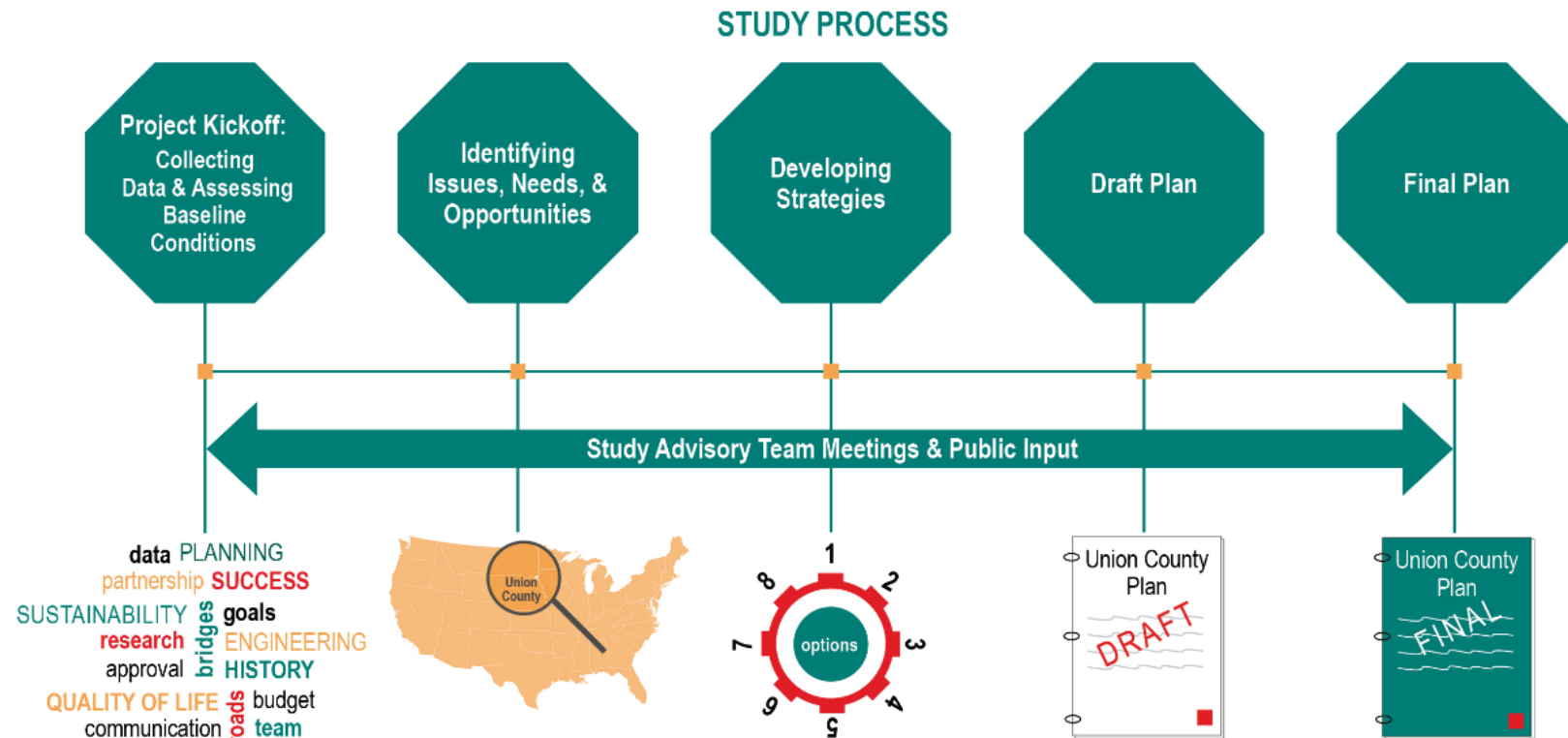


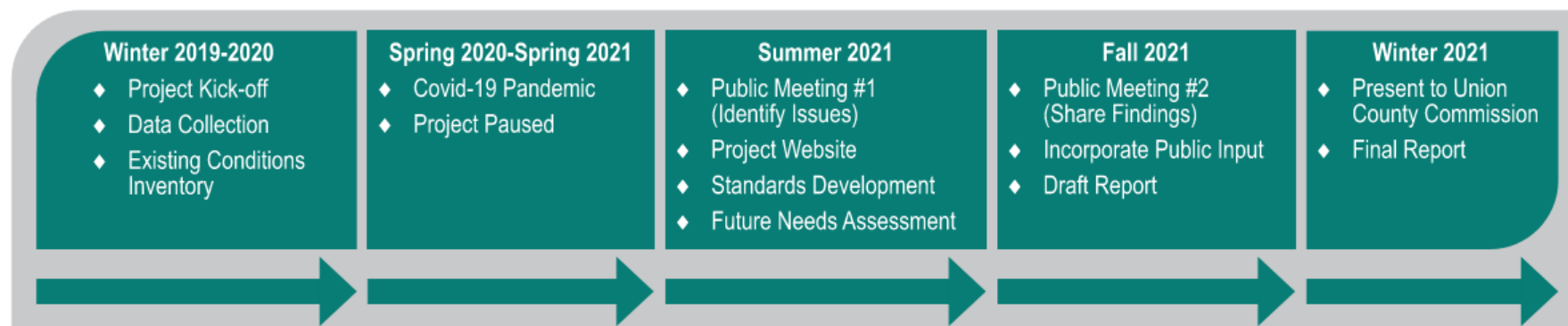
INTRODUCTION AND BACKGROUND

- **What is the Union County Master Transportation Plan (MTP)?** – It is a document that will serve as a guide for the County’s future transportation network in a multi-modal perspective. Safety, infrastructure, and operations needs are examined and prioritized in order to enhance economic and social well-being of county residents. It provides a vision and guides local decision-making.



- **Why is it being made?** – SDDOT must set aside funds for transportation planning and research. It shares some of this with the local level on an annual application and award basis through the State Planning & Research for Local Government Program (SPR for Locals). Union County applied and was awarded funding towards a county Master Transportation Plan.
- **Why is it beneficial to Union County?** – This is an opportunity for the public to be involved in the future of transportation infrastructure for their county. If there is a vision, it should be documented so it can be fulfilled. With official documentation of future transportation priorities, this plan will guide decision-making. The County will have a blueprint of its transportation needs and desires for years to come. Proper transportation planning can assure that infrastructure needs are met. It is an adaptable plan: change is inevitable. This plan can be periodically updated to consider emerging challenges and trends.

- **Is there still time to ask questions and comment on the Union County MTP?** – Yes! the process of completing the Union County MTP is still in progress. What is being presented here are existing conditions and preliminary analysis of the transportation network in Union County. The major outcome of this public outreach effort is to better understand the current and future issues and needs of the transportation network in Union County. As a result, priorities will be identified, and strategies can be developed to address those issues and needs as part of this long range, 20-year plan.



PUBLIC INPUT

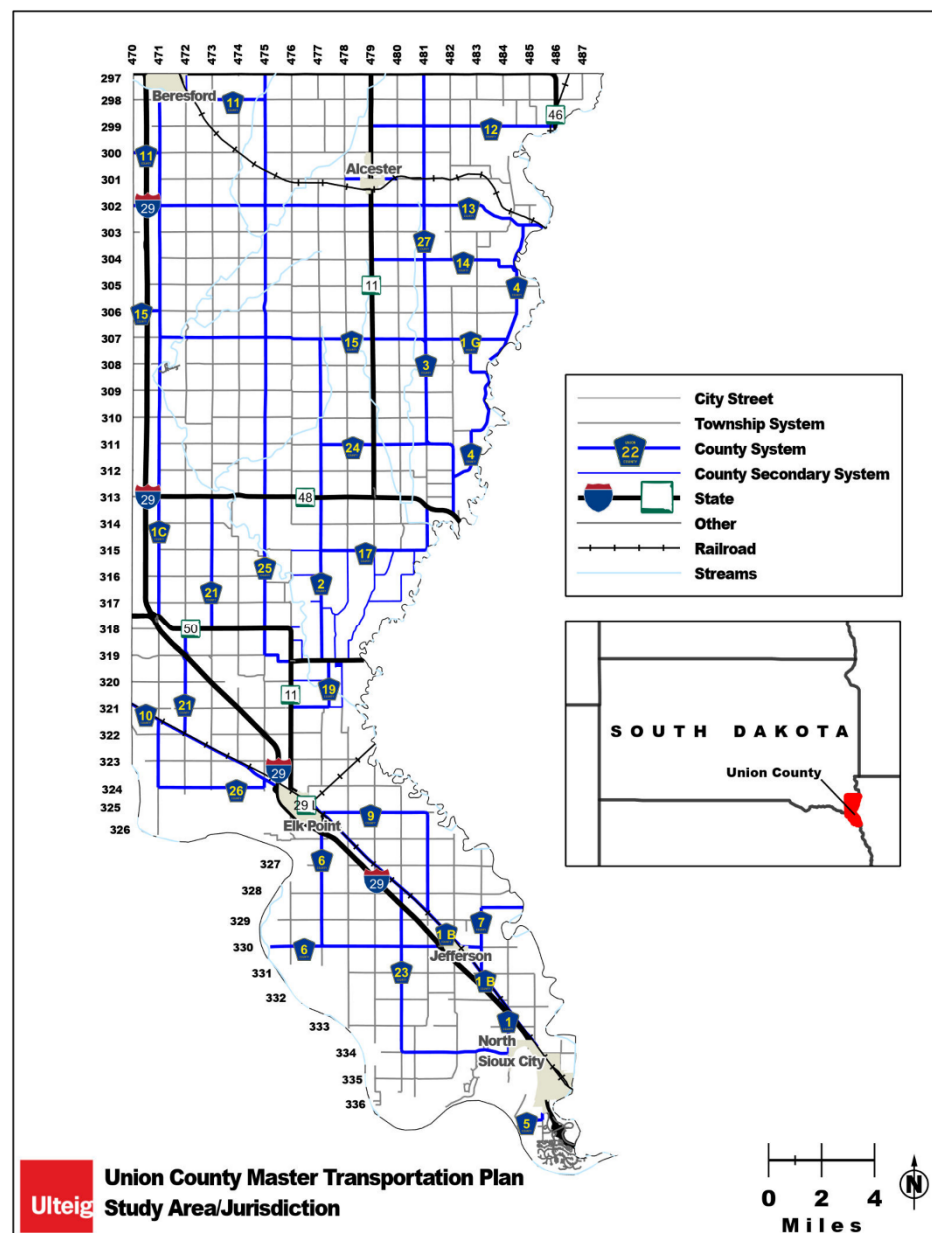
As shown in the study schedule above, the advertisement and launch of this website serve as the first of two opportunities for the general public to provide feedback on the needs and desires of the Union County transportation network, including pedestrian, bicycle, transit, freight, and automobiles movements. This is a critical process in the development of the Union County MTP as the transportation system impacts every resident. Information on the existing conditions of the transportation network in Union County is presented at this time.

Note: Due to Covid-19 Pandemic precautions set by SDDOT (following CDC guidance), this opportunity for public feedback is entirely virtual. If you know of someone that is unable to view the website and would like to participate, please follow the contact directions at the end of this document.



STUDY AREA

The study area for the Union County MTP will include all roadways within Union County, primarily focusing on the county highway network and county bridges, for which Union County is responsible for. Union County is responsible for upkeep of 242 miles of roadway (184 miles paved, 58 miles unpaved), 113 bridges, and a number of railroad crossings. Roads and bridges represent large assets to Union County, and maintenance of the network requires planning to effectively manage short and long terms costs. This study will evaluate multimodal needs (pedestrian, bicycle, transit, freight, and automobile) along the network.



POPULATION TRENDS (US CENSUS BUREAU, AMERICAN COMMUNITY SURVEY)

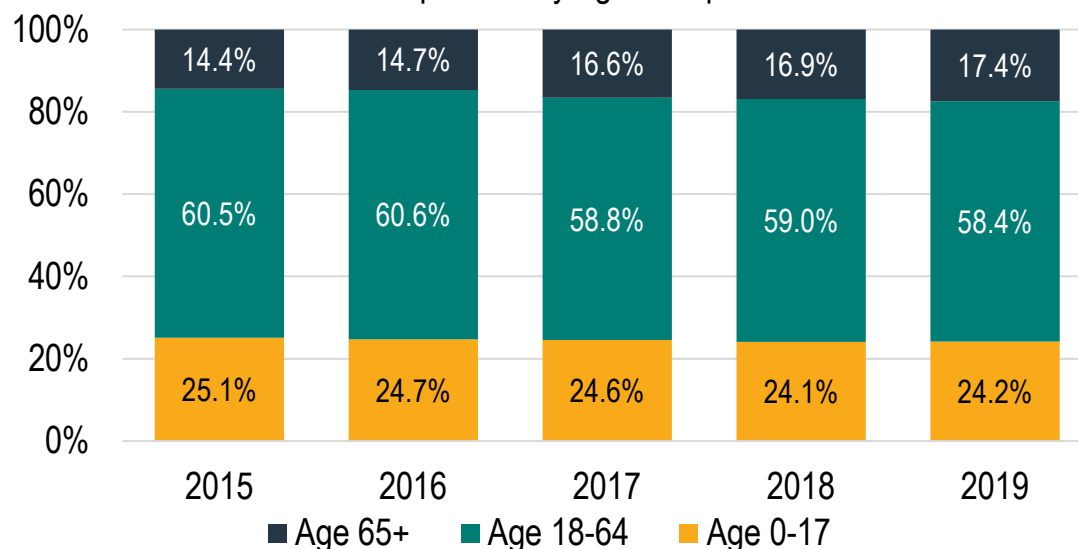
Population characteristics and trends are essential to understand when planning transportation systems. High growth areas will face increased demand for infrastructure enhancements. Areas of higher population density are most efficient when considering multi-modal transportation modes. Age and income demographics are indicators for preferred mode choice (walking, biking, driving, or transit). Examining population trends better informs decisions where future transportation investments should be best spent.

The table to the right shows how population has changed since 2000 within the cities of Union County, SD. From 2000-2010, Union County's population was growing at a steady rate of around 181 people, or 1.4% each year. Based on 2019 ACS estimates, Union County is estimated to have 15,368 people living in the County. Between 2010-2019, Union County's population growth was 0.7% each year.

	2000	2010	2019 (Est.)	Growth 2010-2019 (Est.)
<i>Alcester</i>	880	807	906	12.3%
<i>Beresford</i>	2,006	2,005	2,291	14.3%
<i>Dakota Dunes</i>	N/A	2,540	3,156	24.3%
<i>Elk Point</i>	1,714	1,963	2,176	10.9%
<i>Jefferson</i>	586	547	633	15.7%
<i>North Sioux City</i>	2,288	2,530	2,837	12.1%
<i>Richland</i>	N/A	89	56*	-37.1%
Union County	12,584	14,399	15,368	6.7%
South Dakota	754,844	814,180	884,659	8.7%

*2017

Population by Age Group



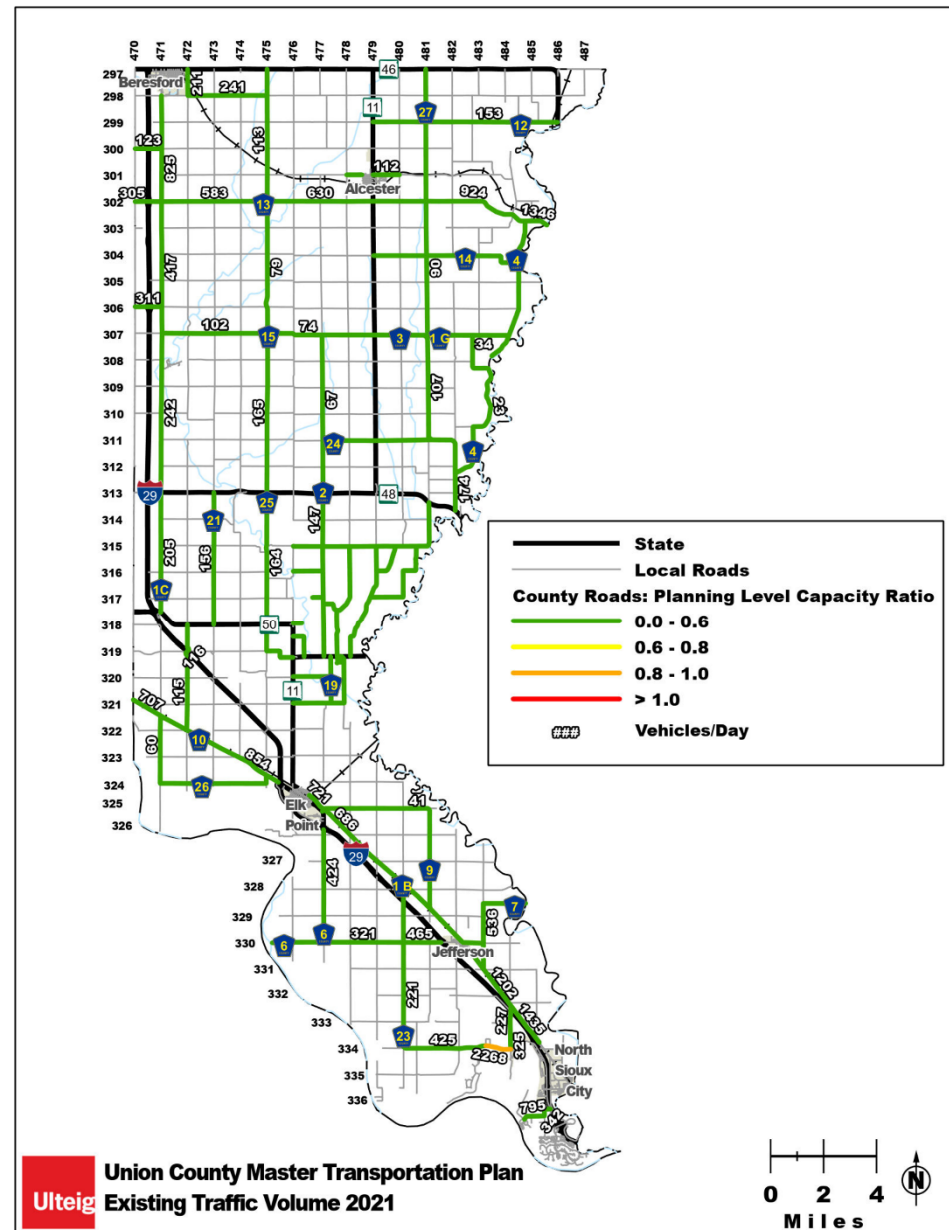
Similar to many areas in the United States, Union County is experiencing an aging population. The percentage of population under 18 years old decreased from 25.1% to 24.2% and the 65+ age category increased from 14.4% to 17.4% over the most recent 5-year period. This increase in proportion of the population that is elderly will create changing demands on the transportation network and transportation services.

EXISTING TRAFFIC VOLUMES

The existing traffic volumes on Union County roadways are well below 2-lane planning level capacity for the vast majority of roads. Due to development around North Sioux City, there is one stretch of County Road 23 at the intersection with County Road 1 that is showing signs of minor delays. As part of the MTP, traffic will be forecasted out to year 2045 to identify roadways and intersections that may need improvements to accommodate future traffic growth.



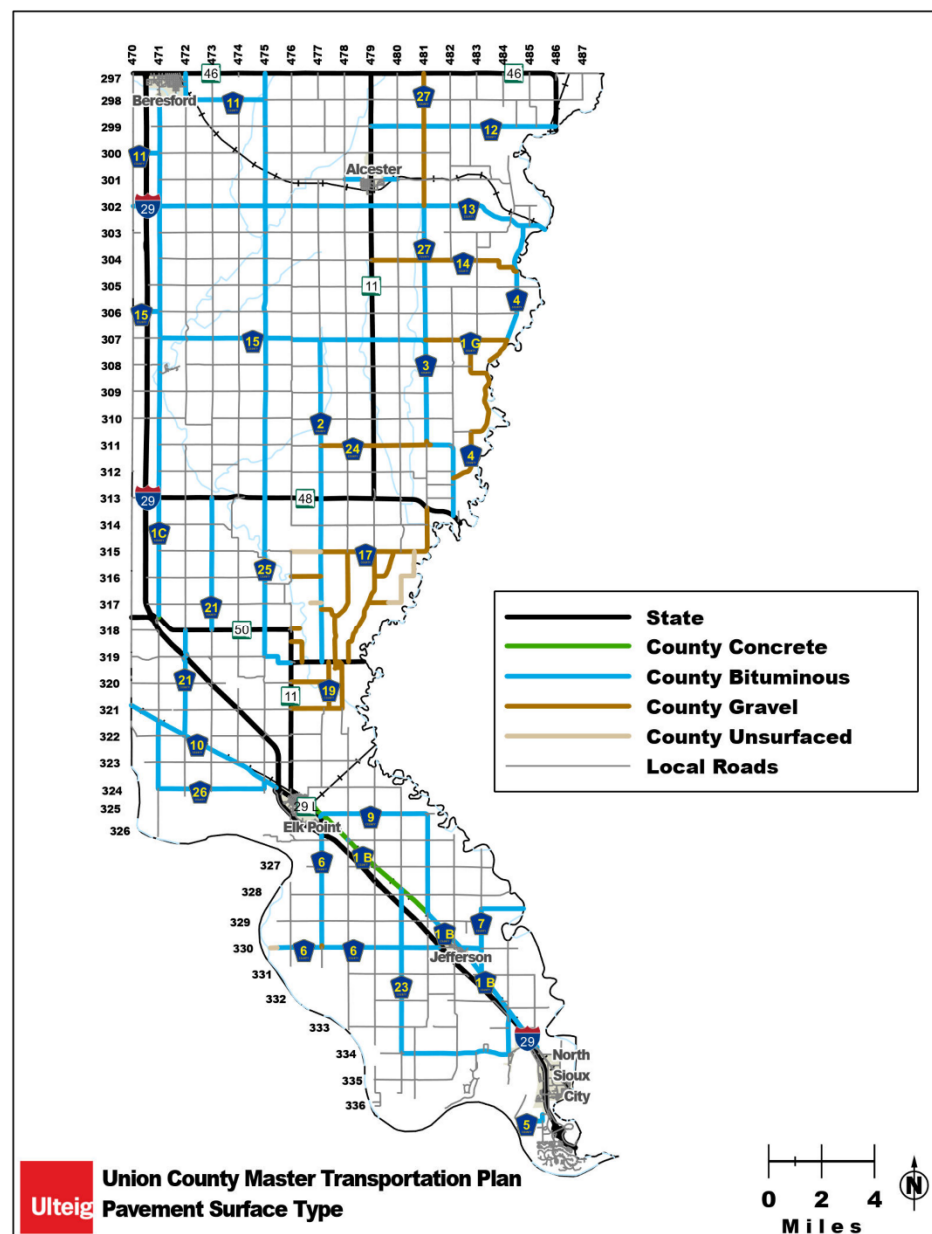
Intersection of County Road 23 (Northshore Dr) and County Road 1 (Westshore Dr/484th Ave) is near Dakota Valley High School. Future development in the area could advance the need for intersection improvements.



ROAD INVENTORY

Union County Roads consist of concrete, asphalt/bituminous, gravel, and unsurfaced roads. All unsurfaced roads maintained by Union County are within the Richland Township (unorganized township). The table below is a summary of Union County owned and maintained roads.

Surface Type	Miles	%
Unsurfaced	4.9	2.0%
Gravel	53.5	22.1%
Bituminous	178.1	73.4%
Concrete	6.0	2.5%



EXISTING ROAD CONDITIONS

The condition of all 242 miles of County-owned Roads was collected using the PASER rating system, which focuses on surface condition by visual inspection of concrete, asphalt, or gravel roadways. The PASER rating system scores the roadway conditions based on surface distresses identified. Paved road segments are rated on a scale of 1-10 (where 10 is the best condition) and unpaved roadways are rated on a scale of 1-5 (where 5 is the best condition).

Asphalt PASER Rating		General Condition	Needed Maintenance or Repair
10	Excellent	New	No maintenance required
9	Excellent	Like new	No maintenance required
8	Very Good	Initial cracking	Little or no maintenance
7	Good	First signs of aging	Routine maintenance, cracksealing and minor patching
6	Good	Definite signs of aging	Preservative treatments (sealcoating)
5	Fair	Definite signs of distress	Preservative treatments (sealcoating)
4	Fair	Losing strength	Structural improvements & leveling (overlay or recycling)
3	Poor	Some loss of strength	Structural improvements & leveling (overlay or recycling)
2	Very Poor	Severe deterioration	Reconstruction
1	Failed	Disintegration	Reconstruction

Table: Asphalt PASER Ratings
(from *PASER Asphalt Roads Manual*)



*Example of Asphalt
PASER Condition Rating 4
(Losing Strength)*

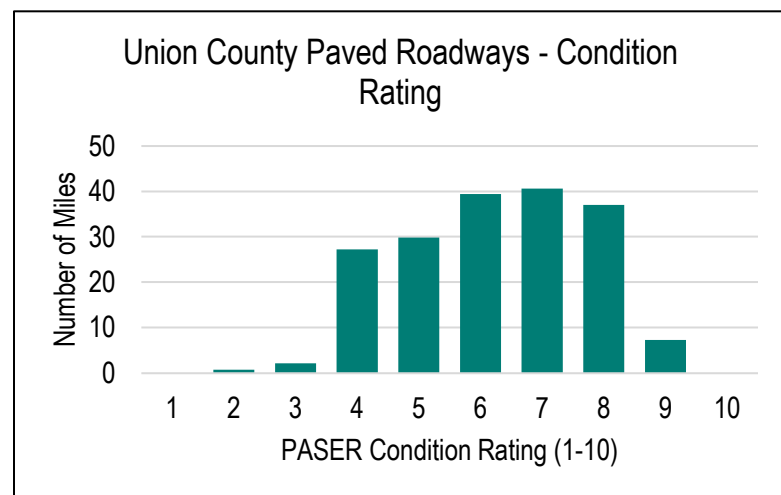
Gravel PASER Rating		General Condition	Needed Maintenance or Repair
5	Excellent	No distress	No Maintenance Required
4	Good	Minor signs of distress	Routine Maintenance
3	Fair	Definite signs of distress	Needs regrading, minor ditch maintenance, and spot gravel application
2	Poor	Slow travel speeds required	Needs additional aggregate layer, major drainage improvements
1	Failed	Travel is difficult or impossible	Complete rebuilding required

Table: Gravel PASER Ratings
(from *PASER Gravel Roads Manual*)

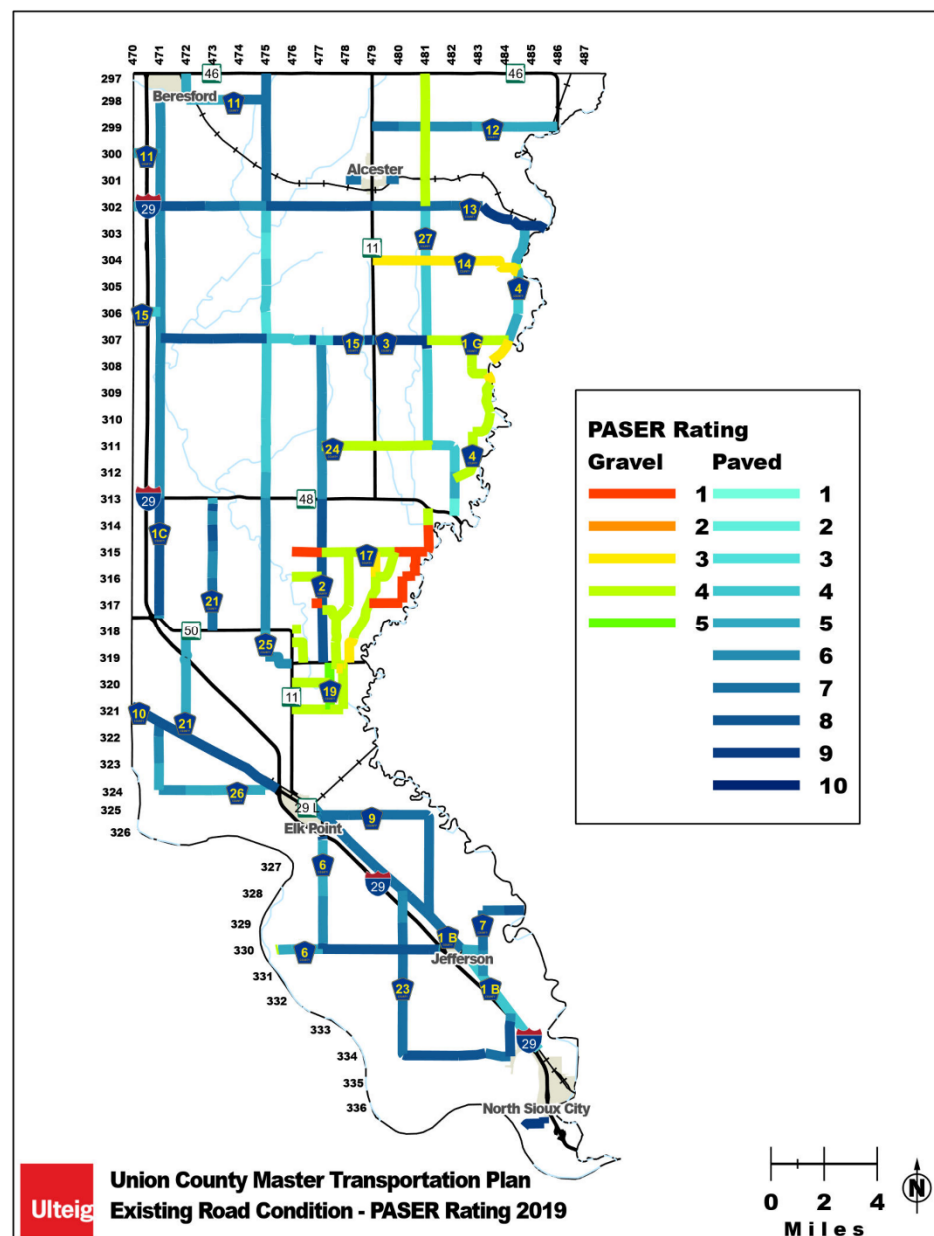
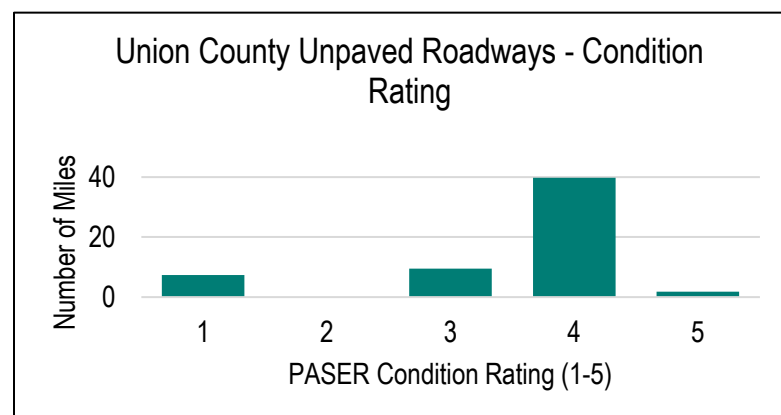


*Example of Gravel
PASER Condition Rating 4
(Minor signs of distress)*

The average PASER condition rating for paved roads in Union County is 6.2. Only 2% of roads are in poor condition (3 or lower rating), but about 30 miles (16% of roads) of paved roadways scored 4 or lower which means they are the best candidates for major rehabilitation such as asphalt overlays.

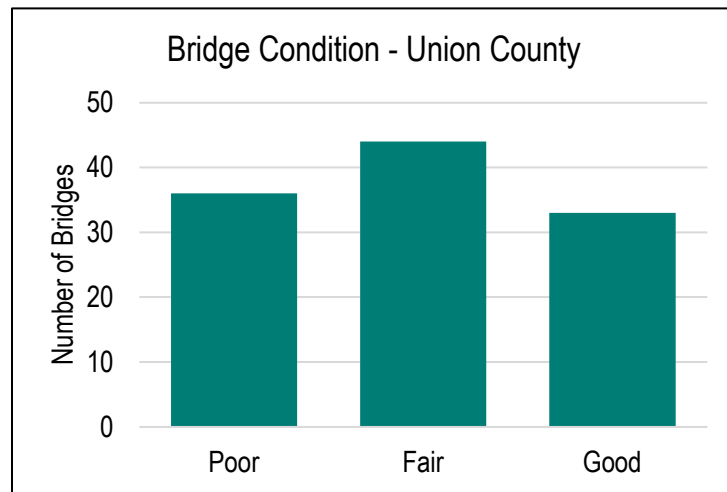


The average PASER condition rating for unpaved roads in Union County is 3.5. The average score was brought down by unimproved roads in Richland Township and roads that were washed out due to flooding at the time of inspection. The majority of county gravel roads are in good condition.

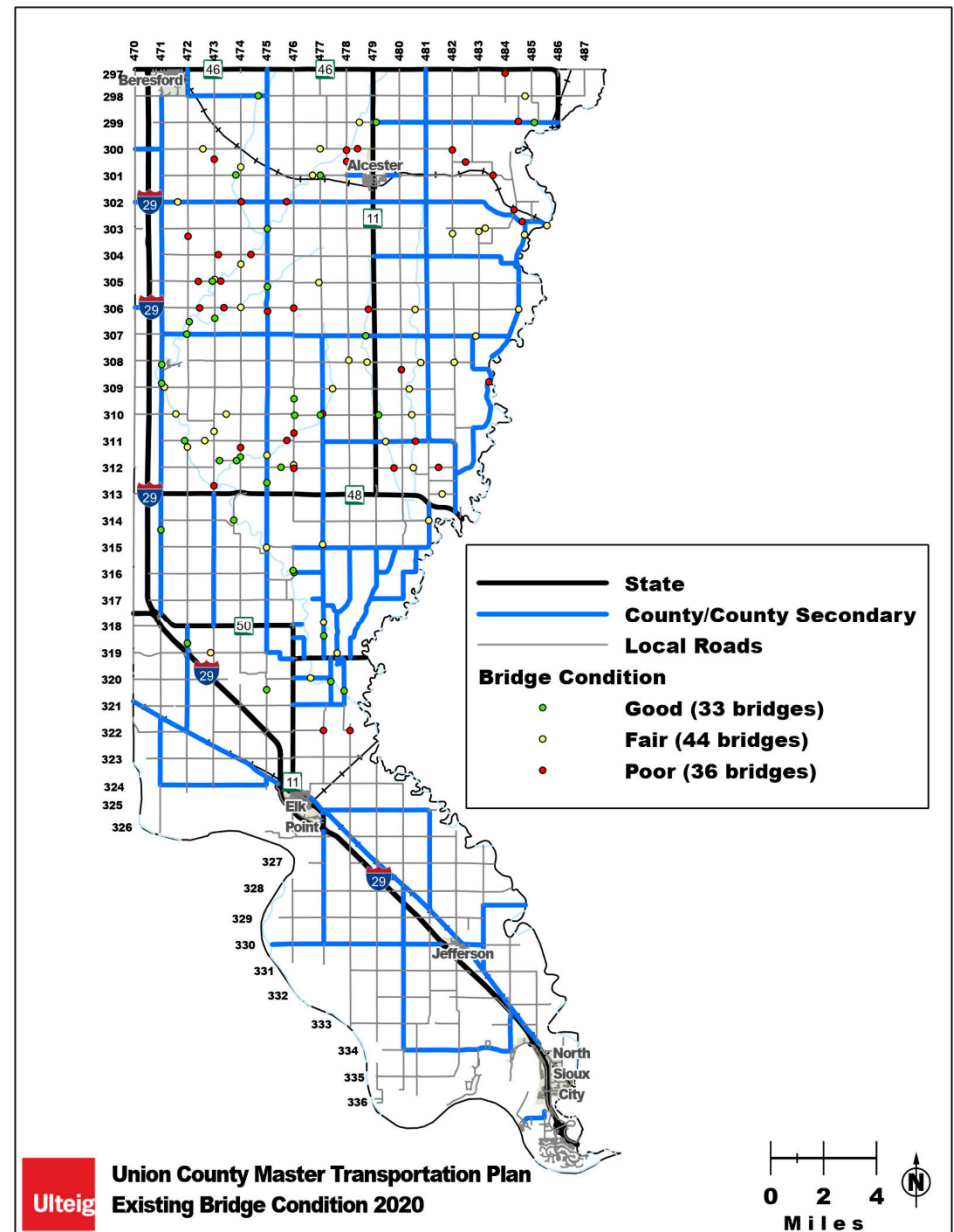


EXISTING BRIDGE CONDITIONS

Union County maintains 113 bridges, and bridge inspections are conducted every 2 years. As a result of bridge inspections, the condition of the bridges falls under one of three categories: Good, Fair, or Poor. Most of Union County bridges are in Fair or Good condition (68%), but 36 of Union County bridges are currently in Poor condition (32%), which means they are structurally deficient. These bridges have short or unknown remaining service lives, and likely require high-cost repairs or replacement. Comparatively, in all of South Dakota, 26% of all county-owned bridges are in Poor Condition.



Between 2016-2020, Union County has replaced 1.6 bridges/year, usually with significant funding assistance from SDDOT Bridge Improvement Grants. At current funding levels, Union County faces a difficult challenge to maintain all bridges in a state of good repair, as bridges continue to deteriorate at a faster rate than they can be repaired or replaced.

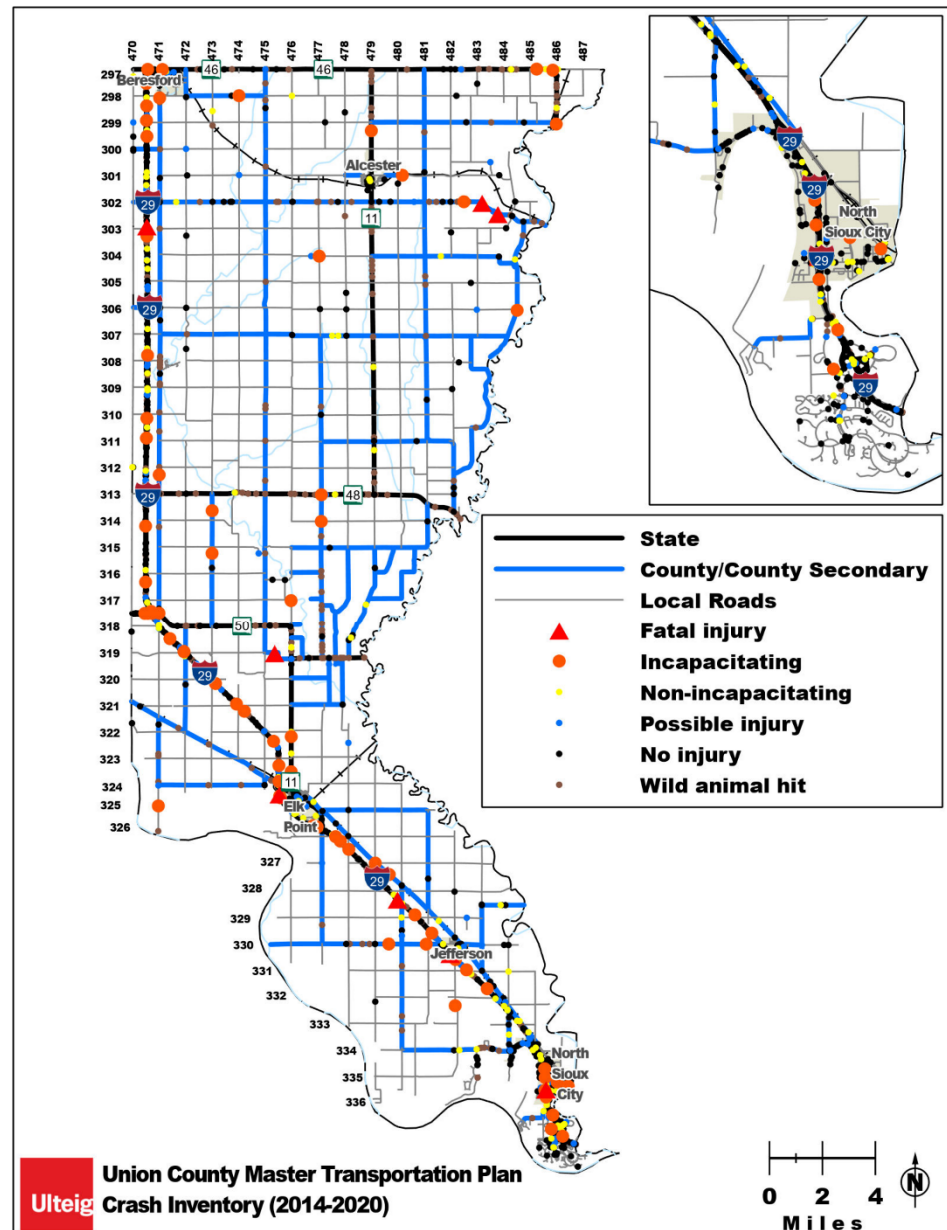
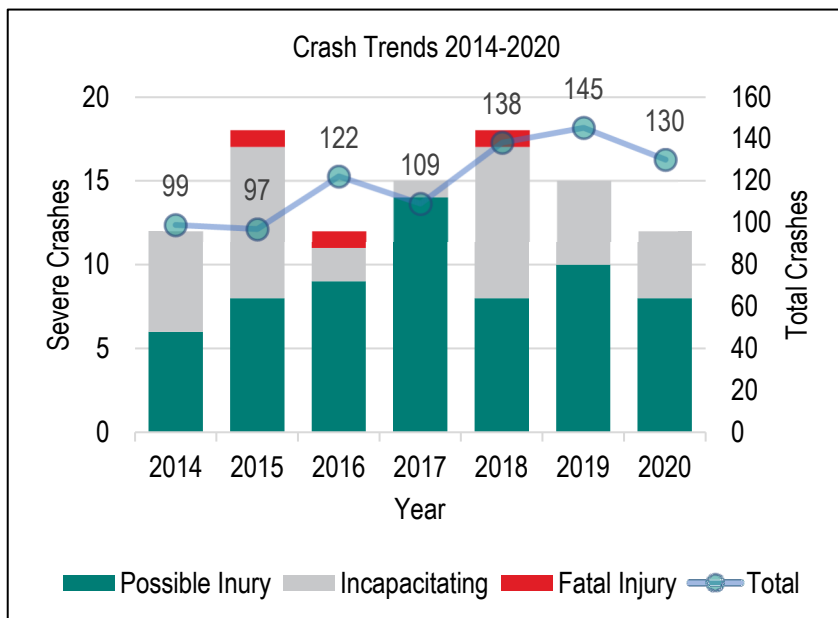


CRASH HISTORY

Safety is always a fundamental element when planning transportation infrastructure and improvements. The general public understands what feels safe and what does not. For these reasons, special attention will be given to roads that have been identified as safety concerns throughout the study area. In order to help identify where improvements should be prioritized in terms of safety, data from the South Dakota Accident Records System were compiled from the last seven years. However, feedback from the public adds more context and can identify locations of concern.

The map to the right shows all reported crashes and severity type between 2014-2020. Excluding crashes on I-29, there were 840 crashes on roadways within Union County. There were 3 fatal injury crashes and 36 serious injury crashes.

The Union County MTP will identify locations of concerns and recommend appropriate safety countermeasures to enhance roadway safety.



GETTING INVOLVED

STAY CONNECTED

Receive updates and announcements by visiting our website and submitting your email address: www.ulteig.com/unioncountymtp/

STAY TUNED FOR PUBLIC MEETING #2

Public Meeting #2 is scheduled for Fall 2021. A public notice will be posted in the local newspapers.

Add your email address on the comment form to receive a direct invitation.

INTERNET SURVEY QUESTIONNAIRE

The internet survey is one of the most cost-effective public involvement tools utilized early in transportation plan development process. Please complete the survey to share your experience using the Union County Transportation Network. The deadline to complete the survey is July 3, 2021.

LEAVE A COMMENT

If you have additional comments about the project, please fill out the comment form on the project website.

If you have any direct questions or concerns, please contact one of the project managers listed below.

Steve Gramm (Steve.Gramm@state.sd.us), Paul Deutsch (Paul.Deutsch@Ulteig.com) or Brad Stangohr (Brad.Stangohr@Ulteig.com)

