

Appendix A – Methods & Assumptions

Davison County
MASTER TRANSPORTATION PLAN

METHODS & ASSUMPTIONS

**Davison County Master
Transportation Plan**

Federal Highway Administration

South Dakota Department of Transportation

Davison County

November 18, 2014



Stakeholder Acceptance Page

The undersigned parties concur with the Methods and Assumptions for the ***Davison County Master Transportation Plan*** as presented in this document.

SDDOT:


Signature

Data Analysis Engineer
Title

Nov. 6, 2014
Date

FHWA:

The South Dakota Division of
FHWA has relinquished
oversight of this study to
SDDOT.

- (1) Participation on the Study Advisory Team and/or signing of this document does not constitute approval of the ***Davison County Master Transportation Plan*** Final Report or conclusions.
- (2) All members of the Study Advisory Team will accept this document as a guide and reference as the study progresses through the various stages of development. If there are any agreed upon changes to the assumptions in this document a revision will be created, endorsed and signed by all the signatories.

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I. Introduction and Project Description

A. Background Information

As an early railroad center within a rich agricultural landscape, Davison County has established the importance of a reliable, multi-modal transportation network to facilitate agricultural commerce in the area. Building upon its strong agricultural foundation, Davison County has continued to expand into additional economic realms such as technology, healthcare, education, and recreation/tourism to develop a thriving, multi-faceted economy that reaches throughout the world. The County's diverse multi-modal transportation needs each create a unique demand on the transportation network to efficiently and sustainably deliver the best transportation services to residents, industry, and tourists.

The Davison County transportation system is comprised of a well-connected network of state, county, city, and township roads which distribute trips and provide adequate mobility throughout the County. The roadway system is generally in good repair, but there are a number of ongoing preservation and expansion needs. There are also a number of unpaved and partially paved routes, which necessitate ongoing maintenance. Continued financial challenges and evolving road user demands require the County and Townships to assess the County transportation assets and determine maintenance and future improvement priorities. Davison County is interested in prioritizing preservation and reconstruction needs along with identifying standard roadway designs based on a comprehensive functional classification system in order to efficiently guide infrastructure investment decisions.

Traveler safety in Davison County is generally well-managed; however, there are some problematic areas. Typical of many rural counties, Davison County has roads that exhibit design characteristics of dated design standards and practice. The County has identified several of these locations on an initial issues map. These locations typically exhibit geometric concerns, such as lack of shoulders, steep side-slopes, limited sight distance, atypical intersection configuration, or designs that do not meet the respective design speed. As urban areas, such as the City of Mitchell, continue to extend outward into the rural countryside, there begins to be a blending of urban development with rural design features. What may have worked for low-volume, high-speed situations in the previous decades, begin to become an issue as traffic volumes and turning conflicts increase.

Davison County has experienced notable traffic growth over the past few years due to new development and shifts in county-wide traffic patterns. The greatest traffic volumes on the County highway system are typically adjacent to the Mitchell urban area, dissipating as the distance away from Mitchell grows. Still, Mitchell attracts workers from throughout the region, with commuter traffic originating from neighboring communities such as Mt. Vernon, Ethan, Parkston, and new residential development just over the County border in the adjacent Hanson County.

Two rail lines currently traverse across the County, briefly joining within the Mitchell corporate limits, running north-south and east-west across the County. Two unit train facilities have been identified in Davison County, one at Mt. Vernon and a larger facility on the west side of Mitchell. The ethanol plant located north of Mitchell, near Loomis, also has a connection to a railroad mainline.

Grade crossing conflict points occur at every at-grade roadway-rail line intersection creating a vehicle-train conflict point, with safety and motorist delay impacts. Many of the at-grade crossing locations throughout the County contain only passive traffic control. Others, typically on higher volume roadways, contain active traffic control, such as flashing light signals.

Most of the existing pedestrian and bicycle facilities within Davison County are located in and around the City of Mitchell and Lake Mitchell areas. Currently, the City is in the midst of implementing six (6) phases of their planned bike trail, primarily surrounding Lake Mitchell and on the east side of Mitchell. As expected, the heaviest concentrations of pedestrian and bicycle travel are within and around the more urbanized areas, but there are both pedestrians and bicyclists that also use paved County roads as routes. This creates safety concerns as pedestrians and bicyclists typically are required to use the travel lane as their travel way due to most paved County road miles lack shoulders.

There is a need to evaluate pedestrian and bicycle facilities at a countywide level, in order to identify potential needs, opportunities, gaps, and barriers. Alternative modes of transportation, such as walking and bicycling, are a key component to the livability of a community. As the City completes their trail network and people continue to move outward into the urban fringe and rural areas, there will likely be a greater demand for connectivity to the City trails and other facilities and destinations as they are developed.

Other modes of inter and intra-county travel include Palace Transit and Palace Transit Express with on-call, demand-response system for curb-to-curb transit service, Jefferson Bus Lines with intercity travel between Mitchell and destinations throughout the United States, and the Mitchell Municipal Airport with a single fixed-base operator.

Davison County is experiencing roadway funding constraints, similar to other counties, as federal and state funding sources continue to diminish. This creates challenges in the County to not only maintain roadways to levels that residents and motorists are accustomed to, but to continue to improve roadway capacity, safety, and network connections. The existing and future needs of the Davison County transportation network will be compared to existing and projected funding to compare gaps in the transportation program, reexamine funding structures, and prioritize projects through a Major Roads Plan.

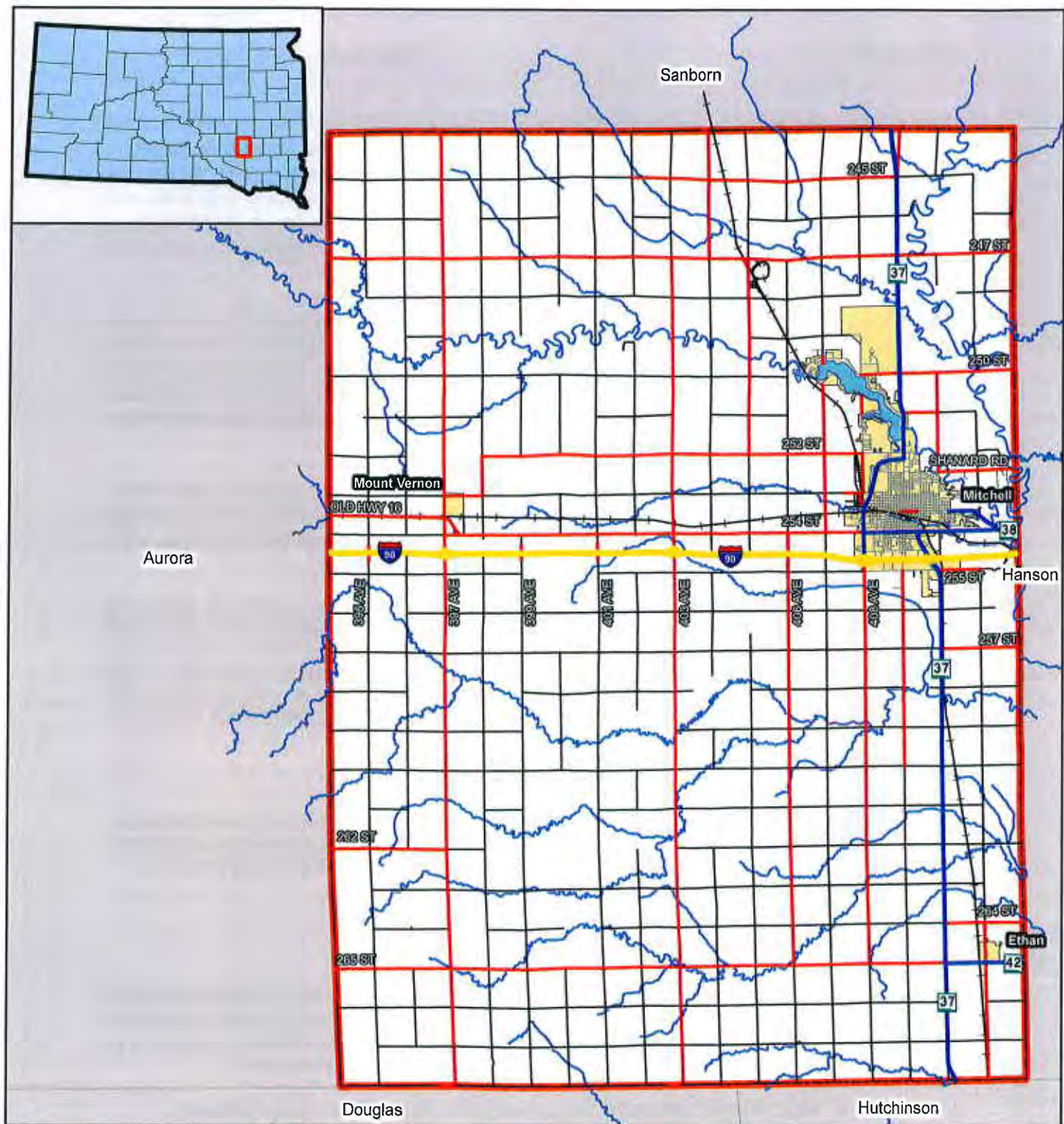
B. Location

The study is being completed in Davison County, South Dakota. The study will encompass all of Davison County including the incorporated and unincorporated cities and townships of Davison County. The study will include all roadways within Davison County, with emphasis on the County Highway System. The location of the study is illustrated in Figure 1.

C. Need for Study

Davison County has experienced sustained population growth since the late 1800's, being one of only a few South Dakota counties to retain and attract new opportunities and residents. Growth is welcomed, but it also brings new challenges to the region and exacerbates "old problems" as the demands on the transportation network are continually evolving. Several of these challenges stem from:

- New industrial, commercial, and agricultural development throughout the County.
- Expansion of the Mitchell urban area as development extends outward into the historically rural agricultural areas.
- Shifts in traffic patterns due to new development, transition of rural to urban/suburban land use, re-emergence in the demand for bicycle and pedestrian facilities.
- Freight demand that continues to push the limits of the existing roadway structure.
- On-going financial stress due to revenue streams not keeping pace with infrastructure and replacement needs.



**Figure 1:
Study Location**

Davison County
MASTER TRANSPORTATION PLAN

Legend

- Interstate
- State Highways
- County Roads (paved)
- County & Township Roads (gravel)
- Rail Lines
- Rivers & Streams
- Cities
- Study Area (Davison County)

0 0.75 1.5 3
Miles
1 in = 3 miles



HRGreen

The SDDOT and Davison County have identified a need to establish baseline conditions, prioritize roadway needs, and determine future system improvements for the County. Overall, the study is expected to:

- Complete a list of transportation issues and needs facing Davison County.
- Develop feasible solutions to address those issues and needs that meet current design standards and/or traffic level of service expectations under both the current and predicted future traffic conditions while promoting a livable community that will enhance the economic and social well-being of Davison County residents.
- Create final products for use by Davison County and the SDDOT which will provide guidance to implement recommended improvements and react to future development plans within the area.

HR Green recognizes the importance of the Davison County Master Transportation Plan document in defining current system deficiencies, identifying future system needs, and ultimately prioritizing the transportation needs for the County. With limited budgets for transportation infrastructure maintenance and construction, available funding for planning level documents meant to guide future system improvements must be efficiently used to achieve the intended benefit. It is, therefore, very important for the community (and SDDOT) to have up-to-date, reliable (documented) transportation system needs sorted by priority and ability to deliver (costs and other considerations), especially in the competition for available federal and state improvement funding.

D. Study Schedule

The study is scheduled to be completed between October 2014 and July 2015. Key dates and tasks are shown in Figure 2.

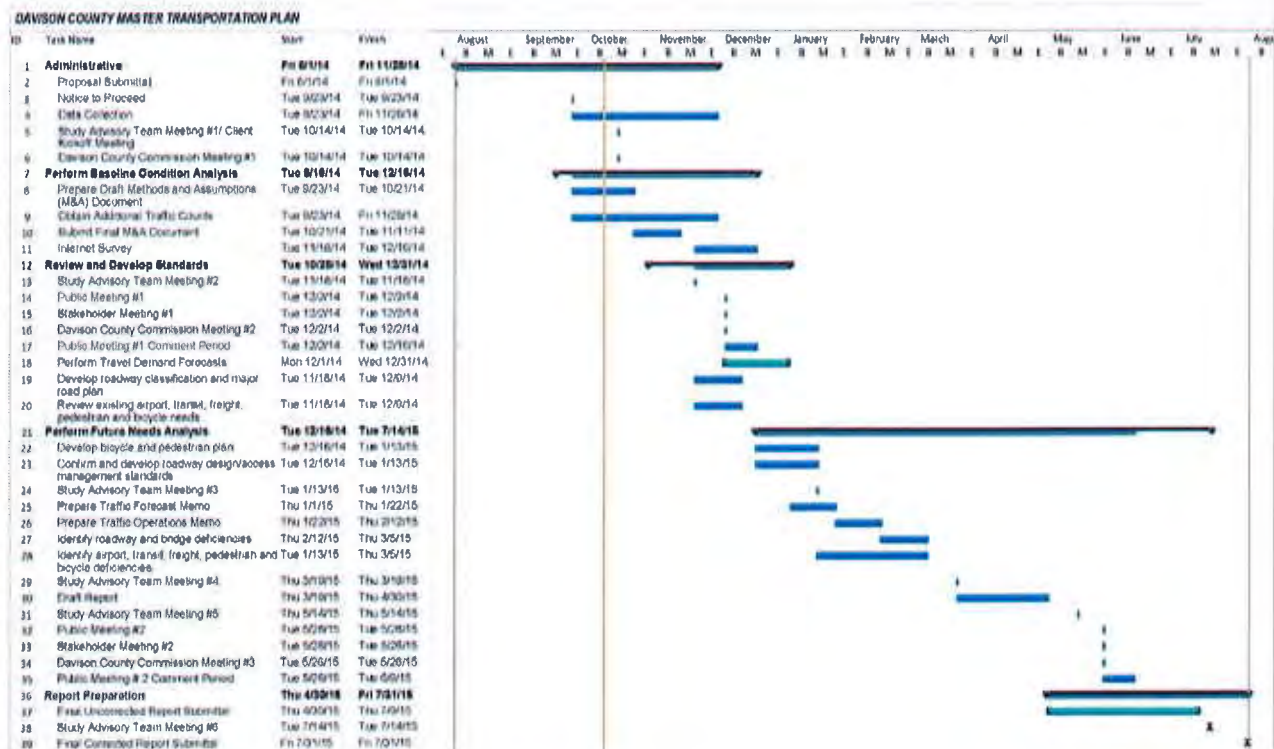


Figure 2 - Study Schedule

E. Facilities Affected by the Study

There will be no direct impacts to any specific facilities. The study will document existing conditions including, locations with high percentages of accidents, roadway segments where traffic volumes may exceed capacity, poor pavement or gravel conditions, deficient bridge conditions, season weight restrictions, and corridors that currently or are expected to create mobility issues throughout Davison County. Text and maps will be used to document these conditions. Field review observations will supplement input from county officials, stakeholders, and the public. The study will provide recommendations to state and local officials on possible improvements that will address existing or future deficiencies.

F. Previous Studies

Davison County Comprehensive Plan
Davison County Draft Updates to Zoning Ordinance
City of Mitchell Comprehensive Plan
City of Mitchell Land Use Plan
City of Mitchell Recreational Trail Plan

G. Study Advisory Team

Jeff Bathke: Davison County Planning & Zoning
Russell Weinberg: Davison County Highway Department
John Claggett: Davison County Commission
Denny Kiner: Davison County Commission
Terry Johnson: City of Mitchell-Public Works
Jeff Brosz: SDDOT – Transportation Inventory Management
Steve Gramm: SDDOT – Project Development
Doug Kinniburgh: SDDOT – Local Government Assistance
Jay Peppel: SDDOT – Mitchell Area

II. Analysis Years/Periods

The Davison County Master Transportation Plan will utilize an existing year and planning year horizon. It is assumed that the existing year will be 2015 and planning year will be 2035, representing a 20-year planning horizon. If needed, based on traffic operations analyses, an interim year may be used to further assess operations and proposed improvements.

At locations where peak hour intersection turning movement counts are available or collected, the peak hour will be identified for analysis. It is assumed, for data collection purposes, that the morning peak hour occurs between 7:00 a.m. and 9:00 a.m. and afternoon/evening peak hour occurs between 3:00 p.m. and 6:00 p.m. The actual peak hour used in analysis will be determined by the intersection counts.

For a majority of the traffic-related analysis, a volume-to-capacity ratio analysis will be conducted on rural roadway segments using daily traffic volumes and capacity estimate based on SDDOT default values and HCM 2010 methodology.

III. Data Collection

Many sources of data are required to establish the current baseline conditions assessment and identify existing issues affecting the transportation system. The data collection effort is anticipated to include the following:

A. Existing City and County Development Practices:

HR Green will obtain and review current ordinances and guidelines pertaining to City and County development practices. These items will include: land use and zoning information, as-build plans, photography, utilities, existing and planned development locations, capital improvement plans, and/or mapping data. This data will be used to determine the long range development planned within Davison County as it relates to planned roadway improvements.

Table 1 - City and County Development Practices Data Collected

TITLE	AGENCY/AUTHOR
Ethanol Plans and Unit Train Loading Facilities Map	SDDOT
School Districts in Davison County	SD Dept. of Education
Census Data	US Census Bureau
5 Year Road Plan 2009-2013 Executive Summary	City of Mitchell
Airport Major Projects 2009-2012 Executive Summary	City of Mitchell
Mitchell, SD Bike Trail Map	City of Mitchell
City Plat Map (Detailed)	City of Mitchell
City Zoning Map	City of Mitchell
City Street Map	City of Mitchell
City of Mitchell Emergency Snow Routes	City of Mitchell
City Code	City of Mitchell
Davison County Commission District Map	Davison County
County Drainage Systems	Davison County
Davison County Driveway Approach Application	Davison County
Davison County Tax Incremental District Guidelines	Davison County
Davison County Zoning Ordinance	Davison County
Zoning Map	PDDIII
Comprehensive Land Use Plan	City of Mitchell Davison County

B. Transportation Network Characteristics:

HR Green will obtain and inventory data related to the existing transportation system within Davison County. Transportation network data will include: functional classification, bicycle and pedestrian facilities, transit systems, airport capabilities, railroad networks, freight capabilities, National Bridge Inspection Standard (NBIS) data for all structures off the state highway system, crash history, current roadway design standards of all applicable agencies within Davison County, and existing geometric, capacity, right-of-way, and other deficiencies along key routes. This data will be used, along with information gathered from the Study Advisory Team, stakeholders, and the traveling public, to develop a list of transportation issues currently facing Davison County.

Table 2 - Transportation Network Characteristic Data Collected

TITLE	AGENCY/AUTHOR
State Highway Functional Classification	SDDOT
Davison County Crash Database	SDDOT
2013 Mileage Reports – Rural Road and City Street	SDDOT
2013 Mileage Reports – Primary County Hwy System	SDDOT
Davison County Crash Summary (2011, 2012, 2013)	SD Dept. of Public Safety
City of Mitchell Crash Summary (2009)	SD Dept. of Public Safety
Long Range Transportation Plan	SDDOT
2015-2018 STIP	SDDOT
SDDOT Local Roads Plan	SDDOT
SDDOT Road Design Manual	SDDOT
South Dakota Airport Directory	SDDOT
BNSF SDDOT Information Sheet	SDDOT
Dakota Southern SDDOT Information Sheet	SDDOT
Official South Dakota Rail Map	SDDOT
Palace Transit Passenger Handbook	Palace Transit
Spring Load Limits Resolution	Davison County
Ethan Road Map	PDDIII
Mt Vernon Road Map	PDDIII
Mitchell Road Map	PDDIII
Davison County Road Map	PDDIII

C. Traffic Volumes:

HR Green identified a number of locations to obtain average daily (24-hour) traffic volumes for planning-level analysis. These locations were categorized into three groups: 1) locations that address known concerns, 2) locations on a paved roadway with low volumes, and 3) information or supplemental count locations to fill in gaps throughout the county. A series of peak hour intersection turning movement count locations were also identified to assess existing commuter traffic.

The SDDOT cross-referenced these locations with available 24-hour tube counts and intersection turning movement counts collected between 2011 and 2013. It was determined that the SDDOT collected tube counts between 2011 and 2013 will be used and factored to year 2015 for existing conditions. Peak hour turning movement counts will be provided by the SDDOT at the SD37 and Spruce Street intersection. The HR Green proposed count locations and the corresponding SDDOT-provided count location are shown in Figure 3.

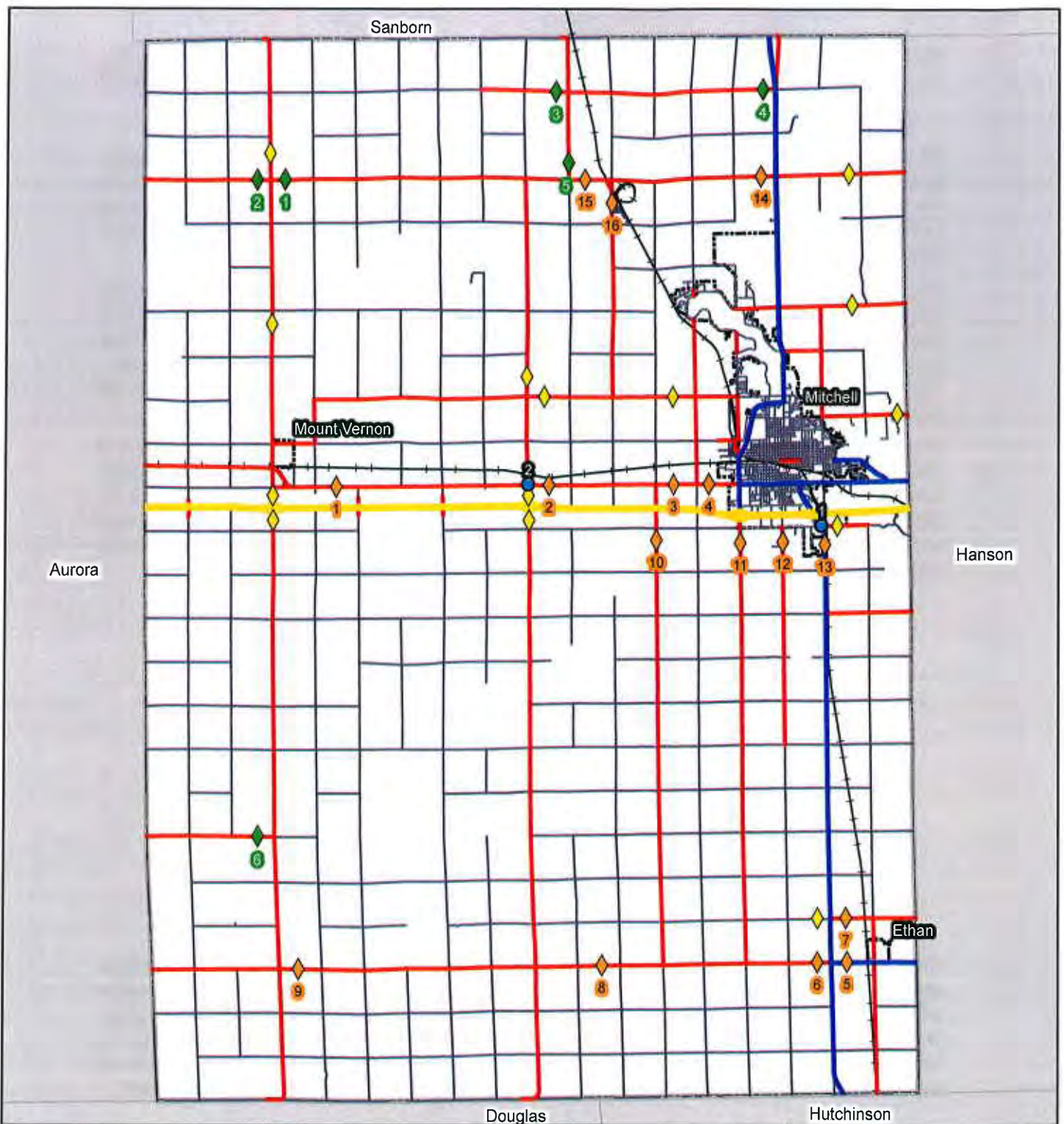
Any additional traffic counts will be collected on a Tuesday, Wednesday, or Thursday while school is in session. Due to the likelihood of any additional traffic counts to be collected during the fall harvest, and potentially spring planting, applicable seasonal factors to be applied to the data will be obtained from the SDDOT. HR Green will coordinate any additional 24-hour tube counts with the SDDOT to gauge their availability to collect the data. It is anticipated that any additional peak hour intersection turning movement counts will be collected by HR Green.

Table 3 - Traffic Data Collected

TITLE	AGENCY/AUTHOR
2013 VMT Report <i>All Vehicles by County</i>	SDDOT
2013 VMT Report <i>Trucks by County</i>	SDDOT
State of South Dakota Traffic Flow Map (2013)	SDDOT
Davison County ADT (2011)	SDDOT
City of Mitchell ADT (2013)	SDDOT
Traffic Counts (Tube Counts)	SDDOT

D. Internet Survey:

HR Green will conduct an internet survey to gather information regarding origin-destination, travel modes, and transportation needs. In addition to the online survey, paper copies of the survey questions will be made available at local churches and meeting halls, at the public meetings, and by mail upon request. The survey will be available for a minimum of four weeks and overlap the first public meeting and subsequent public comment period. Following the completion of the open survey period, HR Green will compile and summarize results to present to the SAT and document in the Master Transportation Plan.



**Figure 3:
Traffic Data
Collection Locations**

Davison County
MASTER TRANSPORTATION PLAN

Legend

● Peak Hour Count Locations
Count Locations (24-Hour)

Type

- ◆ Location w/ Known Concern
- ◆ Location w/ Low-Volume
- ◆ Informational / Supplemental

- Interstate
- State Highways
- County Roads (paved)
- County & Township Roads (gravel)
- ▭ Cities
- ▭ Davison County

0 0.75 1.5 3
Miles
1 in = 3 miles



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IV. Traffic Operations Analysis

The traffic operations analysis will be based on methodology outlined in the Highway Capacity Manual 2010 (HCM 2010). HR Green will predominantly use Highway Capacity Software 2010 (HCS 2010) to complete travel operations analysis. This analysis will maintain compliance with the standard default parameters listed in Chapter 15 of the SDDOT Road Design Manual.

Default values to be used for Highway Capacity Software analysis include:

- Flow Rate = 1,600 vphpl
- Peak Hour Factor = 0.92

Other assumptions, factors, and default values will be based on methodologies provided in the HCM 2010 and will be clearly documented within the Master Transportation Plan and/or applicable document.

V. Travel Forecast

A regional travel demand model is not available for Davison County. For this reason, traffic forecasts will be based on trend lines calculated from historical traffic volume data available from the SDDOT. The traffic forecasts will be supplemented by analyzing anticipated growth areas provided by the County's Planning and Zoning office and the City of Mitchell to adjust the 20-year forecast volumes. For this study, the planning year horizon will be 2035.

VI. Safety Issues

The SDDOT provided crash data for the complete years of 2008-2013. Crash data for the most recently available three (3) complete years, only on roadways outside of county municipalities under Davison County jurisdiction, will be evaluated to identify crash trends or common causes. If necessary, HR Green will complete high level planning review of crash rates within the county and comparisons to statewide averages if available.

VII. Selection of Measures of Effectiveness (MOE)

The primary measures of effectiveness recorded for key study intersections will include average delay per vehicle and Level of Service (LOS). Measures of effectiveness for rural roadway segments include volume/capacity ratio and planning level LOS thresholds. The primary mobility goal for the study will be LOS D. State highway intersections will follow SDDOT Road Design Manual LOS criteria per the highway's functional class (Table 15-1).

Roadway and intersection crash rates will be compared to statewide averages for like-facilities (based on roadway type, area type, and whether it is an intersection or roadway segment).

VIII. Deviations/Justifications

There are no known deviations from study standards at this time. If deviations are deemed necessary during the study process, these issues will be documented and presented to the Study Advisory Team.

IX. Conclusion

The aforementioned approach to the Davison County Master Transportation Plan will accomplish the following goals:

- Complete a list of transportation issues and needs facing Davison County.
- Develop feasible solutions to address those issues and needs that meet current design standards and/or traffic level of service expectations under both the current and predicted future traffic conditions while promoting a livable community that will enhance the economic and social well-being of Davison County residents.
- Create final products for use by Davison County and the SDDOT which will provide guidance to implement recommended improvements and react to future development plans within the area.

The Master Transportation Plan is intended to be a living document that can be used as a blueprint, or "road map" to accommodate the interests or desires of private land developers, elected and appointed local officials, and members of the traveling public. It will provide the tools needed to further promote Davison County as a livable and sustainable community well into the future.

Appendix B – Traffic Operations



Traffic Technical Memorandum

Davison County Master Transportation Plan

Federal Highway Administration

South Dakota Department of Transportation

Davison County

Final Report

March 2, 2015



Introduction

The Davison County Master Transportation Plan provides for an assessment of existing and forecasted traffic operations and safety throughout the County. This included a safety evaluation of intersections, roadway corridors, and railroad crossings throughout the County. Existing traffic volumes were evaluated to provide baseline traffic operations conditions. These volumes were also forecasted to a 2035 Planning Year, and subsequently evaluated for projected traffic operations.

Historical Crash Data Analysis

One method of assessing the performance of an existing roadway network is measuring traveler safety through the review of crash frequency and severity. The objectives are to locate high crash frequency and severe crash locations to reduce the number of crashes and severity through the identification of safety improvements. Crashes were reviewed throughout Davison County to identify crash patterns and problematic locations.

Historical crash data for the most recently available five-year period (2009-2013) was provided by the South Dakota Department of Transportation (SDDOT). A total of 1,444 crashes were reported on County and State facilities within Davison County between 2009 and 2013, which excludes crashes that occurred on City of Mitchell jurisdiction roadways. The crash locations throughout the County, categorized by crash severity, are spatially depicted in Figure 1. They are also summarized in Table 1, further categorized by four crash characteristics: severity, month of the year, lighting conditions, and pavement conditions.

Of the 1,444 crashes, nearly 82 percent resulted in no injury or were a vehicle-animal crash. Approximately 15 percent resulted in possible or non-incapacitating injury. Less than four percent of the crashes resulted in an incapacitating injury (41 total) or fatal injury (five total). Three of the five fatal crashes occurred on State routes (two on SD Highway 37 between Mitchell and Ethan, one on Interstate 90). The other two occurred on County routes, one at the intersection of 265th Street and 403rd Avenue and a second at the intersection of 245th Street and 404th Avenue.

The other three categorical presentations of these crashes provide insight into conditions at the time of crash, such as time of the year, light conditions, and pavement conditions. There is a noticeable increase in crashes from October through December, coinciding with the harvest period and initial winter storm events. Conversely, the months of March, April and July involved fewest crashes out of the 12 months.

A total of 727 crashes were recorded as occurring during daylight hours, representing 50 percent of all crashes. The other 50 percent were spread out from dusk through dawn, further broken out during dark conditions by whether the roadway was lighted or not.

1,092 of the 1,444 crashes were recorded as occurring on dry pavement conditions, which represents approximately 76 percent of all crashes. While not necessarily meaning that pavement condition was a contributing factor in the crash, the other 24 percent occurred on non-dry pavement. 220 crashes were recorded as occurring with some type of frozen precipitation on the roadway surface (15 percent).

Table 1 – Davison County Crash History

Crash Severity	Total # Crashes
Fatal Injury	5
Incapacitating Injury	42
Non-Incapacitating Injury	91
Possible Injury	125
No Injury	715
Wild Animal Hit	466
Total Crashes	1,444

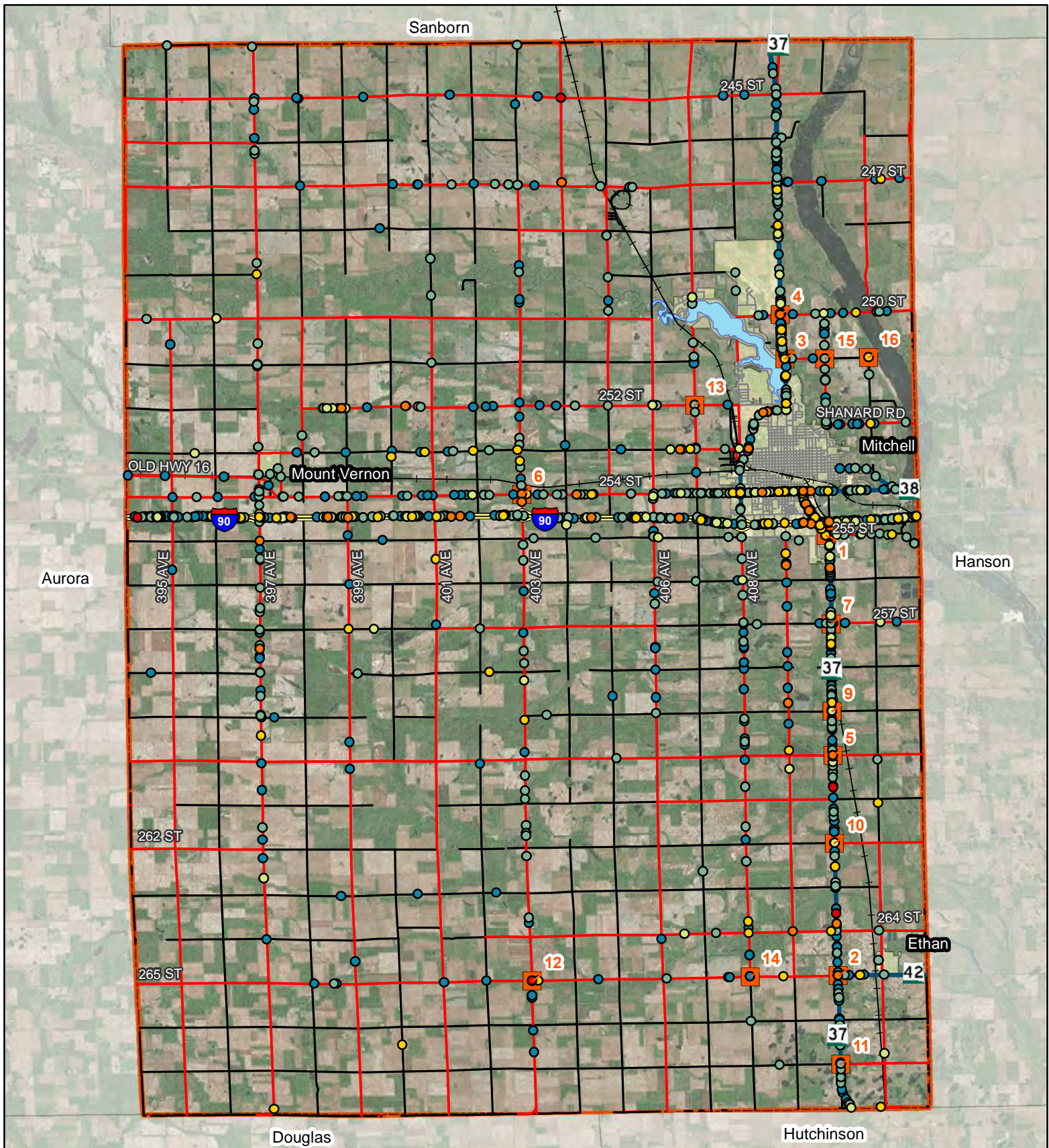
Light Condition	Total # Crashes
Dark – Lighted Roadway	92
Dark – Roadway Not Lighted	498
Dark – Unknown Roadway Lighting	5
Dawn	67
Daylight	727
Dusk	55
Total Crashes	1,444

Month	Total # Crashes
January	119
February	112
March	74
April	93
May	113
June	120
July	97
August	119
September	123
October	156
November	187
December	131
Total Crashes	1,444

Pavement Condition	Total # Crashes
Dry	1,092
Frost	5
Ice	110
Sand, Mud, Dirt, Gravel	7
Slush	20
Snow	85
Unknown	1
Water (Standing, Moving)	1
Wet	123
Total Crashes	1,444

Source: SDDOT Crash Database

Crashes on Davison County, township and State of South Dakota roadways; excludes City of Mitchell roadways



**Figure 1:
Crash History**

Davison County
MASTER TRANSPORTATION PLAN

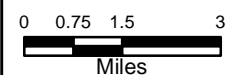
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Crash Severity*

- Fatal Injury (5)
- Incapacitating (42)
- Non-incapacitating (91)
- Possible (125)
- Wild Animal Hit (715)
- No Injury (466)

- Intersections - Top 16
- Interstate
- State Highways
- County Roads
- Township Roads
- Rail Lines
- Cities
- Study Area (Davison County)

* Crash years 2009 - 2013



1 in = 3 miles



Intersections

A quantification of specific crash locations was also completed for Davison County intersections and roadway corridors. County intersections with the greatest number crashes over the five-year period, excluding City of Mitchell jurisdictional roadways, are outlined in Table 2 and spatially identified in Figure 1. Crash rates were established for intersections with three or more crashes using available average daily traffic (ADT) counts reflective of traffic during the crash period. Intersection crash rates are expressed in terms of crashes per million entering vehicles (MEV).

Table 2 – Intersection Crashes on County and State Roadways (2009-2013)

Location		Total # Crashes	Crash Rate (Crashes/MEV)
North-South Roadway	West-East Roadway		
SD 37	Spruce Street	9	0.39
SD 37	SD 42/265 th Street	6	0.88
SD 37	251 st Street	5	0.52
SD 37	250 th Street	3	0.36
SD 37	260 th Street	3	0.45
403 rd Avenue	254 th Street	3	0.70
SD 37	257 th Street	2	
SD 37	258 th Street	2	
SD 37	259 th Street	2	
SD 37	262 nd Street	2	
SD 37	267 th Street	2	
403 rd Avenue	265 th Street	2	
407 th Avenue	252 nd Street	2	
408 th Avenue	265 th Street	2	
410 th Avenue	251 st Street	2	
411 th Avenue	251 st Street	2	

Source: SDDOT Crash Database (total number of crashes and location)

Note: Crashes on Davison County, township and State of South Dakota roadways;
excludes City of Mitchell roadways

Crash patterns exhibited by the list of 16 intersections in Table 2 indicate 39 of the 49 crashes occurred during daylight hours. Thirty-nine crashes occurred during dry conditions, meaning that 10 of the 49 occurred on a wet, snowy, or icy roadway. The most frequently occurring crash type at these intersections was angle crashes, accounting for 33 of the 49 crashes. Six of the 49 crashes were rear-end crashes and 5 were vehicle-animal crashes.

Overall, 10 of the 16 intersections identified in Table 2 involve SD Highway 37, which typically handles the greatest daily traffic volumes of all rural roadways throughout the County (excluding Interstate 90). As each intersection provides unique circumstances that may contribute to the respective intersection's crash history, the following provides further details regarding intersection-specific crash characteristics at the six intersections with three or more crashes.

SD Highway 37 and Spruce Street Intersection

Crash patterns at this intersection show 7 of the 9 crashes occurred during daylight hours, 7 of 9 occurred during dry conditions, and 6 of 9 were angle crashes. These nine crashes involved vehicles from all four directions of travel, with the northbound and southbound directions being the most frequent. The intersection crash rate was calculated at 0.39 crashes per MEV.

The intersection of SD Highway 37 and Spruce Street is located approximately 0.25 miles south of Interstate 90. It is a skewed intersection, as SD Highway 37 is oriented in a northwest to southeast direction transitioning from a two-lane highway south of Mitchell to a divided 4-lane facility northward into Mitchell. The intersection is signalized with exclusive left-turn lanes on SD Highway 37 and dual left-turn lanes on eastbound Spruce Street.

Significant traffic generators are located along Spruce Street, including Mitchell Technical Institute, the Mitchell Livestock Auction, Dakotafest to the east of SD Highway 37, and Cabela's and other large commercial development to the west. These generators, in addition to the recurring volumes as a southern gateway into the City of Mitchell and adjacent to Interstate 90, can create unique traffic volume and composition fluctuations depending on time of day, day of the week, and season.

SD Highway 37 and SD Highway 42/265th Street Intersection

Five of the 6 crashes at this location occurred during daylight hours, 4 of 6 occurred during dry conditions, and 5 of 6 were angle crashes. Three of the angle crashes involved vehicles traveling in the northbound direction. The intersection crash rate was calculated to be 0.88 crashes per MEV.

The intersection is a four-leg intersection, two-way stop-controlled from the 265th Street and SD Highway 42 approaches. It is located 10 miles south of Mitchell and one mile to the west of Ethan.

SD Highway 37 and 251st Street

Crash history at this intersection show 3 of the 5 crashes occurred in daylight hours, 4 of 5 occurred in dry conditions, and 5 of 5 were angle crashes. Three of the five crashes involved a westbound vehicle, from the stop-controlled approach, failing to yield to SD Highway 37 traffic. The other two crashes involved vehicles in the northbound direction failing to yield during a turn and an improper turn. The intersection crash rate was calculated at 0.52 crashes per MEV.

The intersection is located directly east of Lake Mitchell and north of the majority of the City of Mitchell. 251st Street intersects SD Highway 37 on a horizontal curve that is angling from northwest to southeast. 251st Street crosses SD Highway 37 on a straight east-west through the intersection, creating a skewed intersection instead of aligning at a perpendicular angle with the highway. On the eastbound approach, 251st Street exhibits a notable profile grade up to the intersection. SD Highway 37 is also transitioning from an undivided 5-lane cross-section to a divided 4-lane cross-section with depressed turf median through the intersection. Approximately 25 feet of median storage is available for crossing vehicles from edge of inside shoulder to edge of inside shoulder. A left-turn lane is provided for the northbound to westbound traffic movement.

SD Highway 37 and 250th Street

This intersection shows 2 of the 3 reported crashes occurred in daylight hours, 1 of 3 occurred in dry conditions, and 2 of 3 were angle crashes. The crash rate at this intersection was calculated at 0.36 crashes per MEV.

Located approximately one mile north of 251st Street, and east of Lake Mitchell and the Mitchell Municipal Airport, this intersection is stop-controlled from the 251st Street approaches. SD Highway 37 is a 4-lane divided facility with a depressed turf median. A left-turn lane is provided in the northbound direction of SD Highway 37. Vehicle storage is available between the northbound and southbound SD Highway 37 travel lanes for 251st Street traffic to complete a 2-stage maneuver when crossing the highway.

SD Highway 37 and 260th Street

Crash history at this intersection show 2 of 3 crashes occurring in daylight hours, 3 of 3 occurring in dry conditions, and 2 of 3 were rear-end crashes. The third crash was an angle crash. All three occurred in the southbound direction.

SD Highway 37 does not include turn lanes in either the northbound and southbound direction. This requires left-turning vehicles to decelerate and stop in the through travel lane and wait for a gap in traffic before proceeding. Similarly, right-turning traffic will decelerate in the through travel lane prior to completing the right-turn. This creates a greater speed differential between the through and turning traffic, contributing to rear-end crash situations.

403rd Avenue and 254th Street

All 3 of the 3 reported crashes at this intersection occurred in daylight hours, 2 of 3 in dry conditions, and 3 of 3 were angle crashes. Two crashes occurred from a stop-controlled approach, one from the northbound direction and one from the southbound direction, with failure to yield and disregarding traffic signs, respectively. The third involved a westbound vehicle completing a turn to 403rd Avenue.

The intersection is located approximately 0.5 miles north of the Interstate 90 and 403rd Avenue (Betts Road) interchange. The intersection is a four-leg, right-angle intersection stop-controlled from the 403rd Avenue approaches. A diverse mix of vehicles traverses through the intersection. 254th Street provides a paved non-Interstate route into and out of Mitchell from the west, running 0.5 miles north of and parallel to Interstate 90. 403rd Avenue includes one of the four total access locations to Interstate 90, and facilitates a western gateway into Mitchell via 254th Street.

Intersection Summary

A total of sixteen intersections were identified within Davison County, outside of the Mitchell corporate limits, which experienced two or more crashes over the previous five years of available data. Eleven of those 16 intersections were located on SD Highway 37.

Six of the 16 intersections exhibited 3 or greater crashes within the analysis time period. The calculated intersection crash rates for those six intersections were typically at or less than 0.52 crashes per MEV. One of the outliers involved the SD Highway 37 and SD Highway 42/265th Street intersection at 0.88 crashes per MEV. At this intersection, five of the six crashes were angle crashes involving crossing or turning vehicles. Contributing causal factors may be greater turning/crossing traffic volumes (in relation to neighboring intersections), high/excessive speeds, roadway lighting, number of large trucks/equipment entering/exiting/crossing SD Highway 37 and number of access locations in the vicinity of the intersection, among others.

The other intersection to note is the 403rd Avenue and 254th Street intersection, which exhibited a calculated crash rate of 0.70 crashes per MEV. All three crashes were angle crashes. The

intersection likely experiences similar contributing causal factors as the SD Highway 37 and SD Highway 42/265th Street as the intersection depicts many of the same conditions.

Corridor Segments

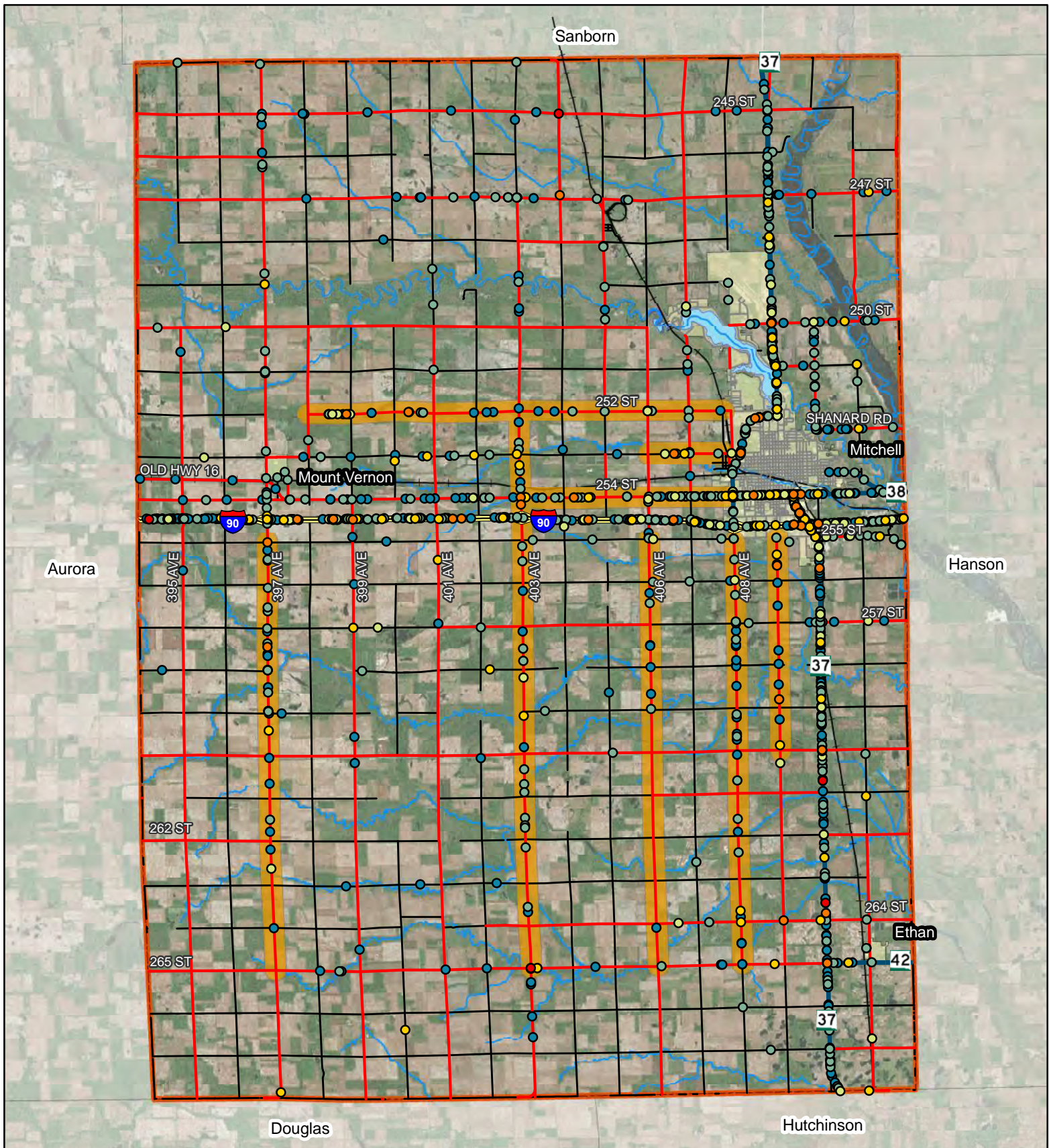
The crash history was also utilized to develop roadway segment crash rates in order to quantify crash frequency in relation to traffic volumes. Segments were selected based on number of recorded crashes and identified safety concerns. Limits were determined by natural break points in the roadway network (such as urban/rural transitions, major roadway intersections, and change in surface). Segmental crash rates are quantified in terms of crashes per hundred million vehicle miles traveled (HMVMT) using the most recently available ADT for a respective roadway segment within the corridor study limits. The 11 selected roadway segments are shown in Table 3 and spatially identified in Figure 2. Additional corridor information, including posted speed limits and ADT volume used in the calculations of crash rates, are provided in Appendix C.

Table 3 – Crashes on County Roadway Segments (2009-2013)

Select North-South County Corridors		Length (miles)	Total # Crashes	Crash Rate (Crashes/HMVMT)
Roadway Corridor	Limits			
397th Avenue	255th St to 265th St	10	29	391
403rd Avenue	252th St to 255th St	3	8	329
403rd Avenue	255th St to 265th St	10	18	349
406th Avenue	255th St to 265th St	10	11	231
408th Avenue	255th St to 265th St	10	28	175
409th Avenue	255th St to 260th St	5	12	272

Select East-West County Corridors		Length (miles)	Total # Crashes	Crash Rate (Crashes/HMVMT)
Roadway Corridor	Limits			
252nd Street	398th Ave to 408th Ave	10	26	234
253rd Street	406th Ave to 408th Ave	2	7	267
254th Street	403rd Ave to Mitchell Limits	5	44	197
<i>Sub-corridor:</i>	<i>406th Ave to Mitchell Limits</i>	2	26	242
Spruce Street	East of SD 37 to Dakotafest Drive	1.15	10	200

Overall, the majority of reported crashes on these 11 corridors involved vehicle-animal crashes, both wild and domestic animals. There were also a number of run-off-road crashes, frequently exhibiting an overturn/rollover type event. With regard to environmental conditions, crashes often occurred during the dusk-to-dawn timeframe and/or dry pavement conditions. The following is a summary of the critical crash factors at each of the 11 roadway segments.



**Figure 2:
Crash History -
Analysis Corridors**

Davison County
MASTER TRANSPORTATION PLAN

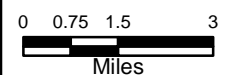
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Crash Severity*

- Fatal Injury (5)
- Incapacitating (42)
- Non-incapacitating (91)
- Possible (125)
- Wild Animal Hit (715)
- No Injury (466)

- Analysis Corridors
- Interstate
- State Highways
- County Roads
- Township Roads
- Rail Lines
- Rivers and Streams (88)
- Cities
- Study Area (Davison County)

* Crash years 2009 - 2013



1 in = 3 miles



397th Avenue, from 255th Street to 265th Street

Of the 29 crashes on this corridor, 10 occurred during daylight hours and 24 occurred in dry conditions. The majority of crashes involved vehicle-animal crashes, at 21 of the 29 crashes. Of the other 8 crashes, 3 were angle crashes, 1 rear-end and 4 run-off-the-road type crashes (3 exhibiting a rollover type crash). The segment crash rate was calculated at 391 crashes per HMVMT, the highest crash rate of the selected corridors.

403rd Avenue, from 255th Street to 265th Street

Crash patterns at this location show less than half, 7 of 18, of the segment crashes occurred during daylight hours and 13 of the crashes occurred under dry pavement conditions. Eight of the 18 crashes involved animals and the other ten involved a run-off-the-road type crash either striking an object on the roadside or exhibiting an overturn/rollover type crash. A fatal crash occurred in 2011 at the southern 403rd Avenue intersection with 265th Street. Failure to yield to vehicle was the identified contributing circumstance. The segment crash rate was calculated at 349 crashes per HMVMT, the second highest crash rate of the selected corridors.

406th Avenue, from 255th Street to 265th Street

The 406th Avenue corridor shows a crash history of 11 crashes, with only 2 occurring during daylight hours and all 11 occurring on a dry roadway surface. All 11 recorded crashes involved vehicle-animal collisions. The segment crash rate on this corridor was calculated at 231 crashes per HMVMT.

408th Avenue, from 255th Street to 265th Street

Crash patterns occurring along this segment show 14 of the 28 crashes occurred during daylight hours and 23 occurred during dry conditions. Similar to the other north-south corridors in the southern half of Davison County, the bulk of the crashes involved vehicle-animal collisions, 20 of 28. Of the 8 other recorded crashes, 6 involved run-off-the-road type crashes (two being overturn/rollover type crashes), 1 involved a rear-end crash and 1 involved an angle crash. The segment crash rate was the lowest of the selected corridors at approximately 175 crashes per HMVMT.

409th Avenue, from 255th Street to 260th Street

Crash patterns on this segment indicated only 3 of the 12 crashes occurring during daylight hours and 10 of 12 occurring on dry pavement. Nine of the 12 crashes involved animals. The other 3 were run-off-the-road type crashes with 2 of those exhibiting overturn/rollover events. The crash rate was calculated at 272 crashes per HMVMT.

403rd Avenue, from 252nd Street to 255th Street

The lone selected north-south segment that extends north of Interstate 90 crash patterns show that 5 of the 8 crashes occurred during daylight hours and 7 of 8 occurred under dry conditions. Two of the crashes involved wild animals. Of the other 8 crashes, 5 were run-off-the-road type crashes (with 3 exhibiting an overturn/rollover event) and 1 was an angle crash. The crash rate was calculated at 329 crashes per HMVMT.

252nd Street, from 398th Avenue to 408th Avenue

A total of 26 crashes were reported on 252nd Street between 398th and 408th Avenues. Of those 26, 13 occurred in daylight hours and 20 occurred under dry pavement conditions. Sixteen of the 26 crashes involved vehicle-animal crashes, 4 were angle, 1 was rear-end and 5 were run-off-the-road

crashes (4 exhibiting an overturn/rollover event). The segment crash rate was estimated at 234 crashes per HMVMT.

253rd Street, from 406th Avenue to 408th Avenue

A total of 7 crashes were noted along 253rd Street between 406th Avenue and 408th Avenue. Five of the 7 crashes occurred during daylight hours and 5 occurred on a dry roadway surface. Unlike the other selected corridors, this corridor includes approximately 1.5 miles of gravel surfacing as well as 1 mile of township jurisdiction roadway west of 407th Avenue. Five of the 7 crashes occurred on an approximately ½ mile segment west of 407th Avenue. The majority of crashes were single-vehicle run-off-the-road crashes, with 2 involving overturn/rollover events and 3 striking a fixed object. The segment crash rate was estimated at 267 crashes per HMVMT.

254th Street, from 403rd Avenue to Mitchell City Limits

Crash history along this segment show 24 of the 44 crashes occurred during daylight hours and 31 of 44 occurred on a dry pavement surface. Unlike several of the other corridors in Davison County, the number of vehicle-animal crashes accounted for less than 50 percent of the segment crashes with 16 of the 44 total crashes. Of the other 28 crashes, 6 involved angle crashes, 2 sideswipe, 8 rear-end, and 12 run-off-the-road (2 with overturn/rollover events and the remaining 10 striking fixed objects). The crash rate for the segment was calculated at 197 crashes per HMVMT.

Twenty-six of the 44 crashes occurred on the two mile stretch between the Mitchell city limits and 406th Avenue. This equates to a calculated sub-segment crash rate of 242 crashes per HMVMT.

Spruce Street, from East of SD Highway 37 to Eastern Dakotafest Driveway

The crash patterns along Spruce Street were evaluated east of the SD Highway 37 intersection to the eastern-most driveway into Dakotafest. A total of 10 crashes were identified over this 1.15 mile segment, with 8 of 10 occurring during daylight hours and all 10 on a dry roadway surface. Five of the 10 crashes were rear-end crashes (4 of those in the westbound travel direction) the other 5 crashes were run-off-the-road crashes (4 of those striking a fixed object and 1 exhibiting an overturn/rollover event). The segment crash rate was calculated at 200 crashes per HMVMT. It should be noted, however, that Spruce Street is subject to seasonal and weekly fluctuations in traffic due to the unique generators east of SD Highway 37, including Mitchell Technical Institute, the Dakotafest grounds, and the Mitchell Livestock Auction.

Five of the ten crashes occurred between August 15 and August 19 in the respective year, with four of those being rear-end type crashes in the westbound direction. These crash characteristics and time of year coincide with the traffic congestion experienced on Spruce Street during Dakotafest.

Corridor Segment Summary

A total of 11 corridor segments were identified for further analysis. Several of those corridors exhibited segmental crash rates in excess of 200 crashes per HMVMT. While the majority of crashes on these segments represented vehicle-animal collisions, there were several other crash types that were common throughout the County.

Run-off-the-road crashes represented the second most common crash pattern. Most of the potential causal factors related to run-off-the-road crashes are applicable to conditions found throughout Davison County on roadways designed decades ago. In many instances, a single causal factor alone doesn't cause a crash, but a series of factors or driver error can exacerbate the situation into a

more dangerous event. Potential causes of this type of crash include: excessive speed, slippery pavement, poor visibility of curves, inadequate roadway lighting, inadequate roadway design, inadequate delineation, inadequate shoulder, and inadequate pavement maintenance.

Railroad Crossing Analysis

Two rail lines traverse across Davison County, briefly joining within the City of Mitchell corporate limits. The BNSF Railway Company (BNSF) owns and operates the north-south line through the region with connections to Yankton and Aberdeen prior to exiting South Dakota. BNSF also owns and operates a line extending east out of Mitchell, connecting to a north-south line along the eastern South Dakota border near Canton. The State of South Dakota currently owns a line extending west of Mitchell to Kadoka, which is operated by Dakota Southern. The primary commodities shipped via these rail lines are agricultural products, thus train frequency is dictated by seasonal fluctuations due to harvest and regional demand.

Two unit train facilities currently exist in Davison County, one at Mount Vernon and a second, and larger, facility on the west side of Mitchell. The ethanol plant located north of Mitchell, near Loomis, also has a connection to a railroad mainline and has recently undergone an expansion to increase railcar storage at the facility. All of these facilities are an integral part of the area's agricultural economy, being able to ship large quantities of products within and outside of the region, and rely on an efficient and reliable local transportation network to bring product and supplies to the distribution locations. In addition to these terminals, other spur lines feed local industrial facilities in the County.

The Federal Railroad Administration Office of Safety Analysis, part of the United States Department of Transportation (US DOT), maintains a national railroad crossing inventory. The inventory lists a total of 65 at-grade crossings in Davison County, 21 private and 44 public. Seven additional crossings are grade separated. Of the 44 listed public at-grade crossings, 37 of them occur outside of the City of Mitchell. These at-grade crossings are typically equipped with passive crossing control such as cross-bucks, but a few do include an active warning system with flashing lights and/or automated gate arm.

Table 4 lists the 10 busiest crossings in Davison County (excluding the City of Mitchell) based on train/vehicle exposures. Train/vehicle exposure is a common measure of railroad crossing volume with is calculated as a function of average daily train volumes and the ADT volumes (i.e., train volumes X traffic volumes), which can be used to prioritize railroad crossing investments.

Through a review of the highway-rail crash summaries from the US DOT Grade Crossing Inventory, two vehicle-train crashes have occurred in Davison County over the last 10 years (2005-2014) of available data. One occurred in 2009 at a Jones Avenue crossing of the BNSF, and the second in 2011 at the 257th Street crossing of the BNSF track. In the instance of the 257th Street crash, it was reported that the train hit the vehicle after the vehicle failed to stop and yield the right-of-way to the train. There were no reported injuries and the SDDOT crash report indicated glare as a contributing factor.

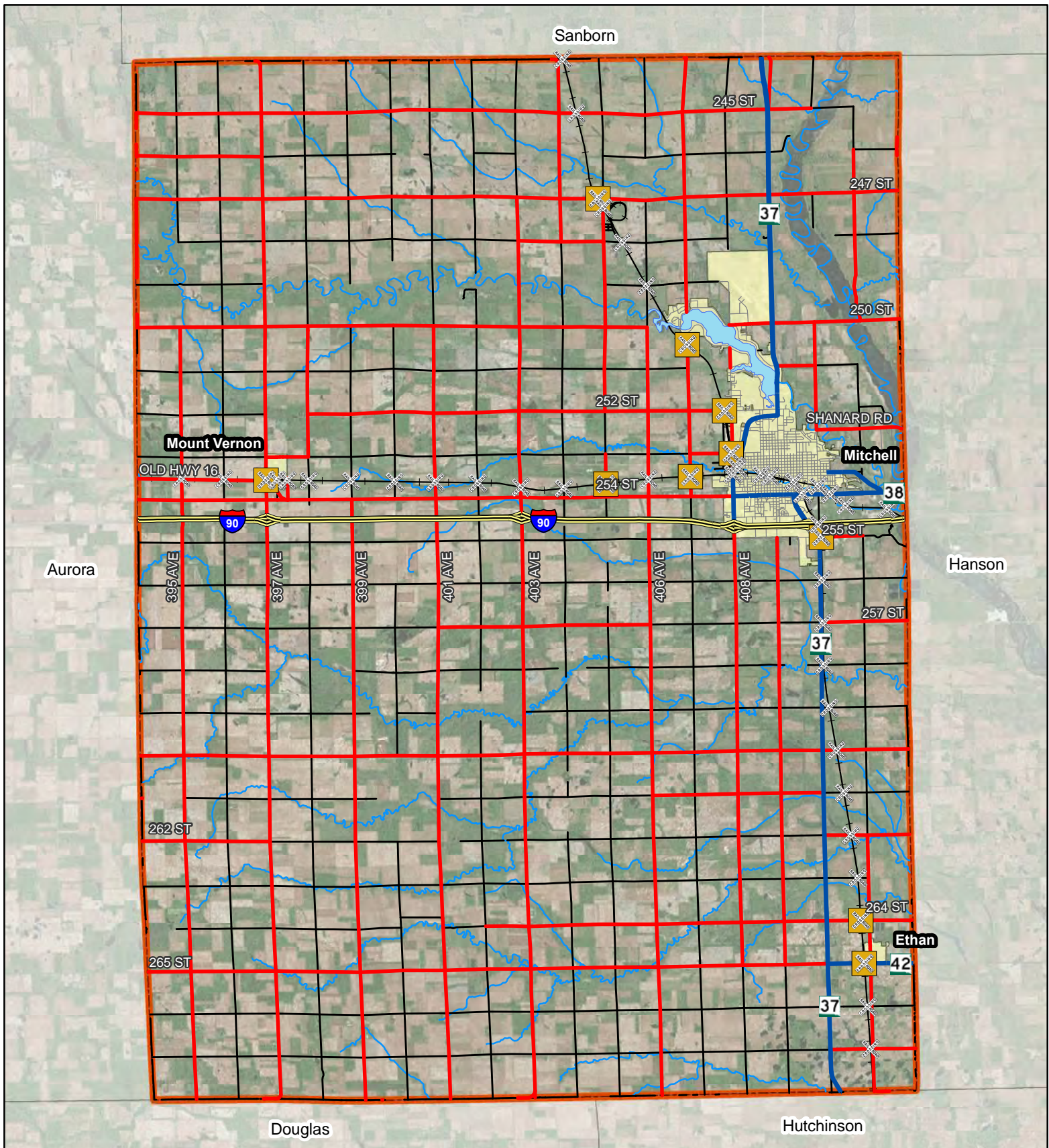
While only two vehicle-train crashes have been reported throughout Davison County since 2005, it is important to understand that these types of crashes can entail random circumstances, which often appears to be the case on a series of low-volume crossings. Similarly, while there may not have historically been a significant number crashes at a particular crossing (often due to limited train-vehicle exposures), the underlying safety issues may still be present creating a potential danger for

the motorist and train. One aspect of a continual railroad improvement program is to identify and address potential issues in the vehicle-train, pedestrian-train, and vehicle-vehicle conflicts.

Table 4 – Railroad Crossing Inventory

Roadway	Railroad Company/ Track Owner	Train/Vehicle Exposures	Crossing Control
Spruce Street	BNSF	5,000	Post-mounted flashing lights, cross-bucks
252nd Street (23rd Avenue)	BNSF	2,920	Post-mounted flashing lights, cross-bucks, stop bar and advance warning pavement markings
SD Hwy 42	BNSF	2,125	Post mounted flashing lights, cross-bucks, stop bar and advance warning pavement markings
253rd Street (8th Avenue)	BNSF	1,505	Cross-bucks
407th Avenue	BNSF	1,265	Gates, post-mounted flashing lights, cross-bucks, stop bar and advance warning pavement markings
264th Street	BNSF	1,125	Cross-bucks, stop bar and advance warning pavement markings
397th Avenue (Earl Street)	Dakota Southern	1,060	Cross-bucks, stop bar and advance warning pavement markings
407th Avenue	Dakota Southern	1,040	Cross-bucks, stop bar and advance warning pavement markings
247th Street	BNSF	910	Gates, post-mounted flashing lights, cross-bucks, stop bar and advance warning pavement markings
405th Street	BNSF	780	Gates, post-mounted flashing lights, cross-bucks, stop bar and advance warning pavement markings

Source: US DOT Grade Crossing Inventory



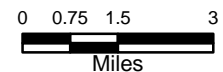
**Figure 3:
Rail Crossings**

Davison County
MASTER TRANSPORTATION PLAN

Legend

- | | | |
|---------------------|----------------|-----------------------------|
| Rail Crossings | Interstate | Rivers & Streams |
| Top Rail Crossings* | State Highways | Cities |
| Rail Lines | County Roads | Study Area (Davison County) |
| | Township Roads | |

*Top Rail Crossings based on Train-Vehicle Exposures



1 in = 3 miles



Traffic and Operations Analysis

In order to better understand existing traffic operations within Davison County, traffic capacity and operations analyses were conducted based on traffic volumes provided by the SDDOT and commonly used engineering standards. The following is a summary of this analysis.

Operations Analysis Measures

The ratio of volume-to-capacity provides a measure of planning-level congestion along a stretch of roadway and can help identify where roadway improvements may be needed. As a high-level planning analysis tool, congested conditions along the roadway segment are likely to exist when the ratio of traffic volume to roadway capacity approaches or exceeds 1.0. Essentially, as traffic volumes approach planning level capacity, traffic operations are expected to deteriorate to low speeds, significant delay, and unstable operations.

Planning level capacity for a specific route is determined by the number of lanes. As the number of lanes on a roadway increases, so does the roadway capacity. Table 5 summarizes the planning level capacity vehicles per day (VPD) based on number of lanes.

Table 5 – Planning Level Traffic Capacity Thresholds

Number of Lanes	Planning Level Capacity (VPD)
2	8,000
3	16,000
4	20,000
5	30,000

Source: South Dakota Department of Transportation Road Design Manual

The transportation industry defines the quality of service offered by highway facilities under specific traffic demands by using the Highway Capacity Manual 2010 Level of Service (LOS) rating. LOS is measured on a scale of A through F, representing the operating conditions of the roadway facility based on speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience measures. LOS A represents traffic that is free flowing on an uncongested roadway while LOS F represents traffic that is creeping or stopped due to a severely congested roadway. With regard to signalized, stop-controlled, and roundabout intersections, LOS is measured by delay a vehicle experiences and subsequent increase in travel time, to traverse through an intersection. Table 6 displays the LOS delay ranges for signalized intersections and two-way stop-control, all-way stop-control and roundabout intersections. For the purpose of this study, LOS D is considered to the primary mobility goal for intersections.

Table 6 – Intersection LOS Thresholds

Level of Service (LOS)	Intersection Delay per Vehicle (sec/veh)	
	Signalized Intersections	Two-Way Stop Control, All-Way Stop Control, and Roundabouts
A	0 – 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

Source: Transportation Research Board, *Highway Capacity Manual*, 2010.

2015 Existing Conditions – Traffic Volumes

The SDDOT provided the most recent traffic counts on County, Municipal, and State roadways throughout Davison County. These volumes, represented by ADT counts, were collected over the previous four years through the SDDOT traffic data collection programs. The bulk of the County-jurisdiction roadway traffic data was collected in 2011. For State highways, roadways within the City of Mitchell, and urban fringe areas, the most recently collected traffic volumes occurred in 2013.

All traffic volumes were factored to 2015 existing conditions using an SDDOT provided growth rate derived from the SDDOT Roadway Information System. A growth rate of 2.3 percent (straight-line) was applied to traffic counts on County roadways and State highways. A 2.2 percent (straight-line) growth rate was applied to Interstate 90 traffic volumes.

HR Green provided supplemental intersection turning-movement counts at the intersection of 403rd Avenue and 254th Street, just north of the Interstate 90 interchange. Traffic counts were collected at this intersection on Wednesday October 22, 2014, from 6:00-9:00 AM and 3:30-6:00 PM to capture the AM and PM peak travel periods.

The intersection turning-movement counts at 403rd Avenue and 254th Street were used to establish current year (baseline) intersection operations and to provide the basis to determine future year intersection operations. The 403rd Avenue (Betts Road) interchange was identified by the SAT as an outlying interchange motorists use to access western and northern Mitchell. As development continues to grow northward and westward, it is anticipated that traffic volumes through this intersection will continue to increase.

The 2015 existing conditions traffic volumes throughout Davison County are presented in Figure 4.

2015 Existing Conditions – Route Volume to Capacity

A volume-to-capacity analysis was completed for select roadway segments throughout Davison County. The selected segments were typically the higher-volume and/or priority routes throughout the County that had existing traffic counts. The exceptions included roadways within the City of Mitchell and Interstate 90.

Overall, analyzed Davison County roadways exhibit a planning-level volume-to-capacity ratio of 'Below 60% Capacity,' depicted by a green roadway segment in Figure 4. This reflects that overall, 2015 existing conditions ADT volumes do not exhibit congested conditions at the planning level along the corridor.

2015 Existing Conditions – Intersection Level of Service

The intersection of 403rd Avenue and 254th Street was analyzed using HCM 2010 two-way stop-control intersection methodology as a baseline for existing conditions. Based on the 2014 collected traffic volumes, this intersection currently measures at LOS A in both the AM and PM peak hours.

Future Conditions Traffic Capacity and Operations Analysis

In order to better understand how projected future traffic volumes may impact traffic operations within Davison County, a future year traffic operations analysis was conducted based on the forecasted 2035 Planning Year traffic volumes.

2035 Planning Year – Traffic Forecasts

Traffic volumes were forecasted to a 2035 Planning Year horizon using a growth rate similar to what was used in factoring recent traffic counts to 2015 Existing Conditions. A straight-line 2.3 percent growth rate was applied to County and State highway routes. A straight-line 2.2 percent growth rate was applied to Interstate 90 traffic volumes. Figure 5 provides a comparison of the 2015 Existing Conditions and 2035 Planning Year traffic volumes, illustrating the anticipated growth over the following 20 years.

2035 Planning Year – Route Volume-to-Capacity

The 2035 Planning Year traffic volumes and planning-level volume-to-capacity ranges for roadway segments are provided in Figure 6. Similar to the 2015 Existing Conditions traffic volumes, all Davison County jurisdictional roadways are projected to exhibit a planning level capacity ratio of 'Below 60% Capacity,' depicted by a green roadway segment.

Three locations approach the 4,800 VPD threshold, representing between 60 and 80 percent of capacity: 254th Street between 407th Avenue and the Mitchell city limits, Spruce Street east of SD Highway 37, and 408th Avenue south of Interstate 90.

2035 Planning Year – Intersection Level of Service

The 254th Street and 403rd Avenue intersection turning-movement volumes were forecasted to 2035 using the SDDOT provided straight-line growth rate of 2.3 percent, similar proportions of daily traffic volumes entering the intersection within the AM and PM peak hours, and existing turning-movement percentages. Based on this methodology, the projected 2035 Planning Year operations for this intersection is projected to be at LOS B at the worst-case stop-controlled approach in the AM and PM peak hours.

One thing to note is that this projection assumes a straight-line growth over the following 20 years, or an increase in overall traffic volumes of approximately 46 percent. This forecast is subject to change due to factors not accounted for in this projection, such as significant development or change in traffic patterns on the west side of Mitchell.

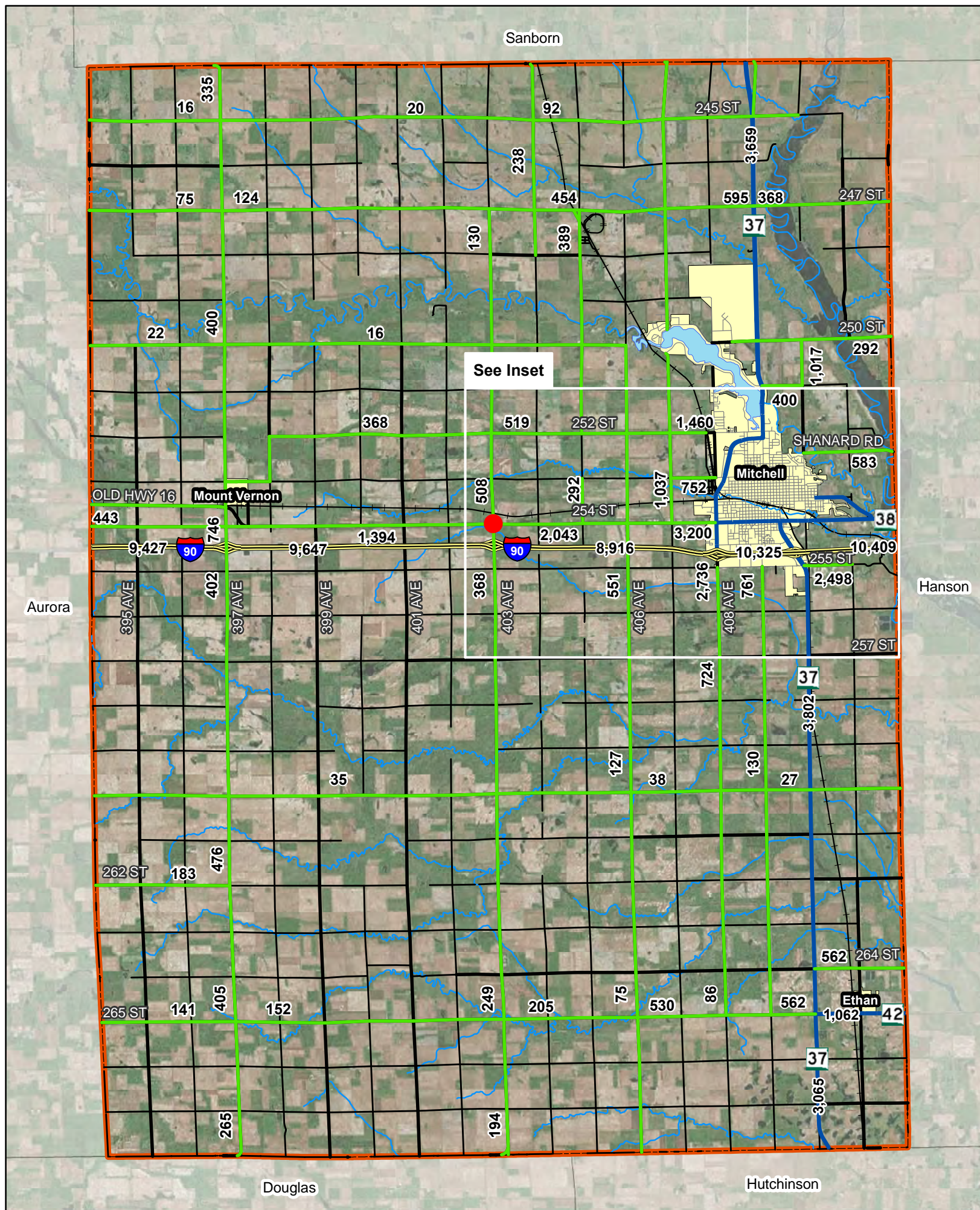
Traffic Operations Analysis Summary

All Davison County roadway segments were found to operate at less than 60 percent of capacity in both the 2015 Existing Conditions and 2035 Planning Year through a planning-level volume-to-capacity ratio analysis.

Three segments were approaching the 60 percent volume-to-capacity threshold of 4,800 VDT: 254th Street between 407th Avenue and the Mitchell city limits, Spruce Street east of SD Highway 37, and 408th Avenue south of Interstate 90. All three locations are located within or extend into the urban fringe growth areas, and should be regularly monitored as development continues outward from Mitchell.

Similarly, the 254th Street and 403rd Avenue intersection will continue to see increasing traffic volumes as Mitchell continues to grow to the west and north. With access to I-90, the 403rd Avenue to 254th Street movement is a western gateway for Mitchell and provides motorists an unofficial bypass route to the north. Further, 254th Street provides the alternate, parallel route to I-90 from cities such as Mount Vernon and Plankinton to the west. The overall makeup of trips through the intersection is a diverse mix. Occurrences such as new development and shifts in travel patterns, both locally and further away from the corridor, will continue to contribute to increasing intersection traffic volumes.

It should be noted, that the quantification and measurement of route volume to capacity does not depict peak hour traffic volume impacts or non-recurring type traffic fluctuations such as special events or operational effects from large, slow-moving vehicles. It also fails to differentiate between corridors with significant variations in frequency of access locations and spacing. Further, unforeseen development or shifts in traffic patterns may have significant impact on specific routes in Davison County. As localized congestion or traffic issues arise, these locations may require further analysis with more detailed data collection to assess the specific conditions.



Legend

Volume to Capacity Ratio

- Above Capacity Threshold (1.0+)
- Between 80% and 100% of Capacity (0.8 - 1.0)
- Between 60% and 80% of Capacity (0.6 - 0.8)
- Below 60% of Capacity (0.0 - 0.6)
- Intersection Studied
- X,XXX Existing Average Daily Traffic (ADT)

- Interstate
- State Highways
- County Roads
- Township Roads
- Rail Lines
- Rivers & Streams
- Cities
- Study Area (Davison County)

**Figure 4:
Existing (2015) Year Traffic
Volumes & Level of Service**

Davison County
MASTER TRANSPORTATION PLAN

0 0.75 1.5 3
Miles
1 inch = 3 miles

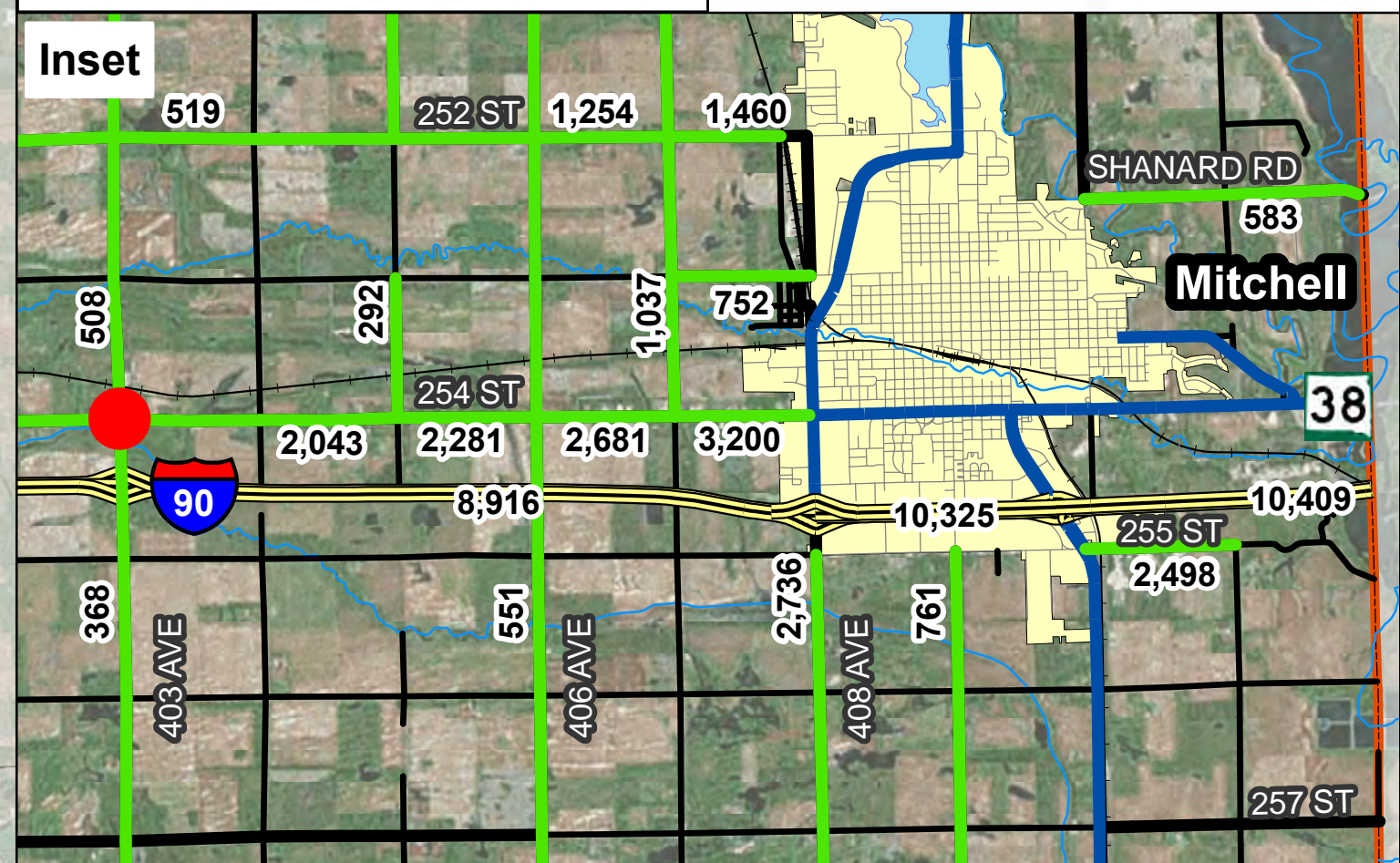


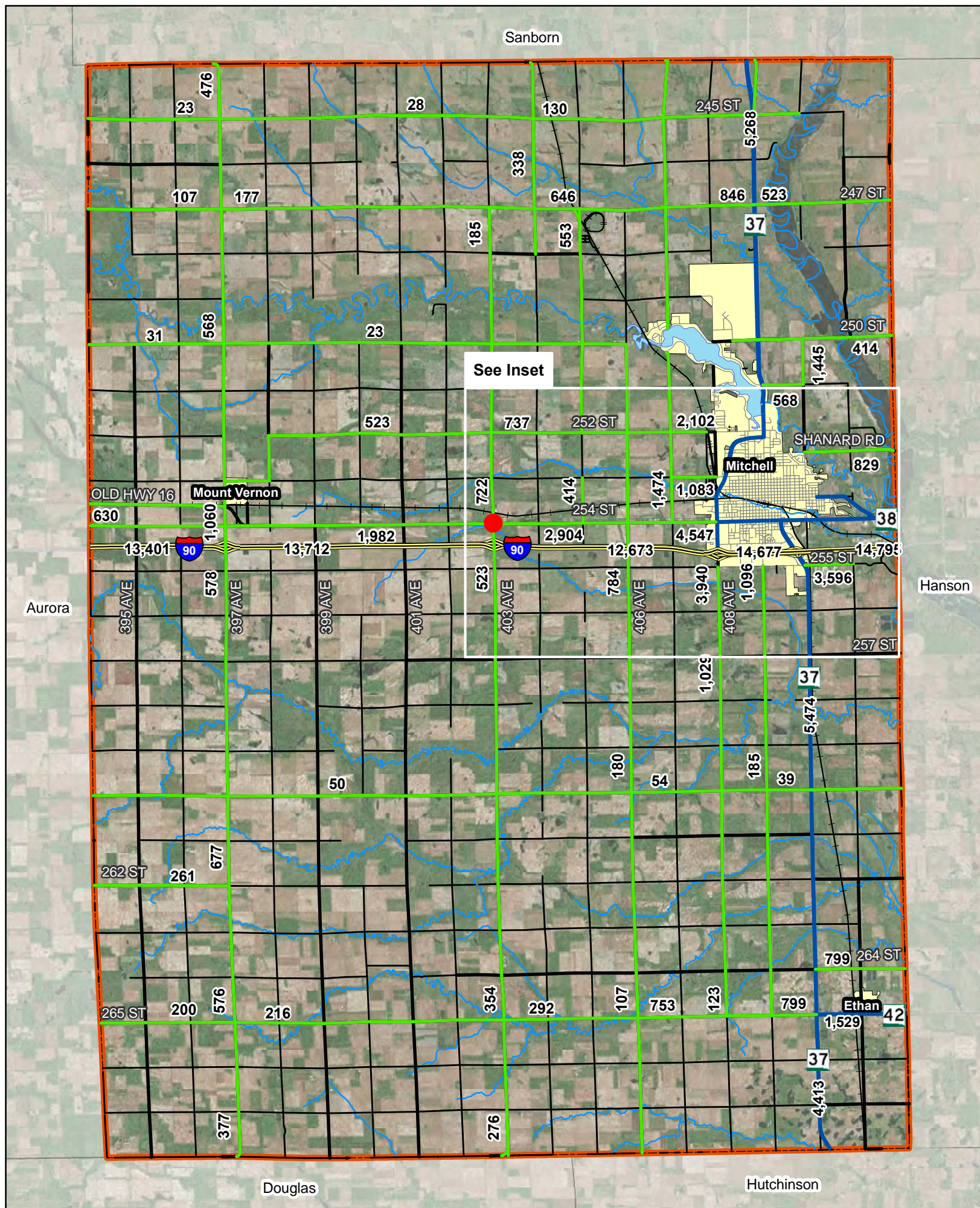
Intersection Studied



- Inset Legend**
- Intersection
 - Stop Sign
 - Existing AM/PM Level of Service

Inset





Legend

Volume to Capacity Ratio

Above Capacity Threshold (1.0+)

Between 80% and 100% of Capacity (0.8 - 1.0)

Between 60% and 80% of Capacity (0.6 - 0.8)

Below 60% of Capacity (0.0 - 0.6)

Intersection Studied

X,XXX Forecast Average Daily Traffic (ADT)

Interstate

State Highways

County Roads

Township Roads

Rail Lines

Rivers & Streams

Cities

Study Area (Davison County)

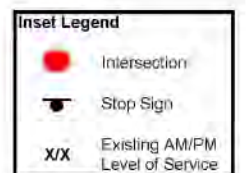
Figure 6:
Forecast (2035) Year Traffic Volumes & Level of Service

Davison County
MASTER TRANSPORTATION PLAN

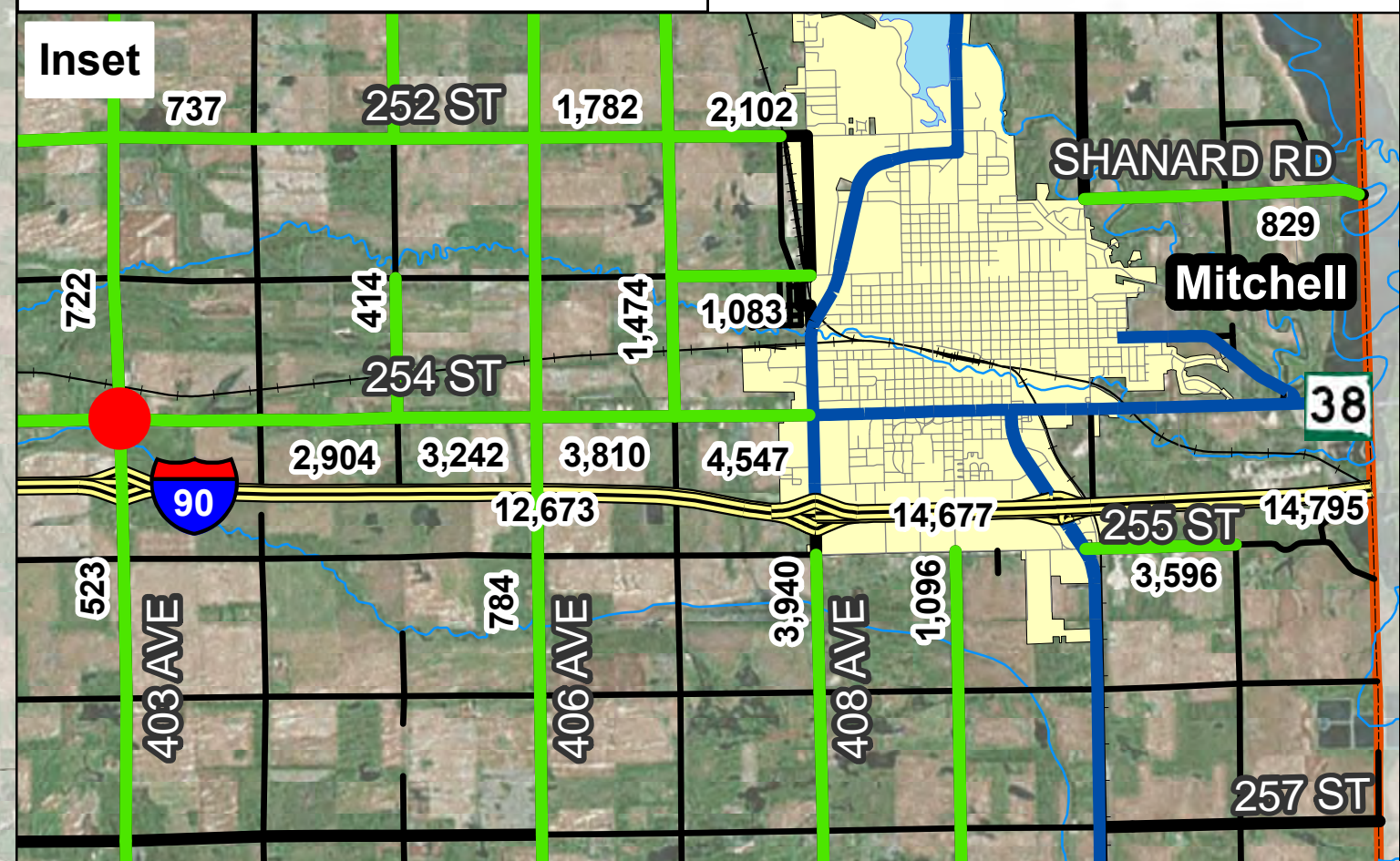
0 0.75 1.5 3
Miles
1 inch = 3 miles



Intersection Studied



Inset



Appendix A – Turning Movement Counts and Traffic Operations Analysis

403rd Ave and 254th St Peak Hour

Manual Traffic Counts

Wednesday October 22, 2014

AM Peak		Eastbound			Westbound			Southbound			Northbound			Total	4-15 Minutes		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	left	Thru	Right		Total Vehicles	Total Trucks	Truck %
6:45	7:00	2	7	8	0	5	14	1	2	0	1	8	2	50			
7:00	7:15	0	9	0	0	1	1	1	4	0	0	2	1	19			
7:15	7:30	0	15	2	3	3	3	0	3	0	1	0	2	32			
7:30	7:45	0	16	0	2	11	1	3	5	0	0	2	6	46			
7:45	8:00	3	21	0	1	6	2	1	4	0	1	4	2	45			
8:00	8:15	1	8	1	2	7	2	0	1	0	0	0	5	27			
8:15	8:30	0	9	0	5	7	1	1	2	2	0	2	2	31			
8:30	8:45	0	6	0	1	10	0	1	1	0	1	3	2	25			
8:45	9:00	0	8	1	5	2	1	0	0	1	0	1	1	20	103	14	14%
Totals		6	99	12	19	52	25	8	22	3	4	22	23	295			
PHF		0.33	0.71	0.38	0.67	0.61	0.67	0.33	0.65	#DIV/0!	0.50	0.38	0.63				
Peak Hour		4	60	3	8	27	8	4	13	0	2	6	15		150	15	10%

PM Peak		Eastbound			Westbound			Southbound			Northbound			Total	4-15 Minutes		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	left	Thru	Right		Total Vehicles	Total Trucks	Truck %
3:00	3:15	0	4	0	4	8	5	3	0	1	1	2	1	29			
3:15	3:30	2	9	1	3	9	2	5	2	4	1	1	4	43			
3:30	3:45	2	5	3	4	16	2	10	7	6	1	2	5	63			
3:45	4:00	0	18	3	0	11	2	6	5	0	0	1	1	47			
4:00	4:15	0	12	0	4	7	0	2	1	2	3	2	1	34			
4:15	4:30	0	6	2	5	12	2	3	0	1	1	4	6	42			
4:30	4:45	0	8	2	1	14	4	12	5	0	0	5	5	56			
4:45	5:00	1	8	2	3	14	0	6	1	0	1	3	0	39			
5:00	5:15	0	8	2	4	25	2	2	1	1	1	2	0	48	185	19	10%
5:15	5:30	1	5	0	1	11	0	0	0	0	1	2	2	23	166	11	7%
5:30	5:45	0	7	2	4	19	2	1	1	0	1	0	3	40	150	11	7%
5:45	6:00	0	8	1	1	20	1	2	1	0	0	3	3	40	151	7	5%
Totals		6	98	18	34	166	22	52	24	15	11	27	31	504			
PHF		0.50	0.61	0.58	0.69	0.67	0.75	0.58	0.54	0.50	0.42	0.75	0.55				
Peak Hr		4	44	7	11	43	6	23	15	12	5	6	11		187	22	12%

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	jdw			Intersection	254th Street and 403rd Avenue		
Agency/Co.	Davison County/SDDOT			Jurisdiction	Davison County		
Date Performed	1/14/2015			Analysis Year	2015 Existing Conditions		
Analysis Time Period	AM Peak Hour						
Project Description <i>Davison County Master Transportation Plan</i>							
East/West Street: <i>254th Street</i>				North/South Street: <i>403rd Avenue</i>			
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	4	60	3	8	27	8	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR (veh/h)	4	60	3	8	27	8	
Percent Heavy Vehicles	10	--	--	10	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	2	6	15	8	22	3	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR (veh/h)	2	6	15	8	22	3	
Percent Heavy Vehicles	10	10	10	10	10	10	
Percent Grade (%)	5			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR		LTR			LTR
v (veh/h)	4	8		23			33
C (m) (veh/h)	1526	1490		874			783
v/c	0.00	0.01		0.03			0.04
95% queue length	0.01	0.02		0.08			0.13
Control Delay (s/veh)	7.4	7.4		9.2			9.8
LOS	A	A		A			A
Approach Delay (s/veh)	--	--	9.2			9.8	
Approach LOS	--	--	A			A	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	jdw			Intersection	254th Street and 403rd Avenue			
Agency/Co.	Davison County/SDDOT			Jurisdiction	Davison County			
Date Performed	1/14/2015			Analysis Year	2015 Existing Conditions			
Analysis Time Period	PM Peak Hour							
Project Description <i>Davison County Master Transportation Plan</i>								
East/West Street: <i>254th Street</i>				North/South Street: <i>403rd Avenue</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	4	44	7	11	43	6		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	4	44	7	11	43	6		
Percent Heavy Vehicles	12	--	--	12	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	5	6	11	23	15	12		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	5	6	11	23	15	12		
Percent Heavy Vehicles	12	12	12	12	12	12		
Percent Grade (%)	5			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	4	11		22			50	
C (m) (veh/h)	1496	1493		839			816	
v/c	0.00	0.01		0.03			0.06	
95% queue length	0.01	0.02		0.08			0.20	
Control Delay (s/veh)	7.4	7.4		9.4			9.7	
LOS	A	A		A			A	
Approach Delay (s/veh)	--	--	9.4			9.7		
Approach LOS	--	--	A			A		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	jdw			Intersection	254th Street and 403rd Avenue			
Agency/Co.	Davison County/SDDOT			Jurisdiction	Davison County			
Date Performed	1/14/2015			Analysis Year	2035 Planning Year			
Analysis Time Period	AM Peak Hour							
Project Description <i>Davison County Master Transportation Plan</i>								
East/West Street: <i>254th Street</i>				North/South Street: <i>403rd Avenue</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	6	85	4	11	38	11		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	6	85	4	11	38	11		
Percent Heavy Vehicles	10	--	--	10	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	3	9	21	6	18	0		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	3	9	21	6	18	0		
Percent Heavy Vehicles	10	10	10	10	10	10		
Percent Grade (%)	5			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	6	11		33			24	
C (m) (veh/h)	1508	1457		824			709	
v/c	0.00	0.01		0.04			0.03	
95% queue length	0.01	0.02		0.13			0.10	
Control Delay (s/veh)	7.4	7.5		9.6			10.3	
LOS	A	A		A			B	
Approach Delay (s/veh)	--	--	9.6			10.3		
Approach LOS	--	--	A			B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	jdw			Intersection	254th Street and 403rd Avenue			
Agency/Co.	Davison County/SDDOT			Jurisdiction	Davison County			
Date Performed	1/14/2015			Analysis Year	2035 Planning Year			
Analysis Time Period	PM Peak Hour							
Project Description <i>Davison County Master Transportation Plan</i>								
East/West Street: <i>254th Street</i>				North/South Street: <i>403rd Avenue</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	6	63	10	16	61	9		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	6	63	10	16	61	9		
Percent Heavy Vehicles	12	--	--	12	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	7	9	16	33	21	17		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	7	9	16	33	21	17		
Percent Heavy Vehicles	12	12	12	12	12	12		
Percent Grade (%)	5			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (veh/h)	6	16		32			71	
C (m) (veh/h)	1469	1466		780			754	
v/c	0.00	0.01		0.04			0.09	
95% queue length	0.01	0.03		0.13			0.31	
Control Delay (s/veh)	7.5	7.5		9.8			10.3	
LOS	A	A		A			B	
Approach Delay (s/veh)	--	--	9.8			10.3		
Approach LOS	--	--	A			B		

Appendix B – Railroad Incident Summaries

HIGHWAY-RAIL GRADE CROSSING

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

Name Of				Alphabetic Code		RR Accident/Incident No.	
1. Reporting Railroad BNSF Rwy Co. [BNSF]				1a. BNSF		1b. TC0311202	
2. Other Railroad Involved in Train Accident/Incident				2a.		2b.	
3. Railroad Responsible for Track Maintenance BNSF Rwy Co. [BNSF]				3a. BNSF		3b. TC0311202	
4. U.S. DOT-AAR Grade Crossing ID No. 382391A		5. Date of Accident/Incident 03/13/11		6. Time of Accident/Incident 06:30 PM			
7. Nearest Railroad Station MITCHELL		8. Division TWIN CITIES		9. County DAVISON		10. State Abbr. 46 Code SD	
11. City (if in a city)		12. Highway Name or No. 257TH ST				<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle Code A. Auto D. Pick-up truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (specify) D				17. Equipment 4. Car(s) (moving) 8. Other (specify) Code 1. Train (units pulling) 5. Car(s) (standing) A. Train pulling- RCL 2. Train (units pushing) 6. Light loco(s) (moving) B. Train pushing- RCL 3. Train (standing) 7. Light loco(s) (standing) C. Train standing- RCL 1			
14. Vehicle Speed (est. mph at impact) 3		15. Direction (geographical) 1. North 2. South 3. East 4. West 2		18. Position of Car Unit in Train 1			
16. Position 1. Stalled on crossing 3. Moving over crossing 2. Stopped on Crossing 4. Trapped 3		Code		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user 1			
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither 4		Code		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither 4			
20c. State the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) 29 °F		22. Visibility (single entry) Code 1. Dawn 2. Day 3. Dusk 4. Dark 4		23. Weather (single entry) Code 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow 1			
24. Type of Equipment Consist 1. Freight train 4. Work train 7. Yard/Switching (single entry) 2. Passenger train 5. Single car 8. Light loco(s) 3. Commuter train 6. Cut of cars 9. Main./inspect. car 1		A. Spec. MoW Equip Code		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry 1		26. Track Number or Name SINGLE MAIN	
27. FRA Track Class 3		28. Number of Locomotive Units 2		29. Number of Cars 112		30. Consist Speed (Recorded if available) Code R. Recorded 30 mph E E. Estimated	
31. Time Table Direction 1. North 2. South 3. East 4. West 3		Code		32. Type of Crossing 1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify) Warning 3. Standard FLS 6. Audible 9. Watchman 12. None			
33. Signaled Crossing Warning		34. Whistle Ban 1. Yes 2. No 3. Unknown 2		Code			
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 1		Code		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown 2		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown 2	
38. Driver's Age		39. Driver's Gender 1. Male 1 2. Female		40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown 2		41. Driver 1. Drove around or thru the gate 4. Stopped on crossing 2. Stopped and then proceeded 5. Other (specify) 3. Did not stop 3	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown 2		Code		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify) 2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed 8			
Casualties to:		Killed Injured		44. Driver was 1. Killed 2. Injured 3. Uninjured 3		45. Was Driver in the Vehicle? 1. Yes 2. No 1	
46. Highway-Rail Crossing Users 0		0		47. Highway Vehicle Property Damage (est. dollar damage) \$2,000		48. Total Number of Highway-Rail Crossing Users (include driver) 1	
49. Railroad Employees 0		0		50. Total Number of People on Train (include passengers and crew) 2		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No 2	
52. Passengers on Train 0		0					
53a. Special Study Block				53b. Special Study Block			
54. Narrative Description DRIVER AGE UNKNOWN							
55. Typed Name and Title		56. Signature				57. Date	

**HIGHWAY-RAIL GRADE CROSSING
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

Name Of						Alphabetic Code		RR Accident/Incident No.	
1. Reporting Railroad BNSF Rwy Co. [BNSF]						1a. BNSF		1b. TC0309200	
2. Other Railroad Involved in Train Accident/Incident						2a.		2b.	
3. Railroad Responsible for Track Maintenance BNSF Rwy Co. [BNSF]						3a. BNSF		3b. TC0309200	
4. U.S. DOT-AAR Grade Crossing ID No. 386033E				5. Date of Accident/Incident 03/06/09		6. Time of Accident/Incident 07:45 AM			
7. Nearest Railroad Station MITCHELL			8. Division TWIN CITIES		9. County DAVISON		10. State Abbr. 46		Code SD
11. City (if in a city) MITCHELL			12. Highway Name or No. JONES AVE						<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private
Highway User Involved					Rail Equipment Involved				
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle Code A. Auto D. Pick-up truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (specify) J					17. Equipment 4. Car(s) (moving) 8. Other (specify) Code 1. Train (units pulling) 5. Car(s) (standing) A. Train pulling- RCL 2. Train (units pushing) 6. Light loco(s) (moving) B. Train pushing- RCL 3. Train (standing) 7. Light loco(s) (standing) C. Train standing- RCL 2				
14. Vehicle Speed (est. mph at impact) 5		15. Direction (geographical) 1. North 2. South 3. East 4. West 3		18. Position of Car Unit in Train 10					
16. Position 1. Stalled on crossing 3. Moving over crossing 2. Stopped on Crossing 4. Trapped 3		Code		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user 2					
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither 4				Code		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither 4			
20c. State the name and quantity of the hazardous material released, if any									
21. Temperature (specify if minus) 27 °F		22. Visibility (single entry) Code 1. Dawn 2. Day 3. Dusk 4. Dark 1		23. Weather (single entry) Code 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow 1					
24. Type of Equipment A. Spec. MoW Equip Consist 1. Freight train 4. Work train 7. Yard/Switching (single entry) 2. Passenger train 5. Single car 8. Light loco(s) 3. Commuter train 6. Cut of cars 9. Main./inspect. car 1				25. Track Type Used by Rail Equipment Involved Code 1. Main 2. Yard 3. Siding 4. Industry 2		26. Track Number or Name YARD			
27. FRA Track Class 2		28. Number of Locomotive Units 2		29. Number of Cars 8		30. Consist Speed (Recorded if available) Code R. Recorded 8 mph E E. Estimated		31. Time Table Direction Code 1. North 2. South 3. East 4. West 1	
32. Type of Crossing 1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify) Warning 3. Standard FLS 6. Audible 9. Watchman 12. None				33. Signaled Crossing Warning		34. Whistle Ban Code 1. Yes 2. No 3. Unknown 2			
Code(s) 07									
35. Location of Warning Code 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 1				36. Crossing Warning Interconnected with Highway Signals Code 1. Yes 2. No 3. Unknown		37. Crossing Illuminated by Street Lights or Special Lights Code 1. Yes 2. No 3. Unknown 2			
38. Driver's Age 38		39. Driver's Gender Code 1. Male 2 2. Female		40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train Code 1. Yes 2. No 3. Unknown 2		41. Driver Code 1. Drove around or thru the gate 4. Stopped on crossing 2. Stopped and then proceeded 5. Other (specify) 3. Did not stop 3			
42. Driver Passed Standing Highway Vehicle Code 1. Yes 2. No 3. Unknown 2		43. View of Track Obscured by (primary obstruction) Code 1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify) 2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed 8							
Casualties to:		Killed	Injured	44. Driver was Code 1. Killed 2. Injured 3. Uninjured 2		45. Was Driver in the Vehicle? Code 1. Yes 2. No 1			
46. Highway-Rail Crossing Users		0	1	47. Highway Vehicle Property Damage (est. dollar damage) \$10,000		48. Total Number of Highway-Rail Crossing Users (include driver) 1			
49. Railroad Employees		0	0	50. Total Number of People on Train (include passengers and crew) 3		51. Is a Rail Equipment Accident / Incident Report Being Filed Code 1. Yes 2. No 2			
52. Passengers on Train		0	0						
53a. Special Study Block					53b. Special Study Block				
54. Narrative Description									
55. Typed Name and Title			56. Signature					57. Date	

Appendix C – Expanded Roadway Segment Crash Summary Table

Crashes on County Roadway Segments (2009-2013)

Select North-South County Corridors		Posted Corridor Speed Limit (mph)	Corridor Segment ADT* (veh/day)	Length (miles)	Total # Crashes	Crash Rate (Crashes/ HMVMT)
Roadway Corridor	Limits					
397 th Avenue	255 th St to 265 th St	55	384 – 436 – 371 <i>south to north</i>	10	29	391
403 rd Avenue	255 th St to 265 th St	55	228 – 337 <i>Increasing south to north</i>	10	18	349
403 rd Avenue	252 th St to 255 th St	55 <i>(55-45 south of 253rd)</i>	337 – 465 <i>Increasing north to south</i>	3	8	329
406 th Avenue	255 th St to 265 th St	55	69 – 114 – 505 <i>Increasing south to north</i>	10	11	231
408 th Avenue	255 th St to 265 th St	55	79 – 663 – 2,616 <i>Increasing south to north</i>	10	28	175
409 th Avenue	255 th St to 260 th St	55 <i>(35-45-55 transition from 255th to Nathan)</i>	119 – 728 <i>Increasing south to north</i>	5	12	272

Select East-West County Corridors		Posted Corridor Speed Limit (mph)	Corridor Segment ADT* (veh/day)	Length (miles)	Total # Crashes	Crash Rate (Crashes/ HMVMT)
Roadway Corridor	Limits					
252 nd Street	398 th Ave to 408 th Ave	55	337 – 475 – 1,148 <i>Increasing west to east</i>	10	26	234
253 rd Street	406 th Ave to 408 th Ave	40-25	719	2	7	267
254 th Street	403 rd Ave to Mitchell Limits	55 <i>(55-50 west of 405th) (50-40 east of 407th)</i>	2,043 – 2,281 – 2,681 – 3,200 <i>Increasing west to east</i>	5	44	197
<i>Sub-corridor:</i>	406 th Ave to Mitchell Limits			2	26	242
Spruce Street	East of SD 37 to Dakotafest Drive	40	2,388	1.15	10	200

* 2011 or 2013 SDDOT ADT Counts used in calculation of corridor crash rates

Appendix C – Public Participation

Davison County

MASTER TRANSPORTATION PLAN

Public Participation Summary

Davison County Master Transportation Plan

July 6, 2015

Prepared For:

South Dakota
Department of Transportation (SDDOT)

Davison County,
South Dakota



Prepared By:



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Figure 5 – Budget for Future Transportation Improvements: Percent of Total Amount Budgeted	7

Introduction

Public participation for the Davison County Master Transportation Plan will be conducted over the course of the ten month project. Initially, the public will have the opportunity to provide the Study Advisory Team (SAT) with input on the existing conditions, issues, and needs of the Davison County transportation network. After the initial feedback is incorporated into the existing conditions analysis, transportation system needs will be forecasted to the year 2035 and a list of projects will be developed. The public will have the opportunity to provide input on the list of projects to help prioritize improvements throughout the County prior to the completion of the Master Transportation Plan.

Throughout the study, several opportunities will be available for public participation; including, stakeholder meetings, public open houses, transportation user surveys, and through providing comments to the SAT and project staff.

Stakeholder Meetings: Existing Conditions and Needs Assessment

On December 2, 2014, a series of stakeholder meetings were held at the Davison County Fairgrounds to gather input from businesses, organizations, and individuals identified by the Study Advisory Team (SAT) as stakeholders. During these stakeholder meetings, approximately 25 participants had the opportunity to view a presentation on the purpose of the Master Transportation Plan and the planning process. Participants also viewed displays featuring existing conditions data collected by the SAT and the consultant team.

After review the materials presented at the meeting, participants provided feedback on their issues and concerns for the Davison County transportation network. Participants identified issue locations on maps with previously identified issue locations within



Stakeholders gather around a map of Davison County to discuss transportation conditions and needs.

Davison County provided at the meeting. The following issues and concerns were identified by stakeholders throughout the meetings:

- Funding for bridge and roadway improvements
- Event traffic congestion and management along Spruce Street related to the sale barn and Dakotafest
- Bicycle and pedestrian issues along Shanard Road, across Interstate 90, and safe routes near schools
- Lighting along SD Highway 38 east of the City of Mitchell
- Bridge condition and weight restrictions
- 250th Street functioning as bypass north of the City of Mitchell
- Pedestrian mobility across SD Highway 37 in the City of Mitchell
- Vehicle safety (crashes) at the intersection of SD Highway 37/Minnesota Street and SD Highway 37/8th Avenue

- Traffic from Innovative along 23rd Avenue
- Need for bicycle and pedestrian facilities along Ohlman Street
- Increased train traffic throughout Davison County creating roadway access issues
- Bridge conditions and ability of handle loads from heavy trucks
- Need for railroad crossing lights at county and township roads

Additional issues were identified on the maps provided during the stakeholder meetings (see Appendix A).

Public Open House: Existing Conditions and Needs Assessment

An open house meeting was held December 2, 2014, at the Davison County Fairgrounds to present the existing conditions and gather input from the public on transportation network needs within Davison County. Approximately, 45 persons attended the open house to view a presentation on the purpose of the Master Transportation Plan and the planning process, review displays featuring existing conditions data collected by the SAT and the consultant team, and comment on issues within the County.



Many of the attendees provided feedback directly to the issue maps located at stations around the meeting room (Appendix A). Issues identified on the maps will be included in the overall transportation issues map for Davison County.

Open House attendees listen to a presentation on the Davison County Master Transportation Plan prior to sharing comments with project staff.

Additionally, attendees provided oral and written comments on the transportation network and issues throughout the County. Several major themes for issues within Davison County were shared with SAT members and project staff. The major themes of comments are as follows:

- Bridge condition, weight restrictions, and functionality with current road user equipment
- Traffic congestion in and around the City of Mitchell
- The use of County roadways as “bypass” routes around the City of Mitchell
- Condition of pavement throughout the County
- Intersection and roadway safety

Several written comments were received following the public open house. Written comments are included in Appendix B.

Transportation Survey Results

A transportation survey was administered between November 19 and December 26, 2014. The survey was distributed through both paper and the internet via SurveyMonkey. Persons attending the open house were encouraged to take the survey prior to exiting the meeting or at

a later date on-line. In total, 77 surveys were received by project staff. Survey results are summarized below, with a copy of the survey questions located in Appendix C.

The transportation survey was composed of 36 questions covering travel characteristics for both residents and non-residents traveling on Davison County roads, perceived condition of roadways in Davison County, future transportation improvements, and transportation funding. Below are select responses to survey questions.

Travel Characteristics

According to survey results, the personal vehicle is the most often used mode of transportation for both residents traveling to school or work. Additionally, for the respondents working in Davison County commute times to work (one-way) do not exceed thirty (30) minutes, with the majority of travelers commuting less than ten (10) minutes. The primary reasons for residents and non-residents of Davison County are as follows:

Residents

- To/From Work
- Grocery Shopping
- Household Errands
- Other Shopping

Non-Residents

- To/From Work
- Household Errands
- Grocery Shopping
- Other Shopping
- Dining Out

Road Conditions

Survey takers were asked to provide their opinion of the current conditions of paved roadways within Davison County. Of the 67 respondents to this question, approximately 63 percent stated pavement conditions of Davison County roadways are “Fair condition.” Approximately 27 percent stated paved roadways were in “Good condition” and 7 percent stated paved roadways were in “Poor condition” (Figure 1).

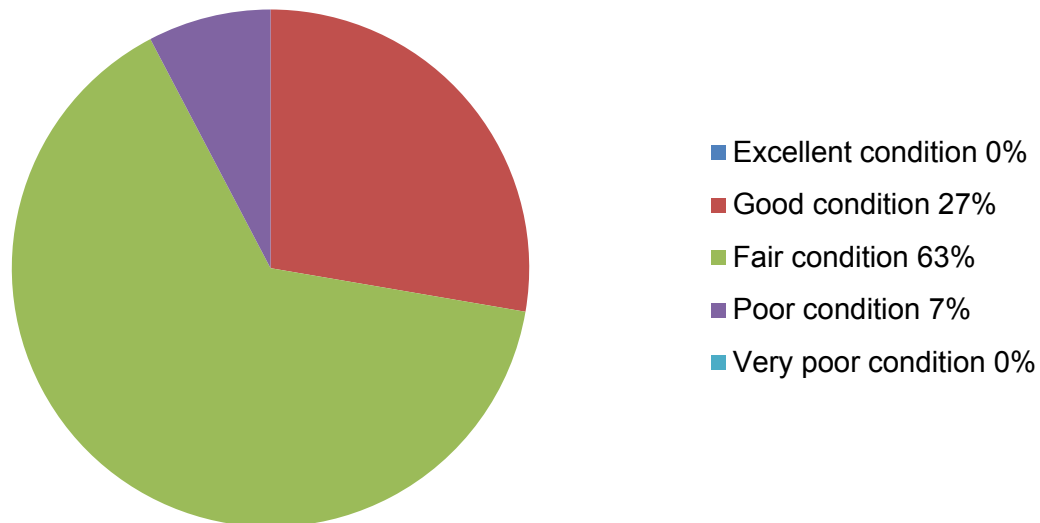


Figure 1 – Paved Roadway Conditions: Percent of Respondents by Condition Level

Additionally, individuals were asked their opinion of the current conditions of gravel roadways within Davison County. Of the 67 respondents to this question, approximately 64 percent noted gravel road conditions in Davison County are “Fair condition.” Approximately 21 percent stated gravel roadways are in “Good condition” and 7 percent in “Poor condition” (Figure 2).

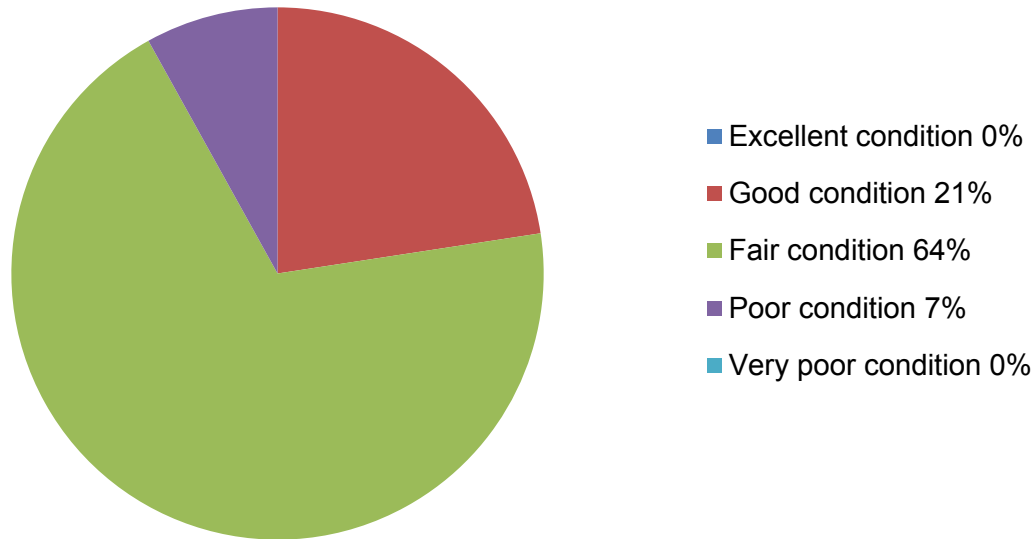


Figure 2 – Gravel Roadway Conditions: Percent of Respondents by Condition Level

Survey respondents were then asked to identify the three safety issues they were most concerned about on roadways within Davison County. Out of 67 responses, the most frequently selected responses were:

- Distracted Drivers (cell phones, texting, etc.)
- Intersections
- Roadway Conditions (pavement surface, ditches, pavement markings, etc.)
- Speeding Vehicles
- Large Vehicles (trucks, farm equipment, etc.)

In order to better understand the perspective of pedestrian and bicyclists in Davison County, survey participants were asked if they walk or bike in Davison County and how safe they feel as a pedestrian or cyclist. Of the 63 participants who answered this question, 47 walk or bike in Davison County of which approximately 30 percent stated they “Somewhat Safe,” as shown in Figure 3. Additionally, only 6 percent of the respondents stated they feel “Not safe” as a pedestrian or bicyclist in Davison County.

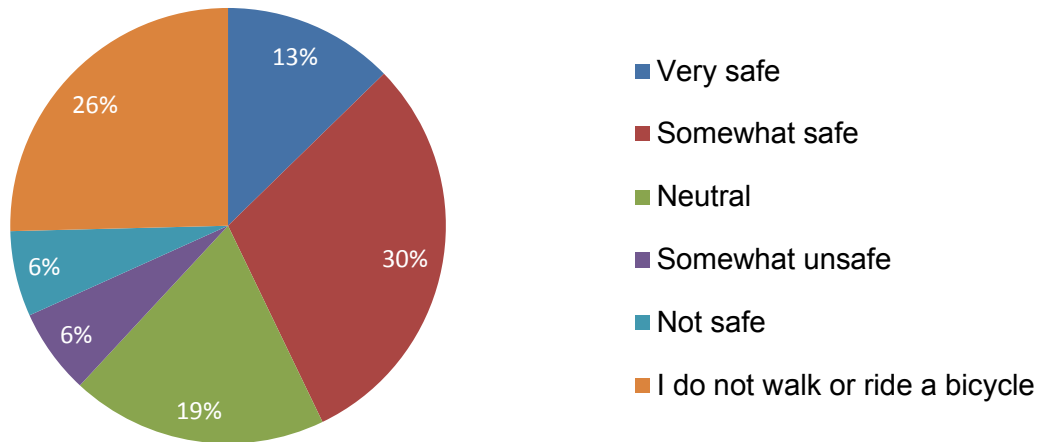


Figure 3 – Pedestrian and Bicyclist Comfort Level: Percent of Respondents by Category

Future Transportation Improvements

Survey participants were also asked a series of questions about the needs of the Davison County transportation system in the next 20 to 30 years. One question asked respondents to select the three most important areas of transportation improvements they see for Davison County. Of the 66 participants who answered this question, the top three areas are:

- County Road Maintenance
- City Street Maintenance
- Township Road Maintenance

Additionally, four participants responded “Other” and provided an explanation for improvements they foresee the county needing over the next 20 to 30 years. Three of the four state bridge replacement or maintenance was important to them. The other participant stated ensuring roads can “handle the heavy traffic without breakup” was important.

Transportation Funding

As a component of prioritizing transportation improvements and evaluating transportation funding possibilities, survey participants were asked about their willingness to support potential increases in fees to support transportation improvements in Davison County. Of the 65 respondents, approximately 49 percent would be in favor of fee increases to support transportation improvements. Additionally, approximately 42 percent stated they were undecided and approximately 9 percent were not in favor of fee increases.

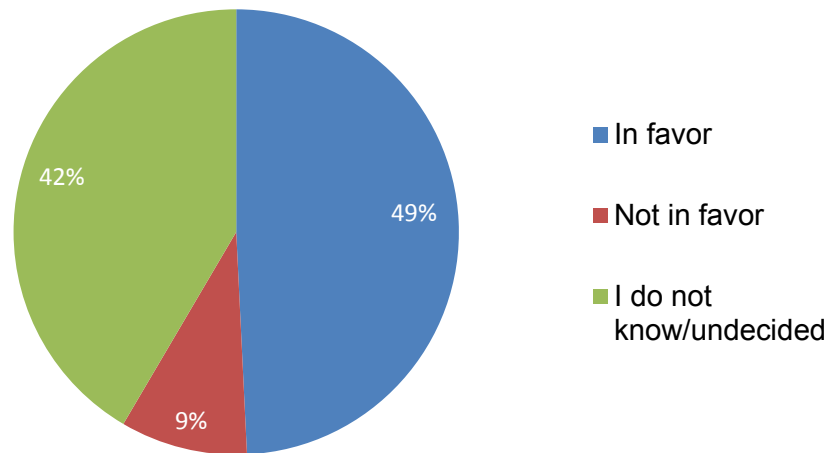


Figure 4 – Support for Increased Fees for Transportation Improvements: Percent of Respondents

Survey participants were also asked to create a budget for future transportation improvement using 100 dollars and distributing the amount between improvement categories. Of the 58 respondents of this question, nearly 56 percent of all funds budgeted were spent on existing road or street maintenance. Of the 58 respondents, 8 chose to budget the entire 100 dollars on existing facility maintenance. Figure 5 presents the percent of the total funds budgeted for each improvement category.

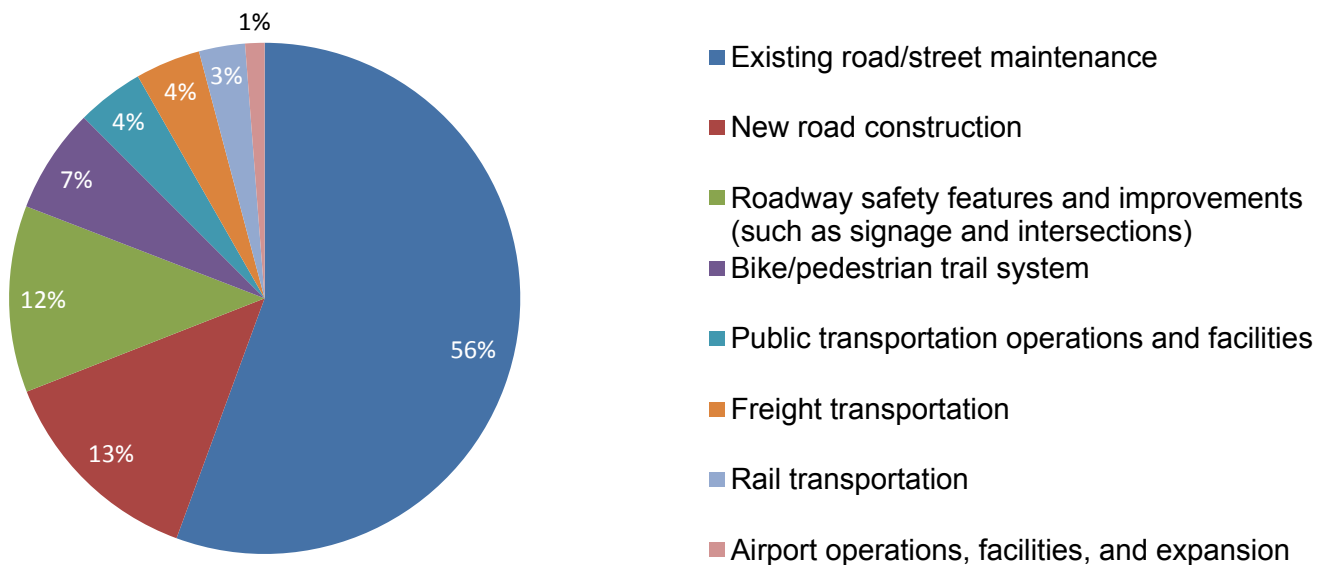


Figure 5 – Budget for Future Transportation Improvements: Percent of Total Amount Budgeted

Stakeholder Meetings: Project Review

A second set of stakeholder meetings were held on June 4, 2015 at the Davison County Fairgrounds to present the list of projects generated to address identified needs, historic and current funding levels for transportation, results of the internet survey, and draft sections of the plan. Eighteen persons registered at one of the two meeting times. Attendees had the opportunity to review informational displays, a presentation on the plan, and discuss the plan with County and Consultant staff.

Feedback gathered during the stakeholder meetings included:

- Support for maintaining the existing system first.
- Bicycle and pedestrian projects should be prioritized after general maintenance and existing roadway system improvements.
- Bicycle and pedestrian projects that are low-cost and easily integrated into other projects should take initial priority over larger, stand-alone bicycle and pedestrian projects.
- General discussion about the funding available through the newly passed Highway Funding Bill (became Law on April 1, 2015), including funding identified for Counties and the State.
- Consideration to the replacement and maintenance of small bridges and culverts not under inspections should be considered.
- Support of improvements to Spruce Street, including a future trail connection as a separate project.



Stakeholder attendees listen to a presentation on the Davison County Master Transportation Plan.

Public Open House: Project Review

A second public information meeting was held on June 4, 2015 at the Davison County Fairgrounds following the stakeholder meetings. Attendees had the opportunity of review the list of projects and priorities generated to address identified needs, historic and current funding levels for transportation, results of the internet survey, and draft sections of the plan. Attendees also had the opportunity to view a presentation on the plan and Davison County transportation funding needs.

Twelve persons registered at the meeting including project staff. Comments provided during the meeting generally echoed the comments made during the stakeholder meetings, including:

- Bicycle and pedestrian projects should be a lower priority than general roadway maintenance and existing system improvements.
- Transportation funding needs to be identified to reduce the current funding gap.

One written comment was received after the public meeting about the 254th Street segment between 403rd Avenue and 408th Avenue being too narrow for the level of traffic and large equipment. The written comment also noted the safety concerns of bicyclists and pedestrians along 254th Street.

Written comments are included in Appendix B.

Appendix

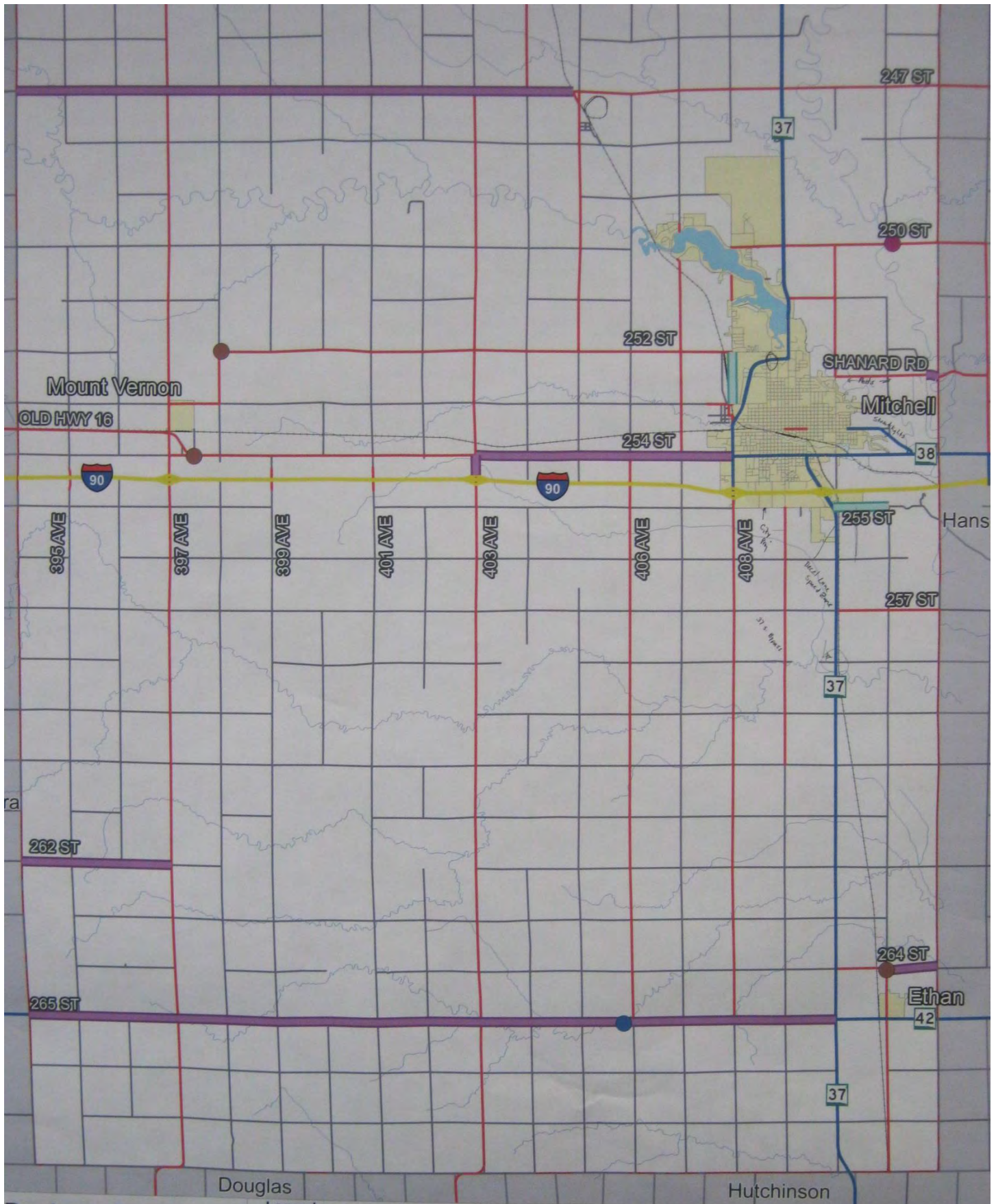
A: Mark up the Map Results

B: Public Meeting Sign-in and Written Comments

C: Internet Survey Results

D: Press Releases, Meeting Advertisements, and Additional Publicity Summary

Appendix A: Mark up the Map Results



Davison County **Issues Map** **Davison County** MASTER TRANSPORTATION PLAN

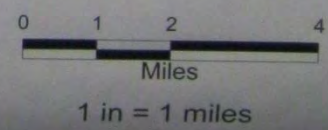
Legend

Issue Type

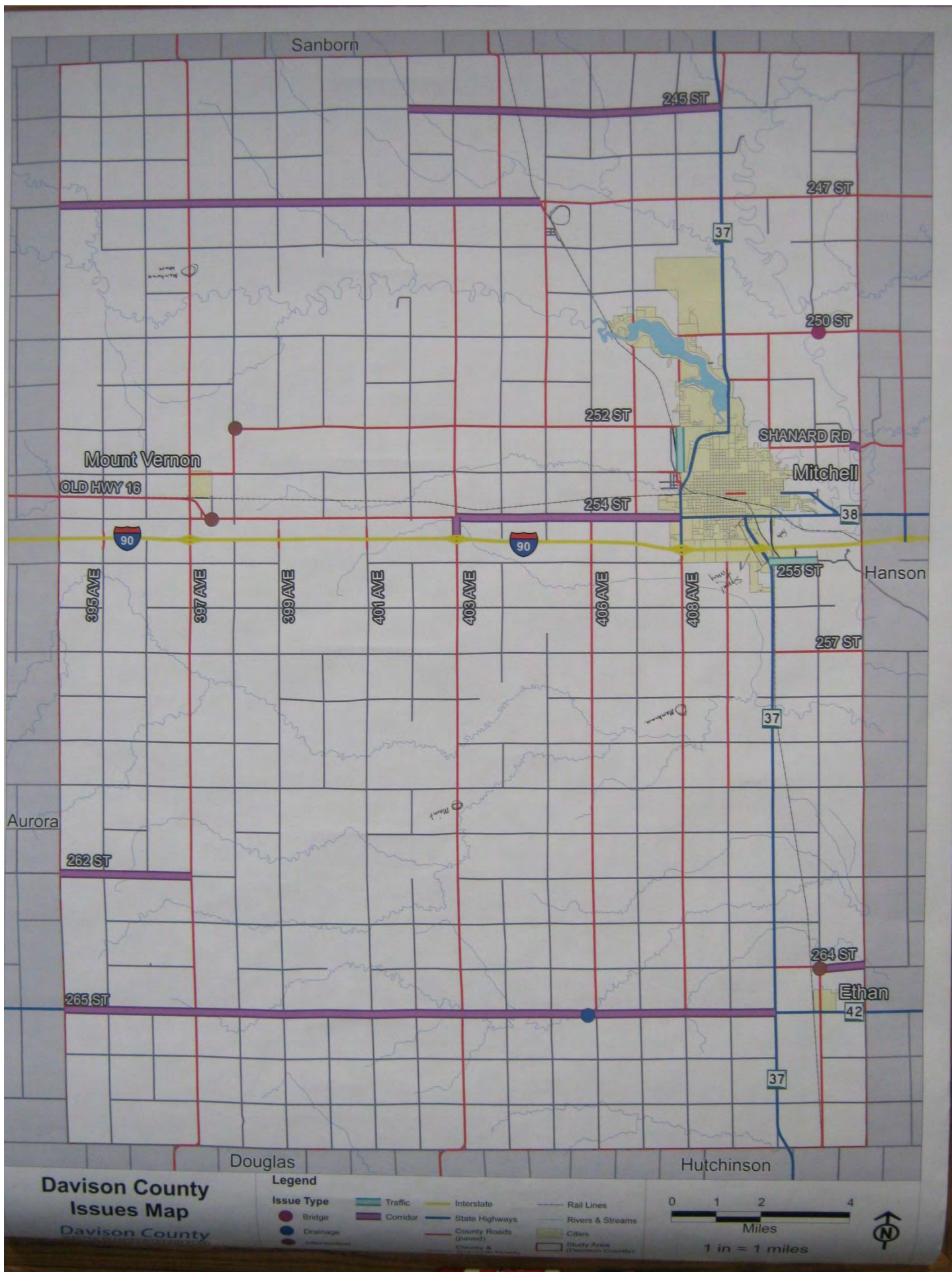
- Bridge
- Drainage
- Intersection

- Traffic
- Corridor
- Interstate
- State Highways
- County Roads (paved)
- County & Township Roads (gravel)

- Rail Lines
- Rivers & Streams
- Cities
- Study Area (Davison County)

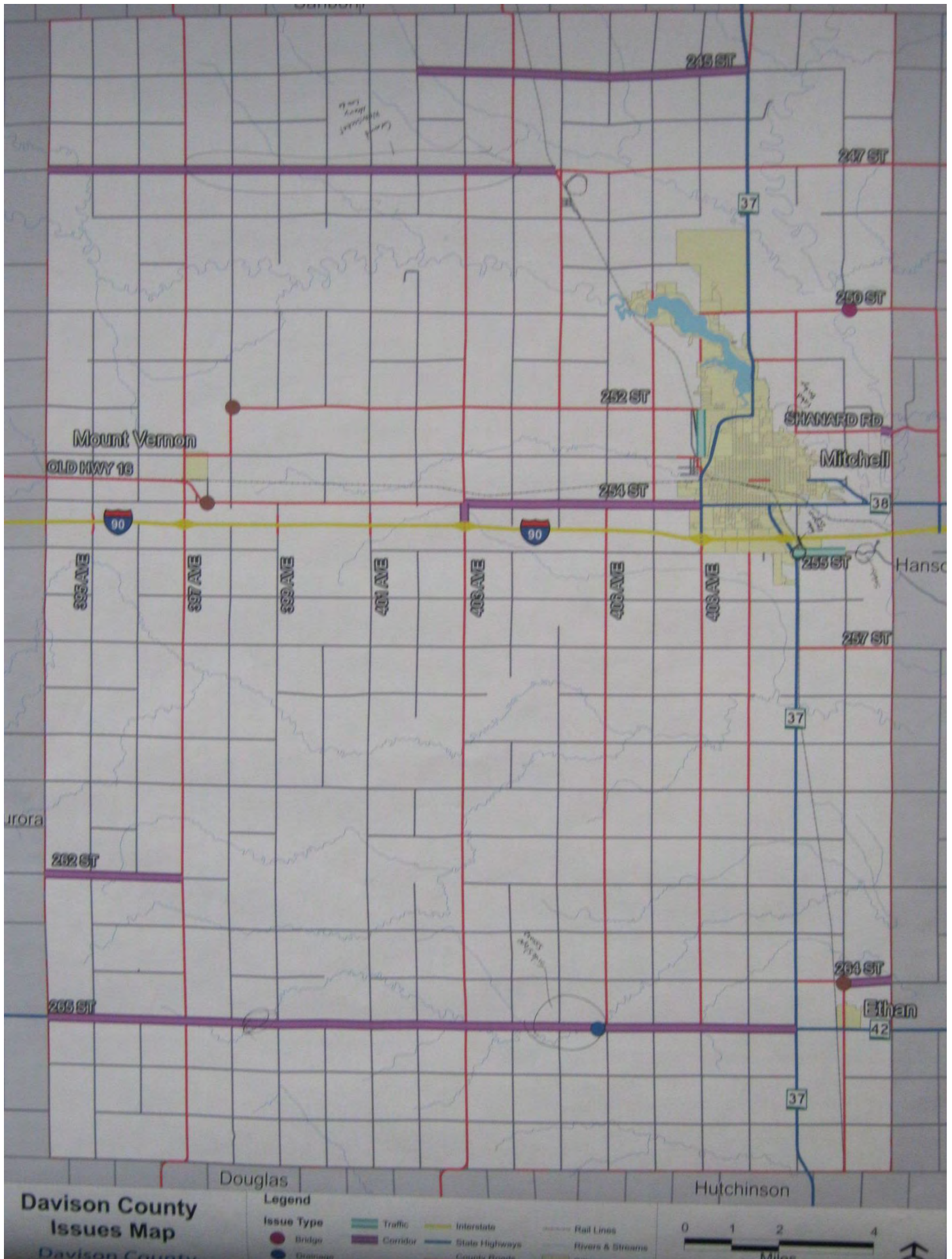




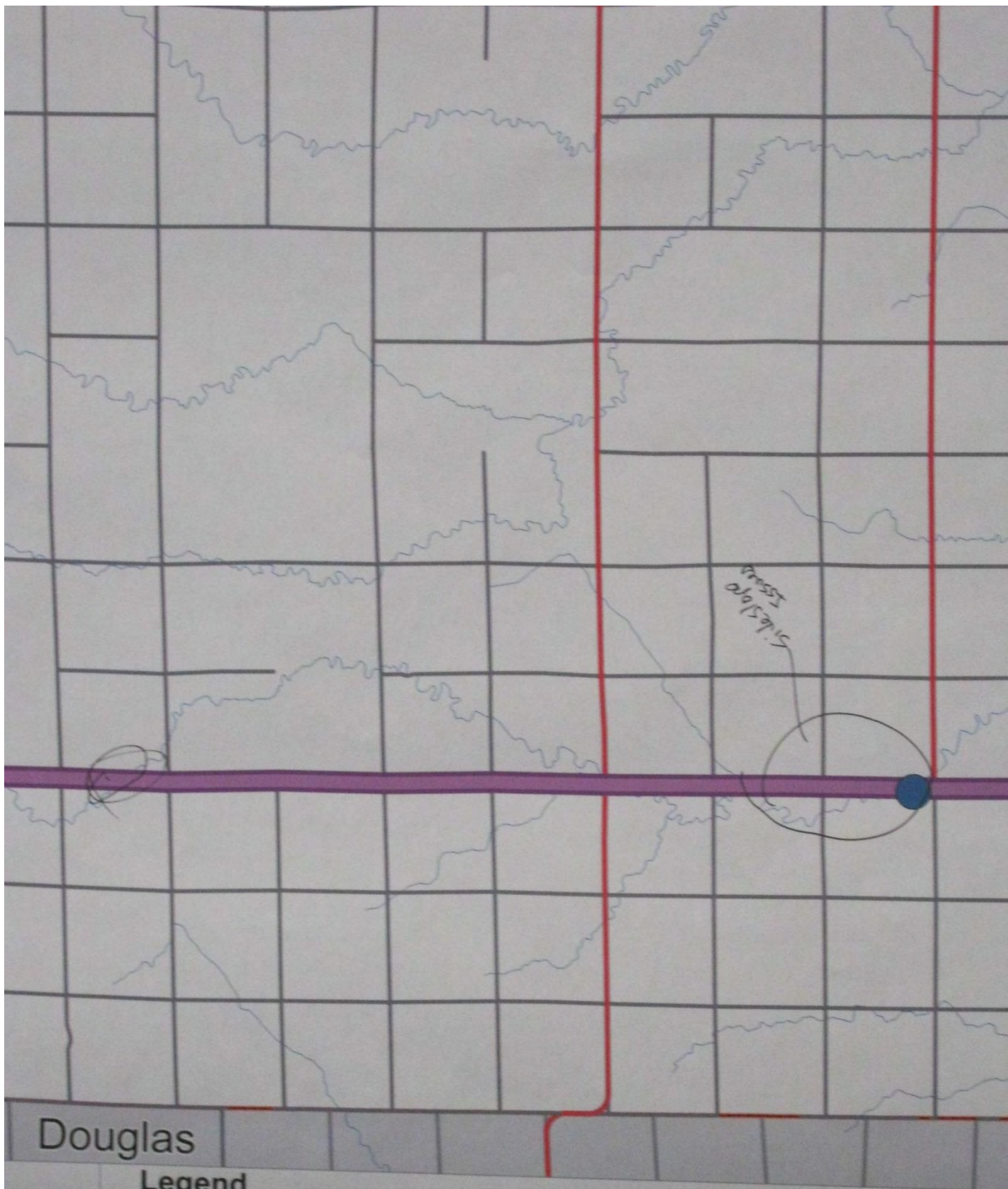












Douglas

Legend

Issue Type

- Bridge
- Drainage
- Intersection



Traffic



Corridor



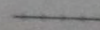
Interstate



State Highways



County Roads
(paved)



Rail Lines

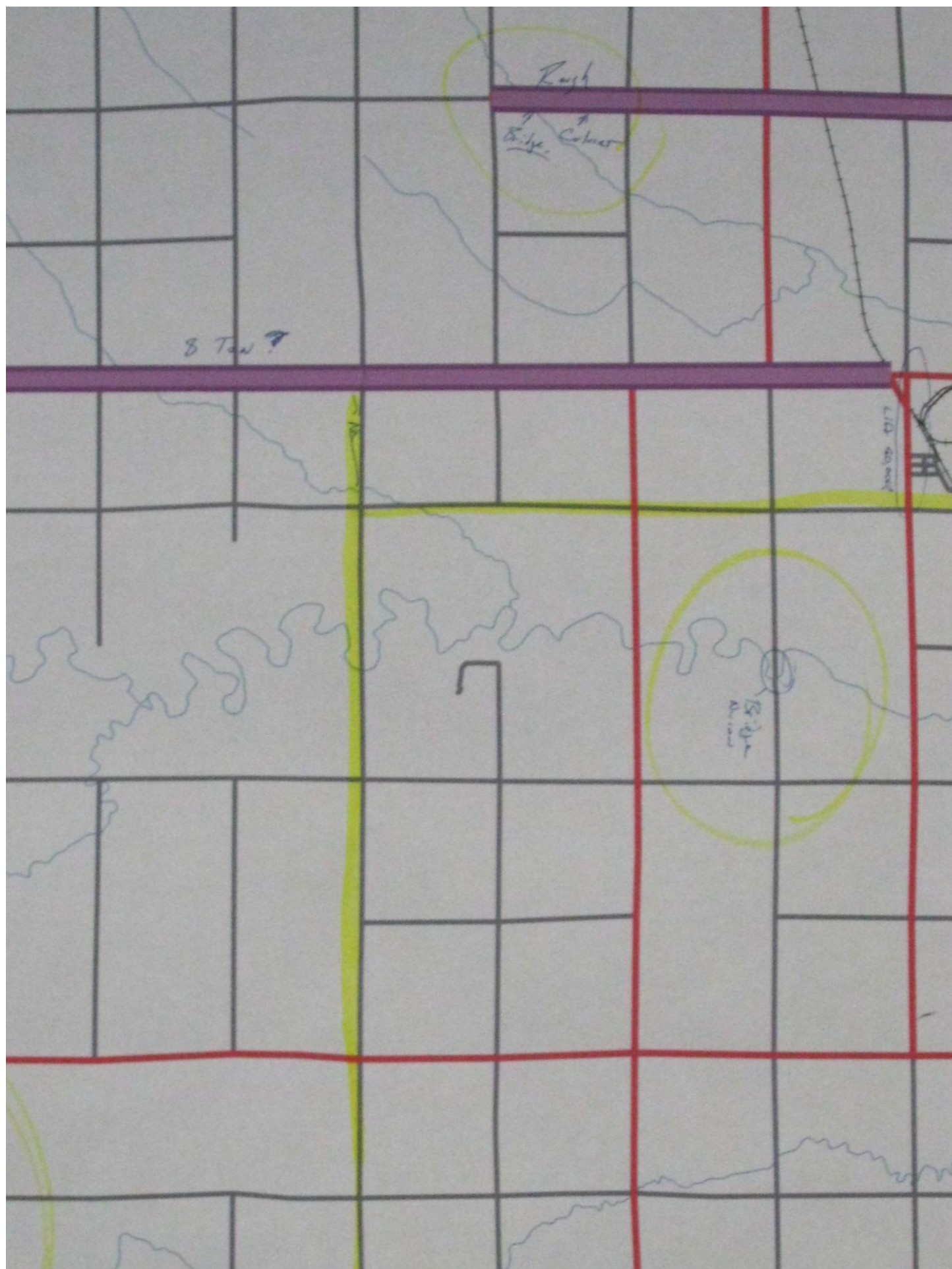


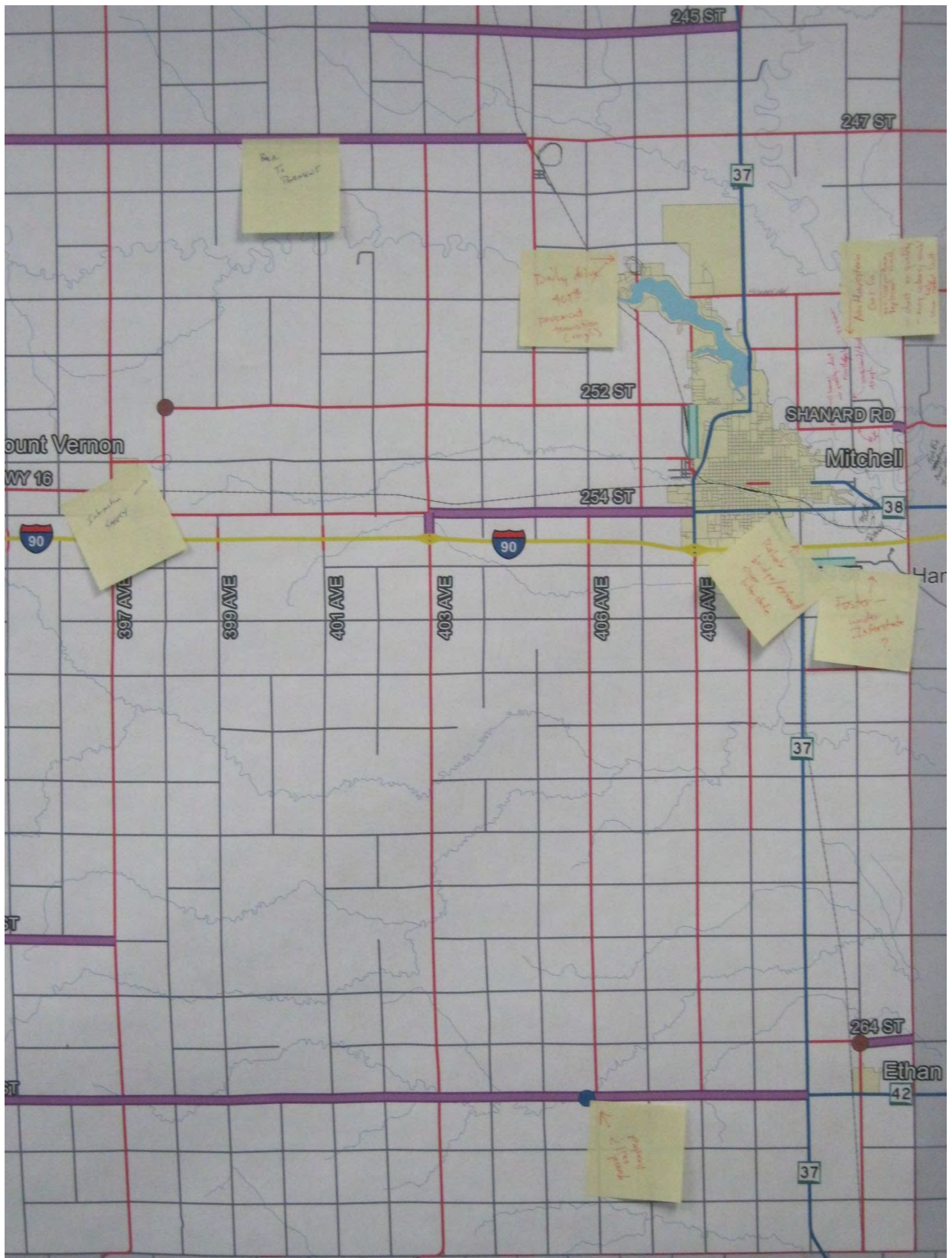
Rivers & Streams



Cities







Appendix B: Public Meeting Sign-In and Written Comments

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
Kari Kirchmeyer	Mitchell	director@mitchellmainstreet.com
Jeff Bathke	200 E. 4 th Mitchell SD 57301	jeffbathke@davisoncounty.org
Rusty Wernberg	1224 W 5 th Mitchell, SD 57301	highway@davisoncounty.org
JOHN GEIDEL	1224 W 5 TH MITCHELL, SD 57301	
Denny Kiner	24998 406 TH AVE	Kinerdr@Santel.net
Lyndon Overweg	201 W 1 st Mitchell	lyndon@mitchelldps.com
Paul Morris	201 W 1 st Mitchell	paulm@mitchelldps.com
Mark Klumb	26296 401 st Ave Mt Vernon	remark@santel.net
Jerry Bachholz	42347 254 th St. Mitchell	jb4@santel.net
Steve Harr	1015 S Miller Mitchell, SD	steveharr@davisoncountysheriff.com
Steve Brink	1015 S Miller Mitchell SD	steve.brink@davisonsheriff.com
Dick FigLAND	705 N CAPITAL Mitchell SD	DFIGLAND.CITYOFMITCHELL@MIDNIGHTWALK.COM

Stakeholder Meetings

Davison County Fairgrounds Complex, Meeting Hall, December 2, 2014

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
Southern Miller	Mitchell Chamber 601 W Main	Info@mitchellchamber.com
Jessica Pickett	300 W 1st Mitchell SD 57301	jpickett@cityofmitchell.org
Jolynn Hansen	300 W 1st Mitchell, SD 57301	jhansen@cityofmitchell.org
Don Kolbe	500 Wildwood Ave. Mitchell SD 57301	remol@mit.midco.net
Christie Gunkel	200 E 4th Mitchell	Christieg@davisoncounty.org
Alan Bidas	26106 - 398th Ave mt. Vernon SD	
Bill Nebeker	25855 408th Ave Mitchell SD	
Larry L. Olsen	25643 403rd Ave. Mitchell SD 57301	
Marcus Traxler	120 S. Lawler Daily Republic Mitchell, SD	
Graig Stohly	24842 402 Ave Mitchell	Stohly@mit.midco.net
Charlie Edinger	1432 Kemper Ave, Mitchell	charlie-edinger1969@hotmail.com chet@mitchelltelecom.net
Loren Weyhaupt	39971 266th St Mt Vernon SD	l.bwsg@sanitel.net

Stakeholder Meetings

Davison County Fairgrounds Complex, Meeting Hall, December 2, 2014

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
Lewis Bankhead	Enlow	

PUBLIC OPEN HOUSE

Davison County MASTER TRANSPORTATION PLAN

Name	Address	Email
Tyler Graham	1610 S Burr st.	Grahamoil@gmail.com
Stan Petersen	1404 N. Rowley Mitchell SD	Stan@CampbellSupply.com
Steve Gramm	700 E. Broadway Pierre	Steve.gramm@state.sd.us
RANDY HART	1421 S. Burr Mitchell SD	mhcartell.sd@americiana.com
Jay A. Larson	505 W 11th Mitchell, SD	
Lyle Bode	24539-398 Ave Mt Vernon, SD	
Brian Bode	24767 398 Ave Mt Vernon	arcticcat121@hotmail.com
Harvey Kelley	40580 250th St Mitchell SD	HARVIE@SANTel.net
Gary Schloffman	2240 E. SPRUCE Mitchell	GMsch@aol.com
ORVILLE STEVENSON	40330 25th ST	
RANDY REIDER	309 Mildred CT Mitchell	reiderman@hotmail.com
Dave Helleloid	1506 S Burr, 2020 Highland way MITCHELL	clusty.e.mitchell@telecom.net

(12)

PUBLIC OPEN HOUSE

Davison County MASTER TRANSPORTATION PLAN

Name	Address	Email
LARRY GRISTAL	1516 Pinehurst Mitchell	ldg@mtcbletelecom.com
Jerry Buchholz	40247 554 th St Mitchell	Same
+2 children Brenda Bode	24539 398 th Ave Mt Vernon	lylebodefarm@santel.net
Sarah Bode	24767 398 th Ave Mt Vernon	Sarahannbode@gmail.com
Kim Weitala	1400 W. Cedar MHE	weitala7@hotmail.com
Paul Rippe	1615 N. Gale Rd Mitchell	pj.rippe@gmail.com
Delbert Rippe	1615 N. Gale Rd Mitchell	d.rippe@hotmail.com
Larry Hassz	40245 248 ST Mitchell	
DANNY PROM	704 E. NORWAY MITCHELL	N/A
Steve Sibson	411 W. 4 th Ave Mitchell	sibbyonline@hotmail.com
Billy Lurken	405 W 11 th Mitchell	billy.lurken@gmail.com
John Pommer	25359 425 th Ave Alexandria	

SD

(14)

PUBLIC OPEN HOUSE

Davison County MASTER TRANSPORTATION PLAN

Name	Address	Email
Delmar Mueller	26316 408 Ave E then	
Roger Hagenan	22811 443rd Ave Ramona S.D.	
Jeff Brosz	700 E Broadway Ave Pierre SD	
Mike	25406 398th Ave Mt Vernon SD	
Isaiah Christopher	2761 East 1st Ave Mitchell	MitchellLIVESTOCK@Santel.net
Danny Kinger	24998 406th Ave. '11	
Rush Wenzel	1224 W 5th Mitchell	
Damon Keith	26791-397 Mt Vernon	
Dean Baker	25337 395 Mt Vernon	
Robert S. Smith	Mt Vernon	
Wally Moore	40864 246 Mitchell	

(11)

PUBLIC OPEN HOUSE

Davison County MASTER TRANSPORTATION PLAN

Name	Address	Email
Eric Prunty	603 N. Lafayette St. Packston SD 57366	ericp@broszengineering.com
Dave Feddeher	Lake County Hwy	
Bruce Haines	1704 N. Main Mitchell SD 57301	brucehaines@questoffice.net
Jim Long	mt, Vernon SD 57363	
Dan Long	1100 S. Burr St.	
Pat Kretsch	711+ Vernon	

6

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
HR Green Staff		
Jon Wiegand		
Bill Moran		
marcus Coenen		
Ross Harris		

Stakeholder Meetings *and Public Information meeting*
Davison County Fairgrounds Complex, Meeting Hall, December 2, 2014

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
Steve Gramm	700 E. Broadway Ave.; Pierre	Steve.gramm@state.sd.us
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Jerry Buchholz	40247 354th St Mitchell	JB4@Santel.net
Marcus Trade	1205 Lander, Mitchell	mttrade@mitchellpublic.com
Randy Reider	309 Mildred CT, Mitchell	
Larry Hasz	40245 248 ST Mitchell	
Eric Prunty	603 N. Lafayette St. Parkston SD 57366	ericp@broszengineering.com
Bond Bode	24539 398th Ave Mt Vernon ⁵⁷³⁶³	lyle.bode.farm@Santel.net
Joel Wieczorek	26509-395th Ave Mt. Vernon	
Jay Peppel	81300 East Norway	Jay.Peppel@State.SD.US
Jon Wiegand	HR Green	
Marcus Coenen	HR Green	

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
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Quern Neugebauer	40620 267 th Ethan S. Rd	
Joan Lubben	2840 Dailey Dr Mitchell	jolubben@dwc.edu
SHANE CROWE	612 N. MAIN MITCHELL SD 57301	scrowe@cityofmitchell.org
Jerry Buchholz	40547 254 th St Mitchell	jb41@santel.net
Jeff Bathke	200 E. 4 th St. Mitchell SD 57301	jeffb@davisoncounty.org
John Claggett	440 West 13 th	johncclaggett@mit-fel.net
Quill Fineman	40330 254 th St Mitchell	
Rusty Wankel	Davison County Hwy	
Mark Krumo	26296 401 st Ave Mt. Vernon	remark@santel.net
Todd Kirby	1800 E. Eu. Road	todd.kirby@chsinc.com
Jim Marken	"	jim.marken@chsinc.com

Interested Participants, Public Agencies, Schools, and
Businesses in Davison County

Davison County

MASTER TRANSPORTATION PLAN

Name	Address	Email
Todd Freudenholz	PO BOX 549 Parker SD 57366	Todd.Freudenholz@Pact.Com
Carol Millard	25533 404 th Ave Mitchell	mill@satel.net
Alex Smith	700 E Broadway, Pierre	Alex R. Smith @ State Sd.us
Steve Gramm	700 E Broadway ; Pierre	Steve.gramm@state.sd.us
Jon Wiegand	HR Green	
Marcus Coenen	HR Green	

Stakeholder Meetings

Davison County Fairgrounds Complex, Meeting Hall, June 4, 2015

December 2, 2014 Stakeholder Meetings and Public Information Meeting

Stakeholder Sign-In Attendance: 29

Public Information Meeting/Open House Sign-In Attendance: 48

Written comment summary:

Although it is not directly a county issue, the County should attempt to influence DOT (State) to assist the City in extending Foster Street under I-90 to connect to the MTI campus. This will eliminate issues related to the traffic congestion on SO 37 and the Spruce Street / RR crossing adjacent to MTI.

Good Meeting / Keep Up the good Work!

Speak was easy to listen to!
Process was commendable!
I like the maps & the discussion!
Good job!

Turning lane's to go North down
by Jrm River and Edge of Mitchell
Turning onto Foster Street

Between I-90 & Haven's going north
Right hand turning lanes on Norway
& Kay

1. How does your organization use the transportation system in Davison County? Are there any critical needs or opportunities? If so, where?

I am primarily concerned that 265th St. West of Ethan is taken care of as it has needed attention for many years. I appreciated hearing that 5 miles will be done in 2015 and more in 2016.

2. What transportation improvements should be identified that support or are needed to achieve the long range goals of your organization?

3. How would your business or operations be impacted without an adequate transportation system? How would your business or operations be impacted by a future roadway network that looks different from today (e.g. road/bridge closures, changes in pavement surfacing, new or closed connections) and are there any specific locations/connections that are vital to your operations?

With increased yields we need good roads, but for me 265th is crucial for my needs in traveling to Mitchell where most of my business is done.

Pictures regarding washboard conditions on N Gale Road, north of Shanard Road.







June 4, 2015 Stakeholder Meetings and Public Information Meeting

Stakeholder Sign-In Attendance: 18

Public Information Meeting/Open House Sign-In Attendance: 12

Written comment summary:

this is about 254 St segment from 403ave to 408ave.

It is too narrow when people are moving large machinery in and out of the machinery dealers.

I think it would be better to have 2 wider lanes instead of a third middle lane.

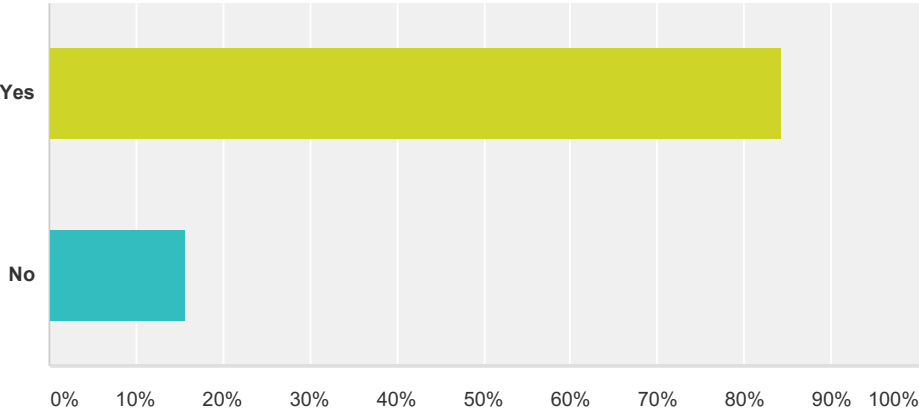
also some people like to hike or bike here but is a dangerous situation for them at times.

Thank you

Appendix C: Internet Survey Results

Q1 Do you work in Davison County (any city or township within Davison County)? If you have more than one job, please answer for your primary employment. If not, please answer “No” and you will be taken to the next section of the survey.

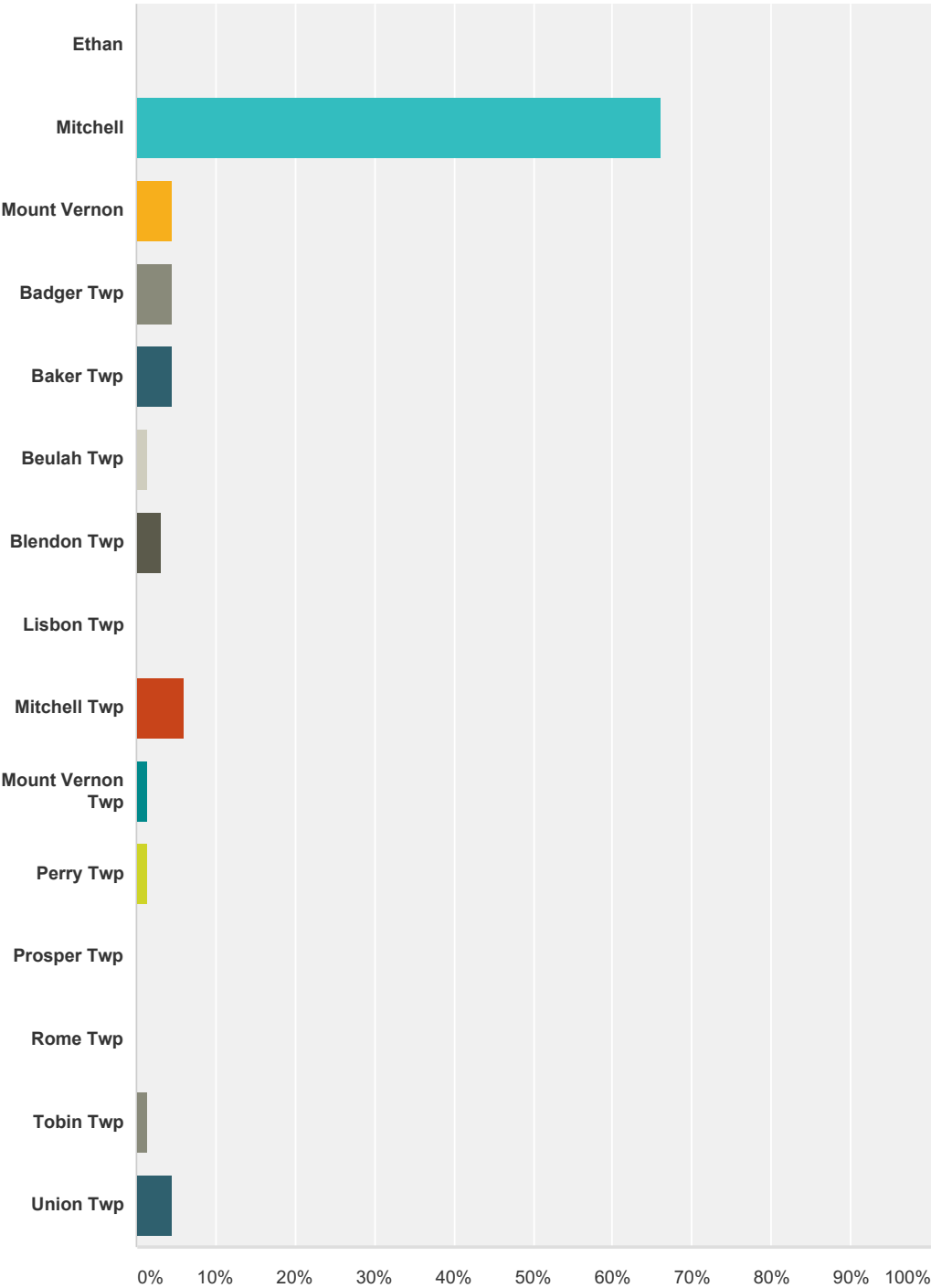
Answered: 77 Skipped: 0



Answer Choices	Responses	
Yes	84.42%	65
No	15.58%	12
Total		77

Q2 In Davison County, in which city or township is your place of work located?
Please click here for a map: Davison County Township Map

Answered: 65 Skipped: 12



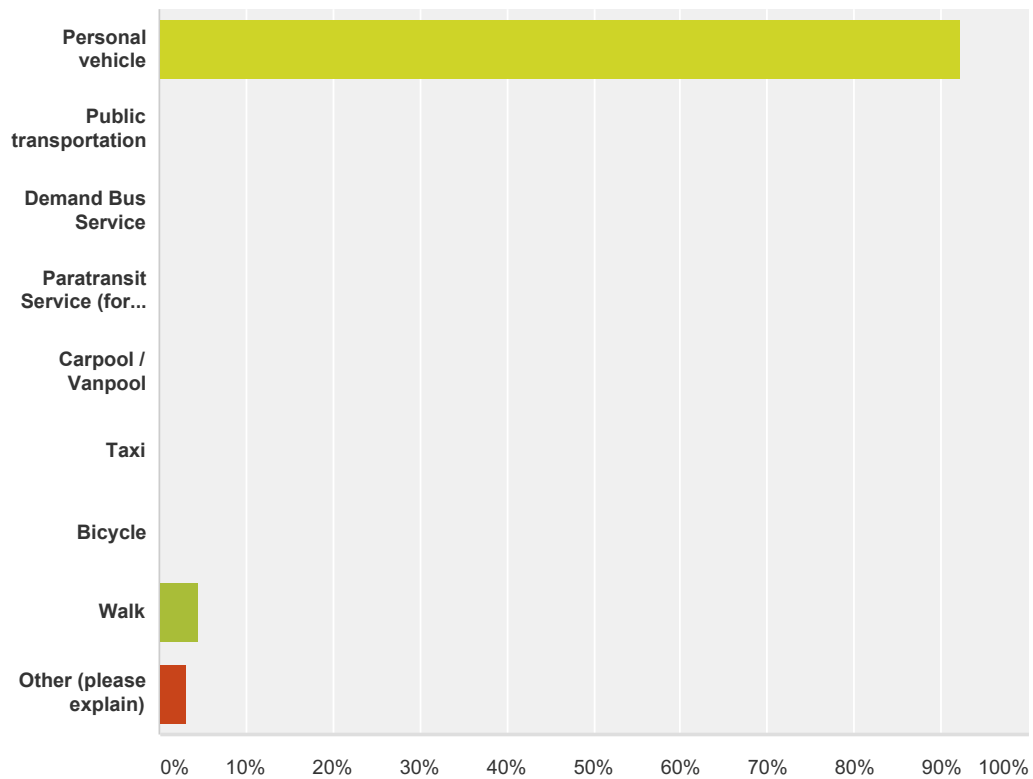
Answer Choices	Responses
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Davison County Master Transportation Plan

Ethan	0.00%	0
Mitchell	66.15%	43
Mount Vernon	4.62%	3
Badger Twp	4.62%	3
Baker Twp	4.62%	3
Beulah Twp	1.54%	1
Blendon Twp	3.08%	2
Lisbon Twp	0.00%	0
Mitchell Twp	6.15%	4
Mount Vernon Twp	1.54%	1
Perry Twp	1.54%	1
Prosper Twp	0.00%	0
Rome Twp	0.00%	0
Tobin Twp	1.54%	1
Union Twp	4.62%	3
Total		65

Q3 What mode of transportation do you most often use to get to work?

Answered: 65 Skipped: 12

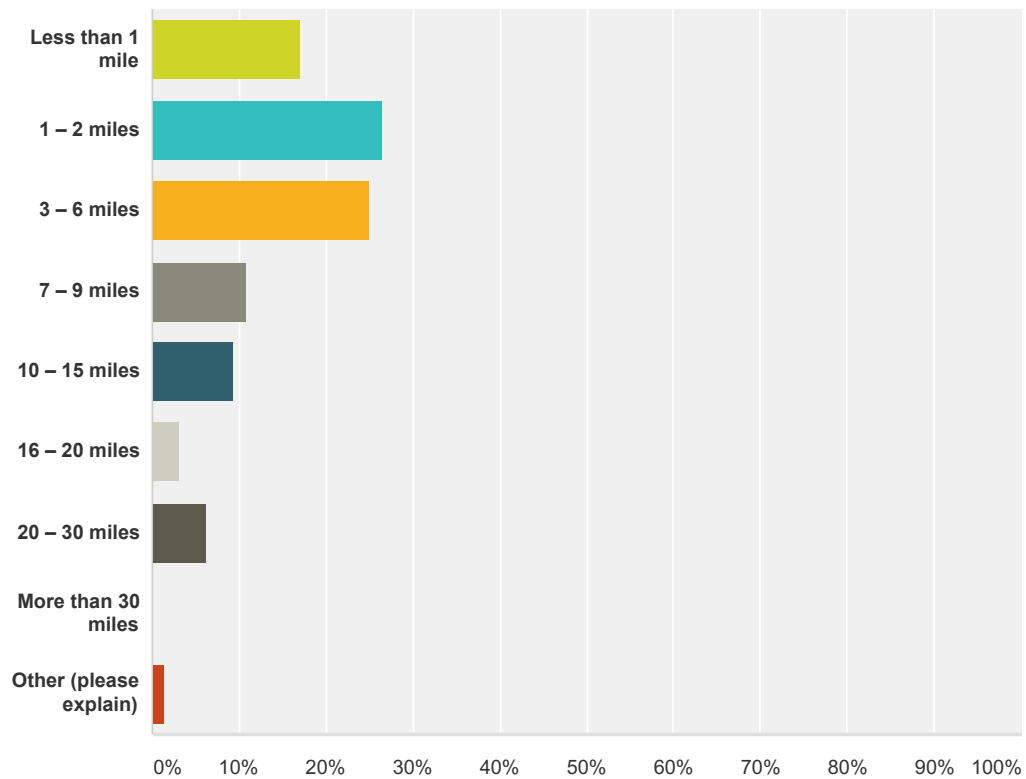


Answer Choices	Responses
Personal vehicle	92.31% 60
Public transportation	0.00% 0
Demand Bus Service	0.00% 0
Paratransit Service (for persons with disabilities)	0.00% 0
Carpool / Vanpool	0.00% 0
Taxi	0.00% 0
Bicycle	0.00% 0
Walk	4.62% 3
Other (please explain)	3.08% 2
Total	65

#	Other (please explain)	Date
1	Turck/Pickup Haul Salvage	12/12/2014 1:38 PM
2	County Vehicle	12/10/2014 3:28 PM

Q4 Approximately how many miles is your commute to work (one-way)?

Answered: 64 Skipped: 13

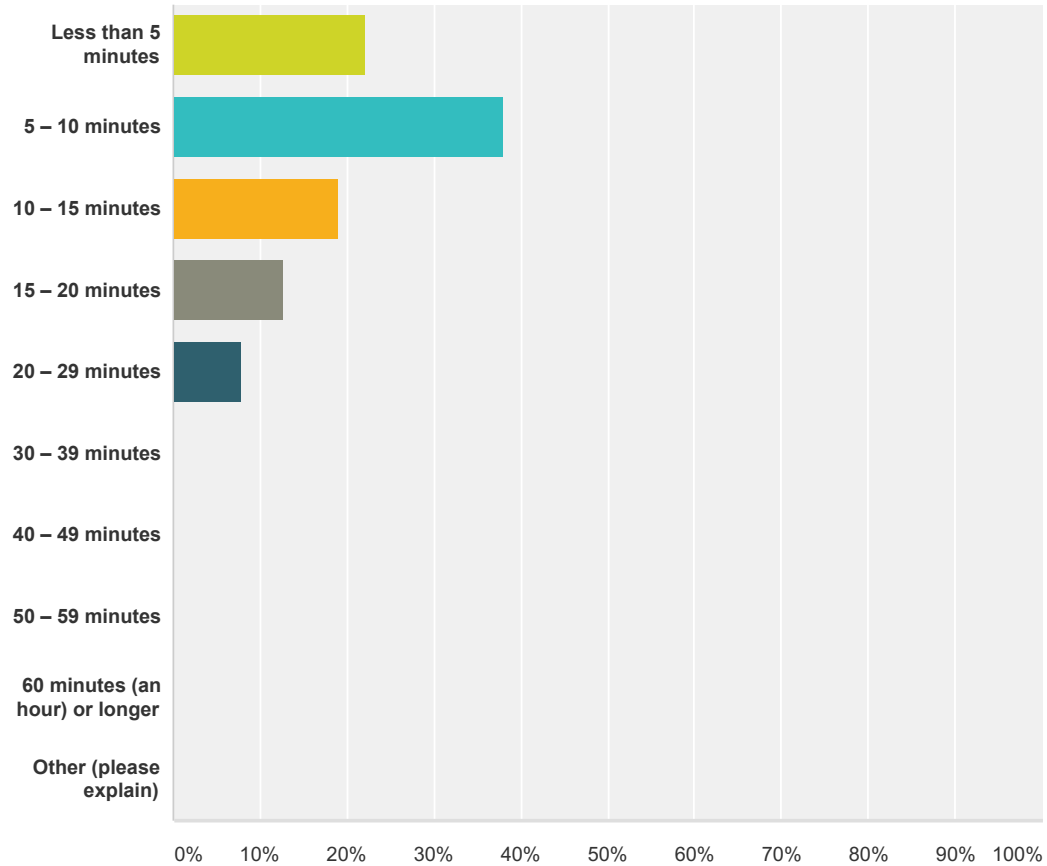


Answer Choices	Responses
Less than 1 mile	17.19% 11
1 – 2 miles	26.56% 17
3 – 6 miles	25.00% 16
7 – 9 miles	10.94% 7
10 – 15 miles	9.38% 6
16 – 20 miles	3.13% 2
20 – 30 miles	6.25% 4
More than 30 miles	0.00% 0
Other (please explain)	1.56% 1
Total	64

#	Other (please explain)	Date
1	varies on the day, take kids 10 miles 1-way to daycare	12/11/2014 9:16 PM

Q5 On a typical day, how long is your commute to work (one-way, without making any stops along the way)?

Answered: 63 Skipped: 14



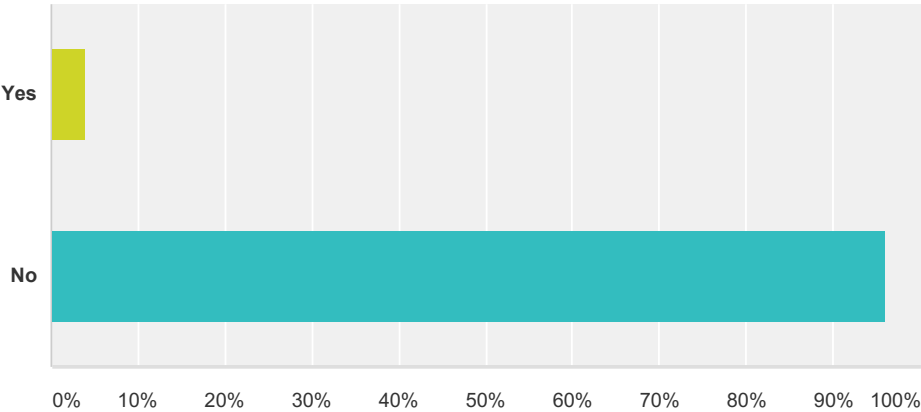
Answer Choices	Responses	
Less than 5 minutes	22.22%	14
5 – 10 minutes	38.10%	24
10 – 15 minutes	19.05%	12
15 – 20 minutes	12.70%	8
20 – 29 minutes	7.94%	5
30 – 39 minutes	0.00%	0
40 – 49 minutes	0.00%	0
50 – 59 minutes	0.00%	0
60 minutes (an hour) or longer	0.00%	0
Other (please explain)	0.00%	0
Total		63

Davison County Master Transportation Plan

#	Other (please explain)	Date
	There are no responses.	

Q6 Do you attend school (public, private, or college) in Davison County? If not, please answer “No,” and you will be taken to the next section of the survey

Answered: 77 Skipped: 0

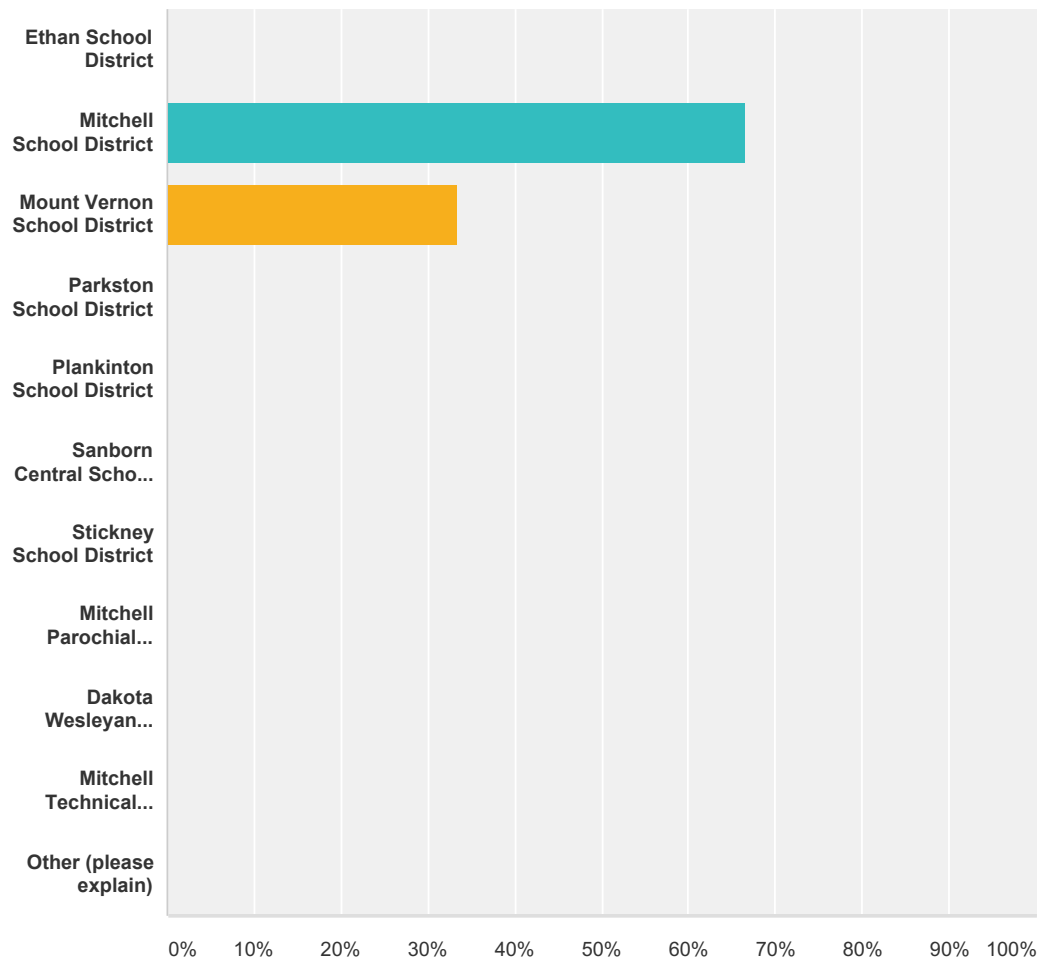


Answer Choices	Responses	
Yes	3.90%	3
No	96.10%	74
Total		77

Davison County Master Transportation Plan

Q7 Please indicate which school you attend:

Answered: 3 Skipped: 74



Answer Choices	Responses
Ethan School District	0.00% 0
Mitchell School District	66.67% 2
Mount Vernon School District	33.33% 1
Parkston School District	0.00% 0
Plankinton School District	0.00% 0
Sanborn Central School District	0.00% 0
Stickney School District	0.00% 0
Mitchell Parochial Schools	0.00% 0
Dakota Wesleyan University	0.00% 0

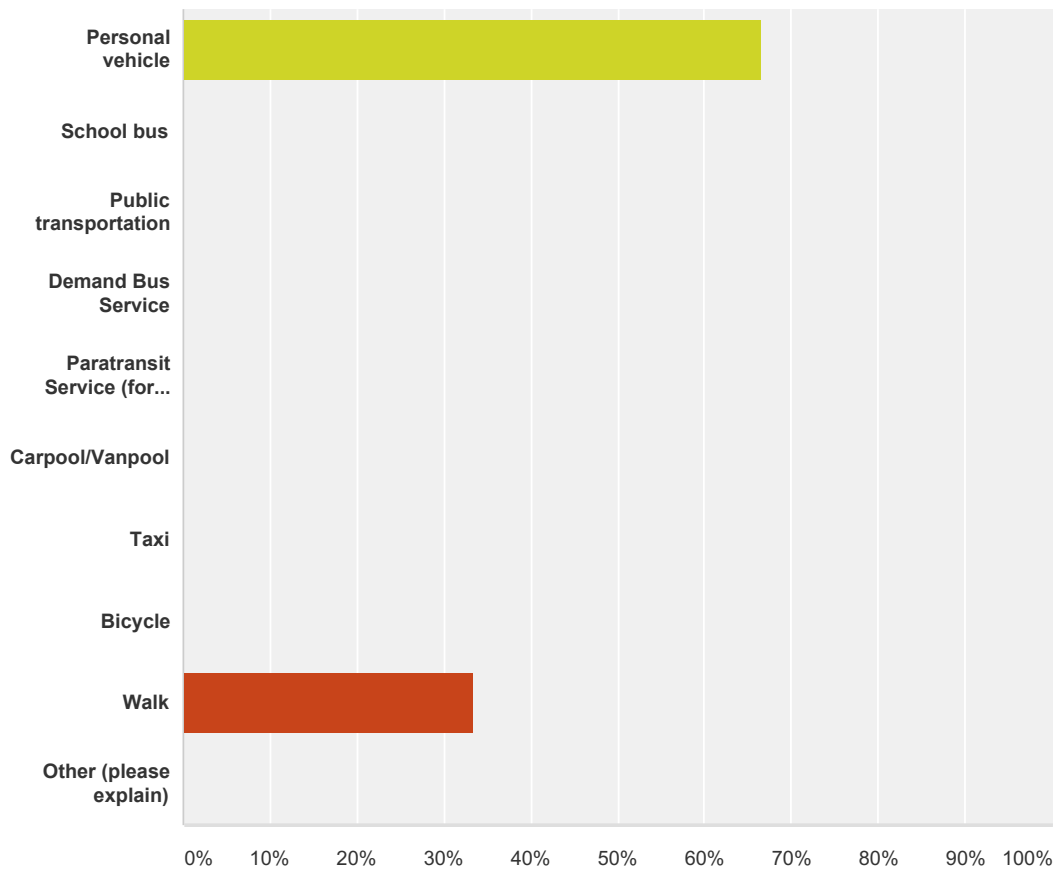
Davison County Master Transportation Plan

Mitchell Technical Institute	0.00%	0
Other (please explain)	0.00%	0
Total		3

#	Other (please explain)	Date
	There are no responses.	

Q8 What mode of transportation do you most often use to get to school/class?

Answered: 3 Skipped: 74



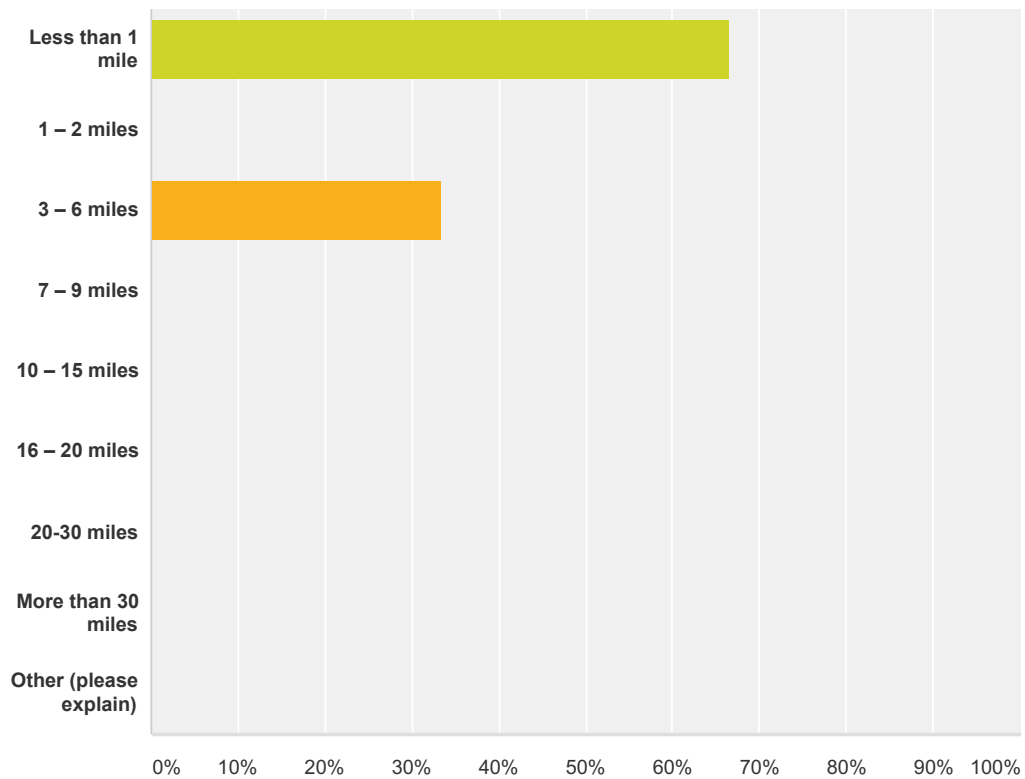
Answer Choices	Responses	
Personal vehicle	66.67%	2
School bus	0.00%	0
Public transportation	0.00%	0
Demand Bus Service	0.00%	0
Paratransit Service (for persons with disabilities)	0.00%	0
Carpool/Vanpool	0.00%	0
Taxi	0.00%	0
Bicycle	0.00%	0
Walk	33.33%	1
Other (please explain)	0.00%	0
Total		3

Davison County Master Transportation Plan

#	Other (please explain)	Date
	There are no responses.	

Q9 Approximately how many miles is your commute to school (one-way)?

Answered: 3 Skipped: 74

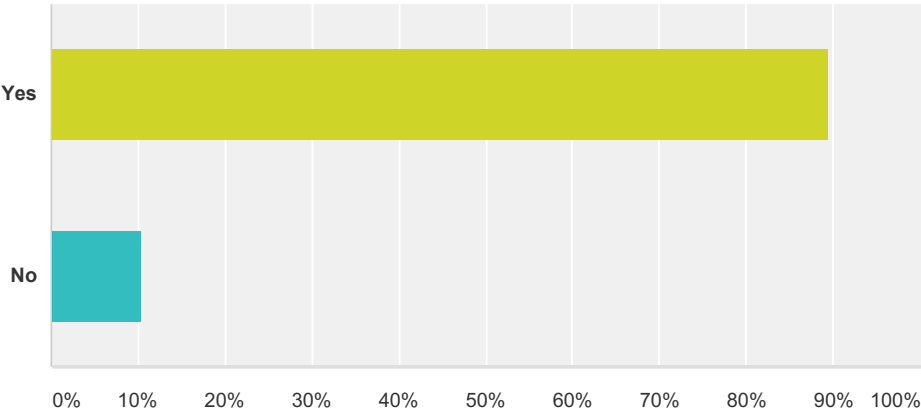


Answer Choices	Responses	
Less than 1 mile	66.67%	2
1 – 2 miles	0.00%	0
3 – 6 miles	33.33%	1
7 – 9 miles	0.00%	0
10 – 15 miles	0.00%	0
16 – 20 miles	0.00%	0
20-30 miles	0.00%	0
More than 30 miles	0.00%	0
Other (please explain)	0.00%	0
Total		3

#	Other (please explain)	Date
	There are no responses.	

Q10 Do you currently reside in Davison County?

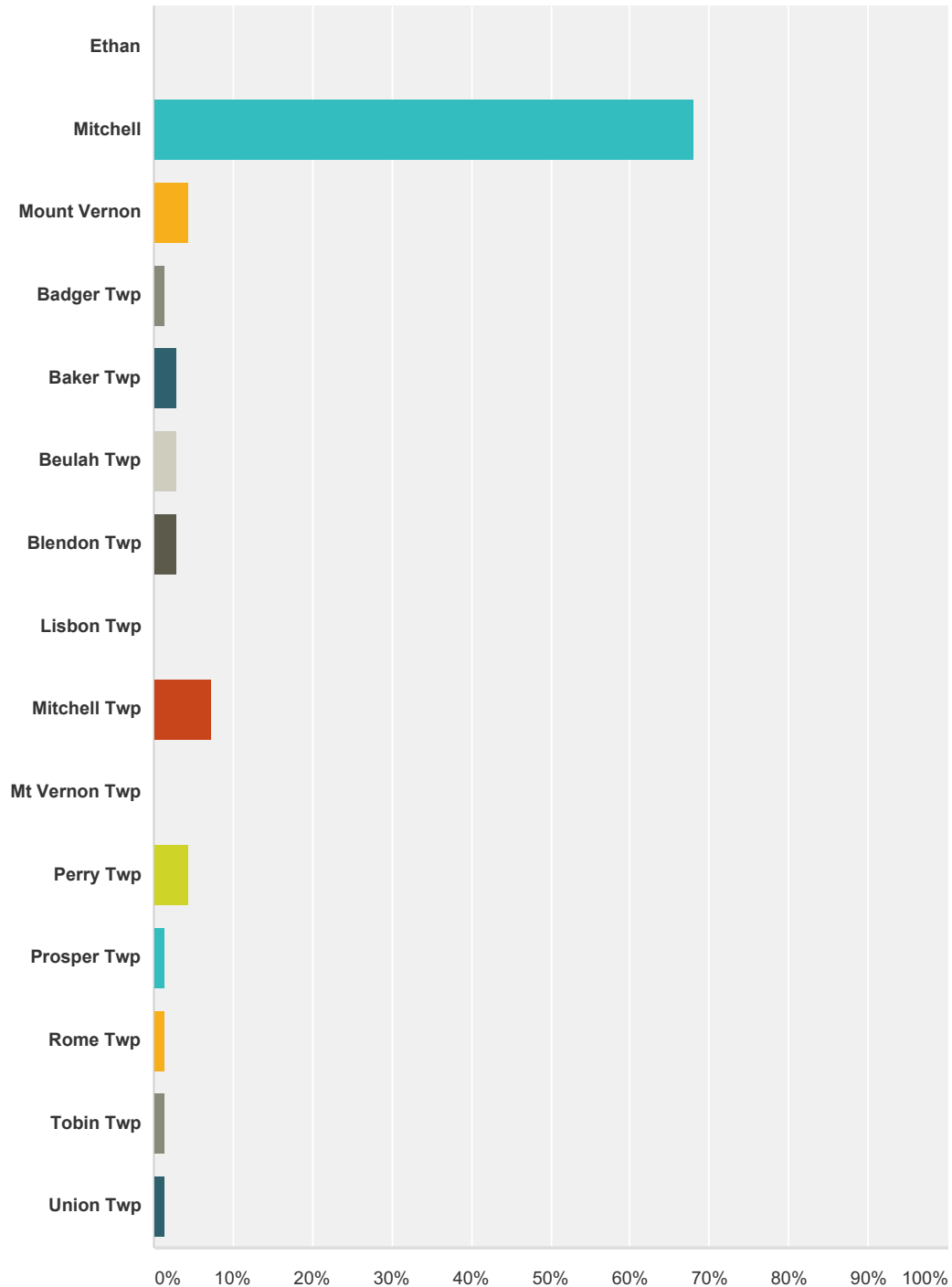
Answered: 77 Skipped: 0



Answer Choices	Responses	
Yes	89.61%	69
No	10.39%	8
Total		77

Q11 In Davison County, in which community (city or township) do you live?
Please click here for a map: Davison County Township Map

Answered: 69 Skipped: 8



Answer Choices

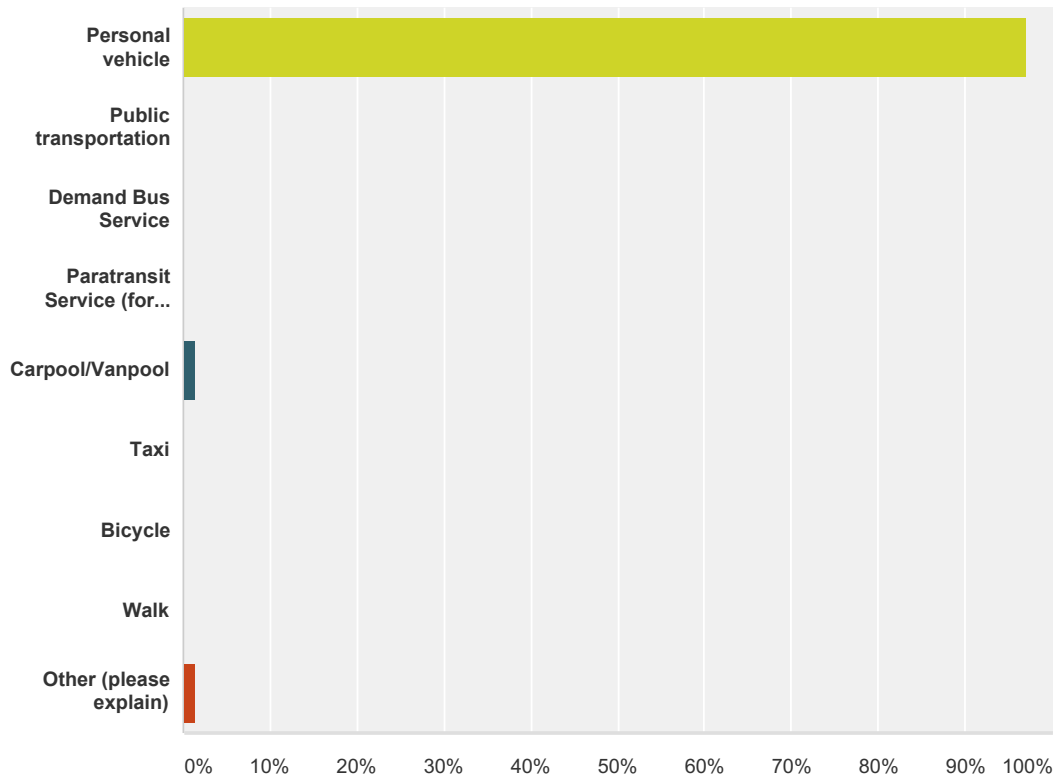
Responses

Davison County Master Transportation Plan

Ethan	0.00%	0
Mitchell	68.12%	47
Mount Vernon	4.35%	3
Badger Twp	1.45%	1
Baker Twp	2.90%	2
Beulah Twp	2.90%	2
Blendon Twp	2.90%	2
Lisbon Twp	0.00%	0
Mitchell Twp	7.25%	5
Mt Vernon Twp	0.00%	0
Perry Twp	4.35%	3
Prosper Twp	1.45%	1
Rome Twp	1.45%	1
Tobin Twp	1.45%	1
Union Twp	1.45%	1
Total		69

Q12 In general, what mode of transportation do you most often use for local travel in Davison County?

Answered: 69 Skipped: 8

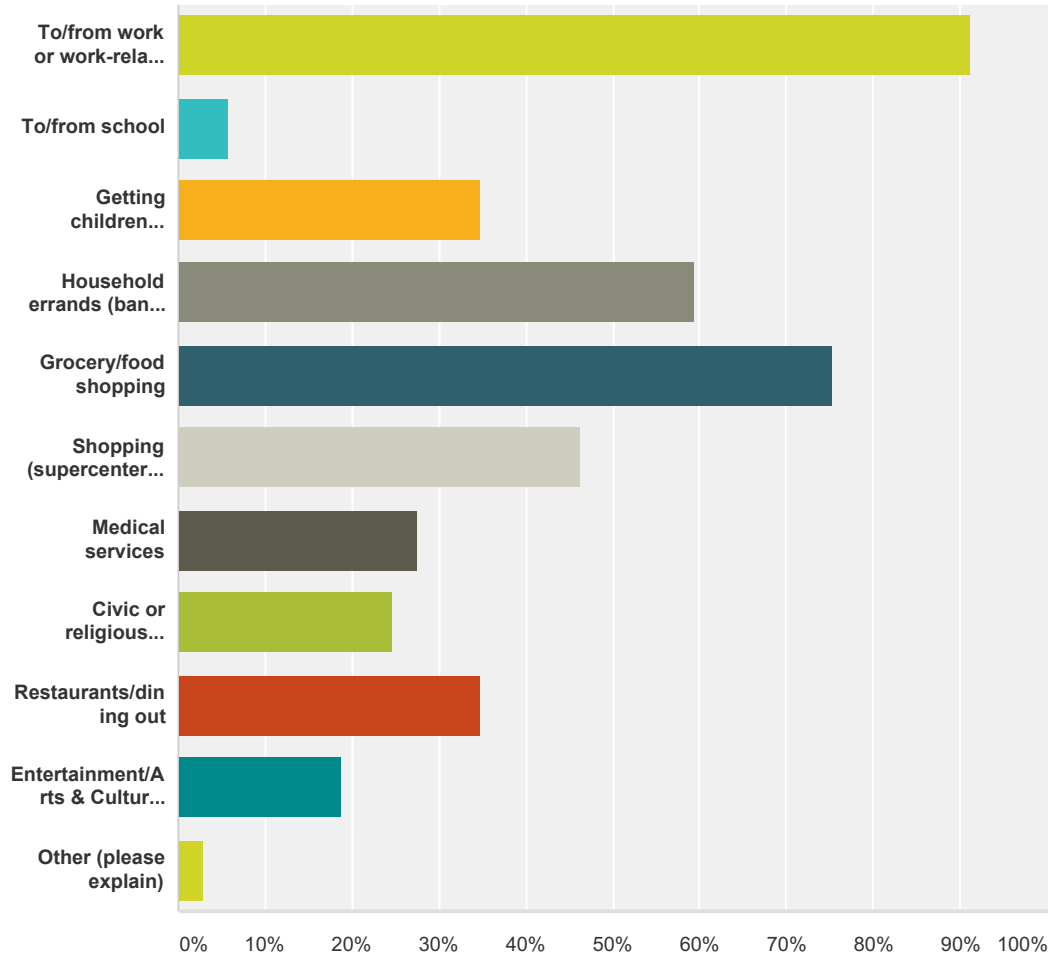


Answer Choices	Responses
Personal vehicle	97.10% 67
Public transportation	0.00% 0
Demand Bus Service	0.00% 0
Paratransit Service (for persons with disabilities)	0.00% 0
Carpool/Vanpool	1.45% 1
Taxi	0.00% 0
Bicycle	0.00% 0
Walk	0.00% 0
Other (please explain)	1.45% 1
Total	69

#	Other (please explain)	Date
1	County Vehicle	12/10/2014 3:30 PM

Q13 What are your primary reasons for travel within Davison County? You may select up to four responses.

Answered: 69 Skipped: 8



Answer Choices	Responses	
To/from work or work-related trips	91.30%	63
To/from school	5.80%	4
Getting children to/from school or activities	34.78%	24
Household errands (bank, dry clean, post office)	59.42%	41
Grocery/food shopping	75.36%	52
Shopping (supercenters, department stores, mall, etc.)	46.38%	32
Medical services	27.54%	19
Civic or religious activities	24.64%	17
Restaurants/dining out	34.78%	24

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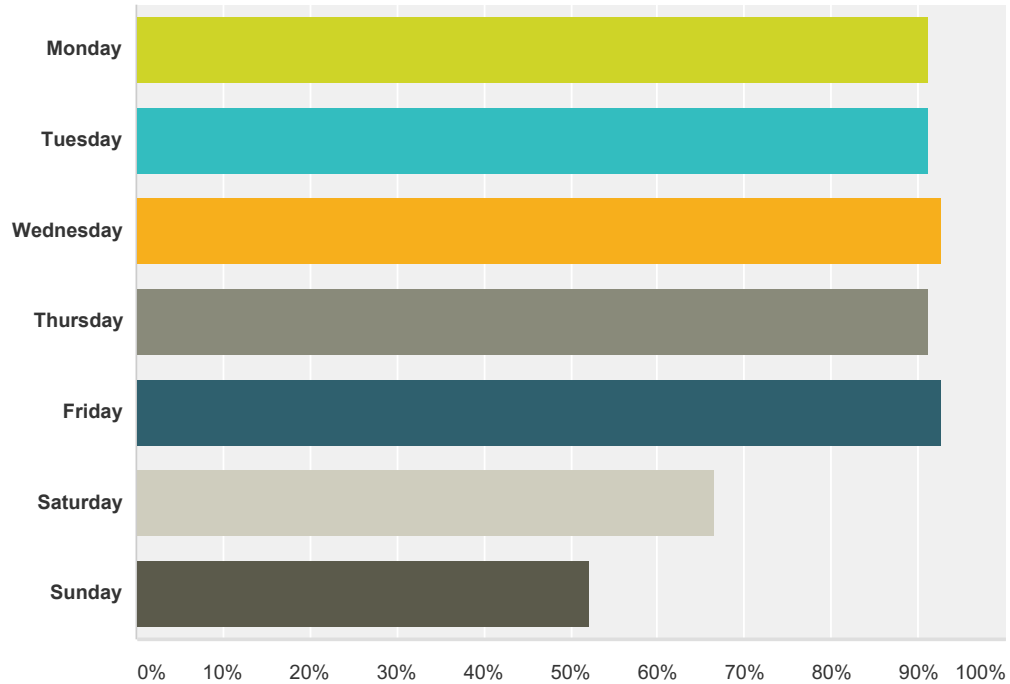
Entertainment/Arts & Cultural activities	18.84%	13
Other (please explain)	2.90%	2
Total Respondents: 69		

#	Other (please explain)	Date
1	salvage hauls to Aurora, Bainer, Gerald Counties and Sioux Falls	12/12/2014 1:39 PM
2	Moving agricultural commodities	12/2/2014 1:12 PM

Davison County Master Transportation Plan

Q14 Which days of the week do you most often travel within Davison County? Check all that apply.

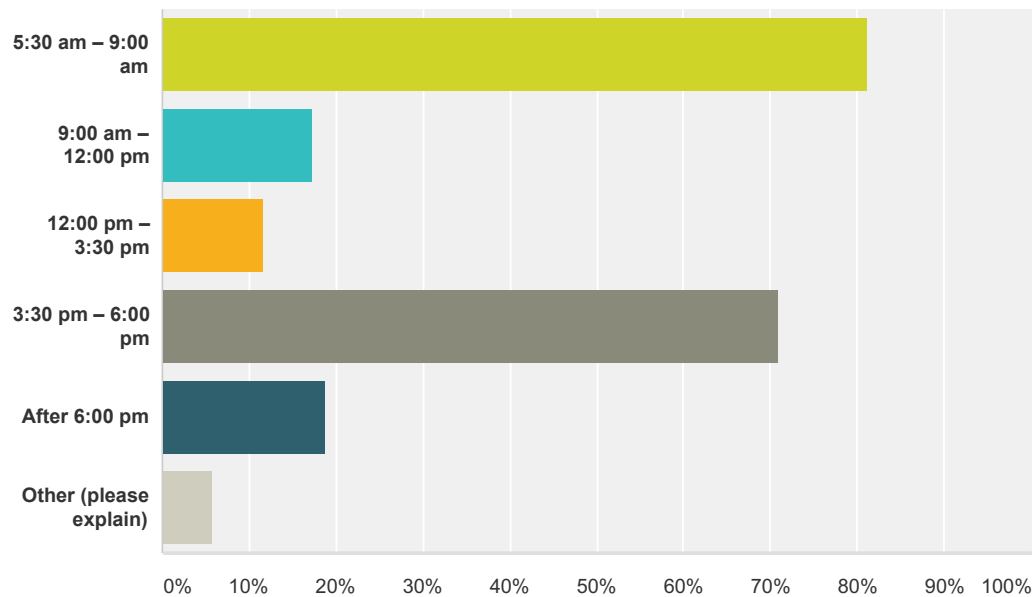
Answered: 69 Skipped: 8



Answer Choices	Responses	
Monday	91.30%	63
Tuesday	91.30%	63
Wednesday	92.75%	64
Thursday	91.30%	63
Friday	92.75%	64
Saturday	66.67%	46
Sunday	52.17%	36
Total Respondents: 69		

Q15 What time(s) of day do you most often travel on a typical weekday (Monday – Friday)? You may select up to two responses.

Answered: 69 Skipped: 8

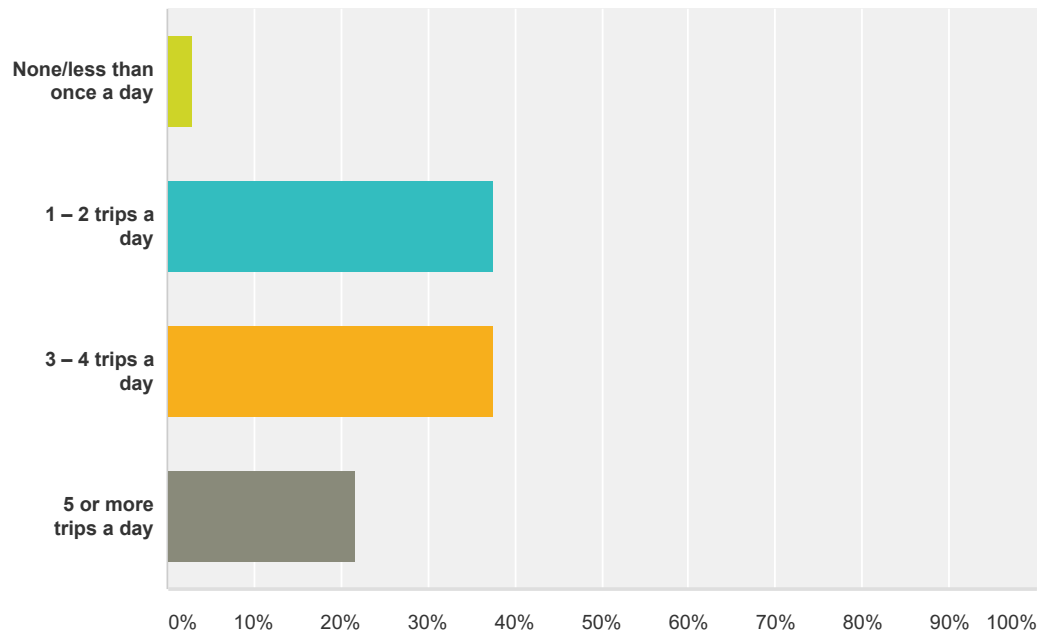


Answer Choices	Responses
5:30 am – 9:00 am	81.16% 56
9:00 am – 12:00 pm	17.39% 12
12:00 pm – 3:30 pm	11.59% 8
3:30 pm – 6:00 pm	71.01% 49
After 6:00 pm	18.84% 13
Other (please explain)	5.80% 4
Total Respondents: 69	

#	Other (please explain)	Date
1	anytime	12/12/2014 3:13 PM
2	anytime	12/12/2014 2:44 PM
3	Wife works in Mitchell, I farm, always on the road	12/8/2014 9:41 PM
4	I am running my kids to and from events all day!!	12/4/2014 8:25 AM

Q16 How many local trips do you make in and around Davison County on a typical weekday (Monday – Friday)? (A trip occurs anytime that you travel from one destination to another, including when you first leave home for the day. It does not include leisure or recreational activities performed in the immediate vicinity of your home, such as jogging or walking a dog).

Answered: 69 Skipped: 8



Answer Choices	Responses	
None/less than once a day	2.90%	2
1 – 2 trips a day	37.68%	26
3 – 4 trips a day	37.68%	26
5 or more trips a day	21.74%	15
Total		69

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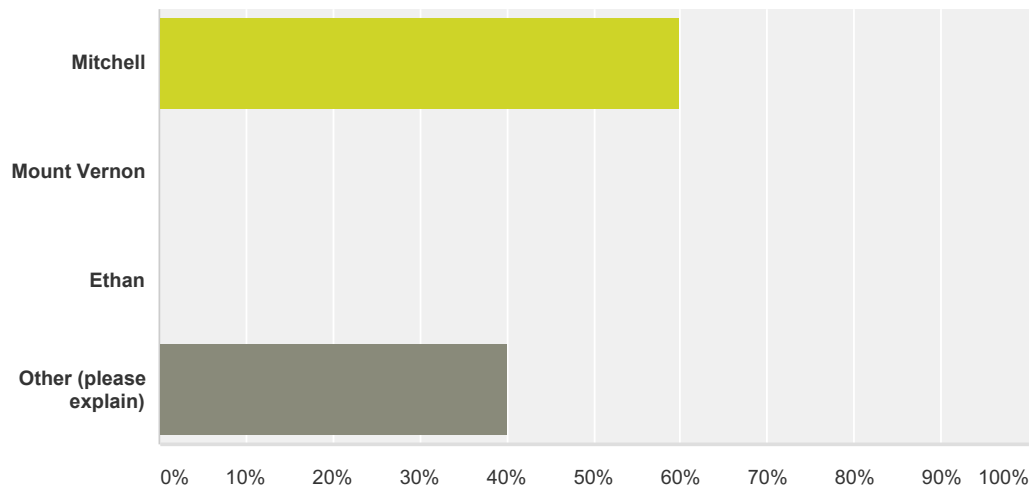
Q17 In which city or township do you reside?

Answered: 5 Skipped: 72

#	Responses	Date
1	I live on 16 E Hwy 38, Alexandria	12/18/2014 8:22 AM
2	Butler township	12/12/2014 2:35 PM
3	Alexandria	12/8/2014 11:53 AM
4	out in country in hanson county, fairview township	12/5/2014 9:42 AM
5	Rosedale Township, Hanson County	12/3/2014 4:24 PM

Q18 Which of the following is your primary destination? Check all that apply.

Answered: 5 Skipped: 72

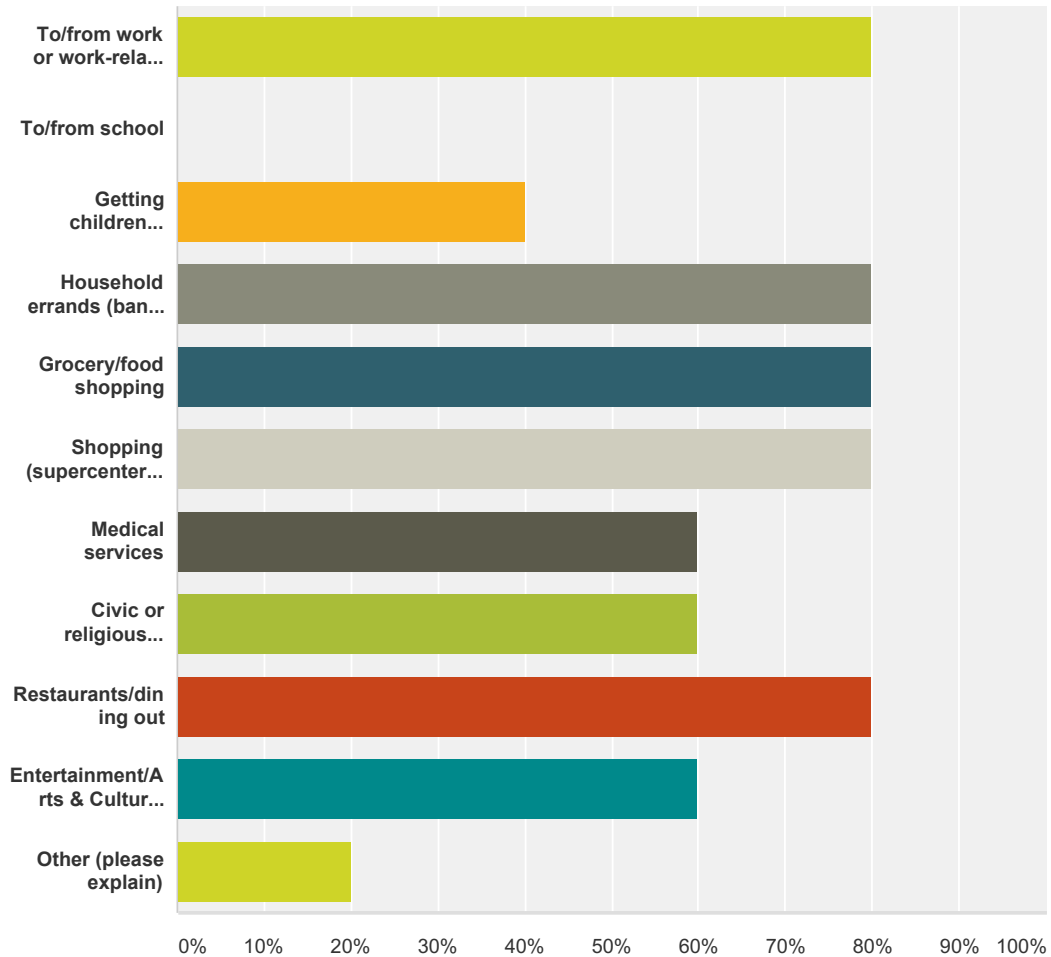


Answer Choices	Responses
Mitchell	60.00% 3
Mount Vernon	0.00% 0
Ethan	0.00% 0
Other (please explain)	40.00% 2
Total Respondents: 5	

#	Other (please explain)	Date
1	Farmer, SD	12/18/2014 8:22 AM
2	Badger township	12/12/2014 2:35 PM

Q19 In a typical month, what are your primary reasons for travel to a city or township within Davison County? Check all that apply.

Answered: 5 Skipped: 72



Answer Choices	Responses	
To/from work or work-related trips	80.00%	4
To/from school	0.00%	0
Getting children to/from school or activities	40.00%	2
Household errands (bank, dry clean, post office)	80.00%	4
Grocery/food shopping	80.00%	4
Shopping (supercenters, department stores, mall, etc.)	80.00%	4
Medical services	60.00%	3
Civic or religious activities	60.00%	3

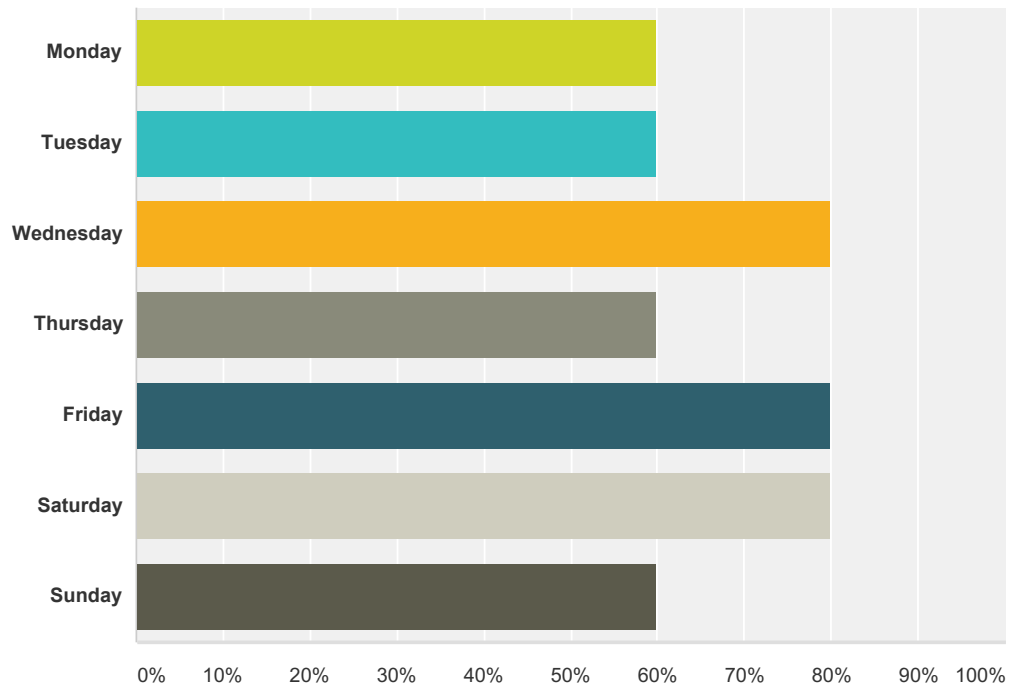
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Restaurants/dining out	80.00%	4
Entertainment/Arts & Cultural activities	60.00%	3
Other (please explain)	20.00%	1
Total Respondents: 5		

#	Other (please explain)	Date
1	taking elderly persons from Alexandria to Mitchell appointments	12/8/2014 11:53 AM

Q20 Which days of the week do you most often travel within Davison County? Check all that apply.

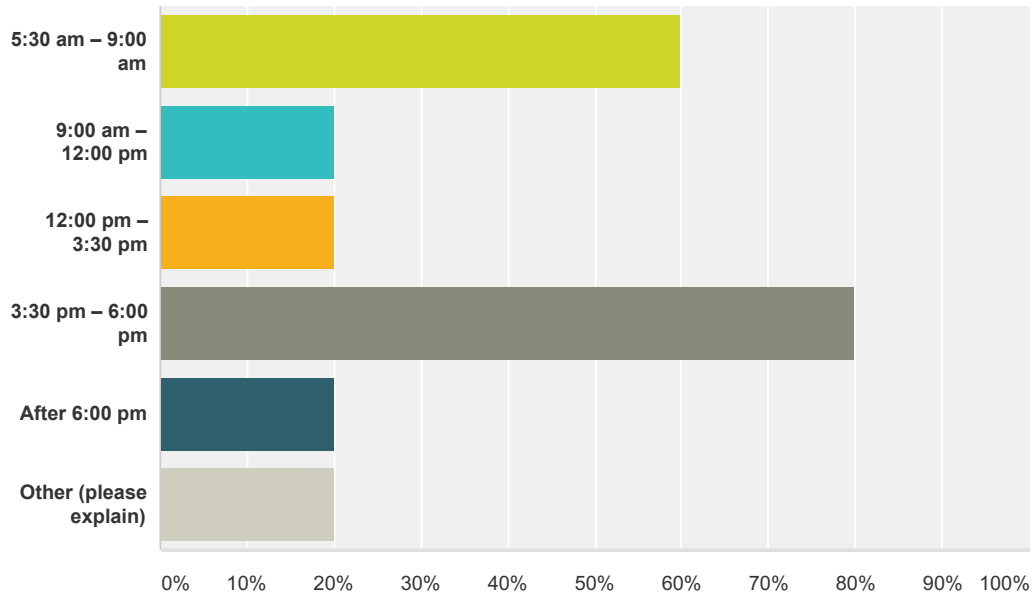
Answered: 5 Skipped: 72



Answer Choices	Responses
Monday	60.00% 3
Tuesday	60.00% 3
Wednesday	80.00% 4
Thursday	60.00% 3
Friday	80.00% 4
Saturday	80.00% 4
Sunday	60.00% 3
Total Respondents: 5	

Q21 What time(s) of day do you most often travel on a typical weekday (Monday – Friday)? You may select up to two responses.

Answered: 5 Skipped: 72

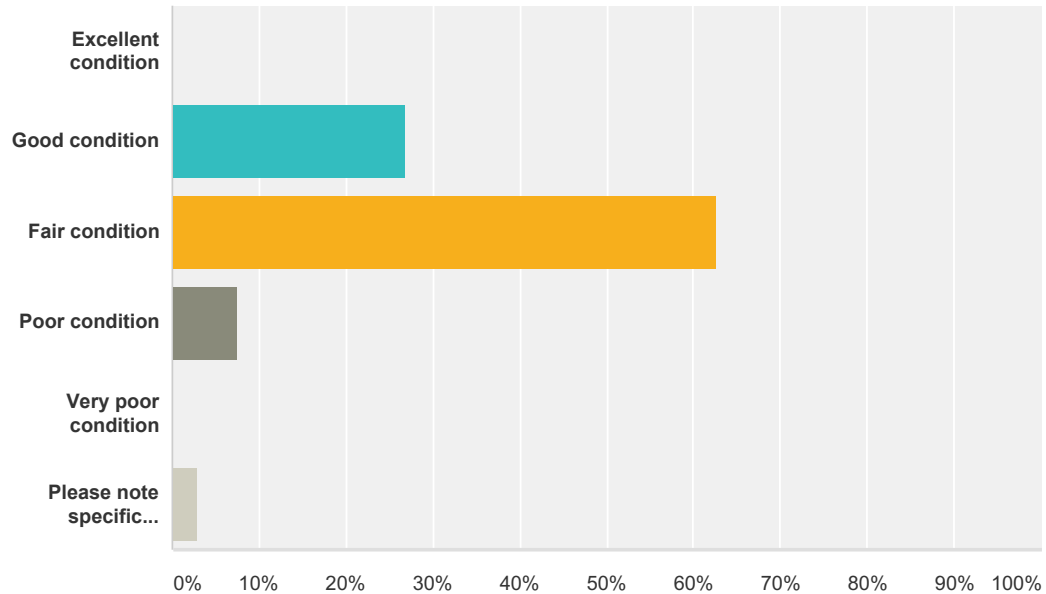


Answer Choices	Responses
5:30 am – 9:00 am	60.00% 3
9:00 am – 12:00 pm	20.00% 1
12:00 pm – 3:30 pm	20.00% 1
3:30 pm – 6:00 pm	80.00% 4
After 6:00 pm	20.00% 1
Other (please explain)	20.00% 1
Total Respondents: 5	

#	Other (please explain)	Date
1	as needed for assistance as above	12/8/2014 11:53 AM

Q22 Pavement conditions on County roadways (not including South Dakota Highways, Interstate 90, or City of Mitchell streets) throughout Davison County are generally in:

Answered: 67 Skipped: 10

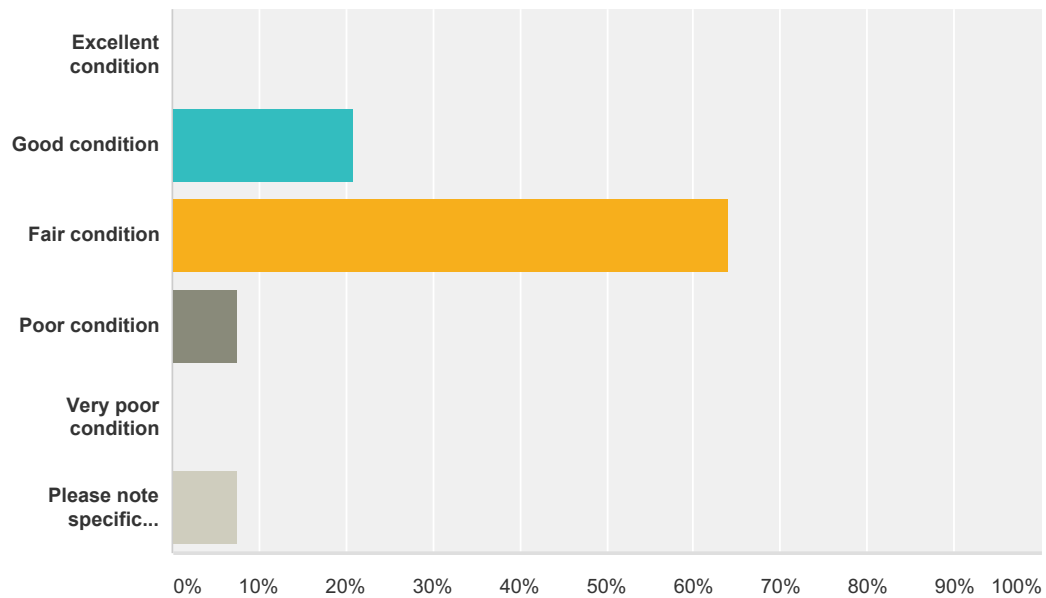


Answer Choices	Responses	
Excellent condition	0.00%	0
Good condition	26.87%	18
Fair condition	62.69%	42
Poor condition	7.46%	5
Very poor condition	0.00%	0
Please note specific locations of Poor or Very Poor conditions	2.99%	2
Total		67

#	Please note specific locations of Poor or Very Poor conditions	Date
1	I rarely ever use these roads... don't know.	12/9/2014 7:28 AM
2	397th Ave, 265th Street	12/2/2014 1:24 PM

Q23 Gravel road conditions throughout Davison County are generally in:

Answered: 67 Skipped: 10

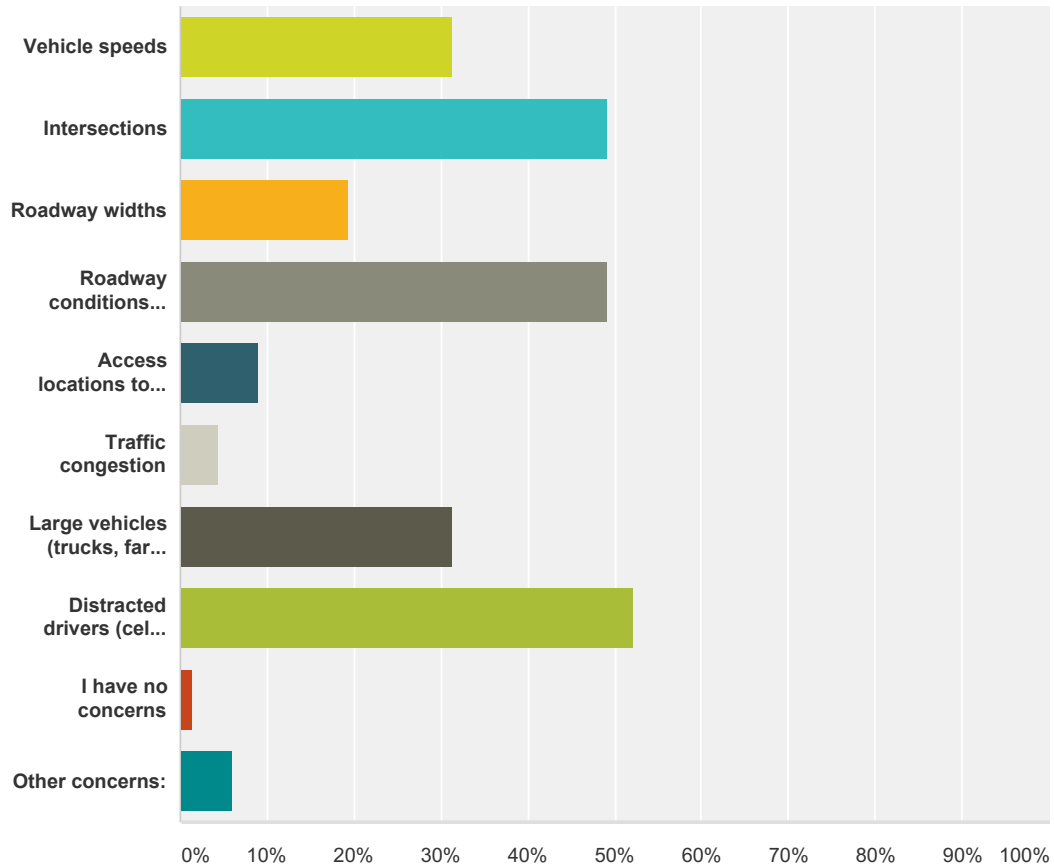


Answer Choices	Responses
Excellent condition	0.00% 0
Good condition	20.90% 14
Fair condition	64.18% 43
Poor condition	7.46% 5
Very poor condition	0.00% 0
Please note specific locations of Poor or Very Poor conditions	7.46% 5
Total	67

#	Please note specific locations of Poor or Very Poor conditions	Date
1	n. gale road - north of shanand road	12/12/2014 3:05 PM
2	N. Gale Road	12/12/2014 2:59 PM
3	247 from Mt. Vernon Oil to Betts Road	12/11/2014 9:21 PM
4	I rarely ever use these roads... don't know.	12/9/2014 7:28 AM
5	I live on 256th street. There are over 15 homes on that road with high traffic volumes. Needs to be paved!!!	12/4/2014 8:29 AM

Q24 With regards to your opinion of safety on the County roadways, what areas of driver safety are you most concerned about in Davison County (Select up to three):

Answered: 67 Skipped: 10



Answer Choices	Responses	
Vehicle speeds	31.34%	21
Intersections	49.25%	33
Roadway widths	19.40%	13
Roadway conditions (pavement surface, ditches, pavement markings, etc.)	49.25%	33
Access locations to homes, businesses, and fields	8.96%	6
Traffic congestion	4.48%	3
Large vehicles (trucks, farm equipment, etc.)	31.34%	21
Distracted drivers (cell phones, texting, etc.)	52.24%	35
I have no concerns	1.49%	1

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Other concerns:	5.97%	4
Total Respondents: 67		

#	Other concerns:	Date
1	rough gravel roads - speed limit too high, dust control	12/12/2014 3:05 PM
2	rutted gravel roads	12/12/2014 2:59 PM
3	I rarely ever use these roads... don't know.	12/9/2014 7:28 AM
4	DWI	12/7/2014 8:26 PM

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Q25 Are you aware of or concerned about any specific safety issues and locations in Davison County, please provide specific locations or examples:

Answered: 24 Skipped: 53

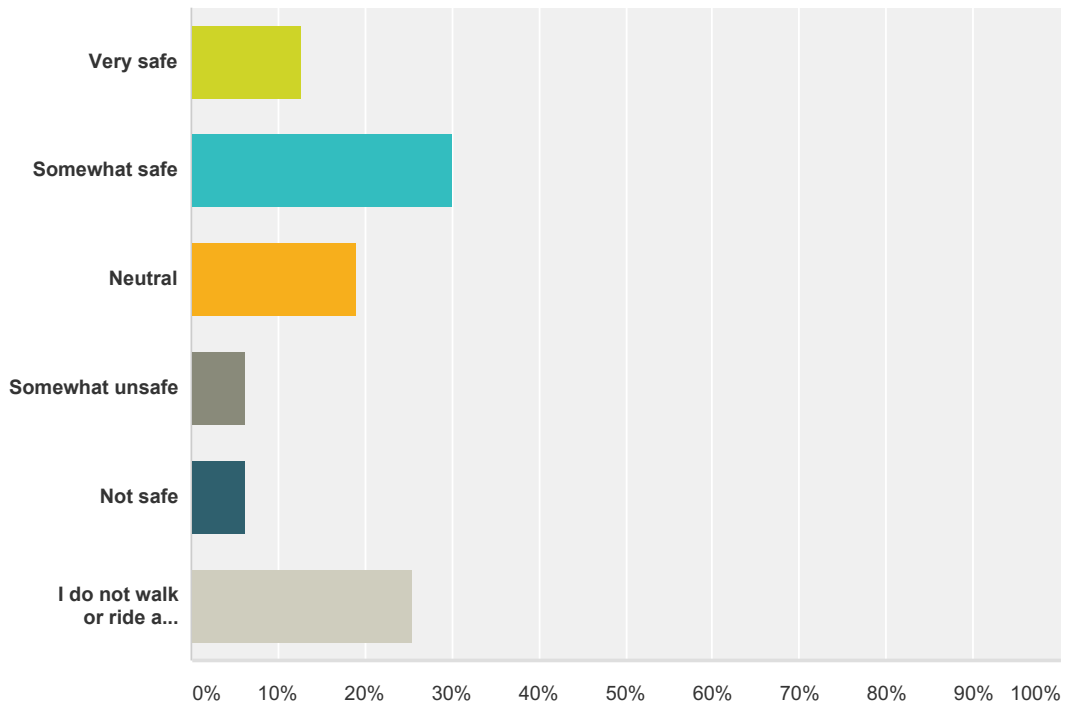
#	Responses	Date
1	On Hwy 38 going West, West of 2nd James River Bridge, put a turning lane on right hand side to go to golf course. On Hwy 38 coming into town, put a right hand turn lane going to hospital.	12/18/2014 8:25 AM
2	BURR STREET AND NORWAY INTERSECTION BY TWIN DRAGON AND MCDONALDS.	12/17/2014 12:12 PM
3	Corner by the south McDonalds - Norway and Burr; traffic not yielding on east side of town where there are one-way streets	12/15/2014 10:34 AM
4	turning lanes; spring weight limits; how roads are built	12/12/2014 3:14 PM
5	N. Gale Road - road very poor - extremely washboard and dust reduces visibility at times to zero. Speed limit needs to be reduced. it is the same as Shanard road (oil) - numerous homes located along road. dust creates health issue from poor quality air.	12/12/2014 3:05 PM
6	n. gale road very wash boardy	12/12/2014 2:59 PM
7	East Spruce Street	12/12/2014 2:31 PM
8	407th Maui Drive to Plano Road needs paved	12/12/2014 2:25 PM
9	hwy 41 - narrow spots with rough sections especially Cty Rd/5 (Holiday Inn) West of Betts Corner	12/12/2014 2:09 PM
10	Railroad tracks north of Case Implement	12/12/2014 2:01 PM
11	247th Avenue	12/12/2014 1:46 PM
12	247 where asphalt was ground up. Chunks of asphalt loose. Also did not grind all of asphalt up. Road is very rough. Road grader does a very poor job. Makes more washboards.	12/11/2014 9:21 PM
13	8th and Bypass Minnesota and Bypass	12/11/2014 12:49 PM
14	Highway width on 254th Street (Old Highway 16)	12/10/2014 3:48 PM
15	15th and Sanborn in Mitchell. the Daley Dental Sign is too close tot he intersection and blocks view.	12/8/2014 1:26 PM
16	The 4-way intersections just east of the intersection of Elm Street and Minnesota in the city of Mitchell have no stop signs. Also concerned about the road clearance on Hwy 16 going west of out town. The buildings and trees prevent the Southern sun from melting ice/snow on the hwy and heavy traffic packs the snow.	12/8/2014 12:29 PM
17	Trucks north of implement dealers/salvage yard, trucks coming in from West to elevator	12/8/2014 12:06 PM
18	Snow removal in the country should be more thorough and completely in a more timely manner.	12/8/2014 7:02 AM
19	SD Hwy 37 is dangerous with the amount of traffic that travels it every day. Particularly intersections that do not have seperate turn lanes. Several crashes occur at intersections because of people driving too fast and following too close.	12/7/2014 2:05 PM
20	East Spruce Street in Mitchell from the Intersection with 37 east to the stockyards and MTI. High traffic-large trucks- narrow roads- train tracks.	12/4/2014 2:06 PM
21	Highway 37 and MTI intersection is very dangerous in the morning. The people turning into MTI do not abide by the traffic signal.	12/3/2014 4:31 PM
22	Corner of Norway and Rowley St. should be four-way.	12/3/2014 2:58 PM
23	Mitchell city: service road intersection of Norway and Burr. The intersection of E Elm and Burr is also hard to see because of the cement wall.	12/3/2014 2:55 PM

Davison County Master Transportation Plan

24	Most of 397th Ave and portions of 265th Street are in tough shape...especially when driving a semi.	12/2/2014 1:24 PM
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Q26 Do you walk or ride a bicycle in Davison County? If so, what is your feeling of safety as a walker or bicyclist:

Answered: 63 Skipped: 14



Answer Choices	Responses	
Very safe	12.70%	8
Somewhat safe	30.16%	19
Neutral	19.05%	12
Somewhat unsafe	6.35%	4
Not safe	6.35%	4
I do not walk or ride a bicycle	25.40%	16
Total		63

#	Please provide a description of your typical route(s) and feelings of safety on those routes:	Date
1	North gale road - traffic (speed limit) too high. Road rough. Shanard Road no shoulder	12/12/2014 3:05 PM
2	Kids riding to MTI	12/12/2014 2:31 PM
3	Walking on Ohlman in a portion that has no bike trail	12/11/2014 12:49 PM
4	South of I90 on Cabelas trail or South Capital street though development behind Menards	12/8/2014 1:55 PM
5	408th and 409th Avenues	12/8/2014 1:28 PM
6	in town and around lake.	12/8/2014 1:26 PM

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7	I walk along the 37 bypass and appreciate the walkway.	12/8/2014 12:29 PM
8	However, my employees walk through out the city. I am glad that sidewalk situation is slowly being addressed	12/8/2014 12:06 PM
9	I jog on county roads. I avoid busy roads.	12/7/2014 2:05 PM
10	Since I live in the city of Mitchell, many of my concerns lie with those particular roads and streets. But	12/3/2014 4:50 PM
11	For the most part, I walk around the South Harmon Drive loop. I walk other places on occasion. I feel safe.	12/3/2014 3:52 PM
12	I walk on sidewalks and feel very safe. Riding a bicycle on the roads feels unsafe. We need many more bike lanes/trails.	12/3/2014 2:58 PM

Davison County Master Transportation Plan

Q27 Are there destinations in Davison County that you would like to walk or bike to that you currently cannot due to lack of adequate connections and/or unsafe routes? Please give a description of these destinations, current available route (if any), and what makes them unsafe to access:

Answered: 17 Skipped: 60

#	Responses	Date
1	Not enough sidewalks behind Shopko.	12/15/2014 10:16 PM
2	No	12/15/2014 10:34 AM
3	N. Gale Shanard - quit walking due to poor quality road and no shoulder on hwy. also speed limit too high on N. Gale Road.	12/12/2014 3:05 PM
4	Crossing bypass at Minnesota St. and on 8th St. is not safe for walking, driving or biking. There are a lot of accidents and close calls!	12/11/2014 12:49 PM
5	Around the lake - requires riding bike on busy roads to get to north side of town	12/8/2014 1:55 PM
6	finish the dirt bike path that runs from the west end of the lake to the Twin City Fan area.	12/8/2014 1:26 PM
7	N/A	12/8/2014 12:29 PM
8	I ride for exercise. Not to tour the county.	12/8/2014 10:27 AM
9	east first street going to the golf course. narrow road, no shoulder, no way to get off the road.	12/8/2014 9:43 AM
10	No.	12/8/2014 7:02 AM
11	Lake Mitchell. There are not enough bike trails and the ones that are there are unsafe because they do not have safety rails or anything to keep a driver from hitting a bike.	12/4/2014 3:06 PM
12	A bike/walk path to and from the spillway area of Lake Mitchell. There really isn't an access.	12/4/2014 10:16 AM
13	It would be good for the county to develop rural bike and walking paths. A rural bike trail would be a good addition to encourage county residents to get outdoors and to do so in a safe area.	12/3/2014 4:50 PM
14	Mitchell is not bike friendly to any destination	12/3/2014 4:31 PM
15	I WOULD LIKE TO SEE THE BIKE PATH EXTENDED TO THE NORTH AND EAST PARTS OF TOWN	12/3/2014 4:01 PM
16	Rowley street towards Walmart -- no sidewalks or bike lane	12/3/2014 2:58 PM
17	Cemetery road, Betts road and back. These are excellent roads to bike on and I don't have a safety issue.	11/30/2014 8:14 PM

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Q28 Overall, what do you think are the most pressing transportation needs or issues for Davison County? (Please respond whether you are a resident or non-resident of a city or township in Davison County).

Answered: 40 Skipped: 37

#	Responses	Date
1	Could use many more right hand turn lanes	12/18/2014 8:25 AM
2	More bike paths More sidewalks in areas that don't have them behind Shopko	12/15/2014 10:16 PM
3	bridges	12/15/2014 11:15 AM
4	Possibly more 4 way stops	12/15/2014 10:34 AM
5	Cars parked on the sides of road causes congestion in the road.	12/15/2014 9:25 AM
6	gravel roads	12/12/2014 3:05 PM
7	rough gravel roads, broken asphalt, bridges	12/12/2014 2:59 PM
8	road repairs	12/12/2014 2:38 PM
9	East Spruce to Mitchell Livestock and MTI and Dak Fest	12/12/2014 2:31 PM
10	Funding to keep existing roads in good condition. We simply cannot continue to let the transportation network deteriorate.	12/12/2014 2:19 PM
11	Cty Rd. 41 - needs good surface especially from Holiday Inn road west to Betts	12/12/2014 2:09 PM
12	keep big trucks on State highways where ever possible, impose load limits earlier in Spring, monitor trucks for weight limits and arrest/fine violators	12/12/2014 2:01 PM
13	Bridges and pavement	12/12/2014 1:46 PM
14	Bridge Repair	12/12/2014 1:40 PM
15	Resident of Mitchell City Sidewalks and bike trails Lights and crossing bypass	12/11/2014 12:49 PM
16	Bring bridges on county gravel roads up to 80,000 pound loads	12/11/2014 12:41 PM
17	Highway width and snow removal on county roads is poor	12/10/2014 3:48 PM
18	My needs are entirely with City of Mitchell streets - some roads need repair (North Rowley, for instance) and some need to be fully incorporated with curb & gutter (Spruce, South Rowley).	12/9/2014 7:28 AM
19	better public transportation	12/8/2014 1:55 PM
20	Managing traffic congestion with the growing population and expanding city structures	12/8/2014 12:29 PM
21	public transit for elderly or those without private vehicles, especially from bedroom communities.	12/8/2014 12:06 PM
22	There are a hand full of high traffic gravel roads that always have a excessive amount of washboard. The county should have a grader go over them more often.	12/8/2014 10:27 AM
23	Snow removal on country roads.	12/8/2014 7:02 AM
24	SD Hwy 37 should be a multi-lane highway between Mitchell and Parkston due to the heavy traffic and numerous intersections.	12/7/2014 2:05 PM
25	roads are cleared in a timely manor	12/5/2014 9:45 AM
26	Some of the city roads are terrible and need to be redone.	12/4/2014 3:06 PM
27	East Spruce Street in Mitchell	12/4/2014 2:06 PM

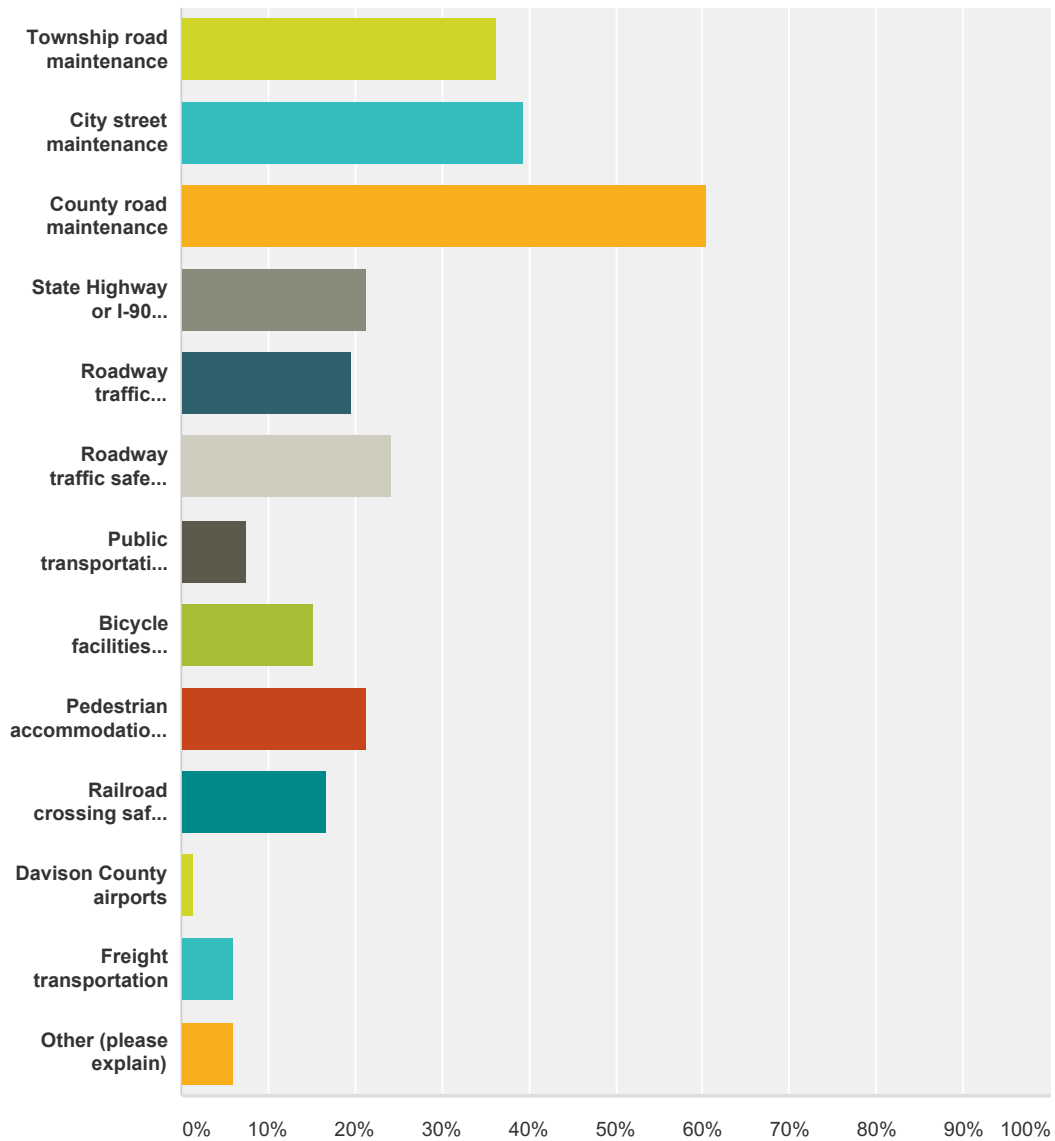
Davison County Master Transportation Plan

28	Traffic at MTI, intersections off of I-90.	12/4/2014 10:16 AM
29	I live in the city of Mitchell. Spruce Street near MTI is a major concern with the railroad crossing. I would also say that some of the county's roads into the city of Mitchell should be improved. West 8th Street, for example, should be paved at some point because it is a primary route into the city. While I understand that rural gravel roads have people who use them and are important to the people that live along them, I feel that the county's priorities should lie with its paved roads and its bridges. That's where the bulk of the travel is happening and if the county wants to encourage agriculture and future development, strong paved roads should be priority. I also think a priority should be placed on creating wider roads where possible.	12/3/2014 4:50 PM
30	Costs of maintenance and repairs and appropriate allocation of resources, priorities	12/3/2014 4:39 PM
31	I am a resident. Sanborn street is in bad shape.	12/3/2014 4:32 PM
32	Intersection of 37 and MTI	12/3/2014 4:31 PM
33	Funding is the biggest hurdle. Bridges need attention. Resident of city.	12/3/2014 3:52 PM
34	Secondary access to the Mitchell Technical Institute area other than spruce stree.	12/3/2014 3:48 PM
35	Replacing bridges maintaining oil roadways	12/3/2014 3:37 PM
36	Resident -- need more affordable public transportation	12/3/2014 2:58 PM
37	The Mt. Vernon oil is in need of surface repair. Resident, we farm in that area.	12/3/2014 8:37 AM
38	Road conditions. Specifically for semi traffic. Many roads don't seem to bad until you drive a semi over them. They are very rough and sometimes it is hard to control the semi safely.	12/2/2014 1:24 PM
39	Access roads to state hiways needs to be set at state weight load limits	11/30/2014 8:14 PM
40	Maintaining roads in good driving condition.The need for load limits for trucks.	11/21/2014 1:47 PM

Davison County Master Transportation Plan

Q29 What areas of transportation improvements are most important to you? Please choose the three that you think should be given top priority in the transportation master plan.

Answered: 66 Skipped: 11



Answer Choices	Responses	
Township road maintenance	36.36%	24
City street maintenance	39.39%	26
County road maintenance	60.61%	40
State Highway or I-90 maintenance	21.21%	14

Davison County Master Transportation Plan

Roadway traffic capacity improvements	19.70%	13
Roadway traffic safety improvements	24.24%	16
Public transportation system	7.58%	5
Bicycle facilities (i.e. bike trails)	15.15%	10
Pedestrian accommodations (i.e. sidewalks, crosswalks and pedestrian paths/trails)	21.21%	14
Railroad crossing safety improvements	16.67%	11
Davison County airports	1.52%	1
Freight transportation	6.06%	4
Other (please explain)	6.06%	4
Total Respondents: 66		

#	Other (please explain)	Date
1	Bridge Restoration	12/12/2014 3:14 PM
2	Bridges	12/12/2014 1:40 PM
3	making sure the roads handle the heavy traffic without breakup	12/3/2014 8:30 PM
4	Replacing bridges	12/3/2014 3:37 PM

Davison County Master Transportation Plan

Q30 Are there any specific transportation improvements you think would be beneficial to Davison County in the next 20 – 30 years?

Answered: 28 Skipped: 49

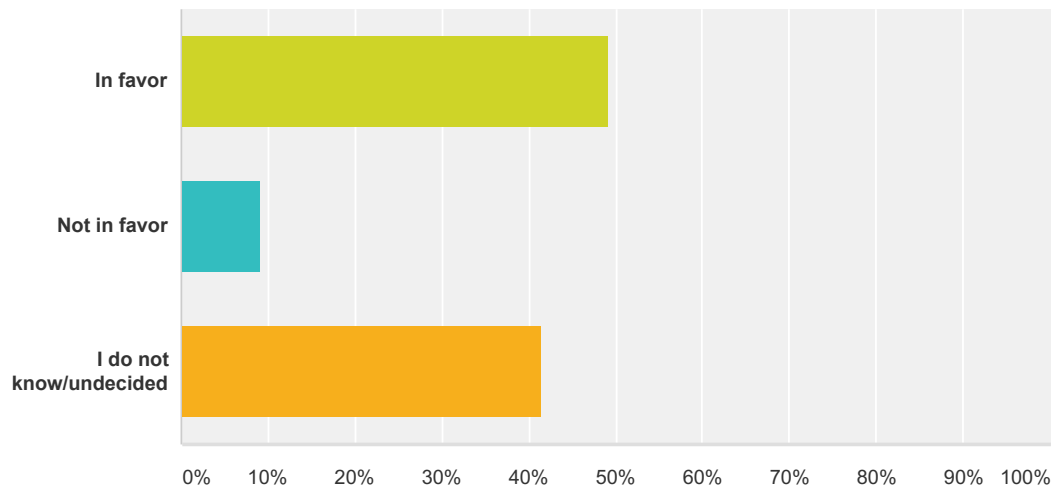
#	Responses	Date
1	Turning Lanes	12/18/2014 8:25 AM
2	TAXI SERVICE, MORE BIKE/WALKING TRAILS	12/17/2014 12:12 PM
3	Spruce Street by MTI and livestock barn	12/15/2014 11:15 AM
4	Develop Ohlman towards the lake.	12/15/2014 9:25 AM
5	bridges	12/12/2014 2:59 PM
6	farmers need a good road to markets	12/12/2014 2:38 PM
7	a way to get to dak fest and MTI when a train is sitting there for 20 mins or more	12/12/2014 2:31 PM
8	Improved rail service. Eliminate the rail road crossing at Spruce and improve road access to MTI by extending Foster Street under I-90.	12/12/2014 2:19 PM
9	do not convert paved roads to gravel unless building a base for future paving or blacktop Rebuild of Betts Road was great!! With the existing truck traffic how long will it last?	12/12/2014 2:01 PM
10	Pave 247	12/11/2014 9:21 PM
11	Again, width of paved county roads. I also believe there are a couple paved roads that could be turned back to gravel to save maintenance costs.	12/10/2014 3:48 PM
12	Walking route from Dry Run Creek to downtown. Enhance East 11th street to provide a connection from the east side of town to the center. Connect South Foster to East Spruce. Connect North Foster to the north end of town; I believe some residential development is starting to take place that would take advantage of this, and it would significantly help spur development on the North Side.	12/9/2014 7:28 AM
13	Added funds for townships for road maintenance etc	12/8/2014 9:48 PM
14	more planning for traffic arteries	12/8/2014 12:06 PM
15	burr street and the area around there (South by McDonalds, etc)	12/8/2014 9:46 AM
16	We need a second exit/entrance to the new MTI campus due to train traffic.	12/8/2014 7:02 AM
17	SD Hwy 37 improved to have separate turn lanes at busy intersections.	12/7/2014 2:05 PM
18	if road starts to brake up start patching ASAP	12/5/2014 9:45 AM
19	As bridges are replaced on I-90 a special emphasis should be placed on adding additional roadways between what will surely be a North and South city of Mitchell.	12/4/2014 2:06 PM
20	Expansion of bike/walk path around Mitcvhell.	12/4/2014 10:16 AM
21	Roads that connect area towns make sure the mat is thick enough so that it withstands truck traffic.	12/3/2014 8:30 PM
22	This doesn't directly apply to the quality of roads but I think Davison County would benefit by having numbered county roads, in addition to the current E911 grid system every county has. While it's probably second-nature to call the road by a certain name (like the Mount Vernon Oil or the Loomis Oil), having easy numbers attached would only help direct drivers through the county. Many of the roads probably have had some sort of historical numbering in the past. For example, because it's been known as Highway 42 for more than 50 years, 265th Street could be called additionally County Road 42. Old U.S. Highway 16 between Mitchell and Mount Vernon could be called County Road 16. I know signage is never cheap but it seems like something that could easily be added at some point to improve driver awareness.	12/3/2014 4:50 PM

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23	Partnerships with city	12/3/2014 4:39 PM
24	Make Highway 37 wider and safer.	12/3/2014 4:31 PM
25	bridge replacement maintaining oil roadways	12/3/2014 3:37 PM
26	the railroad crossing on Minnesota street needs guardrails. City needs to implement bike lanes. We need more affordable public transportation.	12/3/2014 2:58 PM
27	Hwy 37 south of Mitchell to be a 4 lane road.	12/3/2014 2:55 PM
28	Keeping as many oil roads maintained/improved as possible. Try not to break up oil roads and turn them into gravel. Bridge maintenance will also become a bigger issue as ag equipment and yields continue to get bigger.	12/2/2014 1:24 PM

Q31 Would you support an increase in fees for Davison County to adequately fund continued roadway maintenance, bridge replacement, and roadway improvements (new connections, safety improvements, capacity improvements, etc.)?

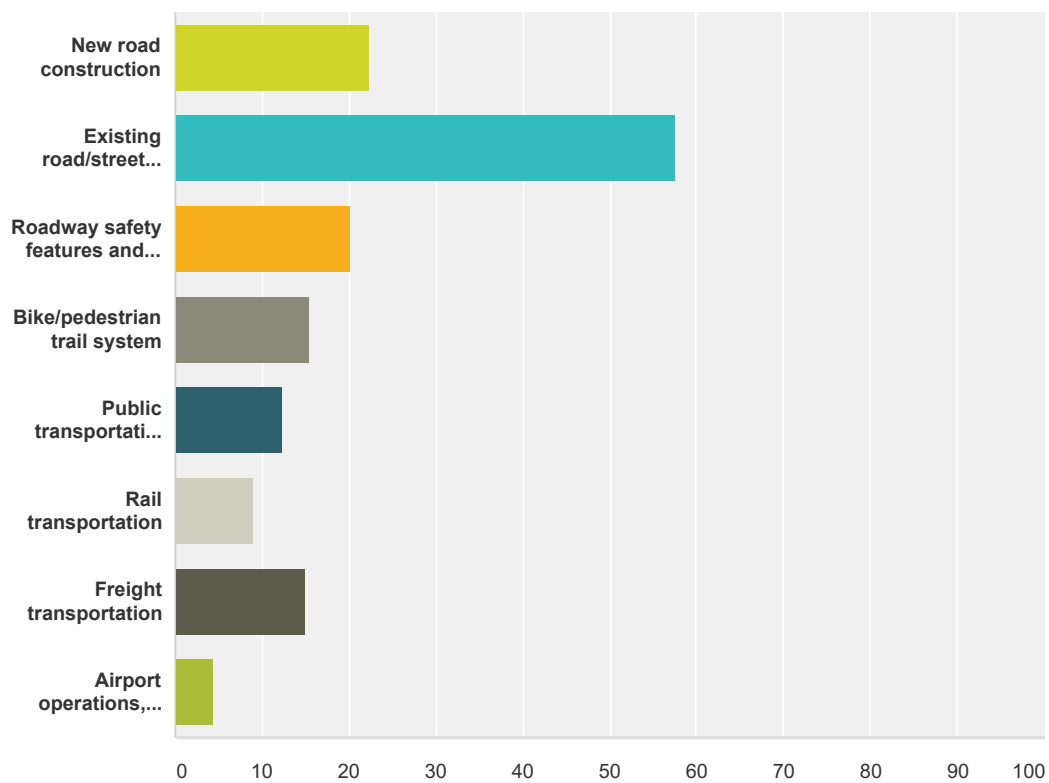
Answered: 65 Skipped: 12



Answer Choices	Responses	
In favor	49.23%	32
Not in favor	9.23%	6
I do not know/undecided	41.54%	27
Total		65

Q32 If you had a budget of \$100 to spend on future transportation improvements in Davison County, how much would you spend on the following areas? (Please indicate the amount of money you would spend for each category. You do not have to fund each category, but please spend the entire \$100 and make sure that your total does not exceed \$100. Please enter only whole numbers – no decimals).

Answered: 58 Skipped: 19



Answer Choices	Average Number	Total Number	Responses
New road construction	22	780	35
Existing road/street maintenance	58	3,225	56
Roadway safety features and improvements (such as signage and intersections)	20	685	34
Bike/pedestrian trail system	15	385	25
Public transportation operations and facilities	12	246	20
Rail transportation	9	169	19
Freight transportation	15	239	16

Davison County Master Transportation Plan

Airport operations, facilities, and expansion	4	71	16
Total Respondents: 58			

#	New road construction	Date
1	0	12/17/2014 12:12 PM
2	10	12/15/2014 11:15 AM
3	20	12/15/2014 9:25 AM
4	10	12/12/2014 7:36 PM
5	20	12/12/2014 2:45 PM
6	20	12/12/2014 2:38 PM
7	80	12/12/2014 2:31 PM
8	15	12/12/2014 2:19 PM
9	25	12/12/2014 2:01 PM
10	20	12/12/2014 1:40 PM
11	10	12/11/2014 12:41 PM
12	0	12/10/2014 3:48 PM
13	35	12/9/2014 7:28 AM
14	50	12/8/2014 9:48 PM
15	30	12/8/2014 6:34 PM
16	15	12/8/2014 1:26 PM
17	20	12/8/2014 12:29 PM
18	25	12/8/2014 12:06 PM
19	20	12/8/2014 10:27 AM
20	25	12/8/2014 9:46 AM
21	90	12/8/2014 7:02 AM
22	10	12/7/2014 2:05 PM
23	15	12/4/2014 2:06 PM
24	15	12/4/2014 10:16 AM
25	15	12/3/2014 11:42 PM
26	10	12/3/2014 4:50 PM
27	10	12/3/2014 4:39 PM
28	10	12/3/2014 4:31 PM
29	20	12/3/2014 4:01 PM
30	100	12/3/2014 3:48 PM
31	20	12/3/2014 2:55 PM
32	0	12/3/2014 8:37 AM
33	5	12/2/2014 1:24 PM
34	0	11/21/2014 2:31 PM

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35	10	11/21/2014 1:47 PM
#	Existing road/street maintenance	Date
1	85	12/18/2014 8:25 AM
2	25	12/17/2014 12:12 PM
3	50	12/15/2014 11:15 AM
4	50	12/15/2014 10:34 AM
5	40	12/15/2014 9:25 AM
6	25	12/12/2014 7:36 PM
7	80	12/12/2014 3:14 PM
8	100	12/12/2014 3:05 PM
9	50	12/12/2014 2:45 PM
10	50	12/12/2014 2:38 PM
11	20	12/12/2014 2:31 PM
12	75	12/12/2014 2:19 PM
13	100	12/12/2014 2:09 PM
14	75	12/12/2014 2:01 PM
15	50	12/12/2014 1:46 PM
16	80	12/12/2014 1:40 PM
17	90	12/11/2014 9:21 PM
18	50	12/11/2014 12:49 PM
19	90	12/11/2014 12:41 PM
20	75	12/10/2014 3:48 PM
21	25	12/9/2014 7:28 AM
22	50	12/8/2014 9:48 PM
23	30	12/8/2014 6:34 PM
24	40	12/8/2014 1:28 PM
25	15	12/8/2014 1:26 PM
26	50	12/8/2014 1:08 PM
27	30	12/8/2014 12:29 PM
28	35	12/8/2014 12:06 PM
29	75	12/8/2014 10:48 AM
30	30	12/8/2014 10:27 AM
31	25	12/8/2014 9:46 AM
32	60	12/8/2014 9:43 AM
33	10	12/8/2014 7:02 AM
34	50	12/7/2014 2:05 PM
35	75	12/5/2014 3:36 PM
36	100	12/4/2014 4:46 PM

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37	100	12/4/2014 3:06 PM
38	35	12/4/2014 2:06 PM
39	50	12/4/2014 10:16 AM
40	100	12/4/2014 8:29 AM
41	85	12/3/2014 11:42 PM
42	100	12/3/2014 8:30 PM
43	45	12/3/2014 4:50 PM
44	60	12/3/2014 4:39 PM
45	10	12/3/2014 4:31 PM
46	50	12/3/2014 4:21 PM
47	30	12/3/2014 4:01 PM
48	100	12/3/2014 3:52 PM
49	70	12/3/2014 3:37 PM
50	30	12/3/2014 2:58 PM
51	60	12/3/2014 2:55 PM
52	60	12/3/2014 8:37 AM
53	65	12/2/2014 1:24 PM
54	40	11/30/2014 8:14 PM
55	100	11/21/2014 2:31 PM
56	75	11/21/2014 1:47 PM
#	Roadway safety features and improvements (such as signage and intersections)	Date
1	15	12/18/2014 8:25 AM
2	25	12/17/2014 12:12 PM
3	10	12/15/2014 11:15 AM
4	25	12/15/2014 10:34 AM
5	30	12/15/2014 9:25 AM
6	10	12/12/2014 7:36 PM
7	20	12/12/2014 3:14 PM
8	5	12/12/2014 2:45 PM
9	5	12/12/2014 2:38 PM
10	10	12/11/2014 9:21 PM
11	25	12/11/2014 12:49 PM
12	25	12/10/2014 3:48 PM
13	5	12/9/2014 7:28 AM
14	40	12/8/2014 1:28 PM
15	10	12/8/2014 12:29 PM
16	15	12/8/2014 12:06 PM
17	25	12/8/2014 10:48 AM

Davison County Master Transportation Plan

18	10	12/8/2014 10:27 AM
19	50	12/8/2014 9:46 AM
20	30	12/8/2014 9:43 AM
21	10	12/7/2014 2:05 PM
22	15	12/5/2014 3:36 PM
23	10	12/4/2014 2:06 PM
24	30	12/3/2014 4:50 PM
25	30	12/3/2014 4:39 PM
26	80	12/3/2014 4:31 PM
27	50	12/3/2014 4:21 PM
28	20	12/3/2014 4:01 PM
29	10	12/3/2014 3:37 PM
30	20	12/3/2014 2:55 PM
31	0	12/3/2014 8:37 AM
32	5	12/2/2014 1:24 PM
33	0	11/21/2014 2:31 PM
34	15	11/21/2014 1:47 PM
#	Bike/pedestrian trail system	Date
1	25	12/17/2014 12:12 PM
2	10	12/15/2014 11:15 AM
3	10	12/15/2014 9:25 AM
4	3	12/12/2014 7:36 PM
5	5	12/12/2014 2:38 PM
6	25	12/11/2014 12:49 PM
7	0	12/10/2014 3:48 PM
8	25	12/9/2014 7:28 AM
9	50	12/8/2014 1:55 PM
10	15	12/8/2014 1:28 PM
11	30	12/8/2014 1:26 PM
12	25	12/8/2014 1:08 PM
13	10	12/8/2014 12:29 PM
14	10	12/8/2014 10:27 AM
15	10	12/8/2014 9:43 AM
16	5	12/7/2014 2:05 PM
17	10	12/5/2014 3:36 PM
18	10	12/4/2014 2:06 PM
19	25	12/4/2014 10:16 AM
20	10	12/3/2014 4:50 PM

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21	20	12/3/2014 4:01 PM
22	40	12/3/2014 2:58 PM
23	10	12/3/2014 8:37 AM
24	2	12/2/2014 1:24 PM
25	0	11/21/2014 2:31 PM
#	Public transportation operations and facilities	Date
1	25	12/17/2014 12:12 PM
2	10	12/15/2014 11:15 AM
3	25	12/15/2014 10:34 AM
4	0	12/15/2014 9:25 AM
5	10	12/12/2014 7:36 PM
6	0	12/12/2014 2:38 PM
7	0	12/10/2014 3:48 PM
8	30	12/8/2014 1:55 PM
9	25	12/8/2014 1:26 PM
10	25	12/8/2014 1:08 PM
11	5	12/8/2014 12:29 PM
12	25	12/8/2014 12:06 PM
13	10	12/8/2014 10:27 AM
14	5	12/7/2014 2:05 PM
15	5	12/4/2014 2:06 PM
16	5	12/3/2014 4:50 PM
17	10	12/3/2014 4:01 PM
18	30	12/3/2014 2:58 PM
19	1	12/2/2014 1:24 PM
20	0	11/21/2014 2:31 PM
#	Rail transportation	Date
1	4	12/15/2014 11:15 AM
2	0	12/15/2014 9:25 AM
3	10	12/12/2014 7:36 PM
4	25	12/12/2014 2:45 PM
5	0	12/12/2014 2:38 PM
6	10	12/12/2014 2:19 PM
7	0	12/10/2014 3:48 PM
8	30	12/8/2014 6:34 PM
9	5	12/8/2014 1:28 PM
10	15	12/8/2014 1:26 PM
11	10	12/8/2014 12:29 PM

Davison County Master Transportation Plan

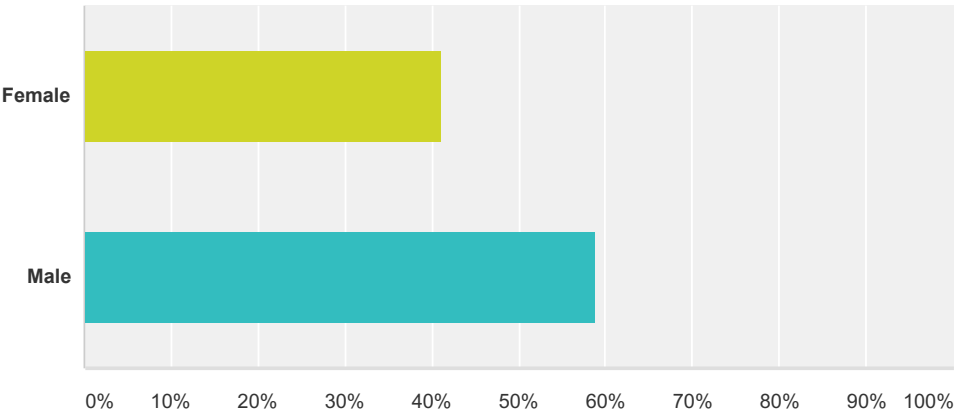
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14	10	12/4/2014 2:06 PM
15	0	12/3/2014 4:50 PM
16	10	12/3/2014 3:37 PM
17	0	12/3/2014 8:37 AM
18	20	12/2/2014 1:24 PM
19	0	11/21/2014 2:31 PM
#	Freight transportation	Date
1	4	12/15/2014 11:15 AM
2	0	12/15/2014 9:25 AM
3	20	12/12/2014 7:36 PM
4	20	12/12/2014 2:38 PM
5	50	12/12/2014 1:46 PM
6	0	12/10/2014 3:48 PM
7	20	12/8/2014 1:55 PM
8	10	12/8/2014 12:29 PM
9	5	12/8/2014 10:27 AM
10	5	12/7/2014 2:05 PM
11	5	12/4/2014 2:06 PM
12	0	12/3/2014 4:50 PM
13	10	12/3/2014 3:37 PM
14	30	12/3/2014 8:37 AM
15	60	11/30/2014 8:14 PM
16	0	11/21/2014 2:31 PM
#	Airport operations, facilities, and expansion	Date
1	2	12/15/2014 11:15 AM
2	0	12/15/2014 9:25 AM
3	12	12/12/2014 7:36 PM
4	0	12/12/2014 2:38 PM
5	0	12/10/2014 3:48 PM
6	10	12/9/2014 7:28 AM
7	10	12/8/2014 6:34 PM
8	5	12/8/2014 12:29 PM
9	5	12/8/2014 10:27 AM
10	5	12/7/2014 2:05 PM
11	10	12/4/2014 2:06 PM
12	10	12/4/2014 10:16 AM

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13	0	12/3/2014 4:50 PM
14	0	12/3/2014 8:37 AM
15	2	12/2/2014 1:24 PM
16	0	11/21/2014 2:31 PM

Q33 What is your gender?

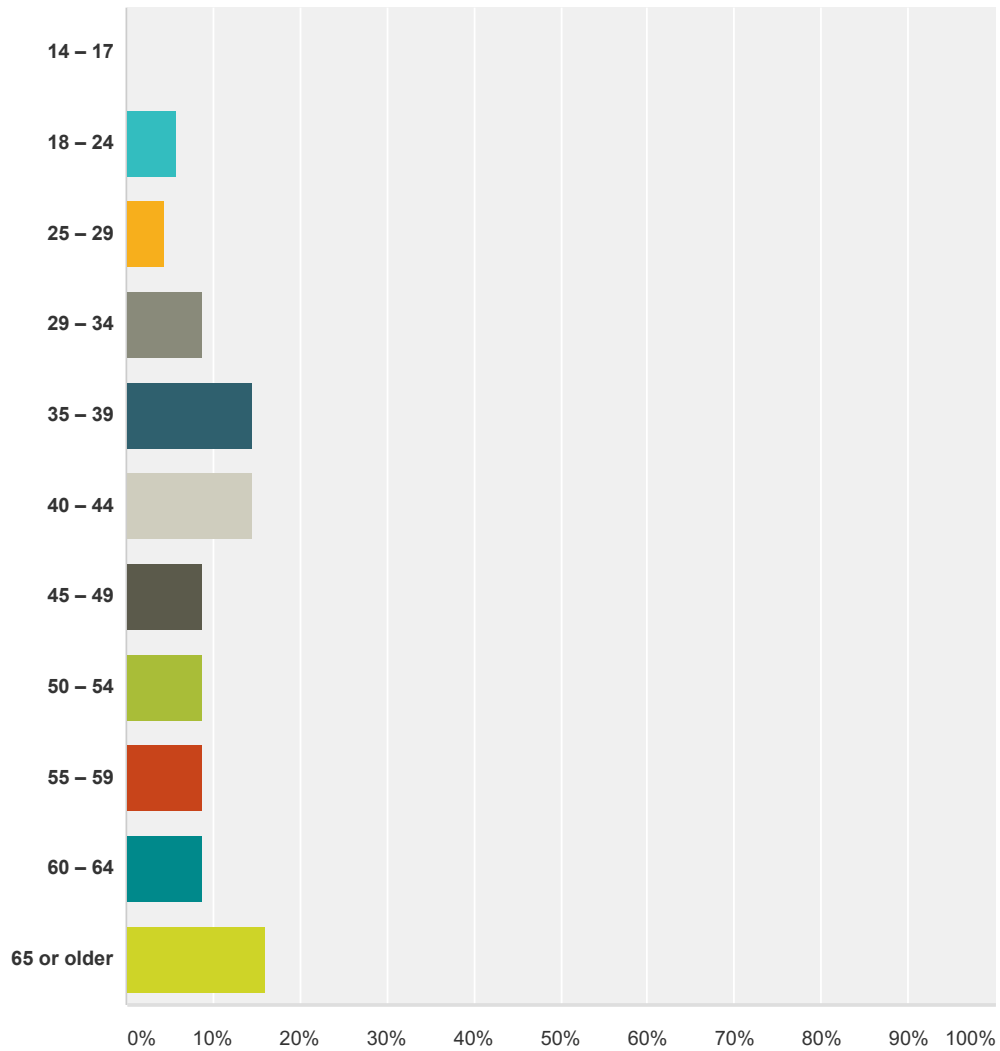
Answered: 68 Skipped: 9



Answer Choices	Responses	
Female	41.18%	28
Male	58.82%	40
Total		68

Q34 What is your age?

Answered: 68 Skipped: 9



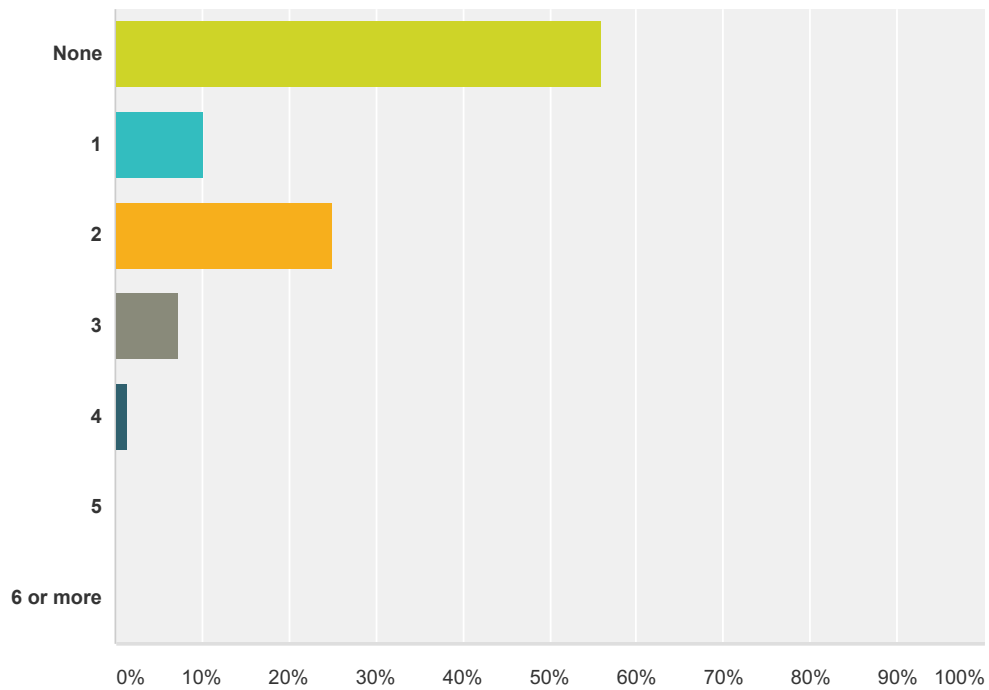
Answer Choices	Responses
14 – 17	0.00% 0
18 – 24	5.88% 4
25 – 29	4.41% 3
29 – 34	8.82% 6
35 – 39	14.71% 10
40 – 44	14.71% 10
45 – 49	8.82% 6
50 – 54	8.82% 6
55 – 59	8.82% 6

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60 – 64	8.82%	6
65 or older	16.18%	11
Total		68

Q35 How many children age 17 or younger live in your household?

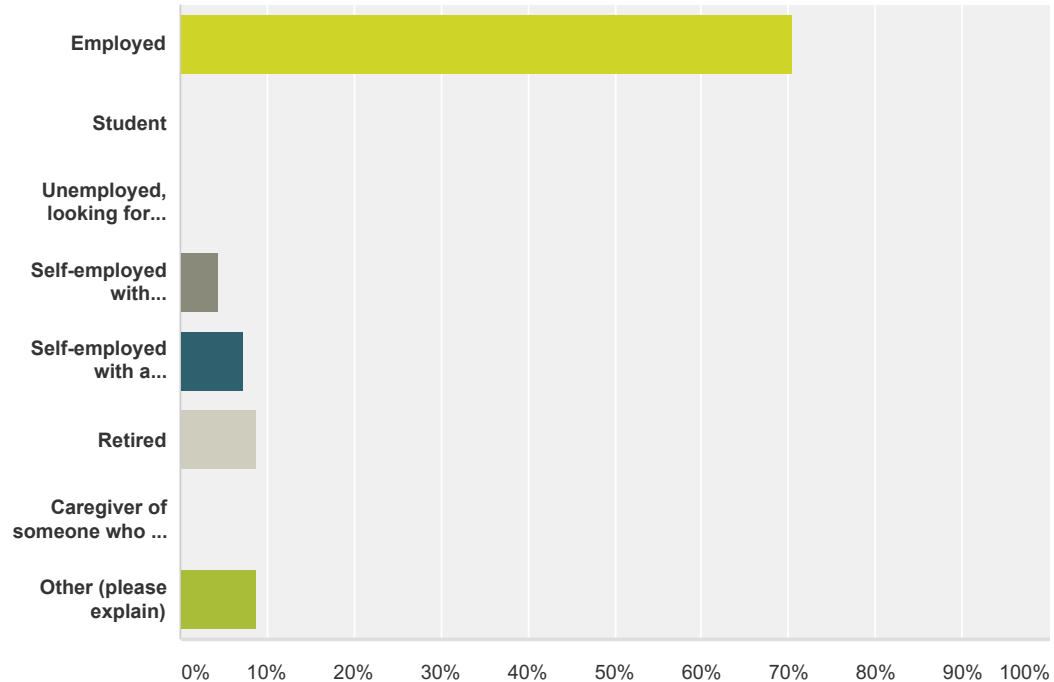
Answered: 68 Skipped: 9



Answer Choices	Responses	
None	55.88%	38
1	10.29%	7
2	25.00%	17
3	7.35%	5
4	1.47%	1
5	0.00%	0
6 or more	0.00%	0
Total		68

Q36 Which of the following best describes your employment status? Please check one.

Answered: 68 Skipped: 9



Answer Choices	Responses
Employed	70.59% 48
Student	0.00% 0
Unemployed, looking for work	0.00% 0
Self-employed with office/location away from home	4.41% 3
Self-employed with a home-based office	7.35% 5
Retired	8.82% 6
Caregiver of someone who is homebound	0.00% 0
Other (please explain)	8.82% 6
Total	68

#	Other (please explain)	Date
1	Farming	12/18/2014 8:25 AM
2	farmer	12/12/2014 3:15 PM
3	Farmer	12/12/2014 2:09 PM
4	farm	12/12/2014 1:46 PM

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5	Ag producer/farmer	12/8/2014 9:50 PM
6	Self employed farmer	12/3/2014 3:39 PM

Appendix D: Press Releases, Meeting Advertisements, and Additional Publicity Summary

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF DAVISON)

Penny Hohbach of said county, being, first duly sworn, on oath, says; that he/she is the publisher or an employee of the publisher of The Daily Republic, a daily newspaper, published in the City of Mitchell, in said County of Davison, and State of South Dakota; that he/she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Davison and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the notice, order or advertisement, a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for 1 issues(s), to wit:

Advisor November 19, 2014 Display Ad

That the full amount of the fee charged for the publication of the attached public notice insures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever, that the fees charged for the publication thereof are: \$120.60

Signed: Penny Hohbach

Subscribed and sworn to before me this 25th day of November, 2014.

Deb Townsend

Notary Public
County of Davison

My Commission Expires: 09-21-18

Prepared by: The Daily Republic, P.O. Box 1288, Mitchell S.D. 57301 605-996-5515

DEB TOWNSEND
Notary Public
SEAL
South Dakota



**SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
DAVISON COUNTY
NOTICE OF PUBLIC INFORMATION MEETING / OPEN HOUSE
FOR**

DAVISON COUNTY MASTER TRANSPORTATION PLAN

Date: December 2, 2014
Time: 5:30 p.m. to 7:00 p.m.
Place: Davison County Fairgrounds Complex, Meeting Hall
3200 West Havens, Mitchell, SD 57301

The South Dakota Department of Transportation (SDDOT) in conjunction with Davison County will hold an open house style public meeting to discuss and receive public input on the development of a Master Transportation Plan for Davison County. The open house will be informal, with one on one discussion available with SDDOT, County & Consultant staff.

Between 5:30 p.m. and 7:00 p.m., SDDOT, County, & Consultant staff will be available with displays to discuss transportation issues within Davison County and answer your questions. During this time, you will also have the opportunity to present written comments. A short presentation will be given at approximately 6:00 p.m.

Notice is further given to individuals with disabilities that this open house/public meeting is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house/public meeting should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations no later than 2 business days prior to the meeting in order to ensure accommodations are available. For further information regarding the study, contact Steve Gramm at (605) 773-6641 or by email at steve.gramm@state.sd.us.

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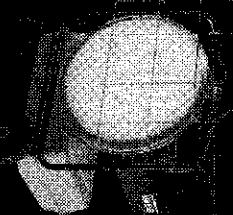
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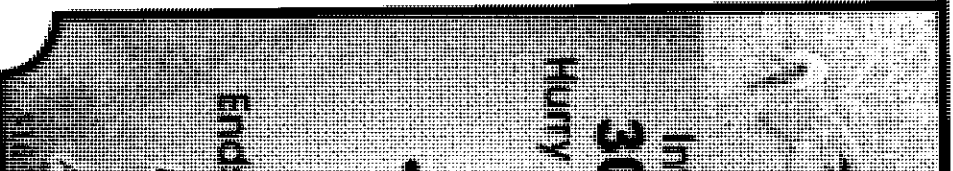
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NEWS

Davison County Transportation Open House Scheduled For Tuesday Night

YESTERDAY AT 10:27 AM IN LOCAL



PHOTO: CLIPART.COM

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A transportation open house will be held Tuesday night from 5:30 to 7 pm at the Davison County Fairgrounds meeting hall. Davison County residents are encouraged to attend and give feedback regarding the county's road system. A presentation will be given at 6 pm. Davison County and the state are conducting a transportation study, looking at needs in the county and what roads should receive priority for upgrades. A final plan will be presented next spring. Written comments will be taken at tonight's meeting and will be taken through December 16th.

TAGS:

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Department of Transportation / Davison County Conducting Transportation Survey

Posted: Friday, November 21, 2014

For Immediate Release: Friday, November 21, 2014

Contact: Steve Gramm, 605.773.6641



Department of Transportation / Davison County Conducting Transportation Survey

MITCHELL, S.D. - As part of the ongoing study to develop the Davison County Master Transportation Plan, a survey is being conducted to learn about travel patterns, transportation needs and suggestions for transportation improvements within Davison County.

The survey may be completed online at www.surveymonkey.com/s/DavisonCounty or by submitting a paper copy. Paper copies of the survey can be obtained at the upcoming public open house or by contacting Jon Wiegand at 605-221-2656.

Interested citizens are invited to attend a public open house scheduled from 5:30 p.m. to 7 p.m. at the meeting hall of the Davison County Fairgrounds Complex at 3200 West Havens in Mitchell on Tuesday, Dec. 2.

For more information, contact Steve Gramm, planning engineer, at 605-773-6641 or by email at steve.gramm@state.sd.us.

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SDDOT and Davison County Seek Public Input into Davison County Master Transportation Plan Study

Posted: Wednesday, November 26, 2014

For Immediate Release: Wednesday, November 26, 2014

Contact: Kristi Sandal, Public Information Officer, 605-773-3265



SDDOT and Davison County Seek Public Input into Davison County Master Transportation Plan Study

MITCHELL, S.D. - The South Dakota Department of Transportation, in collaboration with Davison County, will hold a public open house as part of the Davison County Master Transportation Plan. This open house public meeting will be held at 5:30 p.m. CST on Dec. 2, 2014 in the meeting room at the Davison County Fairgrounds Complex at 3200 West Havens Street in Mitchell.

The Davison County Master Transportation Plan study will address a full range of transportation options and issues, including pedestrian, bicycle, transit, freight and automobile. The purpose for the open house is to inform the public of the study's intent, to record any concerns the public may have on transportation in Davison County and to gather ideas to help determine the future look of Davison County's roadway, bus / transit, bicycle and pedestrian systems.

For those who cannot attend the meeting or desire additional information on the study, information will be made available online after the meeting at

<http://www.davisoncounty.org/departments/highway-dept/davison-county-transportation-study/>.

The meeting will be held from 5:30 to 7:00 p.m. CST at the location indicated. A brief, summarizing presentation will be made at approximately 6:00 p.m. followed by an open house discussion with SDDOT, county and consultant staff. The opportunity to present written comments will be provided. Written comments will be accepted until Dec. 16, 2014.

Notice is further given to individuals with disabilities that this open house/public meeting is being held in a physically accessible place. Any individuals with disabilities who require a reasonable accommodation in order to participate in the open house / public meeting should submit a request to the Department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations no later than two business days prior to the meeting in order to ensure accommodations are available.

For more information, contact Steve Gramm, data analysis engineer, at (605) 773-6641 or by email at steve.gramm@state.sd.us.

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Bill Moran, at left, South Dakota Regional Transportation Director for consulting firm HR Green, points to a large map during Tuesday's stakeholder meetings at the Davison County Fairgrounds west of Mitchell. County residents Bill Nebelsick, second from left and Craig Stehly, third from left and Charlie Edinger, front right, look on. (Marcus Traxler/Republic)

County hears transportation feedback

By [Marcus Traxler](#) on Dec 2, 2014 at 9:17 p.m.

The officials leading Davison County's transportation plan study were looking for feedback about the county's 330 miles of roads prior to their first public meeting on Tuesday night.

They got it.

More than 50 people were on hand for the public open house Tuesday at the Davison County Fairgrounds in Mitchell. The event capped a day where

county officials and engineers met with dozens more local stakeholders and residents about the county's road system and how leaders should go about building its future.

"For the most part, it's the stakeholders that are driving these roads daily," Project Manager Jon Wiegand said. "They're the ones that know about the conflicts, the safety issues and know when the road is falling apart. The feedback they provide is extremely beneficial when it comes down to the specifics."

The transportation study, which is scheduled to be completed by July 2015, is to identify issues and needs and give the county a prioritized list with estimated costs of projects. The study, led by the civil engineering firm HR Green, will look at intersections, traffic segments, bridges, along with shoulders, road makeup quality and how to accommodate pedestrians and bicyclists.

Large 36-inch by 42-inch maps were placed on tables throughout the meeting hall, and consultants encouraged road users to share their concerns. Wiegand referred to it as "marking the map," and an effective way to hear out the public.

Residents provided feedback about which roads were heavily traveled and where problem spots can lie. Ag producers in the county expressed a desire to keep 265th Street between Ethan and the Aurora County line in good shape, since it's one of the county's main east-west routes.

Davison County Highway Superintendent Rusty Weinberg then outlined the county's plan to upgrade that road. About five miles has been re-paved already, and another five miles is in the works for 2015. That was welcome feedback from residents.

"From where I stand, I'm glad we have a plan," said county resident Lewis Bainbridge. "Because for a long time, it didn't look like we did."

Weinberg said study officials will still reach out to a few groups to get more feedback -- most notably school bus drivers and rural mail carriers -- to hear what concerns they might have.

The study is being sponsored by the South Dakota Department of Transportation, which also is making up a portion of the study advisory team. The county paid \$20,000 of the study's \$100,000 cost. The rest is being covered by state and federal sources.

Wiegand said the firm will project forward traffic counts for the next 20 years based on state Department of Transportation figures, and will obtain intersection counts at certain locations around the county. It will use the state's crash counts -- 1,444 crashes in Davison County from 2009 to 2013 -- and figure crash rates. He said crash numbers can be deceiving, because crashes are generally random, and that figure includes more than 600 incidents with animals.

Wiegand said it's also important to consider what the county already has. He said HR Green has been impressed with the system of paved roads in the county.

Studying the issues

A study advisory team for the transportation plan identified the following areas as issues for the study to examine.

- Pavement deterioration along 265th Street.

- Traffic congestion and safety concerns along Spruce Street in southeast Mitchell and along North Ohlman Street in Mitchell.
- Heavy truck traffic from the Poet Ethanol Plant from Loomis to State Highway 37.
- Safety issues at the 252nd Street and 398th Avenue intersection and along 254th Street south of Mount Vernon.
- Safety issues north of Ethan at the corner of 264th Street and 411th Avenue.
- The bridge over the James River along 250th Street near the Hanson County line.
- Potential flood concerns along the James River corridor.
- Steep slope sides along 403rd Avenue (Betts Road) and 265th Street.
- Rough roadway conditions at the intersection of 247th Street and 397th Avenue.
- A surface change along 247th Street between Davison and Aurora counties.

Advisory committee member Jeff Bathke said the meetings Tuesday made them aware of many more issues. Some of the issues have been known for a while, Weinberg said.

"Most of the issues we heard about tonight are things that have been on our radar before, and that's good that we heard about them again," Weinberg said. "I'd say it's been very positive."

Davison County and HR Green are also pushing road users to complete an online survey about their travel habits through the county to gauge what

users would like to see for improvements. That is available on the county's website until Dec. 16.

There are also the bridges. Of the 125 bridges inside the county's boundaries, Davison County is responsible for maintaining 88 of them. The remainder are federal, state or township bridges.

The most pressing bridge in the county is the 363-foot span along 250th Street, or Airport Road. Weinberg said the Davison County would likely have to spend \$3 million to fix it, exceeding the county's road budget of roughly \$2 million.

The county will hold another public meeting in May or June before finalizing the plan.

Wiegand said while the funding mechanism for roads and bridges is out of their control, he said Davison County will be ready when money is available.

"They'll be ready," he said. "They'll have their list of projects and they'll be able to say the cost is 'X' number of dollars and be prepared when funding is available."

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) SS
COUNTY OF DAVISON)

Penny Hohbach of said county, being, first duly sworn, on oath, says; that he/she is the publisher or an employee of the publisher of The Daily Republic, a daily newspaper, published in the City of Mitchell, in said County of Davison, and State of South Dakota; that he/she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Davison and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the notice, order or advertisement, a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for 3 issues(s), to wit:

Monday, May 18, 2015 Display Advertisement

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Signed: *Penny Hohbach*

Subscribed and sworn to before me this 26th day of May, 2015.

Deb Townsend
Notary Public
County of Davison

My Commission Expires: 09-21-18

Prepared by: The Daily Republic, P.O. Box 1288, Mitchell S.D. 57301 605-996-5515

DEB TOWNSEND
Notary Public
SEAL
South Dakota

years ago and school board two years ago.

Volesky, who moved to Mitchell in 2006, graduated from Mobridge High School.

She then obtained a bachelor's degree in education from Brigham Young University, with a minor in

Volesky contends that the project's scale, particularly the approximately 1,200-seat auditorium, is too much.

"Why do they want to build a 1,240-seat fine arts center, when our average attendance for musicals, shows and plays are between 165 to 250 people?" she said, cit-

needs a facelift. And you can do that for a fraction of what they're spending on the fine arts center."

A remodeled high school would be more fair to everyone involved — all teachers, staff, faculty and students, she said. The current plan, she said, isn't fair to the taxpayers of Mitchell — particularly

the biggest issue Volesky hopes to address if elected, she's also concerned about insurance at South Dakota schools, and controversial Common Core standards.

school board's transparency by televising or webcasting board meetings, and working to improve public input.

"I'm running for the people who don't have a voice, or are afraid to express themselves," she said. "We need to get the politics out of education."

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

DAVISON COUNTY NOTICE OF PUBLIC INFORMATION MEETING / OPEN HOUSE

FOR

DAVISON COUNTY MASTER TRANSPORTATION PLAN

Date: June 4, 2015
Time: 5:30 p.m. to 7:00 p.m.
Place: Davison County Fairgrounds Complex, Meeting Hall
3200 West Havens, Mitchell, SD 57301

The South Dakota Department of Transportation (SDDOT) in conjunction with Davison County will hold an open house style public meeting to discuss and receive public input on the preliminary recommendations of a Master Transportation Plan being developed for Davison County. The open house will be informal, with one on one discussion available with SDDOT, County & Consultant staff. Between 5:30 p.m. and 7:00 p.m., SDDOT, County, & Consultant staff will be available with displays to discuss the proposed options and answer your questions. During this time, you will also have the opportunity to present written comments. A short presentation will be given at approximately 5:45 p.m. For those that cannot attend, the information will be available on the study's webpage, www.davison-county.org/departments/highway-dept/davison-county-transportation-study.

Notice is further given to individuals with disabilities that this open house/public meeting is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house/public meeting should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations no later than 2 business days prior to the meeting in order to ensure accommodations are available.

For further information regarding the study, contact Steve Gramm at (605) 773-6641 or by email at gramm@state.sd.us.

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Dr. Matt and Dr. Don Dailey welcome to our dental practice.

Austin is a Fargo, ND, native. He received his undergraduate degree from North Dakota State University in mechanical engineering. He then went on to receive his DDS degree from the University of Minnesota Dental School. Dr. Austin Schmalz decided to make his way back west to enjoy a similar lifestyle that he experienced while growing up in North Dakota. In his spare time, he enjoys staying active by playing sports, working out, hunting, fishing, hanging out with family and friends, and

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Friday, May 29th, 1:30 & 3:30 pm

Location: Sale will be held on site. Watch for Auction Signs.

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Westington Springs, SD House Sells at 1:30 PM on site
405 1st ST Westington Springs, SD

3 Bedroom 2 Bath Home situated on a 50x142 lot. Finished floor area of 772 Sq.ft. main floor & 364 finished on 2nd. This home has 2 bedrooms, laundry room, kitchen and living room on the main floor. The kitchen has been updated with new cabinets. The 2nd floor has been renovated to a large bedroom and does have a bathroom on the 2nd floor. Walk out wooden deck and stairs access to the 2nd floor. Window AC units on both floors. Galvalinized Metal Roof. Detached 16x24 Garage with alley access. Sold AS IS. Legal. Lot 4 Blk 2 Sitcoms 1st Addition, Westington Springs, Jerauld County, South Dakota

Forestburg, SD House Sells at 3:30 PM on site
1515 Arnold, Forestburg, SD

1 Bedroom 1 Bath Single Story Home situated on a nice corner double lot measuring 100x142. Sq. Footage of main floor is 752 Sq. Ft. Unfinished basement with 288 sq ft. Newer Cement Block Foundation in basement. There is a newer single car garage on the property. Exterior woodburner. The interior of the home has had some updating with new carpet, paint and new kitchen cabinets. Sold AS IS. Legal. Lots 17 & 18 Blk 17 Forestburg, Sanborn County South Dakota.

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antibiotics used on dairy farms - including penicillin, ampicillin and amoxicillin.

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION DAVISON COUNTY NOTICE OF PUBLIC INFORMATION MEETING / OPEN HOUSE FOR DAVISON COUNTY MASTER TRANSPORTATION PLAN

Date: June 4, 2015
Time: 5:30 p.m. to 7:00 p.m.
Place: Davison County Fairgrounds Complex, Meeting Hall
3200 West Havens, Mitchell, SD 57301

The South Dakota Department of Transportation (SDDOT) in conjunction with Davison County will hold an open house style public meeting to discuss and receive public input on the preliminary recommendations of a Master Transportation Plan being developed for Davison County. The open house will be informal, with one on one discussion available with SDDOT, County & Consultant staff. Between 5:30 p.m. and 7:00 p.m., SDDOT, County, & Consultant staff will be available with displays to discuss the proposed options and answer your questions. During this time, you will also have the opportunity to present written comments. A short presentation will be given at approximately 5:45 p.m. For those that cannot attend, the information will be available on the study's webpage, www.davison-county.org/departments/highway-dept/davison-county-transportation-study.

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Recipe of the Week



Oatmeal-Chocolate Chip Cookies
Submitted by
Stacey Schleich, Mitchell
Daily Republic Employee

Ingredients:

1 1/2 cups packed brown sugar
1 cup butter or margarine, softened
1 teaspoon vanilla
1 egg
2 cups quick-cooking oats

1 1/2 cups all-purpose flour
1 teaspoon baking soda
1/4 teaspoon salt

1 cup semi-sweet chocolate chips (6 oz)
1 cup chopped nuts, if desired

Directions:

1. Heat oven to 350°F. In large bowl, stir brown sugar and butter until blended. Stir in vanilla and egg until light and fluffy. Stir in oats, flour,

composed of state and federal regulators and dairy industry representatives, first requested the FDA for Veterinary Medicine released results of a survey of nearly 2,000 milk sam-

Guess Who?

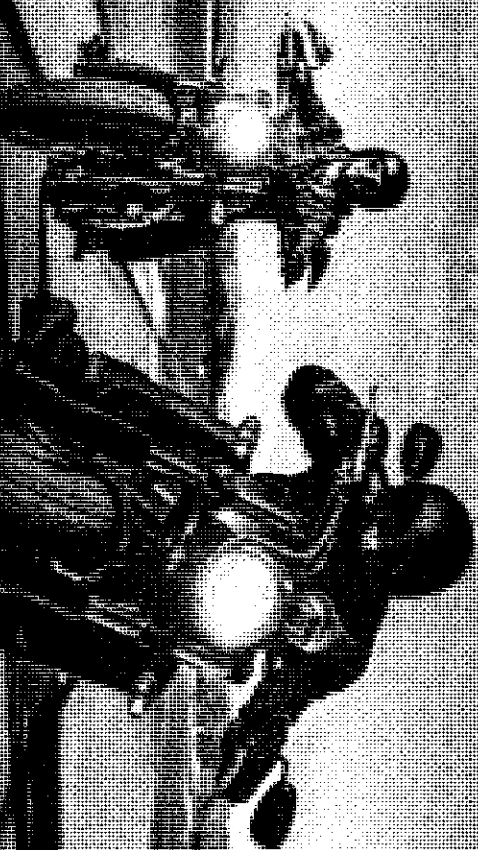
I am a singer/songwriter born on May 19, 1992 in England. I began my singing career in 2012 and three short years later I earned Grammy Awards for Best New Artist and Song of the Year.

Answer: Sam Smith

associated with the Center for Science in the Public Interest. "I don't think it's too big a burden to periodically test and make sure farmers know that someone is looking over their shoulders."

The FDA will use the public comments on its new risk assessment to determine what other drugs to test for and to educate dairy farmers on avoiding illegal drug residues.

PERFORMANCE GRAMMY



PERFORMANCE GRAMMY



Davison County Commissioner Brenda Bode, right, speaks with South Dakota Department of Transportation Project Manager Steve Gramm, left, and local resident Larry Hasz, center, about county transportation projects Thursday at the Davison County Fairgrounds. (Marcus Traxler/Republic)

Study: Big shortfall for Davison Co. roads, bridges

By [Marcus Traxler](#) on Jun 5, 2015 at 8:05 a.m.

Davison County only has about 40 percent of the funds needed to upgrade its county road and bridge system—at a price tag of \$7.6 million per year, according to the consultants studying the county's transportation needs.

That figure was one of many presented during Davison County's Master Transportation Plan public meeting held Thursday night at the Davison County Fairgrounds. The figure is considered to be the annual funding need for the county, and includes asphalt overlays, bituminous and gravel surfacing, signage, doing two bridge projects per



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2 hours ago

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year and knocking out short term projects on the recommended list each year.

Long-term costs, using inflation rates of 4.75 percent, put the total cost of everything on the county's list of projects between \$200 million and \$245 million. That rate was considered conservative, said Project Manager Jon Wiegand, who works for HR Green, of Sioux Falls.

If the county were to just maintain and preserve its current system of roads, it would cost about \$5.5 million annually. With the inflation rate, that \$5.5 million is estimated to turn into roughly \$14 million per year by 2035.

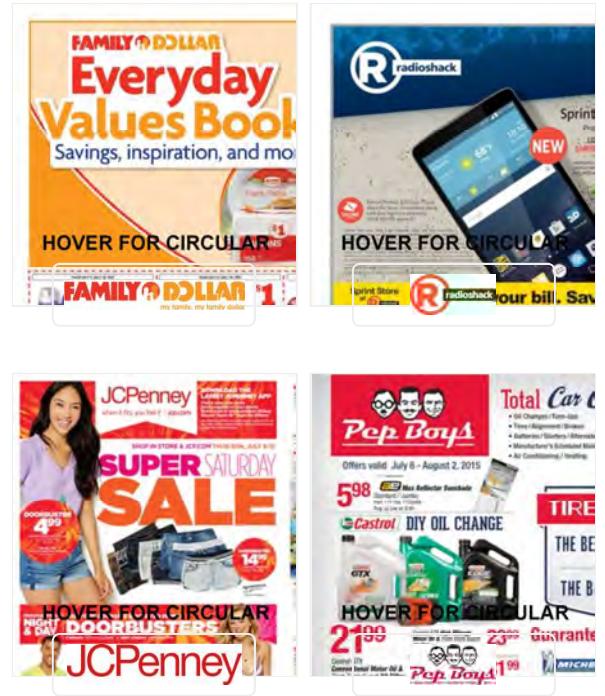
Wiegand said putting the information down is important to let the county know what's needed and where priorities have been established.

"The gap between what's available for funding and what the needs are is large, but you have to be able to prioritize, while at the same time be able to consider maintaining and preserving what you have," he said. "Doing a little of both is the best way to maximize your funds to address the needs as you go."

The study also outlines possible revenue sources for how to fund the projects, which Wiegand said was a key item the county leaders wanted.

Between funding from the county's wheel tax, motor vehicle licenses and other sources, the county had \$2.7 million in revenue in 2014 and increases to the wheel tax and motor vehicle licenses would make an extra \$640,000 available.

This Week's Circulars



The figures don't take into account additional sources of funding made available through the most recent legislative session, which includes the \$15 million set aside for county bridges through a state grant fund or the optional property tax levy for counties.

Davison County Highway Superintendent Rusty Weinberg said there were few surprises in the presentation, with the projects or the funding.

"We've known that money is going to be what dictates a lot of this," he said. "To know exactly where we stand and what the priorities are is most important, so that we can plan and prepare. The biggest thing is getting this out there to the public."

In the funding proposal, Davison County leaders left a space for a county sales tax, something the county has verbalized an interest in exploring, between a half-cent and a 1 cent for infrastructure. No estimate was provided on that figure, and that is an item that would require a change in state law.

Study officials also prioritized north-south and east-west corridors through the county, each of them being asphalt roads that are already primarily used by residents and travelers. Those routes include 247th, 254th and 265th streets for east-west routes and 397th Avenue and 403rd, 405th and 408th avenues going north and south. Cemetery Road and Shanard Road, or 250th and 252nd streets, respectively, were deemed important to the "Mitchell Urban Fringe."

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VERY WELL KEPT. 3 bedroom, 2 bathroom house, all new windows, shingles & eaves, all just painted inside & out. New kitchen with Patzer

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"Those are the roads that are traveled the most and are already being used the most and they're the ones that are carrying the produce," Weinberg said. "Everything that is moving around the county and connecting some folks from Sanborn or Aurora or Hanson County. Those are critical to our county and the people around us."

The county's leaders had learned at a previous commission meeting that 15 bridges had been identified as needed in either replacement or rehabilitation at a cost of \$1.85 million and \$2.31 million, respectively. Wiegand said the two most important bridge projects have been identified as the James River Bridge on 250th Street, or Airport Road, and the bridge over Firesteel Creek on North Foster Street out of Mitchell.

In all, the study proposes 47 projects, ranging from intersections, to roadway segment improvements, multimodal network enhancements (which take into account pedestrians and other road users) and bridges. The study then prioritizes the projects on three different levels: the short term of 0 to 10 years, the medium term of 11 to 20 years and long term of 20-plus years.

One notable long-term project on that list: an overpass of Interstate 90 to connect Spruce Street with Foster Street at a cost of \$14 million, after a feasibility study. Some of the recommendations also include adding street lights on the corners of rural intersections that are known to be dangerous, something the county currently does not have. The project also recommends changing

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1999 FORD WINDSTAR van, V6 motor, red, clean, auto transmission. Good condition, \$32

1964 DODGE Dart, interior & exterior restored, has flat tire, needs motor work & dom

2005 JACK RAUSCH Mustang GT, 4.6 litre engine, 5 sp, 33,000 orig miles, \$16,000. Cal

1998 CHEVY Mark VII van, 188,000 miles, runs great, \$1000. 605-933-0706 or 605-295-0

2008 IMPALA 3.5 flex fuel, 1 owner, \$5,000 OBO. Will take trades. Call Jackson Motor

2007 IMPALA 3.5 flex fuel, low miles, 1 owner, \$8,500 OBO. Will take trades. Call Ja

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3 BEDROOM, 2 bath, w/garage. 609 N. Duff. No pets. \$1000 rent. Call 605-999-5146 »

2 BEDROOMS, up to \$533. Prairie View Court, 1820 N. Wisconsin. No smokers. Deposit \$5 »

1 & 2 BEDROOMS, heat, water, garbage included. Single car garage. No pets. Call 605-9 »

TWO BEDROOM includes heat, water, sewer, garbage, \$595 rent. No smoking/ pets. 605-63 »

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about 10 percent of the county's road surfaces, some from gravel to a paved surface and vice versa.

The price tag for the study is \$100,000 and the county is responsible for \$20,000 of that. The remainder is covered by a grant from the South Dakota Department of Transportation and federal government funds.

HR Green will present a final report in mid-July to the commissioners and it will be about 110 pages long. Wiegand said it will essentially tell the story of the county's transportation network looking at the past, its current state and the future.

"It tells a story of what's going on in Davison County and the needs going forward," he said. "I think it encompasses everything anyone could want to know about the county's future in transportation."

Davison County Commission Chairman John Claggett remarked that he would like to create a "war room" of sorts, where county residents could see the presentation boards. He said residents need to understand what the county is facing with funding needs and the study's findings.

The county is taking public comment on the master plan through June 19 on the county's website, with a link to the project materials on the highway department page.

The cost breakdown

According to consultant HR Green, the following would be a possible future budget, if the county had the desired \$7.6 million in funds annually:

- Short term projects: \$1.49 million per year
- Bridges (doing two per year): \$600,000
- Asphalt concrete overlays: \$1.29 million
- Gravel resurfacing and maintenance: \$1.84 million
- Bituminous surfacing and maintenance: \$1.39 million
- General maintenance and signs: \$1.03 million.

-- Source: HR Green

DOT and Davison County Seek Public Input into Davison County Master Transportation Plan Study

By none on Jun 1, 2015 at 9:07 p.m.

PIERRE – The South Dakota Department of Transportation, in collaboration with Davison County, will hold a public open house as part of the Davison County Master Transportation Plan. This open house public meeting will be held at 5:30 p.m. Thursday in the Meeting Room at the Davison County Fairgrounds Complex in Mitchell.

The Davison County Master Transportation Plan study will address a full range of transportation options and issues including pedestrian, bicycle, transit, freight and automobile. The purpose for the open house is to inform the public of the study's findings and preliminary recommendations and to record any comments or concerns the public may have on those recommendations.


For those who cannot attend the meeting or desire additional information on the study, information will be made available online after the meeting at www.davisoncounty.org/departments/highway-dept/davison-county-transportation-study. (<http://www.davisoncounty.org/departments/highway-dept/davison-county-transportation-study>.)

The meetings will be held from 5:30 to 7 p.m. at the location indicated. A brief, summarizing presentation will be made at approximately 5:45 p.m., followed by an open house discussion with SDDOT, county and consultant staff. The opportunity to present written comments will be provided. Written comments will be accepted until June 19, 2015

Notice is further given to individuals with disabilities that this open house/public meeting is being held in a physically accessible place. Any individuals with disabilities who require a reasonable accommodation in order to participate in the open house / public meeting should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113

For more information, contact Steve Gramm, planning engineer, at 605-773-6641 or by email atsteve.gramm@state.sd.us (<mailto:atsteve.gramm@state.sd.us>) .

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TRENDING

1. Father/Son duo leading Mustangs
2. 'Eyesore' getting cleaned up near Lakeview
3. Mitchell, Plankinton men enter pleas in sex case
4. Zion Lutheran church in Delmont intends to rebuild after May tornado
5. Highway Patrol assists man in ditch

more >

LATEST

First electric plane crosses the Channel
1 hour ago

Father/Son duo leading Mustangs
2 hours ago

Building work along Highway 18
2 hours ago

Confederate flag falls from SC state capitol
2 hours ago

South Dakota might tweak endangered species listing system
2 hours ago

more >

This Week's Circulars



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Customer Service Representative

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Prairie St. John's, a 110-bed psychiatric care facility located in Fargo, Nort...

Registered Nurse - Full Time AM Shift

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[SHARP #280 Owatonna 16 1/2 ft. windrower, always shedded, nice shape low acres, \\$1,575. Call 605-925-7120](#)

[VERY WELL KEPT. 3 bedroom, 2 bathroom house, all new windows, shingles & eaves, all just painted inside & out. New kitchen with Patzer](#)

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1999 FORD WINDSTAR van, V6 motor, red, clean, auto transmission. Good condition, \$32

1964 DODGE Dart, interior & exterior restored, has flat tire, needs motor work & dom

2005 JACK RAUSCH Mustang GT, 4.6 litre engine,
5 sp, 33,000 orig miles, \$16,000. Cal
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1998 CHEVY Mark VII van, 188,000 miles, runs
great, \$1000. 605-933-0706 or 605-295-0
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2008 IMPALA 3.5 flex fuel, 1 owner, \$5,000 OBO.
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\$8,500 OBO. Will take trades. Call Ja

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2 BEDROOM, fridge, stove, central air, washer/dryer, remodeled. No Pets 605-996-1969 »

2 BEDROOM, 510 W 9th. No pets/ smoking. Call 605-933-0868 or 605-770-4618 »

3 BEDROOM houses for rent in Mitchell, no smoking, no pets. 605-682-8611, leave messa »

2 BEDROOMS, up to \$533. Prairie View Court, 1820 N. Wisconsin. No smokers. Deposit \$5 »

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Appendix D – Major Roads Plan Development



Major Roads Plan Development Memorandum

Davison County Master Transportation Plan

Federal Highway Administration
South Dakota Department of Transportation
Davison County

Final Report

April 30, 2015



Introduction

The following memorandum outlines the process used to develop the Major Roads Plan for the Davison County Master Transportation Plan. The roadway classification utilized in the Major Roads Plan builds upon classifications used as part of the Federal Functional Classification (FFC). Any deviation in terminology from the FFC and the Major Roads Plan is also discussed.

Major Roads Plan Development Process

The Major Roads Plan was developed in partnership with Davison County and SDDOT staff as part of the development of the Davison County Master Transportation Plan. The Major Roads Plan builds upon and aligns with the current FFC in terminology and roadway classification characteristics in order to maintain consistent linkages between roadway type, established design guidance and standards, and future funding opportunities. It should be noted, however, that while the Major Roads Plan is intended to be independent of the FFC it can be used as recommended adjustments to future classification evaluations.

When evaluating the existing FFC, shown in Figure 1, and identifying direction in which to drive the proposed Major Roads Plan, the following factors were considered as part of the development process:

- Trip length characteristics of the route as indicated by length of route, type and size of traffic generators served (i.e., freight and farm trucks), and route continuity.
- The ability of the route to serve regional population centers, regional activity centers, and other traffic generators.
- The spacing of the route to serve different functions (need to provide access and mobility functions for the entire County).
- The role of the route in providing mobility or land access (number of access points, access spacing, speed, traffic control, etc.).
- Assign prioritization of parallel routes or duplicate routes.
- Maintain regional connectivity and route continuity of similar facilities.
- The relationship of the route to adjacent land uses (location of towns, growth areas, industrial areas, and neighborhoods, etc.).

Given the agricultural landscape, existing densities, and the limited types of land development planned in Davison County, the road mileage should remain balanced through the County's roadway hierarchy. The Interstate and US/State highway network will continue to serve regional trips entering and exiting the County, while the County roadways are planned to serve shorter trips or key connections based on the classification in the Major Roads Plan. The existing FFC and the proposed Major Roads Plan are presented in Figures 1 and 2, respectively.

Differences between Federal Functional Classification and Proposed Major Roads Plan

The following summarizes differences between the existing FFC in the rural areas of Davison County and the Major Roads Plan classification. These differences are graphically depicted in Figure 2.

West-East Roadways

245th Street (397th Avenue to SD Hwy 37)

Change from Minor and Major Collector to Local Roadway

- Low traffic volumes (range of 20 to 92 vpd, 2015 volumes)
- 2 mile offset from parallel Major Collector (247th Street)

253rd Street (397th Avenue to 398th Avenue), 398th Avenue connection, 252nd Street (398th Avenue to 403rd Avenue); (also known as Cemetery Road)

Change from Major Collector to Minor Collector

- 2 mile offset from parallel Major Collector (254th Street)
- When compared to 254th Street, this route carries notably less traffic throughout the corridor for comparable segments
- Currently could be considered a duplication of routes with 254th Street
 - Segment change to Minor Collector differentiates 252nd Street and 254th Street route priority
 - 254th Street provides primary Mount Vernon to/from Mitchell route; alternate, parallel I-90 route
- Proposed changes do not affect 252nd Street (Major Collector) east of 403rd Avenue into the City of Mitchell
 - 403rd Avenue to 405th Avenue is part of north-south Major Collector route through center of County
 - East of 405th Avenue, increased traffic volumes from existing north-south connections and residential density warrants closer Major Collector spacing
 - Ties into Urban Minor Arterial in Mitchell

253rd Street (407th Avenue to Mitchell)

Change from Major Collector to Minor Collector

- Lowest traffic volume of three adjacent, parallel Major Collectors spaced at 1 mile increments
 - 752 vpd, compared to 1,460 vpd on 252nd Street and 3,200 vpd on 254th Street (2015 volumes)
- 253rd Street is the middle route amongst the three Major Collectors
- Connects to Urban Major Collector in Mitchell
 - 252nd Street and 254th Street tie into Urban Minor Arterials in Mitchell
- Western limits of current classification tie into Township roadway at 407th Avenue

259th Street (County line to 397th Avenue)

Change from Minor Collector to Local Roadway

- Low volume roadway segment (41 vpd, 2015 volume)
- Currently a Township road

260th Street (406th Avenue to SD 37)

Change from Major Collector to Minor Collector

- Provides continuous east-west Minor Collector connection between 397th Avenue and SD 37, near mid-point between I-90 and 265th Street

North-South Roadways

401st Avenue (254th Street to 260th Street)

Change from Minor Collector to Local Road

- Low traffic volumes (38 vpd, 2015 volume)
- 2 mile offset from parallel Major Collector (403rd Avenue)
- Currently is a 6-mile segment bound by a Minor Collector cross-street intersection to the south (260th Street) and Major Collector cross-street to the north (254th Street)
 - Beyond these two intersections, 401st Avenue is classified as a Local Road.

406th Avenue (254th Street to 265th Street)

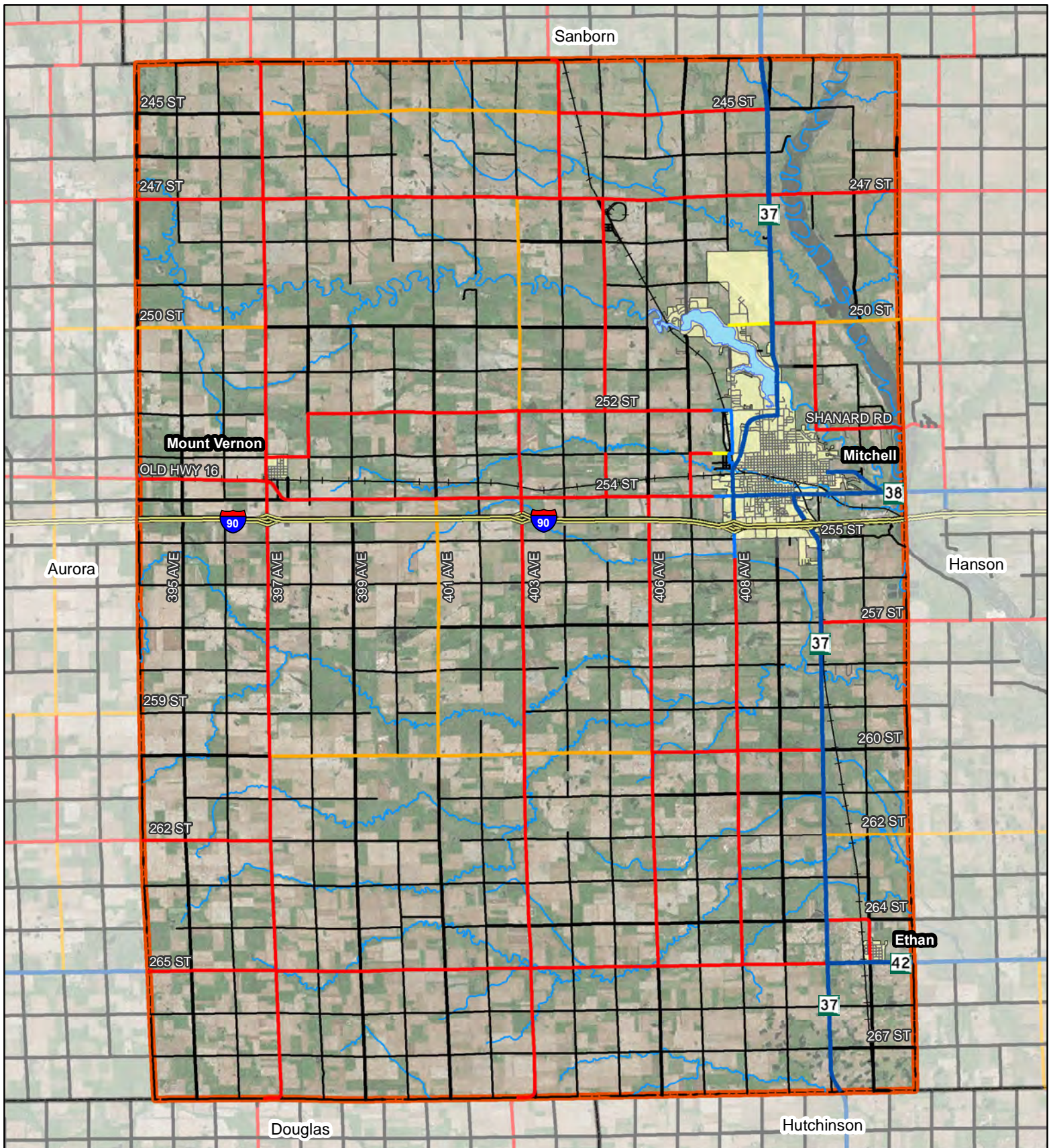
Change from Major Collector to Minor Collector

- 2 mile offset from parallel Major Collector (408th Avenue)
- Compared to 408th Avenue, 406th Avenue carries significantly less traffic for comparable segments
- Current Major Collector classification termini are two Major Collectors within the County
 - No direct connection to urbanized area or Rural Arterials
- Spacing fits as logical location for Minor Collector between 403rd Avenue and 408th Avenue
- A third Major Collector between 403rd Avenue and 408th Avenue could be considered a duplication of routes
 - With 406th Avenue as a Minor Collector, it can be designated as the intermediate, lower volume, lower speed option between two priority routes (403rd Avenue and 408th Avenue)

407th Avenue (252nd Street to 254th Street)

Change from Major Collector to Minor Collector; extend from 253rd Street to 252nd Street to link two Major Collectors

- Appears to serve more as a collection-distribution roadway to/from 254th Street for east-west corridors on the west side of Mitchell
 - Based on dissipation of traffic volumes from south to north.
- Extension from 253rd Street to 252nd represents the north-south collector roadway in the urban fringe west of Mitchell
 - Provides local termini between two Major Collectors, based on traffic dissipation, for 2-mile segment



**Figure 1:
Federal Functional
Classification**

Davison County
MASTER TRANSPORTATION PLAN

Legend

County Roads

- Rural Major Collector
- Rural Minor Collector
- Rural Local Road
- Urbanized Minor Arterial
- Urbanized Collector
- Urbanized Local Street

— Interstate

— State Highways

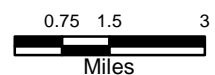
— Township Roads

— Rail Lines

— Rivers & Streams

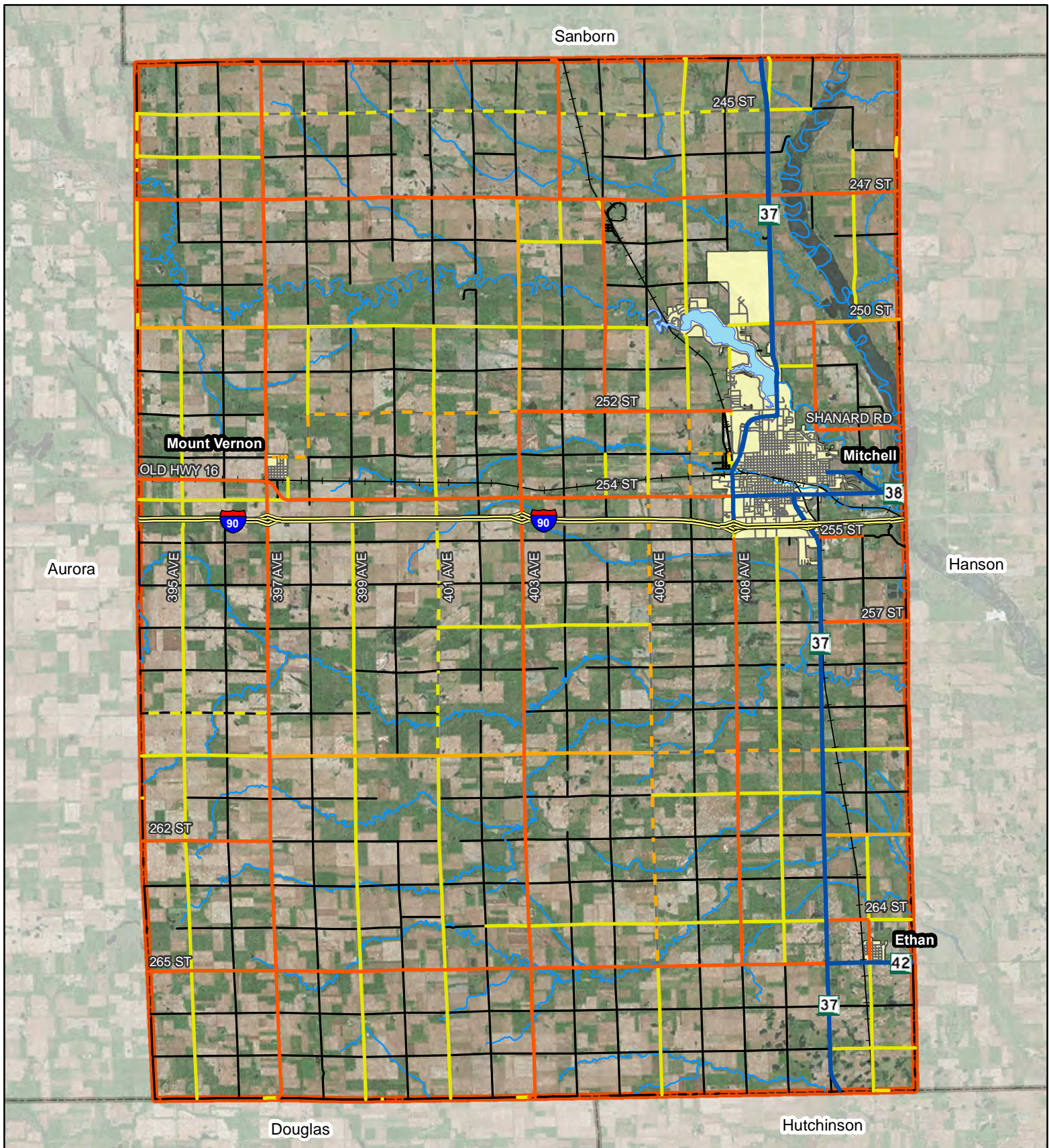
— Cities

Study Area (Davison County)



1 in = 3 miles





**Figure 2:
Proposed Major
Roads Plan**

Davison County
MASTER TRANSPORTATION PLAN

Legend

Interstate
State Highways

**County Roadway
Classifications**

Major Collector
Minor Collector

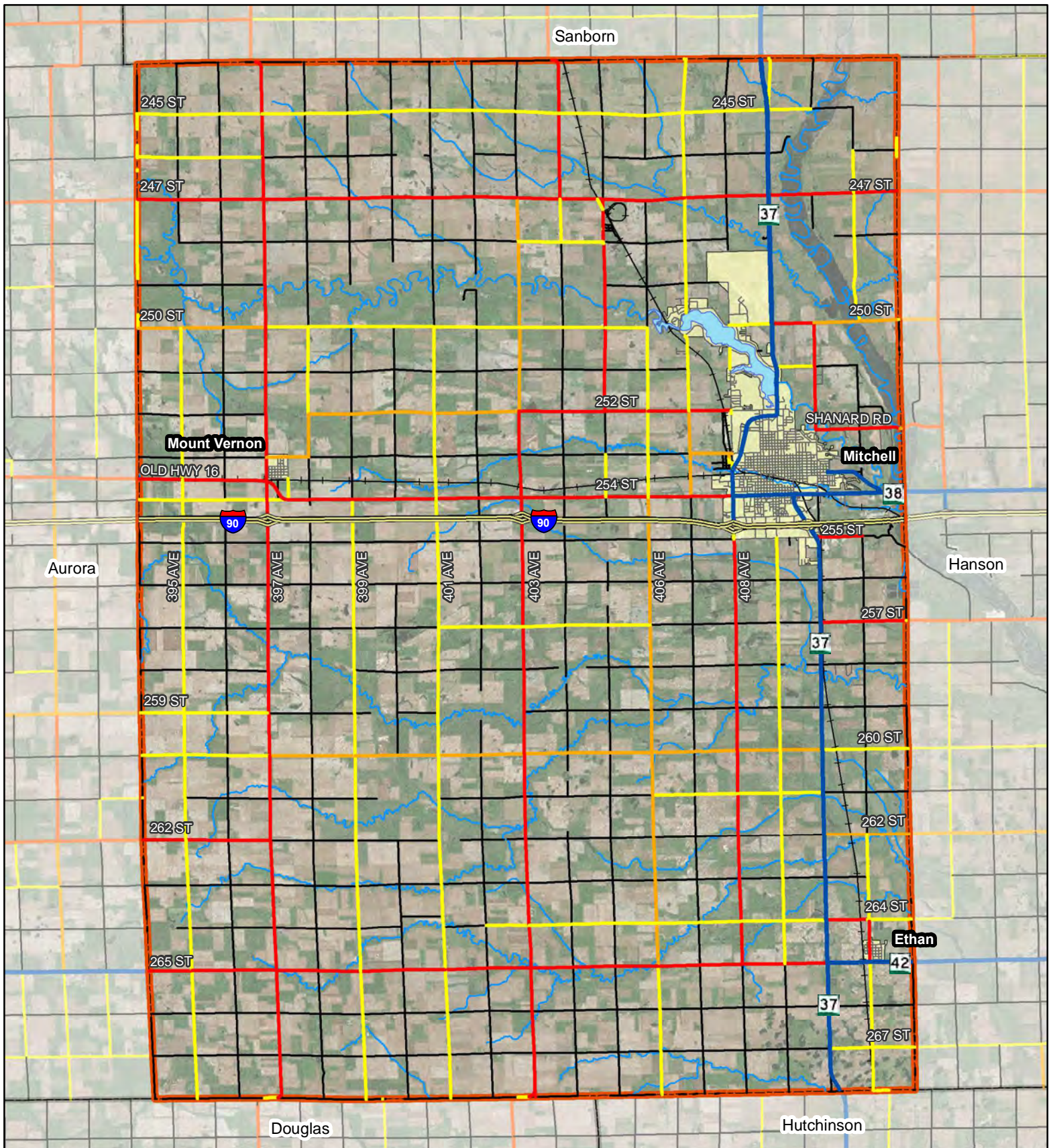
Proposed Minor
Collector
County Local
Proposed
County Local
Township Roads

Rail Lines
Rivers &
Streams
Cities
Study Area
(Davison
County)

0 0.75 1.5 3
Miles

1 in = 3 miles





**Figure 3:
Major Roads
Plan**

Legend

**County Roadway
Classification**

- Major Collector
- Minor Collector
- County Local

Interstate

State Highways

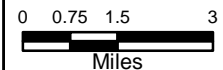
Township Roads

Rail Lines

Rivers & Streams

Cities

Study Area
(Davison County)



1 in = 3 miles



Appendix E – Bridge Priority Rating

Sufficiency Rating:**Priority Points**

80 - 100 = 0 points
50 - 79 = 5
45 - 49 = 10

40 - 44 = 15
0 - 39 = 20
Closed = 20

Sufficiency Rating: _____ = _____

Estimated Average Daily Traffic:

0 - 24 = 0 points
25 - 49 = 5
50 - 249 = 10

250 - 399 = 15
≥ 400 = 20

Est. ADT: _____ = _____

Bypass, Detour Length (Out-of-distance Travel) (miles):

< 2 = 0 points
≥ 2 < 5 = 5
≥ 5 < 7 = 10

≥ 7 < 9 = 15
≥ 9 = 20

Detour: _____ (miles) = _____

Bridge Posting (SI&A Item 70 value):

5 = 0 points
4 = 3
3 = 6

2 = 9
1 = 12
0 = 15

Bridge Posting: _____ (SI&A Item 70 value) = _____

Bridge Width (feet):

≥ 28 = 0 points
≥ 24 < 28 = 1

≥ 22 < 24 = 3
< 22 = 5

Bridge Width: _____ (feet) = _____

Bridge Length (feet):

< 50 = 0 points
50 - 99 = 3
100 - 199 = 6

200 - 299 = 9
300 - 399 = 12
≥ 400 = 15

Bridge Length: _____ (feet) = _____

Located on Priority Route (Major Roads Plan Designation):

Local or Township = 0 points
Minor Collector = 5

Major Collector = 10

Roadway Designation: _____ = _____

Key Industry/Traffic Generator Route: (Importance to Operations)

None = 0 points
Secondary Route = 5

Primary Route = 10

Route Importance: _____ = _____

Total Points = _____

Location Information				Misc. Bridge Information				Priority Rating								Priority Rating Total (out of 115)
Bridge I.D.	Featint	Facility	Location	Year Built	Year Recon	NBI Rating	Suff Rating	Suff Rating Score	ADT (Total) Score	Bypass Length Score	Posting Score	Width Score	Length Score	Priority Route	Key Industry/ Traffic Generator	
18169060	JAMES RV	250TH STREET	4 N & 1.9 E MITCHELL	1961			55.5	5	10	20	15	1	12	5	5	73
18160084	FIRESTEEL CK	410TH AVENUE	NE MITCHELL	1952			57	5	20	15	12	1	6	10	0	69
18100052	FIRESTEEL CK	404TH AVENUE	1.5S 1.0W LOOMIS	1920		SD	30.8	20	10	10	12	5	3	0	0	60
18000041	FIRESTEEL CK	394TH AVE.	15W & 5.9 N MITCHELL	1935		SD	45	15	10	10	12	5	3	0	0	55
18040137	ENEMY CK	398TH AVENUE	11W & 3.7 S MITCHELL	1915	1965	SD	33.9	20	10	5	15	5	0	0	0	55
18153030	JAMES RV	247TH STREET	7 N 0.2 E MITCHELL	1975			86.9	0	15	15	0	0	9	10	5	54
18118210	NORTH BR TWELVE MILE CK	265TH STREET	4.2 W JCT SD 37	1977			78.3	5	10	20	0	0	3	10	0	48
18130234	SOUTH FORK TWELVE MILE C	407TH AVENUE	2W & 13.4 S MITCHELL	1930		SD	40	20	10	5	12	1	0	0	0	48
18163085	FIRESTEEL CK	SHANNARD ROAD	E OF N EDGE MITCHELL	2006			83.4	0	20	5	0	0	6	10	5	46
18044210	NORTH BR TWELVE MILE CK	265TH STREET	11.6 W JCT SD 37	2008			99.6	0	10	20	0	5	0	10	0	45
18090177	CK	403RD AVENUE	8 W 3.3 N ETHAN	2008			92.6	0	15	15	0	5	0	10	0	45
18092210	NORTH BR TWELVE MILE CK	265TH STREET	6.8 W JCT SD 37	1977			79.4	5	10	20	0	0	0	10	0	45
18125030	MORRIS CK	247TH STREET	0.7 N 1.5 E LOOMIS	1954			92.7	0	15	5	0	5	0	10	10	45
18030144	CK	397TH AVENUE	4.4 S MOUNT VERNON	1967			79.6	5	15	10	0	0	0	10	0	40
18170053	CK	411TH AVENUE	4.7 N & 2 E MITCHELL	1935	1965	FO	41	15	5	5	15	0	0	0	0	40
18100019	MORRIS CK	404TH AVENUE	1W 2.IN LOOMIS	1964			79.7	5	10	10	0	0	3	10	0	38
18130183	NORTH BR TWELVE MILE CK	407TH AVENUE	2 W & 8.3 S MITCHELL	1930	1950		62.8	5	10	5	15	1	0	0	0	36
18140037	DRY RUN CK	408TH AVENUE	3 E LOOMIS	1935		SD	44	15	5	5	6	5	0	0	0	36
18090213	CK	403RD AVENUE	8 W 0.3 S ETHAN	1964			78.7	5	15	5	0	0	0	10	0	35
18030052	FIRESTEEL CK	397TH AVENUE	3.8N MT. VERNON	1966			78.7	5	10	5	0	0	3	10	0	33
18110056	FIRESTEEL CK	405TH AVENUE	2 S LOOMIS	1967			78.7	5	10	5	0	0	3	10	0	33
18140149	ENEMY CK	408TH AVENUE	4.9S 1.0W MITCHELL	1960			73.7	5	10	5	0	0	3	10	0	33
18090051	FIRESTEEL CK	403RD AVENUE	2.0W 1.5S LOOMIS	1910	1970	SD	63.7	5	10	10	0	0	3	5	0	33
18050143	ENEMY CK	399TH AVENUE	4.3S & 2E MT VERNON	1935	1965	FO	50.1	5	10	5	12	0	0	0	0	32
18070198	NORTH BR TWELVE MILE CK	401ST AVENUE	10 W & 1.2 N ETHAN	1925	1965	FO	56.4	5	10	5	12	0	0	0	0	32
18162010	JAMES RV	245TH STREET	9.0N,1.2E MITCHELL	1987			89.7	0	10	15	0	1	6	0	0	32
18090209	NORTH BR TWELVE MILE CK	403 AVE	8.0W 0.1N ETHAN	2006			96.1	0	10	5	0	5	0	10	0	30
18140114	CK	408TH AVE	1.4MI S & 1MI W MITCHELL	2001			92.8	0	10	5	0	5	0	10	0	30
18142150	ENEMY CK	259TH STREET	5 S & 0.8 W MITCHELL	1989			66.1	5	10	5	9	1	0	0	0	30
18008030	FIRESTEEL CK	247TH STREET	7N & 14.2 W MITCHELL	2011			93.3	0	10	5	0	0	6	0	5	26
18020056	FIRESTEEL CK	396TH AVENUE	3.4N & 1W MT VERNON	1975			76	5	10	5	0	0	6	0	0	26
18140237	SOUTH FORK TWELVE MILE C	408TH AVENUE	1W & 13.7 S MITCHELL	1930			58.3	5	5	5	6	5	0	0	0	26
18090152	CK	403RD AVENUE	8 W 5.8 N ETHAN	2013			100	0	10	0	0	5	0	10	0	25
18025130	ENEMY CK	257TH ST.	3 S & 12.5W MITCHELL	1920		SD	60.8	5	10	5	0	5	0	0	0	25
18070097	CK	401ST AVENUE	4 E MT VERNON	2009			99.9	0	15	5	0	5	0	0	0	25
18092150	ENEMY CK	259TH STREET	5 S & 5.8 W MITCHELL	1970			76.8	5	10	5	0	5	0	0	0	25
18110026	DRY RUN CK	405 AVE	1.0N LOOMIS	2005			92.7	0	10	10	0	5	0	0	0	25
18120114	CK	406TH AVENUE	2 W 1.4 S MITCHELL	2000			92.7	0	10	5	0	5	0	5	0	25
18120146	ENEMY CK	406TH AVENUE	2W 4.6 S MITCHELL	2009			92.7	0	10	5	0	5	0	5	0	25
18130202	NORTH BR TWELVE MILE CK	407TH AVENUE	2 W & 10.2S MITCHELL	1930		SD	55.7	5	10	5	0	5	0	0	0	25
18070052	FIRESTEEL CK	401ST AVENUE	4.0W 1.5S LOOMIS	1981			89.7	0	5	15	0	0	3	0	0	23
18070153	ENEMY CK	401ST AVENUE	5.3S & 4E MT VERNON	1970			79.8	5	10	5	0	0	3	0	0	23
18120209	NORTH BR TWELVE MILE CK	406TH AVENUE	5 W 0.1 N ETHAN	1968			89.7	0	10	5	0	0	3	5	0	23
18170141	ENEMY CK	411TH AVENUE	4.1S 2.0E MITCHELL	1984			78.8	5	10	5	0	0	3	0	0	23
18020124	ENEMY CK	396TH AVENUE	2.4S & 1W MT VERNON	1970			77.8	5	10	5	0	1	0	0	0	21
18080007	MORRIS CK	402ND AVENUE	7 W & 9.3 N MITCHELL	1960		SD	48.8	10	5	5	0	1	0	0	0	21
18080186	ENEMY CK	402ND AVENUE	9 W & 2.4 N ETHAN	1964			78.8	5	10	5	0	1	0	0	0	21
18090017	DRY RUN CK	403RD AVENUE	1.8 N & 2.0 W LOOMIS	1945		SD	62.8	5	10	5	0	1	0	0	0	21
18091170	ENEMY CK	261ST STREET	4 N & 7.9 W ETHAN	1970			78.8	5	10	5	0	1	0	0	0	21
18020146	ENEMY CK	396TH AVENUE	4.6S & 1W MT VERNON	1967			78.8	5	10	5	0	0	0	0	0	20
18040208	NORTH BR TWELVE MILE CK	398TH AVENUE	13 W & 0.2 N ETHAN	2003			92.9	0	10	5	0	5	0	0	0	20
18040213	NORTH BR TWELVE MILE CK	398TH AVENUE	11.3 S & 1E MT VERNON	2002			92.9	0	10	5	0	5	0	0	0	20
18050206	NORTH BR TWELVE MILE CK	399TH AVENUE	12 W & 0.4 N ETHAN	1972		SD	62.7	5	10	5	0	0	0	0	0	20
18070173	ENEMY CK	401ST AVENUE	7.3 N & 6E MT VERNON	2003			92.8	0	10	5	0	5	0	0	0	20
18080204	NORTH BR TWELVE MILE CK	402ND AVENUE	9 W & 0.6 N ETHAN	1970			78.8	5	10	5	0	0	0	0	0	20
18098160	ENEMY CK	260TH STREET	5.0N 7.2W ETHAN	1917	1984		79.8	5	5	5	0	0	0	5	0	20
18122230	SOUTH FORK TWELVE MILE C	267TH STREET	13S & 2.8 W MITCHELL	2003			92.8	0	10	5	0	5	0	0	0	20
18132200	NORTH BR TWELVE MILE CK	264TH STREET	10S & 1.8 W MITCHELL	2001			92.									

Bridge Reconstruction Planning-Level Cost Estimates																				
Bridge I.D. Featint	Facility	Location	Suff Rating	SD or FO	Area (sq/ft)	Initial Cost	Removal Cost	New Bridge Cost	Reconstruct Total	Initial Cost	Removal Cost	New Bridge Cost	Reconstruct Total	Initial Cost	Removal Cost	New Bridge Cost	Reconstruct Total			
18169060 JAMES RV	250TH STREET	4 N & 1.9 E MITCHELL	55.5	Not Deficient	7772															
18160084 FIRESTEEL CK	410TH AVENUE	NE MITCHELL	57	Not Deficient	4370									\$ 1,650,000	\$ 69,948	\$ 854,920	\$ 2,574,868			
18100052 FIRESTEEL CK	404TH AVENUE	1.5S 1.0W LOOMIS	30.8	Structurally Defi	1615	\$ 150,000	\$ 14,535	\$ 177,650	\$ 342,185					\$ 150,000	\$ 39,330	\$ 480,700	\$ 670,030			
18000041 FIRESTEEL CK	394TH AVE.	15W & 5.9 N MITCHELL	45	Structurally Defi	1679	\$ 150,000	\$ 15,111	\$ 184,690	\$ 349,801											
18040137 ENEMY CK	398TH AVENUE	11W & 3.7 S MITCHELL	33.9	Structurally Defi	646	\$ 150,000	\$ 5,814	\$ 71,060	\$ 226,874											
18153030 JAMES RV	247TH STREET	7 N 0.2 E MITCHELL	86.9	Not Deficient	8568															
18118210 NORTH BR TWELVE MILE CK	265TH STREET	4.2 W JCT SD 37	78.3	Not Deficient	1550															
18130234 SOUTH FORK TWELVE MILE C	407TH AVENUE	2W & 13.4 S MITCHELL	40	Structurally Defi	689	\$ 150,000	\$ 6,201	\$ 75,790	\$ 231,991											
18163085 FIRESTEEL CK	SHANNARD ROAD	E OF N EDGE MITCHELL	83.4	Not Deficient	3900															
18044210 NORTH BR TWELVE MILE CK	265TH STREET	11.6 W JCT SD 37	99.6	Not Deficient	0															
18090177 CK	403RD AVENUE	8W 3.3 N ETHAN	92.6	Not Deficient	0															
18092210 NORTH BR TWELVE MILE CK	265TH STREET	6.8 W JCT SD 37	79.4	Not Deficient	1378															
18125030 MORRIS CK	247TH STREET	0.7 N 1.5 E LOOMIS	92.7	Not Deficient	0															
18030144 CK	397TH AVENUE	4.4 S MOUNT VERNON	79.6	Not Deficient	990															
18170053 CK	411TH AVENUE	4.7 N & 2 E MITCHELL	41	Functionally Obs	958	\$ 150,000	\$ 8,622	\$ 105,380	\$ 264,002											
18100019 MORRIS CK	404TH AVENUE	1W 2.IN LOOMIS	79.7	Not Deficient	1625															
18130183 NORTH BR TWELVE MILE CK	407TH AVENUE	2 W & 8.3 S MITCHELL	62.8	Not Deficient	624									\$ 150,000	\$ 5,616	\$ 68,640	\$ 224,256			
18140037 DRY RUN CK	408TH AVENUE	3 E LOOMIS	44	Structurally Defi	549	\$ 150,000	\$ 4,941	\$ 60,390	\$ 215,331											
18090213 CK	403RD AVENUE	8 W 0.3 S ETHAN	78.7	Not Deficient	797															
18030052 FIRESTEEL CK	397TH AVENUE	3.8N MT. VERNON	78.7	Not Deficient	2971															
18110056 FIRESTEEL CK	405TH AVENUE	2 S LOOMIS	78.7	Not Deficient	2917															
18140149 ENEMY CK	408TH AVENUE	4.9S 1.0W MITCHELL	73.7	Not Deficient	1550															
18090051 FIRESTEEL CK	403RD AVENUE	2.0W 1.5S LOOMIS	63.7	Structurally Defi	2745					\$ 150,000	\$ 24,705	\$ 301,950	\$ 476,655							
18050143 ENEMY CK	399TH AVENUE	4.3S & 2E MT VERNON	50.1	Functionally Obs	1367					\$ 150,000	\$ 12,303	\$ 150,370	\$ 312,673							
18070198 NORTH BR TWELVE MILE CK	401ST AVENUE	10 W & 1.2 N ETHAN	56.4	Functionally Obs	1001					\$ 150,000	\$ 9,009	\$ 110,110	\$ 269,119							
18162010 JAMES RV	245TH STREET	9.0N,1.2E MITCHELL	89.7	Not Deficient	3509															
18090209 NORTH BR TWELVE MILE CK	403 AVE	8.0W 0.1N ETHAN	96.1	Not Deficient	0															
18140114 CK	408TH AVE	1.4MI S & 1MI W MITCHELL	92.8	Not Deficient	0															
18142150 ENEMY CK	259TH STREET	5 S & 0.8 W MITCHELL	66.1	Not Deficient	947									\$ 150,000	\$ 8,523	\$ 104,170	\$ 262,693			
18008030 FIRESTEEL CK	247TH STREET	7N & 14.2 W MITCHELL	93.3	Not Deficient	4615															
18020056 FIRESTEEL CK	396TH AVENUE	3.4N & 1W MT VERNON	76	Not Deficient	3025															
181400237 SOUTH FORK TWELVE MILE C	408TH AVENUE	1W & 13.7 S MITCHELL	58.3	Not Deficient	484									\$ 150,000	\$ 4,356	\$ 53,240	\$ 207,596			
18090152 CK	403RD AVENUE	8 W 5.8 N ETHAN	100	Not Deficient	0															
18025130 ENEMY CK	257TH ST.	3 S & 12.5W MITCHELL	60.8	Structurally Defi	495					\$ 150,000	\$ 4,455	\$ 54,450	\$ 208,905							
18070097 CK	401ST AVENUE	4 E MT VERNON	99.9	Not Deficient	0															
18092150 ENEMY CK	259TH STREET	5 S & 5.8 W MITCHELL	76.8	Not Deficient	840															
18110026 DRY RUN CK	405 AVE	1.0N LOOMIS	92.7	Not Deficient	0															
18120114 CK	406TH AVENUE	2 W 1.4 S MITCHELL	92.7	Not Deficient	0															
18120146 ENEMY CK	406TH AVENUE	2W 4.6 S MITCHELL	92.7	Not Deficient	0															
18130202 NORTH BR TWELVE MILE CK	407TH AVENUE	2 W & 10.2S MITCHELL	55.7	Structurally Defi	635					\$ 150,000	\$ 5,715	\$ 69,850	\$ 225,565							
18070052 FIRESTEEL CK	401ST AVENUE	4.0W 1.5S LOOMIS	89.7	Not Deficient	2153															
18070153 ENEMY CK	401ST AVENUE	5.3S & 4E MT VERNON	79.8	Not Deficient	1636															
18120209 NORTH BR TWELVE MILE CK	406TH AVENUE	5 W 0.1 N ETHAN	89.7	Not Deficient	2002															
18170141 ENEMY CK	411TH AVENUE	4.1S 2.0E MITCHELL	78.8	Not Deficient	1572															
18020124 ENEMY CK	396TH AVENUE	2.4S & 1W MT VERNON	77.8	Not Deficient	657															
18080007 MORRIS CK	402ND AVENUE	7 W & 9.3 N MITCHELL	48.8	Structurally Defi	538	\$ 150,000	\$ 4,842	\$ 59,180	\$ 214,022											
18080186 ENEMY CK	402ND AVENUE	9 W & 2.4 N ETHAN	78.8	Not Deficient	657															
18090017 DRY RUN CK	403RD AVENUE	1.8 N & 2.0 W LOOMIS	62.8	Structurally Defi	678					\$ 150,000	\$ 6,102	\$ 74,580	\$ 230,682							
18091170 ENEMY CK	261ST STREET	4 N & 7.9 W ETHAN	78.8	Not Deficient	635															
18020146 ENEMY CK	396TH AVENUE	4.6S & 1W MT VERNON	78.8	Not Deficient	1173															
18040208 NORTH BR TWELVE MILE CK	398TH AVENUE	13 W & 0.2 N ETHAN	92.9	Not Deficient	0															
18040213 NORTH BR TWELVE MILE CK	398TH AVENUE	11.3 S & 1E MT VERNO	92.9	Not Deficient	0															
18050206 NORTH BR TWELVE MILE CK	399TH AVENUE	12 W & 0.4 N ETHAN	62.7	Structurally Defi	872					\$ 150,000	\$ 7,848	\$ 95,920	\$ 253,768							
18070173 ENEMY CK	401ST AVENUE	7.3 N & 6E MT VERNON	92.8	Not Deficient	0															
18080204 NORTH BR TWELVE MILE CK	402ND AVENUE	9 W & 0.6 N ETHAN	78.8	Not Deficient	1044															
18098160 ENEMY CK	260TH STREET	5.0N 7.2W ETHAN	79.8	Not Deficient	990															
18122230 SOUTH FORK TWELVE MILE C	267TH STREET	13S & 2.8 W MITCHELL	92.8	Not Deficient	0															
18132200 NORTH BR TWELVE MILE CK	264TH STREET	10S & 1.8 W MITCHELL	92.8	Not Deficient	0															
18150142 ENEMY CK	409TH AVENUE	4.2 S MITCHELL	78.8	Not Deficient	1098															
18150187 NORTH BR TWELVE MILE CK	409TH AVE	2.3 N & 2 W ETHAN	78.8	Not Deficient	1206															
18170175 CK	411 AVE	7.5S 2.0E MITCHELL	92.8	Not Deficient	65															
18173180 NORTH BR TWELVE MILE CK	262ND STREET	3 N & 0.3 E ETHAN	78.8	Not Deficient	1044															
18175180 NORTH BR TWELVE MILE CK	262ND STREET	3 N & 0.5 E ETHAN	78.8	Not Deficient	829															
18040049 FIRESTEEL CK	398TH AVENUE	4.1N & 1E MT VERNON	89.8	Not Deficient	2013															
18072190 ENEMY CK	263RD STREET	9.8W & 2.0N OF ETHAN	65.5	Not Deficient	753									\$ 150,000	\$ 6,777	\$ 82,830	\$ 239,607			
18100213 NORTH BR TWELVE MILE CK	404TH AVENUE	5W & 11.3 S MITCHELL	78.8	Not Deficient	861															
18130032 MORRIS CK	407TH AVENUE	2 W & 6.8 N MITCHELL	60.5	Structurally Defi	1518					\$ 150,000	\$ 13,662	\$ 166,980	\$ 330,642							
18060095 CK	400TH AVENUE	3 E MT VERNON	67.4	Not Deficient	603									\$ 150,000	\$ 5,427	\$ 66,330	\$ 221,757			
18000026 CK	394TH AVENUE	3W 6.9N MT VERNON	90.8	Not Deficient	1076															
18060153 ENEMY CK	400TH AVENUE	9 W & 5.3 S MITCHELL	90.8	Not Deficient	1335															
18120057 FIRESTEEL CK	406TH AVENUE	1.7 S & 1 E LOOMIS	89.8	Not Deficient	4564															
18072040 CK	248TH STREET	5.8 N & 0.5 S OF LOOMIS	88.7	Not Deficient	840															
18083010 DRY RUN CK	245TH STREET	2.5 N & 2.7 E LOOMIS	90.8	Not Deficient	797															
18110152 CK	405TH AVENUE	5.8N 6.0W ETHAN	89.8	Not Deficient	980															
18110213 NORTH BR TWELVE MILE CK	405TH AVENUE	6.0 W & 0.5 S ETHAN	89.8	Not Deficient	1238															
18115140 ENEMY CK	258TH STREET	4 S & 3.5 W MITCHELL	85.8	Functionally Obs	560															
18130148 ENEMY CK	407TH AVENUE	4.9S & 2W MITCHELL	89.8	Not Deficient	0															
18139190 NORTH BR TWELVE MILE CK	263RD STREET	9 S & 1.1 W MITCHELL	92.8	Not Deficient	0															
18140179 CK	408TH AVENUE	7.9 S & 2.0 W MITCHELL	89.8	Not Deficient	1076															
18144150 ENEMY CK	259TH STREET	5 S & 0.6 W MITCHELL	92.8	Not Deficient	1227															
18150116 DRAINAGE DITCH	409TH AVENUE	1.6 S MITCHELL	89.8	Not Deficient	1001															
18150173 NORTH BR TWELVE MILE CK	409TH AVENUE	3.7 N & 2 W ETHAN	89.8	Not Deficient	829															
18100158 ENEMY CK	404TH AVENUE	5 W & 5.8 S MITCHELL	78.8	Not Deficient	861															
18110137 ENEMY CK	405TH AVENUE	7.3 N & 6 W ETHAN	89.8	Not Deficient	807															
18135180 NORTH BR TWELVE MILE CK	262ND STREET	3 N & 3.5 W ETHAN	89.8	Not Deficient	797															
18140188 NORTH BR TWELVE MILE CK	408TH AVENUE	1 W & 8.8 S MITCHELL	89.8	Not Deficient	904															
18150237 SOUTH FORK TWELVE MILE C	409TH AVENUE	2.7 S & 2 W ETHAN	89.8	Not Deficient	1410															
18074200 NORTH BR TWELVE MILE CK	264TH SREET	10 S & 7.6W MITCHELL	89.8	Not Deficient	549															
88						Total				\$ 1,844,206	Total				\$ 2,308,009	Total				\$ 4,400,807
																	TOTAL		\$ 8,553,022	

Appendix F – Life Cycle Costs

SUMMARY

	Summary	Current	Proposed
Bit	Total 20-Yr Costs	\$53,512,500	\$49,657,500
	Total AC Overlay	\$25,715,000	\$26,640,000
	Total Bit. Maintenance	\$27,797,500	\$23,017,500
Bit	Annual AC Overlay	\$1,285,750	\$1,332,000
	Annual Rdwy Main	\$1,389,875	\$1,150,875
	Total Annual	\$2,675,625	\$2,482,875
Gravel	Total 20-Yr Costs	\$36,842,400	\$40,728,800
	Annual	\$1,842,120	\$2,036,440
PCC	Total 20-Yr Costs	\$66,000	\$66,000
	Annual	\$3,300	\$3,300
Signs	Total 20-Yr Costs	\$750,000	\$750,000
	Annual	\$37,500	\$37,500
Gen Maint	Total 20-Yr Costs	\$19,800,000	\$19,500,000
	Annual	\$990,000	\$975,000
	Total 20-Yr Costs	\$110,970,900	\$110,702,300
	Total Annual	\$5,548,545	\$5,535,115

**does not include bridges at this time*

Gravel											Resurfacing		Maintenance			
Current System	Miles	Resurfacing	Blading	Dust Control	Spot Gravel/Ann Maint	AC to Gravel	Blotter to Gravel				5-Year	Annual	5-Year	Annual	Total Annual	
		\$50,000	\$1,500	\$2,000	\$500	\$30,000	\$25,000									
Gravel	153	\$7,650,000	\$229,500	\$306,000	\$76,500	\$0	\$0				\$7,650,000	\$1,530,000	\$1,560,600	\$312,120	\$1,842,120	
	153	\$7,650,000	\$229,500	\$306,000	\$76,500	\$0	\$0				\$7,650,000	\$1,530,000	\$1,560,600	\$312,120	\$1,842,120	
	153	\$7,650,000	\$229,500	\$306,000	\$76,500	\$0	\$0				\$7,650,000	\$1,530,000	\$1,560,600	\$312,120	\$1,842,120	
	153	\$7,650,000	\$229,500	\$306,000	\$76,500	\$0	\$0				\$7,650,000	\$1,530,000	\$1,560,600	\$312,120	\$1,842,120	
											\$30,600,000	\$1,530,000	\$6,242,400	\$312,120	\$1,842,120	
With Proposed Changes											Resurfacing		Maintenance			
	Miles	Resurfacing	Blading	Dust Control	Spot Gravel/Ann Maint	AC to Gravel	Blotter to Gravel				5-Year	Annual	5-Year	Annual	Total Annual	
	153	\$50,000	\$1,500	\$2,000	\$500	\$30,000	\$25,000									
2016-2020	159	\$7,950,000	\$238,500	\$318,000	\$79,500	3 \$90,000	3 \$75,000				\$8,115,000	\$1,623,000	\$1,621,800	\$324,360	\$1,947,360	
2021-2025	170	\$8,500,000	\$255,000	\$340,000	\$85,000	3 \$90,000	8 \$200,000				\$8,790,000	\$1,758,000	\$1,734,000	\$346,800	\$2,104,800	
2026-2030	170	\$8,500,000	\$255,000	\$340,000	\$85,000						\$8,500,000	\$1,700,000	\$1,734,000	\$346,800	\$2,046,800	
2031-2035	170	\$8,500,000	\$255,000	\$340,000	\$85,000						\$8,500,000	\$1,700,000	\$1,734,000	\$346,800	\$2,046,800	
		\$33,450,000	\$1,003,500	\$1,338,000	\$334,500	6 \$180,000	11 \$275,000				\$33,905,000	\$1,695,250	\$6,823,800	\$341,190	\$2,036,440	
20% of roads receive dust control, 2 times in 5-year period											*total per 5-year period					
											Includes conversion of surface		2015 Dollars (2015 \$)			

Existing System and Proposed System

General Maintenance - Existing Network

General Maintenance - With Proposed Changes

2015 Dollars (2015 \$)