,000.00
Agency Village Pathways				$50,000.00
Planning:				
2024 LRTP Update				
BALANCE:				
Total Funding	$3,637,042.00	$3,860,604.00	$3,798,946.00	$4,920,438.00
Total Costs	$2,944,930.00	$3,495,150.00	$2,047,000.00	$4,152,661.00
Balance	$692,112.00	$365,454.00	$1,751,946.00	$767,777.00
Carry Over to next year	$692,112.00	$365,454.00	$1,751,946.00	$767,777.00

Table 9: Long Range Projects

Project Number*	Cost	Amount	Project Type	Project Name/Location
1	$640,000.00	8 Miles	Gravel Construction	BIA 15-20 (Veblen South)
2	$7,272,000.00	6.06 Miles	Reconstruction	BIA 2-10 (Big Coulee Road)
3	$1,117,800.00	24.84 Miles	Crack and Chip Seal	Multi Route Crack and Chip Seal (BIA 3, BIA 5, BIA 7)
12	$3,204,000.00	2.67 Miles	Reconstruction	BIA 12-10, 20 (Owens Road) New asphalt paving
13	$1,080,000.00	0.9 Miles	Reconstruction	BIA 121-10, 20, 30, 40 (Big Coulee) New asphalt paving
14	$1,776,000.00	2.96 Miles	Walkway and Lighting	Agency Village Pathways-Phase I, BIA 701, 706, 707
15	$376,800.00	4.71 Miles	Gravel Construction	Multi-Route Gravel Surfacing, BIA 4, 701, 706
16	$1,020,000.00	0.85 Miles	Reconstruction	BIA 702-10, Powwow Road paving/stabilization
17	$300,000.00	0.25 Miles	Reconstruction	BIA 707, Little Crow Drive paving
18	$190,000.00	0.95 Miles	Gravel Construction and Drainage	BIA 151-10, Sacred Hills Housing gravel surfacing
19	$595,000.00	0.35 Miles	Urban Reconstruction	BIA 711-10,20 Old Tiospa Zina Road reconstruction
22	$320,000.00	4 Miles	Gravel Construction	BIA 11-10, Barse Trail gravel surfacing
22a	$1,500,000.00	1.5	Bridge	BIA 11-10, Barse Trail culvert rehab
23	$4,524,000.00	3.77 Miles	Reconstruction	BIA 8-20, Long Hollow Road reconstruction
24	$455,000.00	0.91 Miles	Asphalt Overlay	BIA 701-30 Mill and Overlay paving
25	$542,500.00	0.31 Miles	New Construction	Lake Traverse District Center paving
26	$6,702,500.00	3.83 Miles	New Construction	Multiple Route Housing Streets Reconstruction/Overlay
26a	$2,160,000.00	1.2 Miles	Concrete Rehabilitation	BIA 2000 (Sisseton Housing)
26b	$432,000.00	0.24 Miles	Concrete Rehabilitation	BIA 171 (Red Iron Housing)
26c	$1,098,000.00	0.61 Miles	Concrete Rehabilitation	BIA 902 (Peever Flats)
26d	$385,000.00	0.22 Miles	New Construction	BIA 153 (Veblen Housing)
26e	$1,404,000.00	0.78 Miles	Concrete Rehabilitation	BIA 502 (Enemy Swim Housing
26f	$432,000.00	0.24 Miles	Concrete Rehabilitation	BIA 152 (Sacred Hills Housing)

26g	$576,000.00	0.32 Miles	Concrete Rehabilitation	BIA 705 (Tiospa Zina Housing)
26h	$108,000.00	0.06 Miles	Concrete Rehabilitation	BIA 201 (Finley Heights Housing)
26i	$280,000.00	0.16 Miles	New Construction	BIA 5000 (Waubay Housing)
28	$387,900.00	8.62 Miles	Crack and Chip Seal	Multiple Route Crack and Chip Seal, Phase 2
28a	$67,950.00	1.51 Unit	Crack and Chip Seal	BIA 901 (Peever Road)
28b	$12,600.00	0.28	Crack and Chip Seal	BIA 709 (Tiospa Zina Road)
28c	$5,400.00	0.12	Crack and Chip Seal	BIA 705 (Tiospa Zina Road)
28d	$56,700.00	1.26 Miles	Crack and Chip Seal	BIA 701 (Agency Loop Road)
28e	$169,650.00	3.77 Miles	Crack and Chip Seal	BIA 8 (Long Hollow Road)
28f	$29,250.00	0.65	Crack and Chip Seal	BIA 703 (Crawfordsville Housing)
28g	$22,500.00	0.5 Miles	Crack and Chip Seal	BIA 708 (Veterans Memorial Drive)
28h	$23,850.00	0.53 Miles	Crack and Chip Seal	BIA 704 (Agency Village Housing)
29	$297,500.00	0.17 Miles	New Construction	Enemy Swim Housing Access Road
30	$3,500,000.00	70	Miscellaneous	TTP/Transit Facility
31	$3,888,000.00	6.48 Miles	Walkway and Lighting	Day County 1, Enemy Swim to US 12
32	$12,600,000.00	10.50 Miles	Reconstruction	Day County 1, Widening and Safety Improvements
33	$180,000.00	0.30 Miles	Walkway and Lighting	IHS-Grocery Store Pathway
34	$100,000.00	2.00	Miscellaneous	Transit Support (Annual cost)
35	$100,000.00	2.00	Miscellaneous	Inventory Update
36	$10,000.00	1.00	Miscellaneous	Culvert Inventory
Total:	**$51,904,000.00**			

* Discontinuities in numbering result from priority list projects that were either completed or have annually recurring costs

RECOMMENDED STUDIES

It is recommended that the following studies be undertaken as determined in line with other Tribal priorities.

- Complete a study of streetlight conditions and needs within SWO towns and subdivisions.
- Signing Inventory and Consistency Study – Existing traffic control signs within the reservation should be inventoried. This will allow further analysis to determine whether they have been appropriately and consistently applied. The intent of this undertaking is to verify that appropriate traffic control signing (stop and yield signs) are in place, increasing safety for the traveling public.
- Create a program to inventory and rate the condition of culverts across the Reservation.
- Future utilities should be planned and mapped to improve coordination with future transportation improvement projects.
- Non-paved roadway conditions survey – a methodology needs to be established for categorizing non-paved roadway conditions, as well as for establishing future priorities for varying levels of effort to be applied to improve these roads.
- Conduct a PASER Study of paved roads in the Reservation.
- Functional Classification Coordination – differences between the RIFDS and South Dakota Department of Transportation (SDDOT) functional classification maps should be addressed, with both systems updated accordingly.
- Erosion Control Standards – New standards should be established; locations where significant erosion issues exist should be identified and corrective measures should be developed and implemented. Recent project activity should be reviewed to determine the effectiveness of erosion measures, and methods to enhance erosion control on future projects should be explored.

CHAPTER 7 - APPENDICES

Appendix A – Public Involvement

SISSETON-WAHPETON OYATE TRIBAL TRANSPORTATION PROGRAM

LONG RANGE TRANSPORTATION PLAN

MARCH 2019 MEETING AGENDA

9:00 am **Introductions and Purpose**

9:30 am **Overview of Tribal Transportation Programs**

- Legislation
- Regulations
- Funding

10:00 am **Long Range Transportation Plan Development**

- Current LRTP and Need to Update
- Existing Infrastructure
- Transportation System Goals
- Transportation System Needs

12:00 **Lunch**

1:00 pm **Long Range Transportation Plan**

- Transit Needs
- Roadway Needs
  - Paved
  - Gravel
- Pedestrian Needs
- Short Term Projects
- Long Term Project Listings

2:15 pm Break

2:30 pm **Development Transportation Improvement Plan**

- Current Project Priorities
- Funding Levels and Projections
- New or Revised Project Priorities

4:00 pm Adjourn

Sisseton-Wahpeton LRTP / Safety Plan Invite List

_____	SWO Law Enforcement Chief of Police
Brenda Red Wing	BIA Aberdeen Office
Russell Hawkins	BIA Superintendent Sisseton Agency
Ella Robertson	Tribal Chairwoman
Floyd Kirk, Jr.	Tribal Vice Chairman
Ryan Rucktaeschel	Day County Sheriff
Jay Tasa	Roberts County Sheriff
Dale Elsen	Marshall County Sheriff
Kevin Owen	Grant County Sheriff
Brad Howell	Codington County Sheriff
_____	School Bus Transportation
_____	EMS Director
_____	County 911 Coordinators
_____	County Commissioners
_____	Tribal/BIA Road Maintenance Department
_____	Reservation Planning Committee Chair
_____	Fuel, Inc. Representative
_____	Sisseton Transit Director

Sisseton-Wahpeton LRTP / Safety Plan Invite List

-Gary Gaikowski	SWO Law Enforcement Chief of Police
-Russell Hawkins	BIA Superintendent Sisseton Agency
-Donovan White	Tribal Chairman
-Eddie Johnson	Tribal Vice Chairman
-Ryan Rucktaeschel	Day County Sheriff sheriff@daycountysheriff.org
-Pat Stricklund	Day County Hwy
-Barry Hillestad	Roberts County Sheriff robertscoso@venturecomm.net
-Mike Hauge	BIA regional
-Brenda Redwing	BIA regional
-Bill Whiteside	BIA Regional
-Dale Elsen	Marshall County Sheriff mcsheriff@venturecomm.net
-Kevin Owen	Grant County Sheriff Kevin.Owen@state.sd.us
-Eric Shepherd	SWO Housing Director
-Brad Howell	Codington County Sheriff bhowell@codington.org
-DelRay German	TERO Director
-Sherry Johnson	School Bus Transportation
-Jim Pearson	EMS Director
Janessa Guy	County 911 Coordinators
-Dawn Sattler	County Commissioners dawn.sattler@state.sd.us
Russell Hawkins	Tribal/BIA Road Maintenance Department
-Richard White	Tribal Roads maintenance
LeeAnn TallBear	Reservation Planning Committee Chair
James Bird	Fuel, Inc. Representative
-Kathy Holman	Sisseton Transit Director

MEETING SIGN-IN SHEET

Project: SWO LRTP Update

Meeting Date: April 24, 2019

Name	Company	Phone	E-Mail
DARIN FALCON	KLJ	605.593.6979	darin.falcon@kljeng.com
Luke Klim	KLJ		
Cliff Eberhardt	SWO DOT	605-698-8355	cliffordE@swo-nsn.gov
Alvah Quinn Jr	BIA Roads	605 698-7061	
Richard White	Tribal Roads Department	268-1382	RichardW@swo-nsn.gov
MIKE HAUGE	BIA-Transportation	605.226.7645	mike.hauge@bia.gov
Don Carlson	Robert County	605-880-0163	dmcarlsn@tnktc.com
Dennis Jensen	Roberts County	605-268-0328	dennisdjensen1956@gmail.com
Crysty Owen	SWO Planning	605-698-8214	C.
Kathy Holman	Community Transit	605-698-7511	comtron@venturecomm.net
John Teeuwen	SWO Planning	605-698-8818	fallbear1@swo-nsn.gov
Sheldon Kipp	BIA/DOT (HPR)	525 567 3320	sheldon.kipp@bia.gov
4A Starr	SWO - TERO	605-698-3549	TERO.Compliance@swo-nsn.gov

[Recipient Address]
[City, State, Zip]

RE: SWO Long Range Transportation Plan Informational Meeting

Dear Colleague:

The Sisseton-Wahpeton Oyate Department of transportation will host an open-to-the-public informational meeting to discuss and receive comments from the Public, Council members, Tribal Programs, and other stakeholders on the SWO Long Range Transportation Plan (LRTP) update and Tribal Transportation Program (TTP) Safety Plan update. The LRTP is a 20-year plan that addresses the full range of transportation issues and needs for all modes of travel within the Lake Traverse Reservation. The Safety Plan is a document specific to transportation safety issues and potential remedies within the reservation.

The purpose of this meeting is to provide an overview of tribal transportation programs, to gather comments on issues and needs that should be addressed by the LRTP and Safety Plan, and to discuss development of the Transportation Improvement Plan (TIP). Staff from the SWO DOT and their engineering consultant will be available to present initial information and analysis of the SWO transportation system and to respond to comments or questions.

You are invited to attend and comment on SWO transportation issues or needs and share your views. Oral and written comments will be taken during the meeting. A tentative agenda for the meeting is attached.

The meeting will take place on Wednesday, April 24th, from 9am running until approximately 4pm. The meeting will be held at the Dakota Magic Casino, located along I-29 at the North Dakota/South Dakota state line. Lunch, as well as morning and afternoon refreshments, will be provided for all attendees.

For more information regarding the SWO Long Range Transportation Plan, please contact KLJ Project Manager, Darin Falcon at (701)355-8759 or email at darin.falcon@kljeng.com.

Sincerely,

Clifford Eberhardt, Director, SWO DOT
Sisseton-Wahpeton Oyate
PO Box 509
Agency Village, SD 57262

Encl: Meeting Agenda (1 sheet)

Sisseton-Wahpeton Oyate
Department of Transportation
12554 BIA Hwy 711.
P.O. Box 509
Agency Village, SD 57262
Office: (605) 698-8355

RE: SWO Long Range Transportation Plan Informational Meeting

Dear Colleague:

The Sisseton-Wahpeton Oyate Department of Transportation will host an open-to-the-public informational meeting to discuss and receive comments from the Public, Council members, Tribal Programs, and other stakeholders on the SWO Long Range Transportation Plan (LRTP) update. The LRTP is a 20-year plan that addresses the full range of transportation issues and needs for all modes of travel within the Lake Traverse Reservation.

A kickoff meeting was held earlier this year, and a draft LRTP report has been prepared, stemming from concerns voiced at the kickoff meeting and data collection and analysis that has been performed since then. The purpose of this meeting is to provide an overview of the draft LRTP, to gather comments on issues and needs that should be addressed by the LRTP and Safety Plan, and to discuss development of the Transportation Improvement Plan (TIP). Staff from the SWO DOT and their engineering consultant will be available to present their analysis of the SWO transportation system and to respond to comments or questions.

You are invited to attend and comment on SWO transportation issues or needs and share your views. Oral and written comments will be taken during the meeting. A tentative agenda for the meeting is attached.

The meeting will take place on Monday, October 21st, from 9am running until approximately 3pm. The meeting will be held at the SWO Tribal Administration Building in the training conference room next to enrollment.

For more information regarding the SWO Long Range Transportation Plan, please contact KLJ Project Manager, Darin Falcon at (701)355-8759 or email at darin.falcon@kljeng.com.

Sincerely,

Cliff Eberhardt
SWO. Department of Transportation
Office: (605) 698-8355
Email: CliffordE@swo-nsn.gov

PUBLIC NOTICE

The Sisseton-Wahpeton Oyate Department of Transportation has updated the Tribe's Long Range Transportation Plan (LRTP) and is soliciting public comments on the final draft. The 30-day public comment period will endon November 30, 2019.

The purpose of the LRTP Is to clearly demonstrate the Tribe's transportation needs and to develop strategies to meet these needs. These strategies should address future land use, economic development, traffic demand, public safety, and health and social needs.

The LRTP draft can be reviewed at the SWO-DOT office at the SWO Tribal Administration Building, located at 12554 BIA Hwy 711, Agency, Village, SD.

Appendix B – Housing Plan

SISSETON WAHPETON HOUSING AUTHORITY
10-YEAR HOUSING PLAN OUTLINE

YEARS 1-3:

1. LONG HOLLOW II – development of 20 Cashway Redi-built homes with crawlspace foundations on 20 open lots at the Long Hollow II Housing site that consists of various home construction methods such as Low-Income Tax Credit, Homeownership and USDA Rural Development 515 rental units. Site presently has water and sewer infrastructure utilizing a USDA RD Water & Sewer grant, Sisseton Wahpeton Oyate Department of Transportation (SWO-DOT) transportation funding, SWO/SWHA Program Support Funding, Indian Health Service (IHS) Water & Sewer funding and 1st Tribal Lending Construction Loan financing.

   Cost to complete this project is 20 3-bedroom Homes x $160,000.00 = $3,200,000.00

2. BARKER HILL PHASE II – development of 30 South Dakota Governors Homes & 20 redi-built/stick-built homes for rental units and 12 individual homeownership homes all with crawlspace foundations. Sitework and infrastructure funding consists of USDA RD Water & Sewer grant, USDA RD loan, SWO-DOT funding and IHS water & sewer funding.

   Home construction funding shall consist of SWO/SWHA Program Support Funding, Federal Home Loan Bank (FHLB) New Construction grand funding, and 1st Tribal Lending Construction Loan financing.

   Cost to complete the project is estimated to be:

Infrastructure, lagoon, sitework and street construction =	$ 3,565,700.00
30 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,600,000.00
20 2-bedroom Redi & Stick Built Homes x $150,000.00 =	$ 3,000,000.00
12 Homeownership Homes x $160,000.00 =	$ 1,920,000.00
TOTAL ESTIMATED COST FOR CONSTRUCTION =	$12,085,700.00

3. LAKE TRAVERSE DISTRICT - development of remaining 60 lots for combination of 40 rental units and 20 homeownership units that will consist of costs to complete final set of plans for site, street and infrastructure design, survey and construction engineering.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

DRAFT

Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$ 3,900,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
15 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,650,000.00
20 Homeownership Homes x $160,000.00 =	$ 3,200,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$11,750,000.00

4. REHAB HOUSING – remediation, cleanup and removal of 7 existing barracks two-bedroom units and construction of 14 SD Governors Home narrow lot 2-bedroom units with crawlspace foundations. Infrastructure presently in place for water, sewer and streets.

   Cost to complete the project is estimated to be:

   Remediation, cleanup and removal of existing 7 barracks units = $ 216,800.00
   14 2-bedroom narrow lot SD Governors Homes x $110,000.00 = $1,540,000.00
   TOTAL ESTIMATED COST FOR CONSTRUCTION = $1,756,000.00

YEARS 4-7:

5. ENEMY SWIM HOUSING – development of remaining 54 lots for combination of 40 rental units and 14 homeownership units that will consist of costs to complete final set of plans for site, street and infrastructure design, survey and construction engineering.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

   Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

   Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$ 3,900,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
15 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,650,000.00
14 Homeownership Homes x $160,000.00 =	$ 2,240,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$10,790,000.00

DRAFT

6. VETERANS HOUSING – development of sitework, infrastructure, streets and 16 homes for individual homeownership.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

   Home construction shall consist of SWO/SWHA Program Support funding, 1st Tribal Lending Construction Loan financing with majority of the financing with the Veterans Administration Native American Direct Loan Program (VA NADL).

   Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$2,750,000.00
16 homeownership homes x $200,000.00 =	$3,200,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$5,950,000.00

7. RED IRON HOUSING – development of sitework and infrastructure for construction of 2-4 4-plex multi-family units.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

   Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

   Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$1,300,000.00
4 four-plex multi-family units x $400,000.00 =	$1,600,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$2,900,000.00

8. PEEVER FLATS SOUTH HOUSING – development of additional land south and east of the existing Peever Flats Housing for additional infrastructure, streets and 38 additional homes.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

DRAFT

Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$ 2,700,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
13 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,430,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$ 7,130,000.00

Years 8-10

9. BROOKS ADDITION – development of sitework, infrastructure, streets and 31 homes for individual homeownership.

   Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding and SWO/SWHA Program Support Funding.

   Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

   Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$2,000,000.00
31 homeownership homes x $160,000.00 =	$4,960,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$6,960,000.00

10. SISSETON TRAILER COURT – development of sitework, infrastructure, streets and 18 homes for individual homeownership.

    Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

    Home construction shall consist of SWO/SWHA Program Support funding, FHLB New Construction grant funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

    Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =	$1,500,000.00
18 homeownership homes x $160,000.00 =	$2,880,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$4,380,000.00

11. SISSETON OLD I.H.S. APARTMENT COMPLEX – development of sitework, infrastructure and parking lot for 2-story 24-unit apartment building with 16 two-bedroom units and 8 three-bedroom units.

    Sitework, infrastructure and streets shall utilize USDA RD water and sewer grant funding, IHS water and sewer funding, SWO/SWHA Program Support Funding and the possible addition of SWO-DOT transportation funding.

    Apartment construction shall consist of SWO/SWHA Program Support funding, 1st Tribal Lending Construction Loan financing with the possible injection of SD Housing Development Authority HOME, HOF and HTF funding.

    Cost to complete the project is estimated to be:

Infrastructure, sitework and street construction =		$1,500,000.00
2-story Apartment Building	=	$3,000,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =		$4,500,000.00

This is a preliminary Housing Plan and further items will be incorporated as data and statistics are compiled to determine an accurate number of units and what type of units to construct at each development site. There may also be additional sites added for further housing developments.

Additional data included will be history of housing, present inventory, description of type and number of each units, how many bedrooms of units, type of units needed such as rental, homeownership, duplex, apartment, townhome, etc. and various funding resources and strategies available to utilize to construct.

Also, various types of construction and homes will be dependent upon SWHA data and variables such as tenant income, family size, location by waiting list, elderly/disabled/handicapped, unemployed, low and no income, etc.

DRAFT

Barker Hill – Phase II:

Infrastructure, lagoon, sitework and street construction =	$ 3,565,700.00
30 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,600,000.00
20 2-bedroom Redi & Stick Built Homes x $150,000.00 =	$ 3,000,000.00
12 Homeownership Homes x $160,000.00 =	$ 1,920,000.00
TOTAL ESTIMATED COST FOR CONSTRUCTION =	$12,085,700.00

Lake Traverse District:

Infrastructure, sitework and street construction =	$ 3,900,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
15 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,650,000.00
20 Homeownership Homes x $160,000.00 =	$ 3,200,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$11,750,000.00

Rehab Housing:

Remediation, cleanup and removal of existing 7 barracks units =	$ 216,800.00
14 2-bedroom narrow lot SD Governors Homes x $110,000.00 =	$1,540,000.00
TOTAL ESTIMATED COST FOR CONSTRUCTION =	$1,756,000.00

Enemy Swim Housing:

Infrastructure, sitework and street construction =	$ 3,900,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
15 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,650,000.00
14 Homeownership Homes x $160,000.00 =	$ 2,240,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$10,790,000.00

Tribal Veterans Housing:

Infrastructure, sitework and street construction =	$2,750,000.00
16 homeownership homes x $200,000.00 =	$3,200,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$5,950,000.00

Red Iron Housing:

Infrastructure, sitework and street construction =	$1,300,000.00
4 four-plex multi-family units x $400,000.00 =	$1,600,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$2,900,000.00

Peever Flats Housing:

Infrastructure, sitework and street construction =	$ 2,700,000.00
25 3-bedroom SD Governors Homes x $120,000.00 =	$ 3,000,000.00
13 2-bedroom SD Governors Homes x $110,000.00 =	$ 1,430,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$ 7,130,000.00

DRAFT

Brooks Addition:

Infrastructure, sitework and street construction =	$2,000,000.00
31 homeownership homes x $160,000.00 =	$4,960,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$6,960,000.00

Sisseton Trailer Court:

Infrastructure, sitework and street construction =	$1,500,000.00
18 homeownership homes x $160,000.00 =	$2,880,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$4,380,000.00

Old I.H.S. Site Housing:

Infrastructure, sitework and street construction =	$1,500,000.00
2-story Apartment Building =	$3,000,000.00
TOTAL ESTIMATE COST FOR CONSTRUCTION =	$4,500,000.00

TOTAL PROJECT DEVELOPMENT COSTS = $68,201,700.00

DRAFT


Barker Hill Phase II
Additional 62 Homes
- 30 Governors Homes
- 20 Redi-built
12 Homeownership
Cashway Home #1
Legend
457th Ave
Housing Expansion
N
Google Earth
© 2018 Google
1000 ft

Rehab Housing

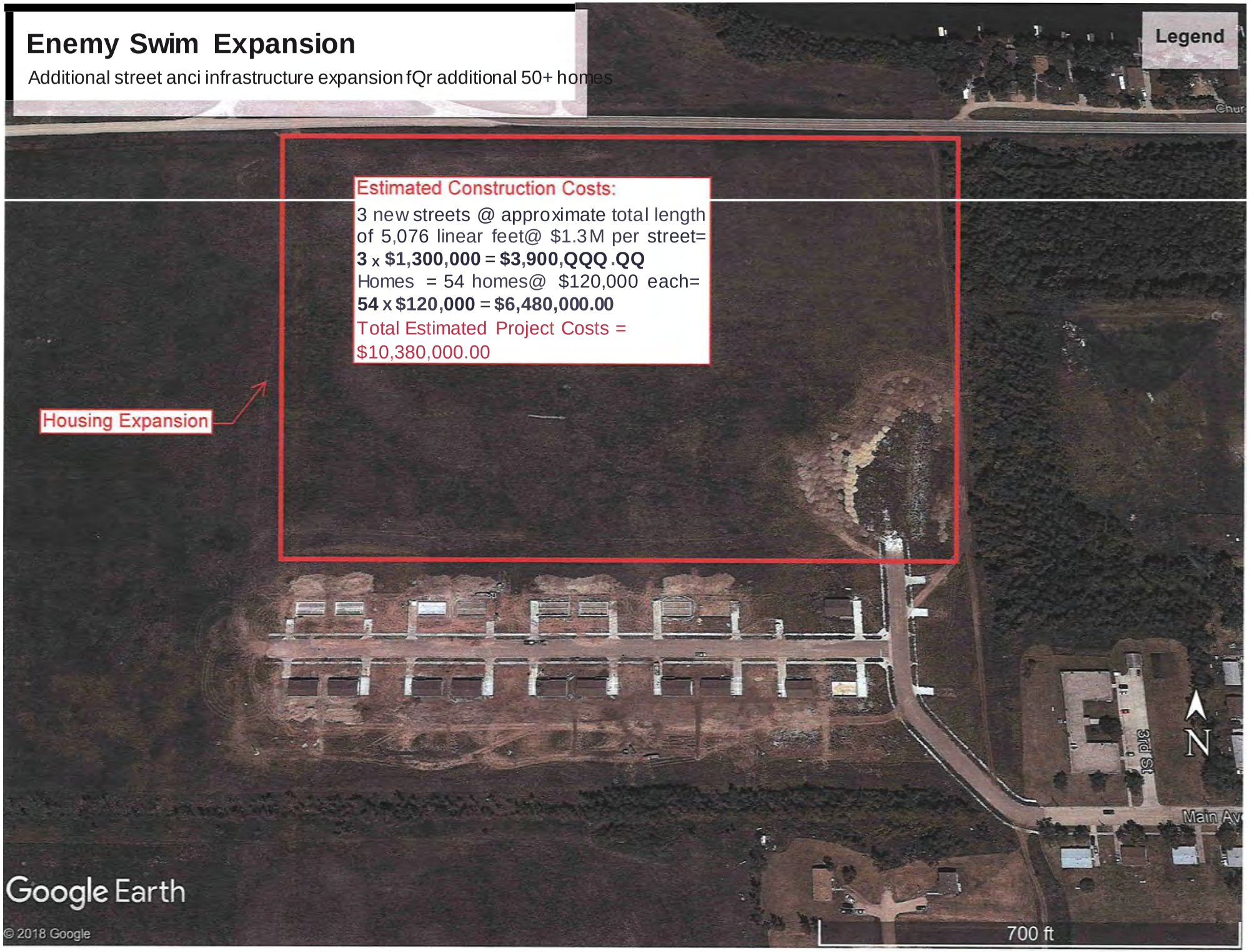
Additional 14 Homes
- Cleanup & removal of 7 barracks units
- 14 narrow lot Governor homes

Estimated Construction Costs :
Demolition of existing barracks units = $233,000.00
Homes= 14 Narrow Lot Governo rs
Homes@ $120,000 each=
14 x $ 120 ,QQQ = $ 1,680 ,000 .00
Total Estimated Project Costs= $1,913,000.00



Enemy Swim Expansion

Additional street anci infrastructure expansion fQr additional 50+ homes



PRELIMINARY SITE PLAN FOR HOMEOWNERS



0 25 50 100 150 200 Yards

Date Created: 2../ H l-•2 016
By Sisseton- Wa.hpeb n Oya te
GIS **Zooi,v** Office
giste chE@v ent LJ"ero mm.net
re-05) e.ss - 2s1 1

Legend

- BDM Ser vice
- ELEC Service
- House
- HomeRoads
- Garage
- Dri•rew ay
- 2.SAcre Home-site
- Righ t-O f.Way


Red Iron Expansion
Additional street and infrastructure expansion for multi:.family units
-4 plexes
- 8 plexes
Legend
443rd Ave
North Red Iron Lake
Rin Dr
Housing Expansion
10
Shore Drive
444th Ave
N
Google Earth
© 2018 Google
2000 ft

Peever Flats Expansion

- 30 additionalhomes

Legend



Estimated Construction Costs:

Infrastructure additional 3,480 linear feet for streets, sitework and water & sewer - $2,680,000.00

Homes - 38 additional Governors Homes @ $120,000 each= 38 x $120,000 = $4,560,000.00

Total Estimated Project Cost= $7.24M


Brooks Addition
- 31 new homes
Legend
Housing Expansion
2 Stars Ln
Estimated Construction Costs:
Additional Streets length of approximately 2,560 linear feet@ $1,970,000.00
Homes 31 additional homes@ $160,000 =
31 x $160,QQQ = $4,960,0 00.00
Total Estimated Project Costs= $6,930,000.00
457th Ave
Little Crow Dr
N
Google Earth
© 2018 Google
900 ft


Sisseton Trailer Court
Additional 18 homes
Legend
Pine St W
457th Ave
7th Ave W
6th Ave W
5th Ave W
149th St
10
Hickory St W
Housing Expansion
Carl St
Noble St
Gerry St
N
Google Earth
© 2018 Google
400 ft