

METROPOLITAN PROFILE 2018

ANNUAL REPORT FOR THE FARGO-MOORHEAD METROPOLITAN AREA



PREPARED BY
METROCOG
FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION

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The preparation of this document was funded in part by the United States Department of Transportation with funding administered through the North Dakota and Minnesota Departments of Transportation, the Federal Highway Administration and the Federal Transit Administration. Additional funding was provided by the Minnesota Department of Transportation and through local contributions from the governments of Fargo, Horace, West Fargo and Cass County in North Dakota; and Moorhead, Dilworth and Clay County in Minnesota. The United States government and the states of North Dakota and Minnesota assume no liability for the contents or use thereof.

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Interested Persons, Stakeholders, Jurisdictions, Agencies and Organizations --

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is pleased to present the 2018 Metropolitan Profile (Metro Profile), a document previously known as the Surveillance and Monitoring Report for the Fargo-Moorhead Metropolitan Area. The data presented within this Profile pertains to the 2017 calendar year (January 1, 2017 through December 31, 2017).

As background, Metro COG has produced the Metropolitan Transportation Surveillance and Monitoring Report since 1981. Over time, it has taken various forms in order to ensure compliance and compatibility with relevant surface transportation authorization. Under Fixing America's Surface Transportation Act (FAST Act), the Metro Profile has become an essential performance management tracking tool.

The Metro Profile is structured to document and monitor the following:

- (a) Changes, improvements, and projects affecting the transportation system;
- (b) Demographic and socio-economic conditions affecting the region;
- (c) Land use and development patterns;
- (d) The accuracy of projections made within Metro 2040 – Mobility for the Future, Metro COG's Long Range Transportation Plan (LRTP); and
- (e) Implementation of the Transportation Improvement Program (TIP).

The Metro COG Policy Board believes this data to be critical to both accurately represent the state of the transportation network and to maintain and to implement elements of the Metropolitan Transportation Planning Program, such as the TIP, LRTP, and regional Travel Demand Model (TDM).

For convenience, the Profile is separated into five sections:

- Section 1: Community Profile
- Section 2: Roadway Network
- Section 3: Freight Network - Truck, Rail, Air, Pipeline
- Section 4: Bicycle & Pedestrian Network
- Section 5: Transit Network

It is Metro COG's goal to continue to enhance the ease and accuracy of collecting and reporting metropolitan transportation data, as well as improve accessibility to this information for all interested persons.

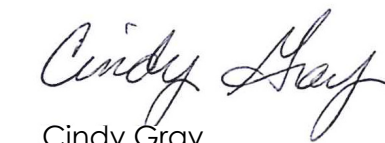
Any questions or comments on the content of this document should be directed to Metro COG. Additionally, supporting plans, studies, and other transportation data for the Fargo-Moorhead Metropolitan Planning Area are available by contacting Metro COG via:

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Sincerely,



Arland Rasmussen
Chair, Metro COG Policy Board



Cindy Gray
Executive Director, Metro COG

ACRONYMS

AADT Average Annual Daily Traffic

ACS American Community Survey (U.S. Census Bureau)

ADA Americans with Disabilities Act of 1990

ADT Average Daily Traffic

ATAC Advanced Traffic Analysis Center

ATR Automatic Traffic Recorder

CFR Code of Federal Regulations

CSAH Minnesota County State Aid Highway

DNR Department of Natural Resources

FHWA Federal Highway Administration

FTA Federal Transit Administration

FAUA Federal Aid Urbanized Area or UZA

HSS U.S. Dept. of Health and Human Services

HUD U.S. Dept. of Housing & Urban Development

ITS Intelligent Transportation System

L RTP Long-Range Transportation Plan

MATBUS Metro Area Transit of Fargo-Moorhead

Metro COG Fargo-Moorhead Metropolitan Council of Governments

MnDOT Minnesota Department of Transportation

MPA Metropolitan Planning Area

MPO Metropolitan Planning Organization

MSA Metropolitan Statistical Area (includes all of Cass County and Clay County)

MSUM Minnesota State University – Moorhead

NAICS North American Industry Classification System

NDDOT North Dakota Department of Transportation

NDSU North Dakota State University

PPP Public Participation Plan

TAZ Traffic Analysis Zone

TDM Travel Demand Model

TDP Transit Development Plan

TH Minnesota Trunk Highway

TIP Transportation Improvement Program

UPWP Unified Planning Work Program

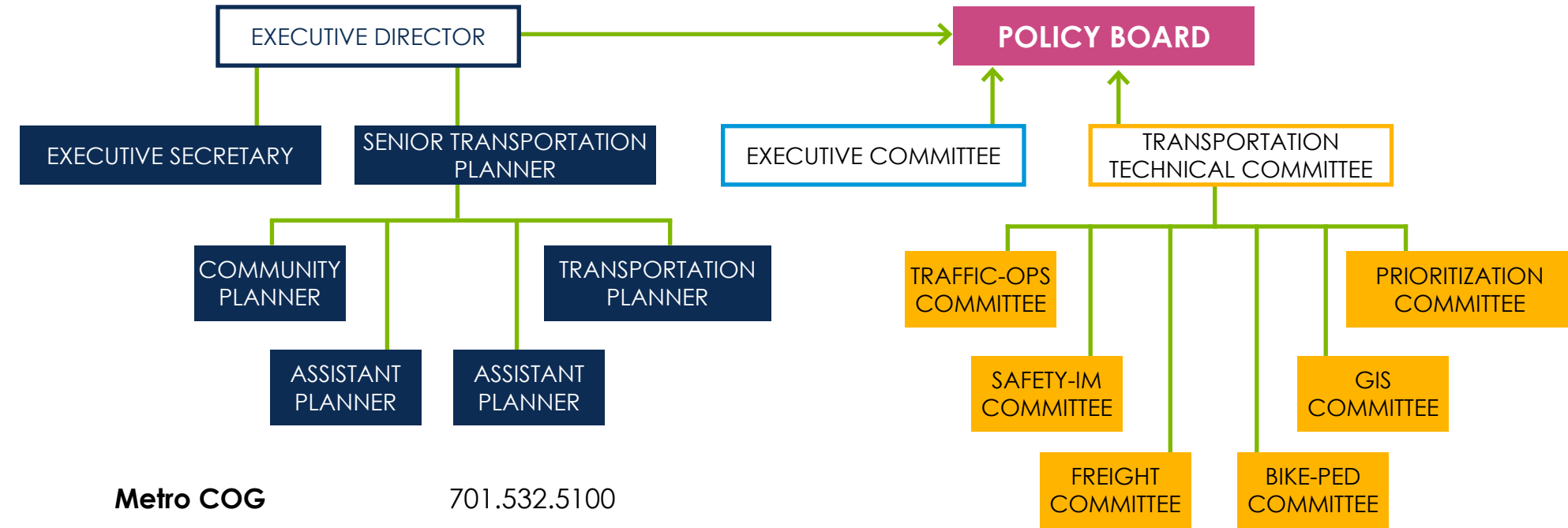
USC United States Code

UZA Urbanized Area or FAUA

VMT Vehicle Miles Traveled

VSS Valley Senior Services

Organizational Chart



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INTRODUCTION

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is both the designated Council of Governments (COG) and Metropolitan Planning Organization (MPO) for the greater Fargo-Moorhead Metropolitan Area. An MPO is a transportation policy-making organization comprised of representatives from local government and transportation authorities. The Federal Surface Transportation Assistance Act of 1973 requires the formation of a MPO for any urbanized area with a population greater than 50,000. MPOs ensure that existing and future expenditures for transportation projects and programs are based on a comprehensive, cooperative, and continuing planning process, known as the “3-C” process.

The core of an MPO is the urbanized area, which is initially identified and defined by the U.S. Census Bureau as part of the Decennial Census update. This boundary is adjusted by local officials and approved by the overseeing Department of Transportation. The result of which is the official Adjusted Urban Area Boundary (known as the UZA). In Metro COG’s case the overseeing DOT is North Dakota Department of Transportation (NDDOT). The UZA boundary is used to determine the type of transportation funding programs potential projects may be eligible to

receive. In 2012 Metro COG worked closely with local jurisdictions, NDDOT, and the Minnesota Department of Transportation (MnDOT) to establish an Adjusted Urban Area Boundary for the Fargo-Moorhead area. This Adjusted UZA was subsequently approved by the Metro COG Policy Board, FHWA, and both the Minnesota and North Dakota Departments of Transportation in 2013.

In addition to the urban area (defined as the urbanized jurisdictions plus any additional urban areas immediately adjacent to the jurisdiction limits), the MPO boundary includes any contiguous areas which may become urbanized within a twenty-year forecast period. Collectively, this area is known as the Metropolitan Planning Area (MPA). Metro COG’s MPA boundary was most recently expanded in 2013 and is comprised of approximately 1,073 square miles (687,000 acres), 14 cities, and 30 townships. The MPA boundary is effectively Metro COG’s “study area” or area of influence respective to the metropolitan planning program. These areas are significant not only as potential future population centers, but also due to their proximity to existing and future transportation assets of regional significance. Although many of these areas are not developed nor are they likely to experience development pressure in the near future, they are participants in the required metropolitan planning process.

The map in Figure 1 provides an overview of these boundaries for the Fargo-Moorhead area, specifically depicting:

- a) The Metropolitan Planning Area Boundary and townships within the MPA;
- b) The Adjusted UZA boundary; and
- c) Cities within the MPA.

The Metropolitan Profile (Profile) is separated into five chapters, each of which focuses on trends affecting the development patterns and transportation network of the Fargo-Moorhead Metropolitan Area. Together, they provide a comprehensive snapshot of the conditions and trends affecting the metro area as of 2017.

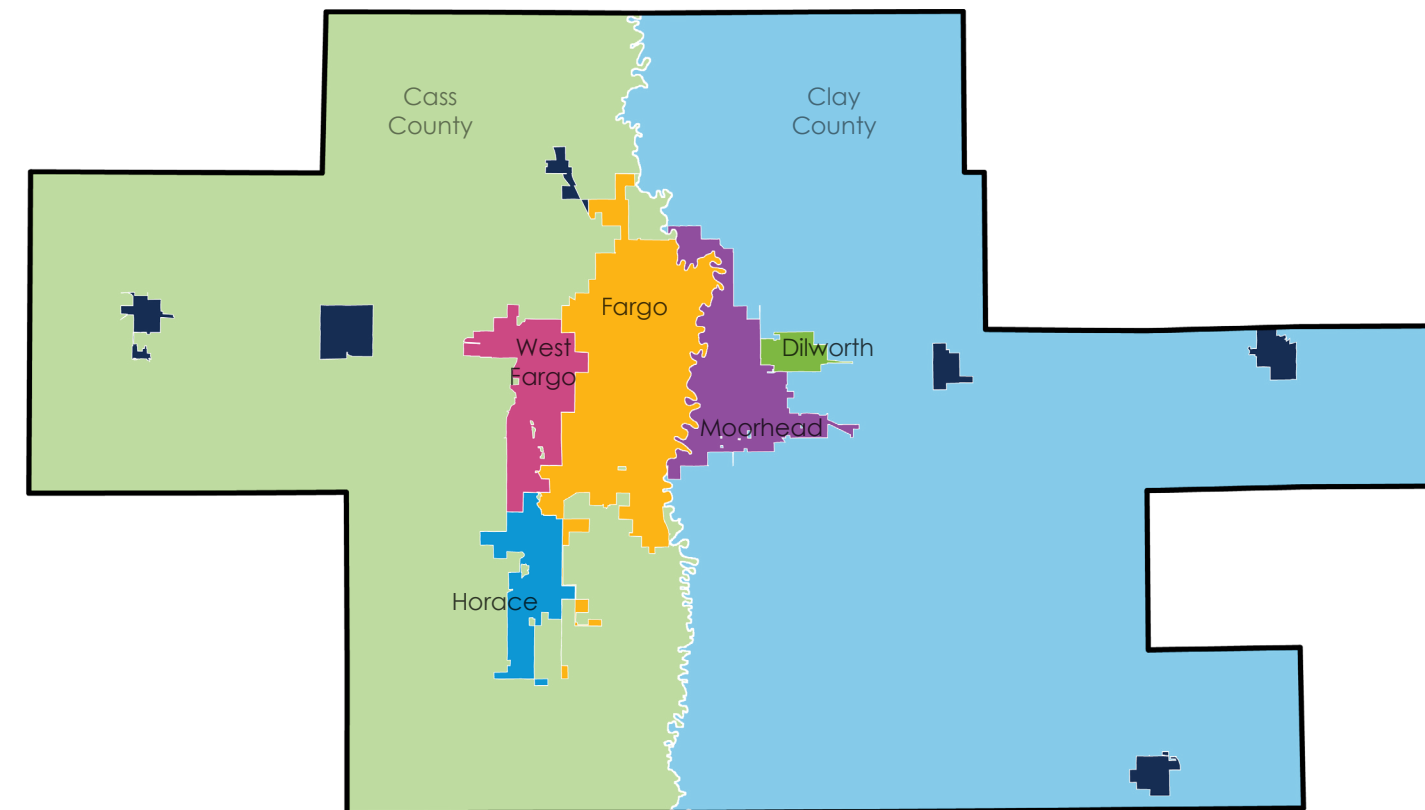


Figure 1. Map of Jurisdictions located within Metro COG's MPA

Metro COG serves a bi-state area that covers 14 townships in Cass County, ND and 16 townships in Clay County, MN.

Within that area there are seven (7) member jurisdictions: Cass County, Clay County, City of Fargo, City of Moorhead, City of West Fargo, City of Dilworth, and City of Horace. These jurisdictions pay dues and have voting rights on the policy board and transportation technical committee.

Associate Jurisdictions are located within the MPA and have populations over 700. These jurisdictions do not pay dues and do not have voting rights on the policy board and transportation technical committee. These include in Minnesota: Barnesville, Glyndon, and Hawley; and in North Dakota include: Casselton, Harwood, and Mapleton.

Additionally there is a third designation of jurisdiction, which are non-member jurisdictions. These jurisdictions have populations under 700 or have chosen not to participate in Metro COG and include in Minnesota: Comstock and Sabin; and in North Dakota: Argusville, Briarwood, Frontier, Kindred, North River, Oxbow, Prairie Rose, and Reiles Acres.

The (14) Townships within the MPA in North Dakota include: Barnes, Berlin, Casselton, Durbin, Everest, Harmony, Harwood, Mapleton, Normanna, Pleasant, Raymond, Reed, Stanley, Warren.

The (16) Townships within the MPA in Minnesota include: Alliance, Barnesville, Eglon, Elkton, Elmwood, Glyndon, Hawley, Holy Cross, Humboldt, Kragnes, Kurtz, Moland, Moorhead, Morken, Oakport, Riverton.

COMMUNITY PROFILE

POPULATION
EMPLOYMENT
HOUSING
LAND USE

ROADWAY NETWORK

SAFETY
SYSTEM
PRESERVATION
SYSTEM
MANAGEMENT &
OPERATIONS
ECONOMIC VITALITY
TRENDS IN VMT
SYSTEM RELIABILITY
TRAFFIC COUNTS
INTELLIGENT
TRANSPORTATION
SYSTEM (ITS)
FEDERAL
FUNCTIONAL
CLASSIFICATION

FREIGHT NETWORK

PIPELINES
RAIL
AVIATION
TRUCK

BICYCLE & PEDESTRIAN NETWORK

NETWORK
STUDIES & PLANS

TRANSIT NETWORK

2017 EQUIPMENT,
PROJECTS,
RIDERSHIP & ON TIME
PERFORMANCE
SERVICES

VISION STATEMENT

PROVIDE QUALITY, PROACTIVE REGIONAL PLANNING SERVICES FOR A CHANGING SOCIETY.

MISSION

- Harmonize the activities of federal, state, and local agencies,
- Render technical assistance
- Encourage public participation in the development of the area

CORE FUNCTIONS

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase accessibility and mobility for people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Enhance travel and tourism.

EXECUTIVE SUMMARY

Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is both the designated Council of Governments (COG) and Metropolitan Planning Organization (MPO) for the greater Fargo-Moorhead Metropolitan Area. Metro COG coordinates planning efforts across state lines for the 7 member jurisdictions and 6 associate jurisdictions within the MPA.

Each year Metro COG produces the Metropolitan Profile (Metro Profile), which serves as a fact book summarizing major trends and data within the MPA for that year. The Metro Profile is separated into five chapters, each of which focuses on trends affecting the development patterns and multi-modal transportation network of the Fargo-Moorhead Metropolitan Area.

In the 2018 Metro Profile, information and data from the 2017 calendar year has been compiled and analyzed. The following are some highlights.

In 2017, the MPA grew by 1.6% for an estimated MSA population of 241,356. The demand for housing also remained strong with an MSA occupancy rate of 92.4%, while 8,507 housing units were built. Although, there was an increase in the apartment annual vacancy rate to 9.1%, which meant that less people

were living in apartments in 2017. Additionally, unemployment was at an all-time low of 2.6%.

Total fatalities were down from 16 in the MPA in 2016 to only 8 in 2017. Five (5) of the crashes occurred in Fargo or West Fargo, while only one (1) occurred in the rural portion of the MPA in North Dakota and two (2) occurred in the rural portion of the MPA in Minnesota.

In 2017, 97.9% of pavement on the Interstate System was considered to be in good condition. In Minnesota and North Dakota, the pavement on the Non-interstate NHS that is in poor condition exceeded the targets set by their associated state DOT. Thus, each of segment in poor condition should be reviewed closer in order to determine project priorities over the next four years.

Additionally, the percentage of NHS bridges classified as in good condition in North Dakota and Minnesota both fell below the associated state DOT performance measure targets that are set for 2018. This means that NHS bridges should be further examined and a project priority and implementation list established, as to improve the overall NHS bridge conditions over the next 4 years to meet the set targets.

In 2017, 89.4% of commuters commuted to/from work in a personal vehicle (alone or as a carpool), whereas only 1.3% bicycled, 3.2% walked, and 1.0% took public transportation. These percentages are about static compared to 2016's commuter travel modes. This information draws into question as to why there is no change in the percentage of people using alternative modes of transportation to/from work.

At the end of 2016, Fed EX Express moved their air cargo operations from Grand Forks, ND to Fargo, ND. This has had a major influence on the air traffic in the area. Overall, Hector International has seen an increase in landings with a 176.6%

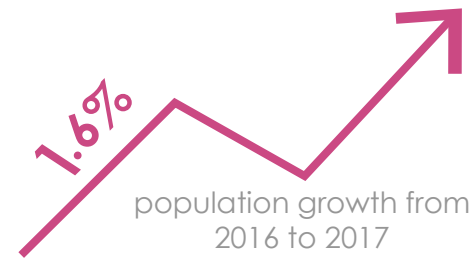
increase in air cargo landings and an additional 2.2% increase in landings/departures of commercial airlines. Even charter airline passenger totals are up from 2016.

Overall the bicycle and pedestrian network remained unchanged.

The transit network saw some changes in 2017. A few route changes occurred, and there were purchases and decommissions of some of the fleet on both sides of the river. MATBUS - Moorhead's fixed route service saw ridership increase by 1.23% from 2016 and on-time performance was up 5.21%. At the same time, MATBUS - Fargo's fixed route service saw a decrease in ridership by 4.88% and the on-time performance was down 5.66%. This may be in part to the implementation of the Great Rides Bike Share, which launched in 2015. Metro COG in coordination with MATBUS needs to further compare the factors involved in the increase in Moorhead ridership and on-time performance versus Fargo ridership and on-time performance. The information gleaned from further review may help increase system wide on-time performance and ridership.

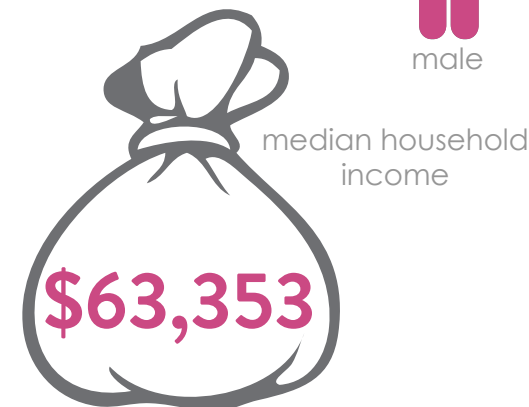
Overall in 2017, the Fargo-Moorhead Metropolitan Planning Area has seen steady growth in the community's profile. Across the multi-modal transportation network there were safety improvements that reduced the number of fatalities in the urbanized area. As construction projects were completed across the region, the roadway and freight networks saw increased reliability indexes. Despite increased travel time reliability, concerns on roadway condition and bridge condition have surfaced. Transit and bicycle/pedestrian networks have stayed stable in the MPA from 2016-2017.

MSA POPULATION... **241,356**



208,321 Total Population of Member Jurisdictions

32.9 median age in MSA



EMPLOYMENT | JOBS

The Fargo-Moorhead Metropolitan Statistical Area had 192,117 people over the age of 16. Once a person turns 16, they are considered eligible to work and count towards the workforce. Of those eligible in 2017, approximately 76.5% participated in the workforce.



Unemployment rate of 2.6%

In 2017, the MSA had an **unemployment rate of 2.6%**. Besides 2015, where the unemployment rate was 2.6% as well, this is the lowest it has been in over a decade.

*INFORMATION RETRIEVED FROM THE AMERICAN CENSUS SURVEY ON CENSUS.GOV FOR 2017 AND 2016 FOR THE FARGO-MOORHEAD METROPOLITAN STATISTICAL AREA.

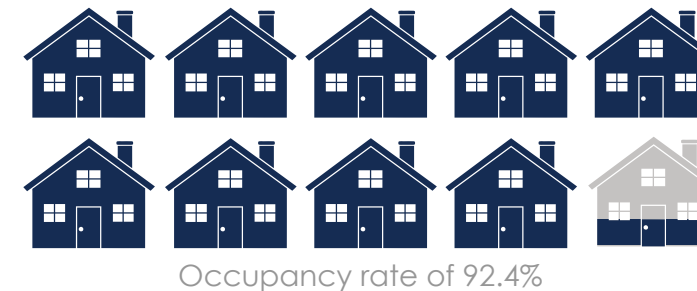
HOUSING

In 2017, the Fargo-Moorhead MSA's average household size was **2.31 people**. In 2017 there were **100,721 households** counted, which is up from 99,968 households in 2016. If no housing units were built in 2017 there would have been a housing shortage. To maintain an occupancy rate of 95%, only 5,036 units would have needed to have been built in 2017 in the MSA. Instead 8,507 housing units were built in 2017 for a total of **108,958 housing units** in the MSA, which left the MSA with an **occupancy rate of 92.4%**.

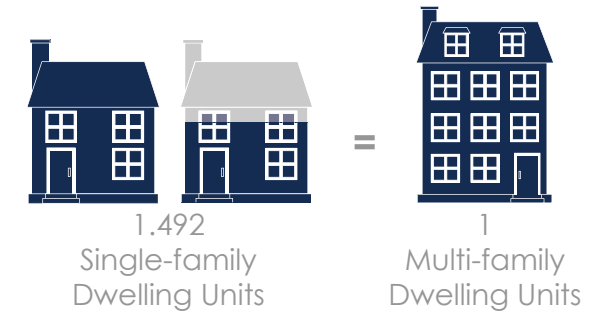


Jurisdictions try to keep the occupancy rate between 91-97% for a stable market.

Of the occupied housing units, **58.4% were owner-occupied** and 41.6% were renter-occupied.



In 2017, there was a ratio of **1.492** Single-Family Dwelling Units for every 1 Multi-family Dwelling Unit. Within the MSA there was an **apartment annual vacancy rate of 9.1%** in 2017.



*INFORMATION RETRIEVED FROM THE AMERICAN CENSUS SURVEY ON CENSUS.GOV FOR 2017 AND 2016 FOR THE FARGO-MOORHEAD METROPOLITAN STATISTICAL AREA.

BUILDING PERMITS

Within the Metropolitan Planning Area **1,779** total new residential building unit permits were issued.

- Single-family Residential - **735 units**
 - 318 units Fargo
 - 251 units West Fargo
 - 42 units Horace
 - 118 units Moorhead
 - 6 units Dilworth
- Multi-family Residential - **1,044 units**
 - 907 units Fargo
 - 90 units West Fargo
 - 2 units Horace
 - 45 units Moorhead
 - 0 units Dilworth

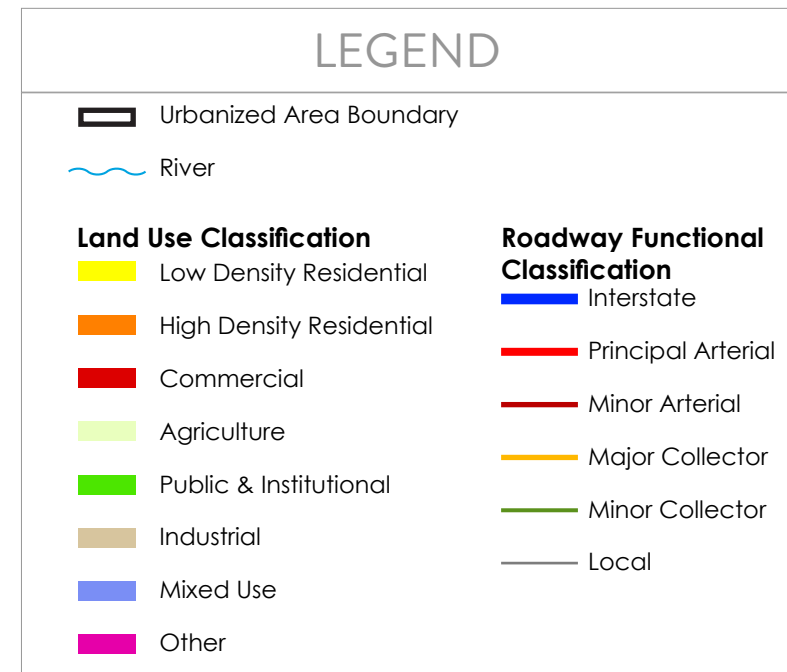
INCORPORATED ACREAGE BY JURISDICTION

North Dakota

- Cass County ~ 1,131,520 AC
- Fargo ~ 31,400 AC
- West Fargo ~ 9,768 AC
- Horace ~ 7,123 AC
- Casselton ~ 1,226 AC
- Harwood ~ 771 AC
- Mapleton ~ 2,503 AC

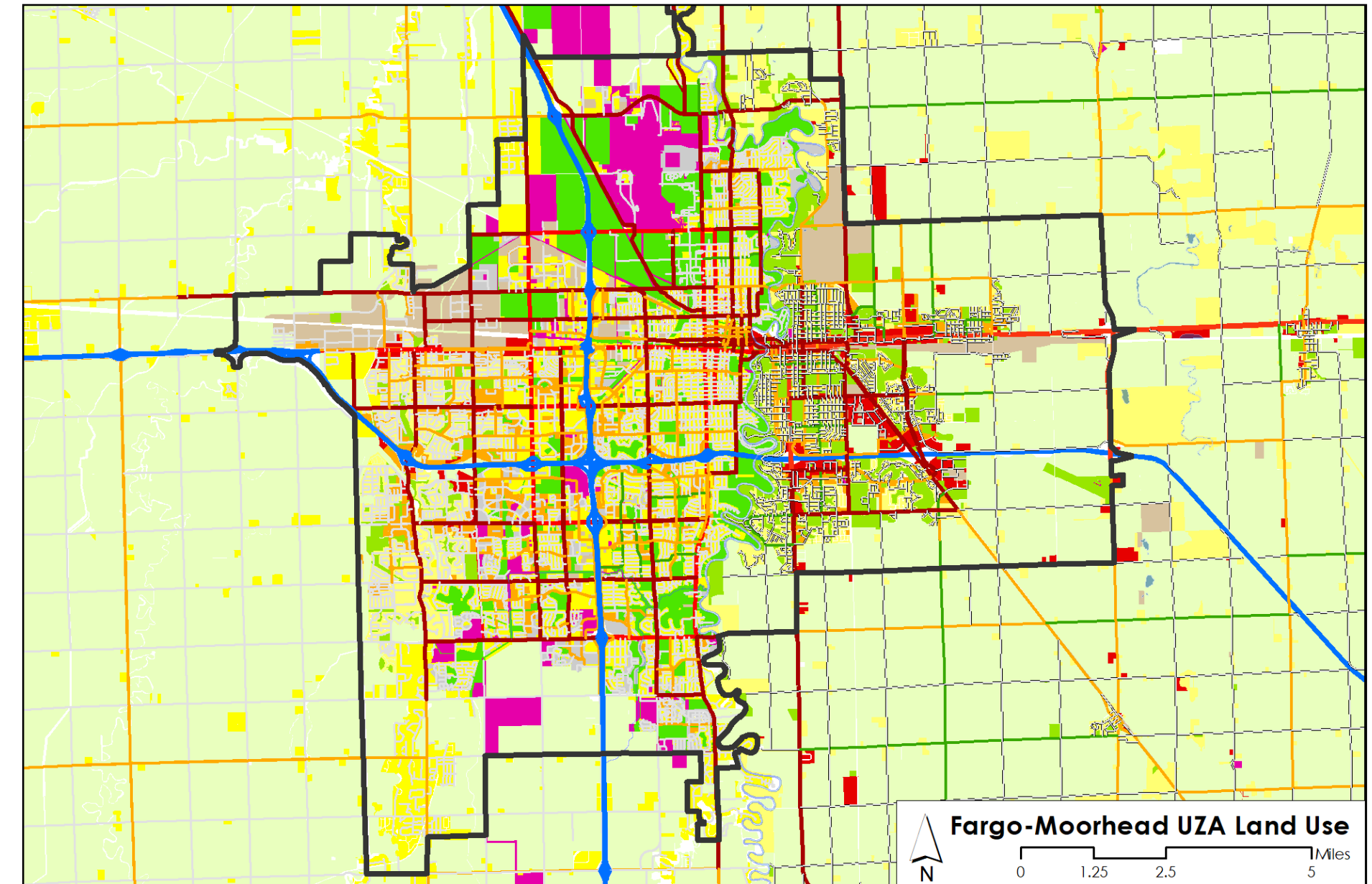
Minnesota

- Clay County: 673,732.9 AC
- Moorhead: 14,267.8 AC
- Dilworth: 2,054 AC
- Barnesville ~ 1,397 AC
- Glyndon ~ 926 AC
- Hawley ~ 1,571 AC



*BUILDING PERMIT DATA RECEIVED FROM EACH JURISDICTION. APARTMENT VACANCY RATE CALCULATED BY APPRAISAL SERVICES INC. SINGLE FAMILY REFERS TO ONE UNIT PER BUILDING. MULTI-FAMILY REFERS TO TWO OR MORE UNITS PER BUILDING.

2017 FARGO-MOORHEAD URBANIZED AREA LAND USE



*LAND USE MAP DEVELOPED BY METRO COG WITH GIS DATA FROM EACH JURISDICTION. SOME CLASSIFICATIONS WERE SIMPLIFIED AND/OR COMBINED TO CREATE A VISUALLY CONSISTENT MAP. JURISDICTION ACREAGE WAS CALCULATED FROM THE GIS INFORMATION PROVIDED BY EACH JURISDICTION.

PERFORMANCE MEASURES

SAFETY

8 Fatal motorized crashes in 2017

34 Serious Injury motorized crashes in 2017

4,354 Total motorized crashes in 2017

0.227 Rate of motorized fatalities per 100 million VMT in 2017

0.965 Rate of motorized serious injuries per 100 million VMT in 2017

ROADWAY NETWORK

SAFETY

SYSTEM PRESERVATION

SYSTEM MANAGEMENT & OPERATIONS

ECONOMIC VITALITY

TRENDS IN VMT

SYSTEM RELIABILITY

TRAFFIC COUNTS

INTELLIGENT TRANSPORTATION SYSTEM (ITS)

FEDERAL FUNCTIONAL CLASSIFICATION

ECONOMIC VITALITY

1 Projects were constructed in 2017 that were previously studied by Metro COG (12th Avenue North from 9th Street NW to 45th Street | West Fargo, ND to Fargo, ND)

1 Projects completed that use Planning and NEPA in the same document/process in 2017 (52nd Avenue South | Fargo, ND)

TRENDS IN VMT

Vehicle Miles Travelled (VMT) is often used to measure the relative traffic demand on the transportation network, as well as assist with the calibration of the Traffic Demand Model (TDM). For the purposes of the Metro Profile, VMT is annualized and refers to the total number of miles traveled by all vehicles on an annual basis.

In the MPA in 2017 there were **3,524,803,989 VMT**.

This is up 1.39% from 2016.

VMT per capita is the number of vehicle miles traveled per person. This is a statistical tool that is used to determine the amount and length of trips people are taking. It also can be used to determine which modes of transportation people are using. In the MPA in 2017 there were **14,604.17 V/C**.

SYSTEM MANAGEMENT & OPERATIONS

A good measure of roadway capacity is the percentage of VMT on the modeled network with vehicle/capacity ratio. Near capacity levels are considered 0.85-0.95, so as a measurement Metro COG uses the percentage to gauge the roadway network's capacity levels. These percentages are calculated using the Traffic Demand Model (TDM).

Since Metro COG updates the TDM every 5 years, the last traffic numbers are from 2015. Thus, in 2015, the VMT on the modeled network with vehicle/capacity ratio greater than 0.9 was **2.15%**. What this means is that the roadway network is under capacity.

Another indicator that the transportation network is under capacity is that the average travel speed for the TDM network in 2015 was **49.6 mph**.

Further, the roadway network can be examined by the level of travel time reliability (LOTR). Federal Highway Administration (FHWA) uses this measurement as in Performance Measure 3 (PM3). This information is elaborated on in the System Reliability | Accessibility section.

SYSTEM PRESERVATION

MAP-21 requires MPOs to adopt system preservation targets for each state that they operate in or to set their own targets for the entire MPA. This is considered Performance Measure 2 (PM2).

In 2018, MnDOT and NDDOT set their respective statewide PM2 targets for 2018-2021 based on 2017 data. By November 16, 2018, Metro COG needs to adopt PM2 targets. In order to do so, Metro COG will examine the 2017 data and determine if the targets proposed by the respective states are applicable and/or aligned with the regional planning goals. Then Metro COG can adopt the respective statewide PM2 targets and/or set their own MPA-wide targets.

Adjacent are the 2017 system preservation numbers that are used to determine the PM2 targets. The data has been grouped by the entire MPA, North Dakota's portion of the MPA, and Minnesota's portion of the MPA.

Pavement is evaluated using the Pavement Condition Index (PCI), which provides a numerical rating of 0 to 100.

Excellent	86-100
Good	71-85
Fair	56-70
Poor	0-55

Bridges are evaluated using the national Bridge Inventory (NBI), which provides a numerical rating of 0 to 9.

Good	7-9
Fair	5-6
Poor	0-4

The higher the percentage of pavement or bridges in good/excellent condition the better and the lower the percentage of pavement or bridges in poor condition the better.

MPA

2017 INTERSTATE PAVEMENT

97.9% in good condition

0.0% in poor condition

2017 NON-INTERSTATE NHS PAVEMENT

89.3% in good condition

2.9% in poor condition

NORTH DAKOTA - 2017

Interstate Pavement in ND

95.7% in good condition

0.0% in poor condition

NON-INTERSTATE NHS PAVEMENT IN ND

88.6% in good condition

2.3% in poor condition

MINNESOTA - 2017

Interstate Pavement in MN

100% in good condition

0.0% in poor condition

NON-INTERSTATE NHS PAVEMENT IN MN

90.0% in good condition

3.4% in poor condition

2017 NHS BRIDGE CLASSIFICATION

49.0% in good condition

1.0% in poor condition

2017 NHS BRIDGES CLASSIFIED IN ND

47.0% in good condition

2.0% in poor condition

2017 NHS BRIDGES CLASSIFIED IN MN

52.0% in good condition

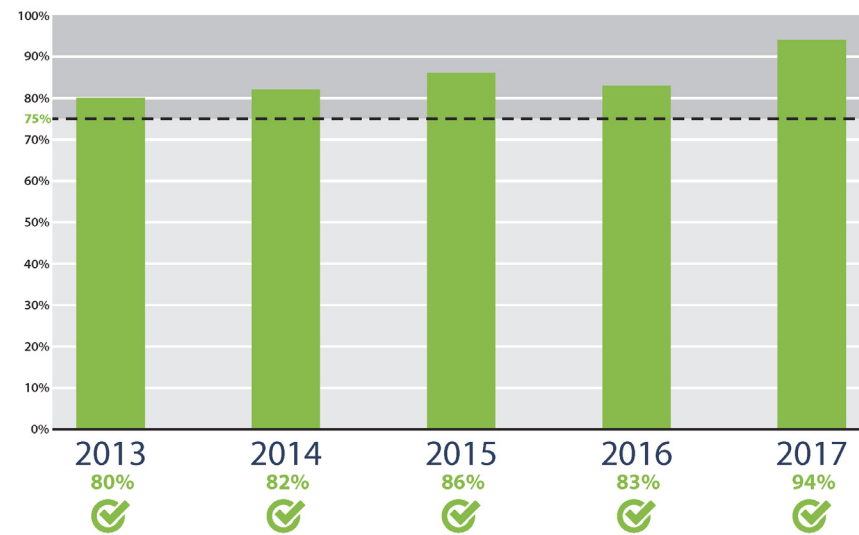
0% in poor condition

*SAFETY STATISTICS WERE CALCULATED USING THE CRASH DATA FROM MnDOT AND NDDOT RESPECTIVELY. VMT DATA WAS CALCULATED USING THE MnDOT YEAR-END REPORT IN MINNESOTA AND IN NORTH DAKOTA. A 3% GROWTH RATE WAS APPLIED FOR 2015-2016 AND 2016-2017. THE TRAVEL DEMAND MODEL, WHICH USES DATA COLLECTED IN 2015 AND IS PRODUCED BY ATAC FOR METRO COG, WAS USED TO CALCULATE THE VEHICLE/CAPACITY RATIO, AVERAGE MPH, AND TOTAL MOTOR VEHICLE TRIPS. HENCE THE 2015 REFERENCE. SYSTEM PRESERVATION DATA WAS CALCULATED BY USING THE NATIONAL PERFORMANCE MANAGEMENT RESEARCH DATA SET (NPMRDS) AND LOCATION JURISDICTIONAL DATA.

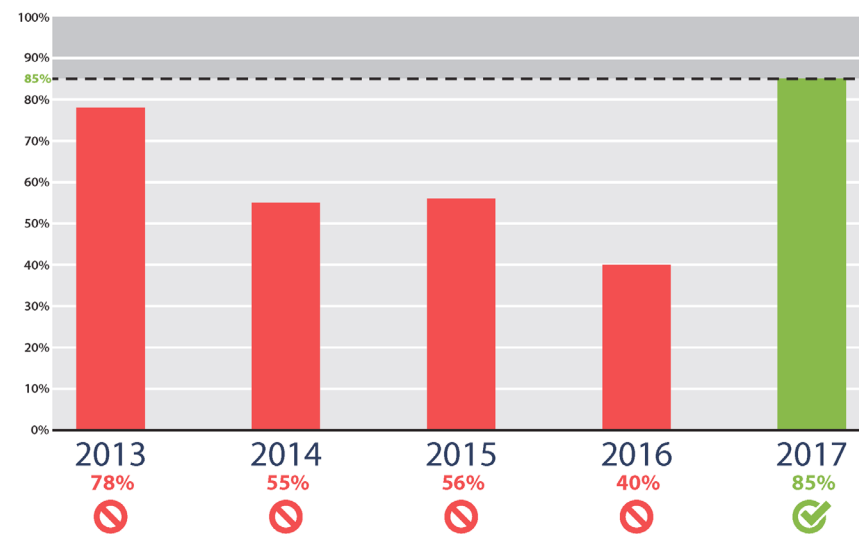
SYSTEM RELIABILITY

TRAVEL TIME RELIABILITY

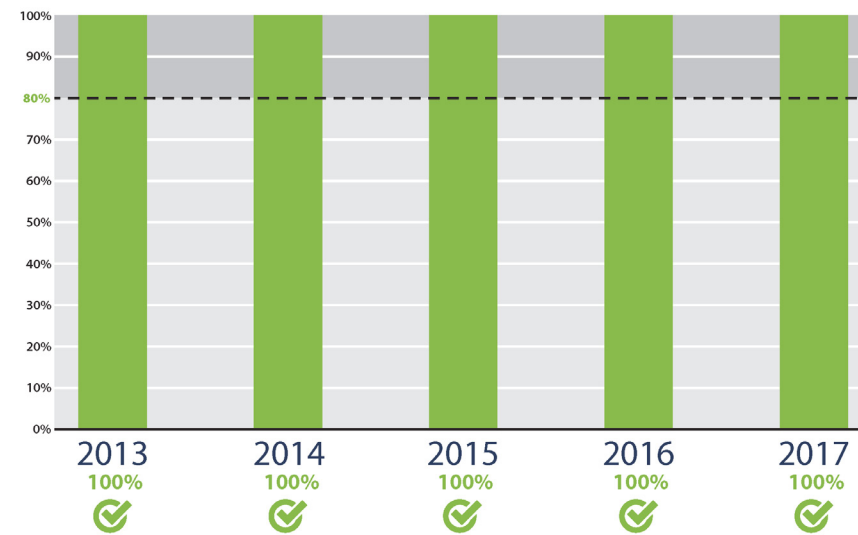
Non-Interstate NHS Travel Time Reliability, Minnesota



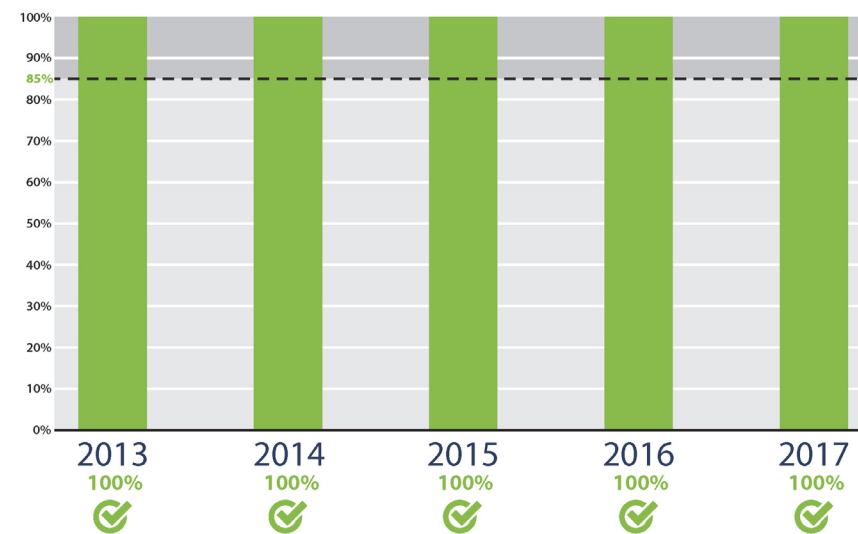
Non-Interstate NHS Travel Time Reliability, North Dakota



Interstate Travel Time Reliability, Minnesota



Interstate Travel Time Reliability, North Dakota



MAP-21 requires MPOs to adopt system reliability targets for each state that they operate in or to set their own targets for the entire MPA. System Reliability targets are considered Performance Measure 3 (PM3).

In 2018, MnDOT and NDDOT set their respective statewide system reliability targets for 2018-2021 based on 2017 data. Metro COG will examine the 2017 data and determine if the targets proposed by the respective states are applicable and/or aligned with the regional planning goals. Then Metro COG can adopt the respective statewide PM3 targets and/or set their own MPA-wide targets.

On the adjacent page are the Travel Time Reliability for Interstate and Non-Interstate NHS for each state. The dotted line notes the goals of each state for that target and the bars represent the Travel Time Reliability in that state's portion of the MPA. If the bar is green it meets or exceeds the target. If the bar is red, it does not meet the target. In 2017, all set performance measure targets for system reliability were met in the MPA.

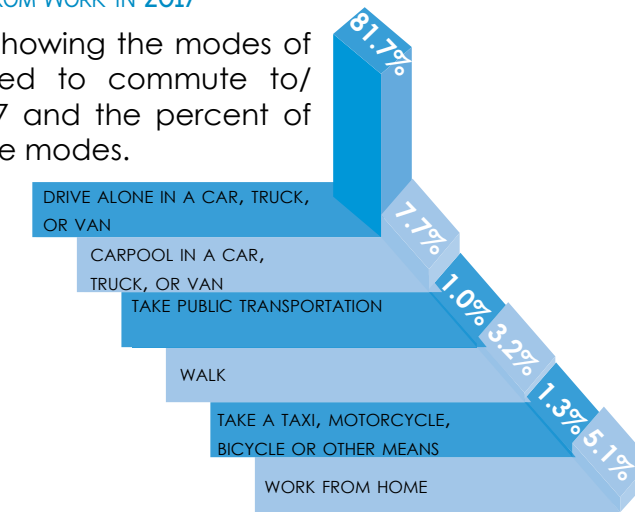
It is important to note that between 2016 and 2017 the reliability of the data dramatically improved as there was a switch in data providers at a national level. Minnesota recalculated their data for previous years, hence why there wasn't a significant difference in the Minnesota data.

ITS

Metro COG maintains an Intelligent Transportation System (ITS) plan for the MSA and works in cooperation with the Advance Traffic Analysis Center (ATAC) on the maintenance of the Regional ITS Architecture. The ITS Deployment Strategy and Regional ITS Architecture were both updated and adopted by Metro COG in December 2014. The primary recommendations of the ITS Deployment Strategy and Regional Architecture focus on interoperability and regionalization of existing and future ITS deployments and place a high priority on the centralization and integration of signal systems within the MSA.

TRAVEL MODES TO & FROM WORK IN 2017

Below is a chart showing the modes of transportation used to commute to/from work in 2017 and the percent of people using those modes.



187 MINUTE DELAY PER PEAK TRIP*

*Does not include off-peak trips.

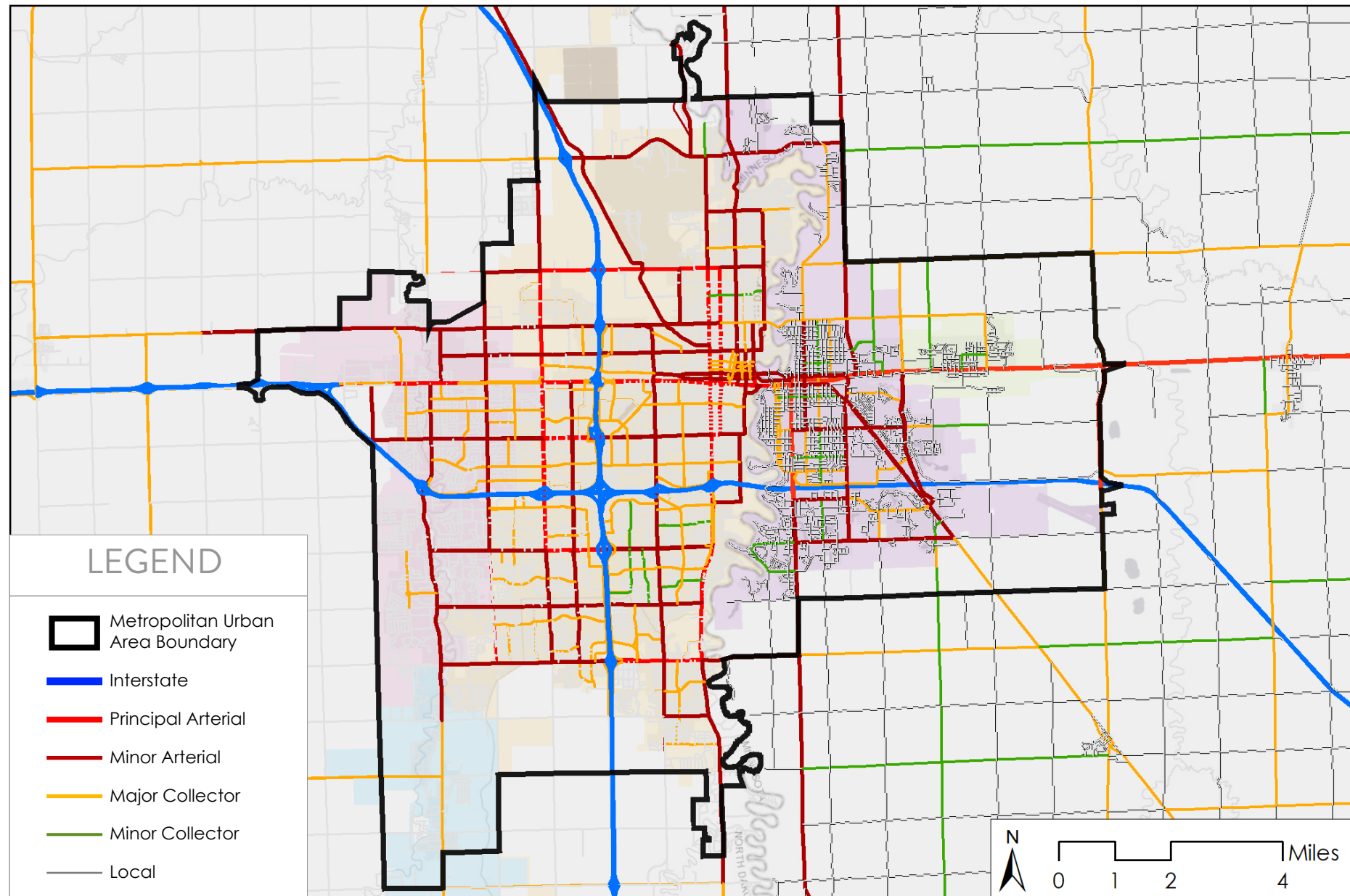
TRAFFIC COUNTS

Metro COG collects 12-hour turning movement counts, peak turning movement counts, and multi-day volume counts at the request of local jurisdictions to assist in various planning efforts. In addition, every five years Metro COG conducts a metro area-wide traffic count operation which collects 48-hour average daily traffic (ADT) counts and vehicle class counts at certain locations. The most recent area-wide traffic count operation was in 2015. The information collected was used to help calibrate the Travel Demand Model in 2017, as well as assist Metro COG and other agencies in various planning efforts.

Access to Metro COG's traffic counts, and links to NDDOT, MnDOT, and the local jurisdictions' counts can be found on Metro COG's website at: www.fmmetrocog.org/resources/traffic-counts

*TRAVEL TIME RELIABILITY WAS CALCULATED USING THE NATIONAL PERFORMANCE MANAGEMENT RESEARCH DATA SET (NPMRDS) AND LOCATION JURISDICTIONAL DATA.

2017 FEDERAL FUNCTIONAL CLASSIFICATION



FEDERAL FUNCTIONAL CLASSIFICATION

The FHWA groups roadways into functional classes according to the character of service the roadway is intended to provide. In order to be eligible for federal transportation funding, a roadway must be identified as a collector, arterial, or interstate in the Federal Functional Classification (FFC) road network.

All streets and highways are classified depending on the character of the traffic and the degree of land access that they provide. Higher level facilities, such as interstate highways, have lower access, allowing for higher speeds and capabilities. Conversely, lower level facilities allow for greater access, but have reduced mobility due to lower speeds and capabilities.

The classifications are listed below in the legend. The roadway classifications are organized from highest level facilities on top to lowest level facilities on the bottom.

FARGO-MOORHEAD METROPOLITAN ROADWAY NETWORK

Roadways meeting certain categories under the functional classification system have access to federal transportation funds, which can be utilized for studies, network improvements, and construction. Local facilities, residential streets, and rural minor collectors (pursuant to CFR 470.103) are not eligible for federal transportation funding assistance.

In 2015, Metro COG worked with MnDOT and the FHWA to update the Federal Functional Classification network for Clay County, Minnesota. This update introduced new recommended roadway types on to the local system, which were first outlined in a document published by the FHWA in 2013.

Cass County Federal Functional Classification has not been updated since 2007. It is currently being updated due to the significant roadway network changes over the last decade. This major undertaking will be completed in 2019.

The map on the adjacent page illustrates the current classification of the Metropolitan Urban Area and some of the surrounding MPA area.

*DATA FOR THE FEDERAL FUNCTIONAL CLASSIFICATION MAP WAS RECEIVED FROM MNDOT, NDDOT, AND CASS COUNTY TO CREATE THE MAP.

PIPELINES

Oil and gas production in western North Dakota has encouraged the expansion of pipeline development throughout the region and the nation. Pipelines move petroleum products from production areas to refineries without the need to utilize surface transportation freight networks.

FREIGHT NETWORK

PIPELINES
RAIL
AVIATION
TRUCK

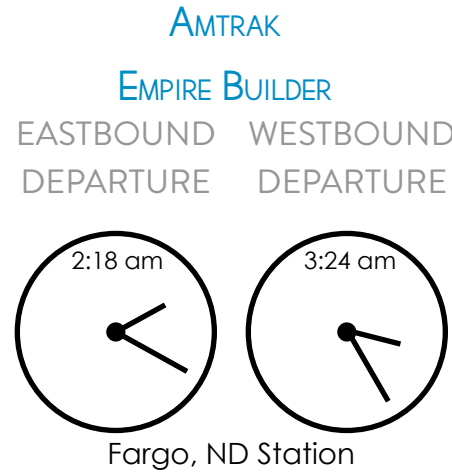


RAIL

The Metropolitan area is and continues to be a hub for the rail network. This form of transportation is an integral part of the daily operation of the area with the many railroad crossings through the MPA.

BNSF Railway owns the tracks throughout the MPA and is the primary railroad operator throughout the region. Although, Otter Tail Valley Railroad (OTVR) has trackage rights to haul chemicals, coal, and grain from the Dilworth Yard to Barnesville and Fergus Falls, to the southeast. Red River Valley & Western (RRVW) owns and operates 577 miles of track in North Dakota and Minnesota transporting grain, sugar, corn syrup, fertilizer, coal, gravel, feed, lumber, and steel to over 60 customers in the region.

Amtrak uses the rails to move people throughout the country on the Empire Builder. In 2017, Amtrak had 20,232 boardings/alightings in Fargo, which is down 6.3% from 2016. In 2017, Amtrak spent \$1,557,158 in Fargo on goods and services, which was up 0.46% from 2016.



AIR

Fargo-Moorhead MPA is home to five (5) airports. Smaller airports serve a majority of private air traffic for the region. This increases fluidity of non-commercial air traffic in the area.

Hector International Airport provides the only commercial service to the area. It is also the primary hub for air-based freight and mail activity for the region. In December 2016, Fed Ex Express moved their air cargo operations from Grand Forks, ND to Hector International in Fargo, ND. This move was a major contributor to the increase in air cargo landings and tonnage from 2016 to 2017.



COMMERCIAL AIRLINES



7,076 landings/departures
(2.2% increase)



787,927 total passengers
(0.2% decrease)

392,889 total enplanements (boarding)
(0.7% decrease)

395,038 total deplanements (deboarding)
(0.4% increase)

CHARTER AIRLINES



6,701 total passengers
(3.9% increase)



TRUCK

In 2017, Truck Freight bottlenecks were identified as having delays per mile over 3 hours at two locations.

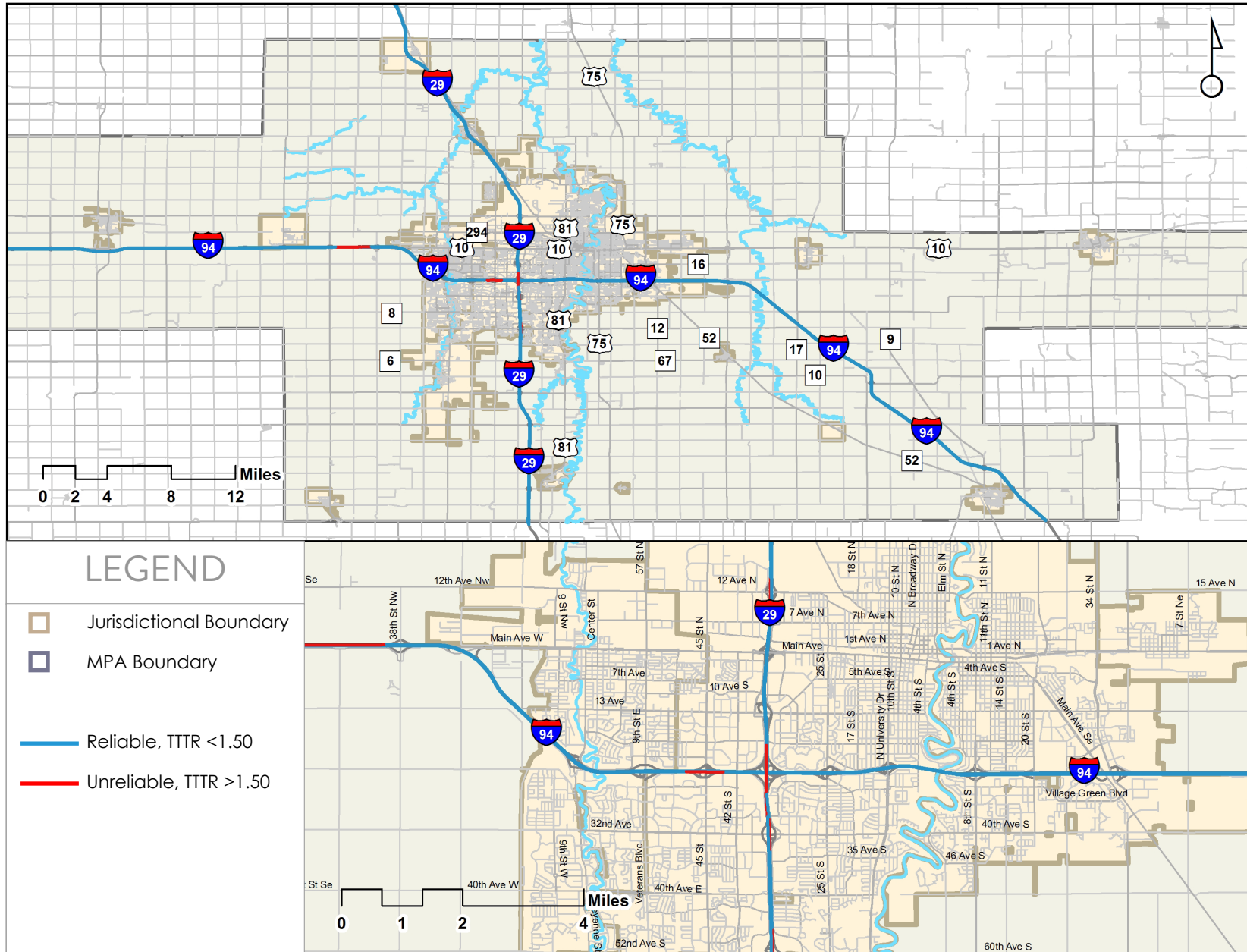
- At the interchange of US-75 (8th Street) and I-94/US-52 there is an AM Peak Average Delay of 6.09 hours, a Midday Average Delay of 12.11 hours, and a PM Peak Average Delay of 8.34 hours.
- Along I-94 at Exit 6 for MN-336/CR-11, there is an AM Peak Average Delay of 3.15 hours, a Midday Average Delay of 6.43 hours, and a PM Peak Average Delay of 1.99 hours. This is presumably caused by the tightness of the exit ramp's curve, which causes trucks to slow down to exit safely.

Three other intersections were identified as having Average Midday Peak Delays of 2-3.5 hours. These intersections should be watched closely over the next few years to see if there is any change.

- US-75 at US-10
- I-94 at Exit 2 for US-52/34th Street
- US-75 at 60th Avenue S/CR-74/ CR-12

*DATA USED IN THE PIPELINE SECTION WAS RETRIEVED FROM THE 2017 METRO PROFILE, AS THE DATA HAS NOT CHANGED. DATA USED IN THE RAIL SECTION WAS RETRIEVED FROM AMTRAK.COM, BNSF.COM, GWRR.COM, AND RRVW.NET. AIR DATA WAS COLLECTED FROM THE YEAR END STATISTICS PAGE ON FARGOAIRPORT.COM. TRUCK DATA WAS COLLECTED FROM NPMRDS AND LOCAL JURISDICTIONS AND ANALYZED BY METRO COG WITH THE HELP OF HDR IN COORDINATION WITH THE LRTP DEVELOPMENT.

2017 TRUCK TRAVEL TIME RELIABILITY



PERFORMANCE MEASURES

SYSTEM MANAGEMENT & OPERATIONS

TRUCK TRAVEL TIME RELIABILITY

Truck Travel Time Reliability (TTR) is used to assess the reliability of the Interstate as required by MAP-21 [23 CFR 490.607].

The reporting is divided into five periods:

- Morning peak (6-10 a.m.) Monday through Friday
- Midday (10 a.m.-4 p.m.) Monday through Friday
- Afternoon peak (4-8 p.m.) Monday through Friday
- Weekends (6 a.m.-8 p.m.)
- Overnight for all days (8 p.m.-6 a.m.)

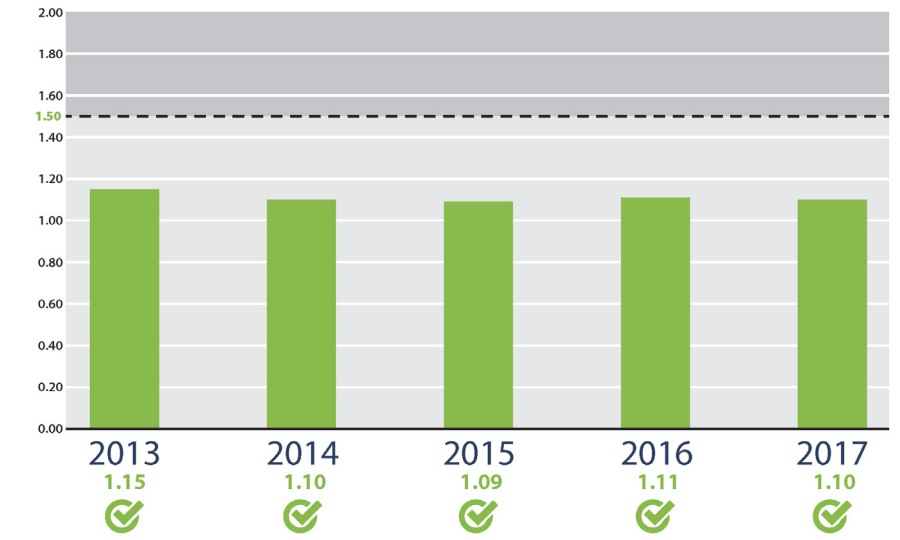
The TTR ratio is generated by dividing the 95th percentile time by the normal time (50th percentile) for each roadway segment. The TTR Index is generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate.

In 2017, the **TTR for the entire MPA was 1.14**. The Minnesota portion of the MPA had a TTR of 1.10 in 2017. The North Dakota portion of the MPA had a TTR of 1.16 in 2017.

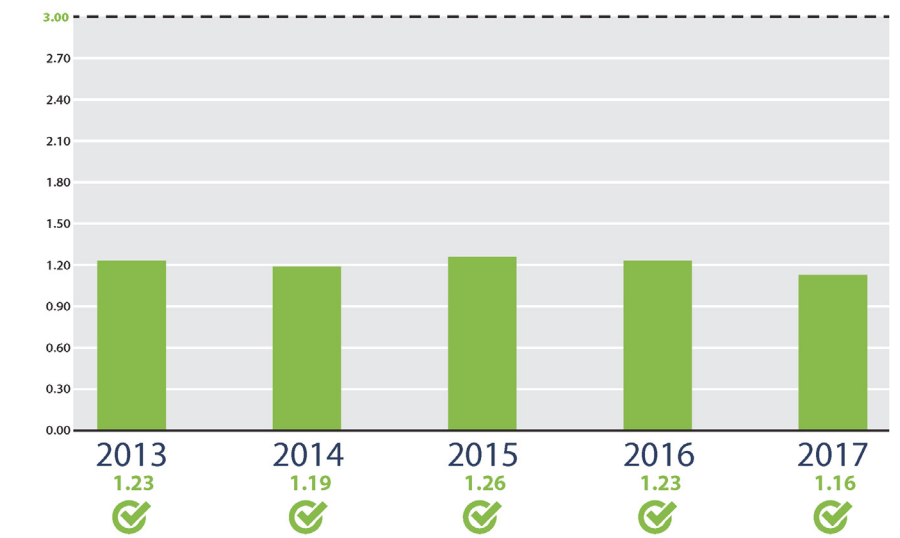
The adjacent charts show the TTR for each year from 2013 through 2017 for the associated state's portion of the MPA. The dashed line on each chart indicates the state TTR target set for 2018-2021. MnDOT has set their TTR target as 1.50 for 2018-2021. NDDOT has set their TTR target as 3.00 for 2018-2021. Since the MPA is below both these target numbers, as indicated in the adjacent charts by the green bars, the MPA is meeting and exceeding the targets set by each state.

If the bar was red and the MPA was not meeting the targets, Metro COG would consider setting their own targets for 2018-2021.

Truck Travel Time Reliability, Minnesota



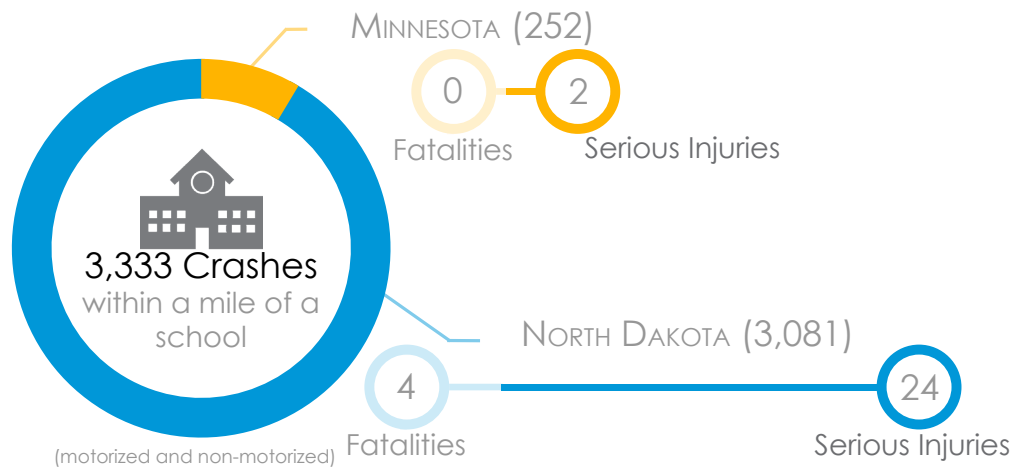
Truck Travel Time Reliability, North Dakota



* TRUCK TRAVEL TIME RELIABILITY DATA WAS COLLECTED FROM THE NPMRDS DATA AND FORMULATED INTO TABLES BY HDR FOR METRO COG IN DEVELOPMENT OF PERFORMANCE MEASURE TARGETS FOR THE LRTP.

PERFORMANCE MEASURES

SAFETY



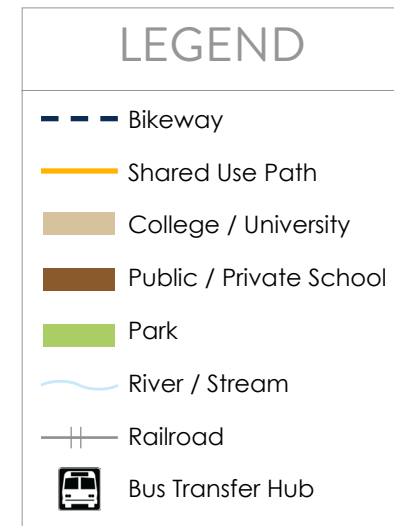
BICYCLE & PEDESTRIAN NETWORK

NETWORK STUDIES&PLANS

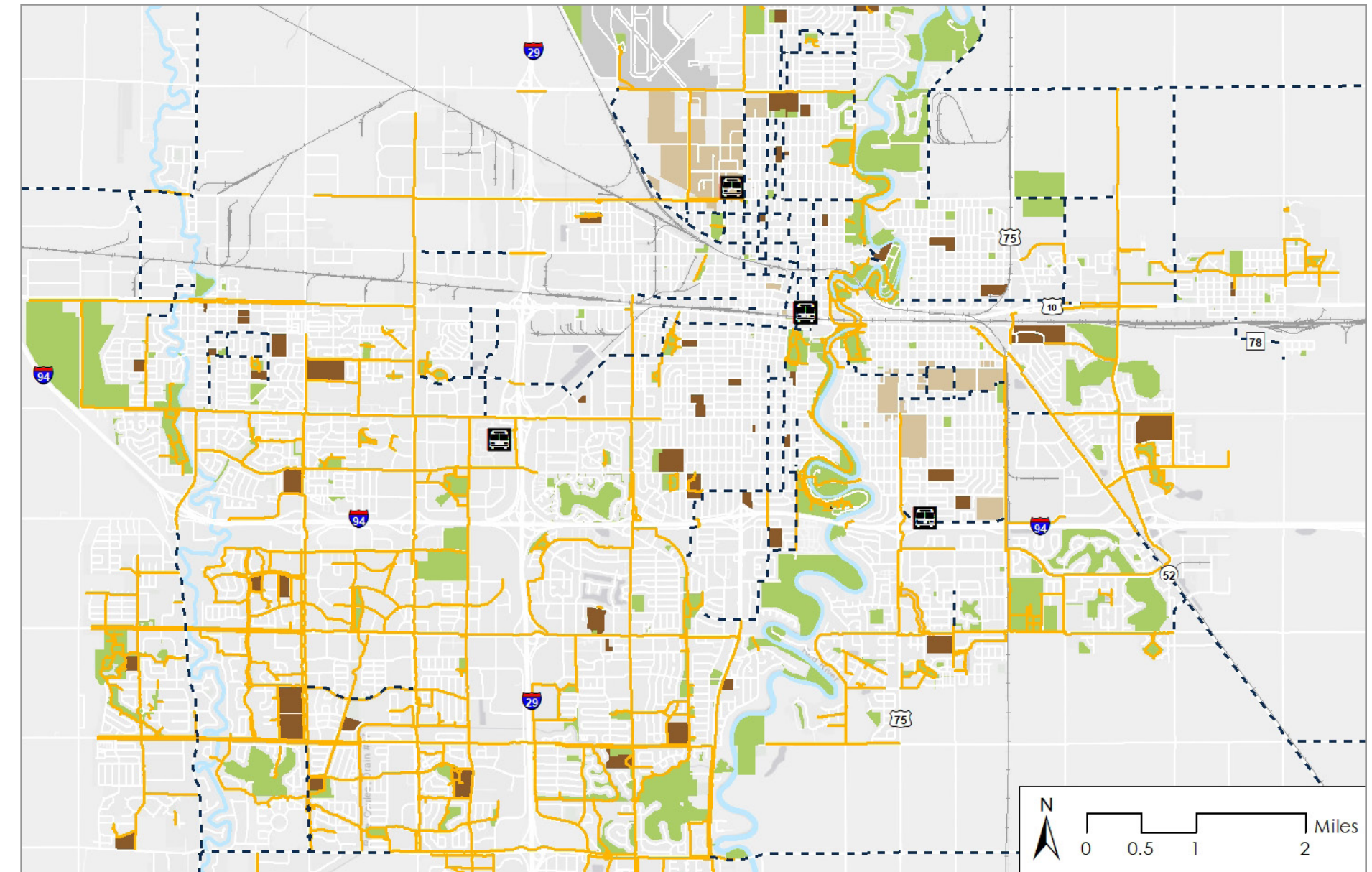


FM Metro Area Bikeways Maps are available at various locations throughout the metro and for download at:

http://www.fmmetrocog.org/application/files/2315/3548/3945/2017_FM_Bikeways_Map.pdf



2017 BICYCLE AND PEDESTRIAN MAP



*BIKEWAY AND SHARED USE PATH MAP DEVELOPED AND UPDATED BY METRO COG WITH INPUT FROM THE JURISDICTIONS AND METROPOLITAN BICYCLE AND PEDESTRIAN COMMITTEE.

*SAFETY STATISTICS WERE CALCULATED USING THE CRASH DATA FROM MNDOT AND NDDOT RESPECTIVELY. SYSTEM PRESERVATION, ECONOMIC VITALITY, ACCESSIBILITY/CONNECTIVITY, AND ENVIRONMENTAL CONSERVATION DATA WAS PROVIDED BY EACH JURISDICTION. IF A JURISDICTION DIDN'T PROVIDE DATA, IT WAS NOTED. BICYCLE COUNTS WERE CONDUCTED BY METRO COG AND ADDITIONAL INFORMATION CAN BE FOUND ONLINE AT FMMETROCOG.ORG IN THE 2018 BICYCLE AND PEDESTRIAN COUNT REPORT.

PERFORMANCE MEASURES

ENVIRONMENTAL CONSERVATION

MOORHEAD

- **5** Complete Street Projects
- **1** Project with an environmental improvement component (Pond expansion)

FARGO, HORACE, WEST FARGO, DILWORTH

- 2017 Environmental Conservation data not available

ACCESSIBILITY | CONNECTIVITY

MOORHEAD

- **2.70** Miles of trails/sidewalk added in 2017
- **18** Projects were installed within a mile of a school
- **4** Recreational/Trail improvements/expansions in 2017
- **0.93** Miles of on-street bike facilities added
- **18%** Intersections are ADA compliant

FARGO, HORACE, WEST FARGO, DILWORTH

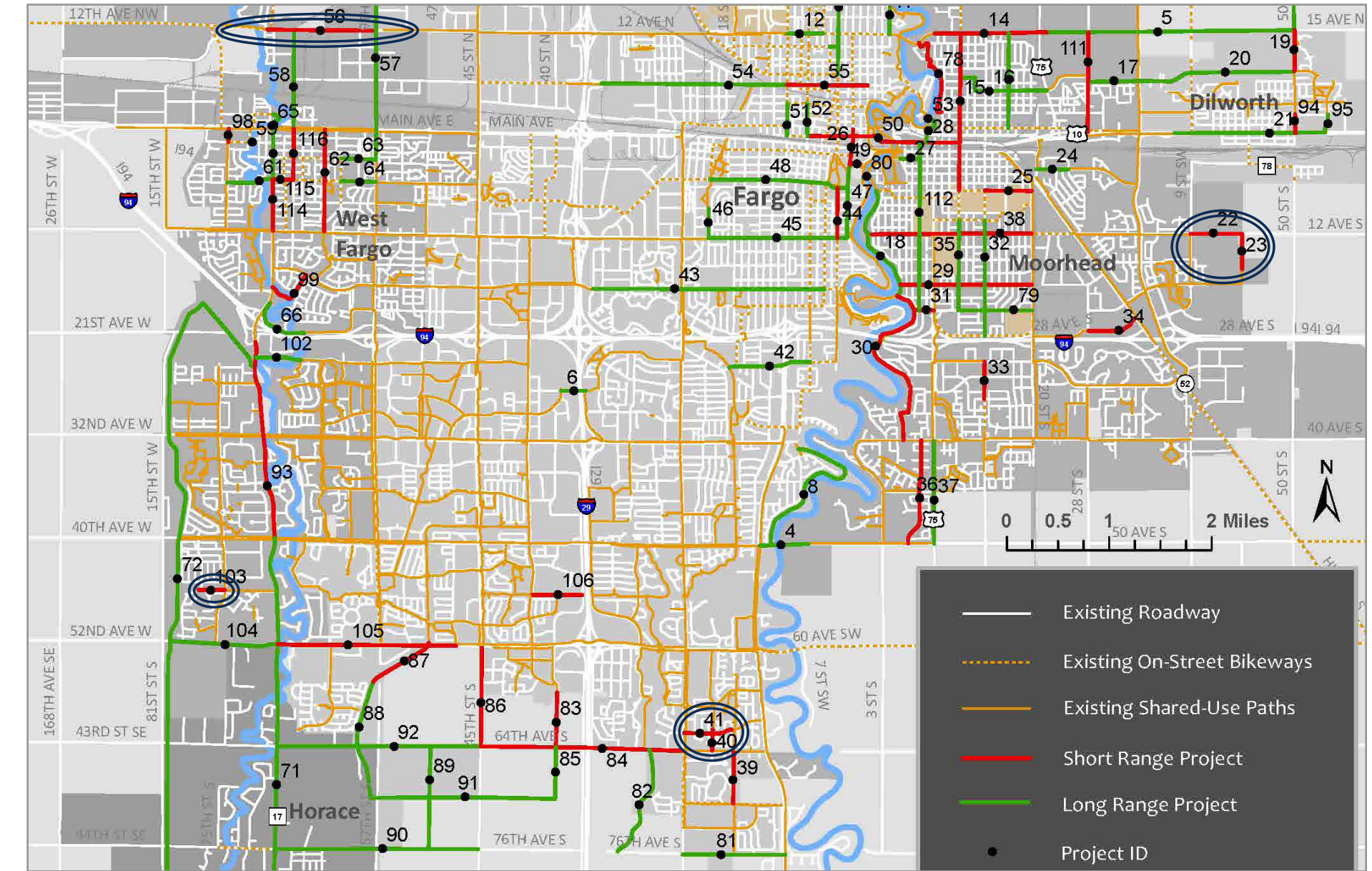
- 2017 Accessibility | Connectivity data not available

6 PROJECTS INSTALLED FROM BIKE/PED PLAN IN 2017

- **56** - City of West Fargo constructed a shared use path on 12th Avenue NE from CR-17 to 9th Street
- **103** - City of West Fargo constructed a shared use path on 9th Street W to 11th Street W
- **40** - City of Fargo constructed a shared use path on 21st Street S from 58th Avenue S to 64th Avenue S
- **41** - City of Fargo constructed a shared use path on 62nd Avenue S from 25th Street to 18th Street
- **22** - City of Moorhead constructed a shared use path on 12th Avenue S from 40th Street S to 45th Street S
- **23** - City of Moorhead constructed a shared use path on 45th Street S from 4th Avenue S to 0.4 mi S of 12th Avenue S

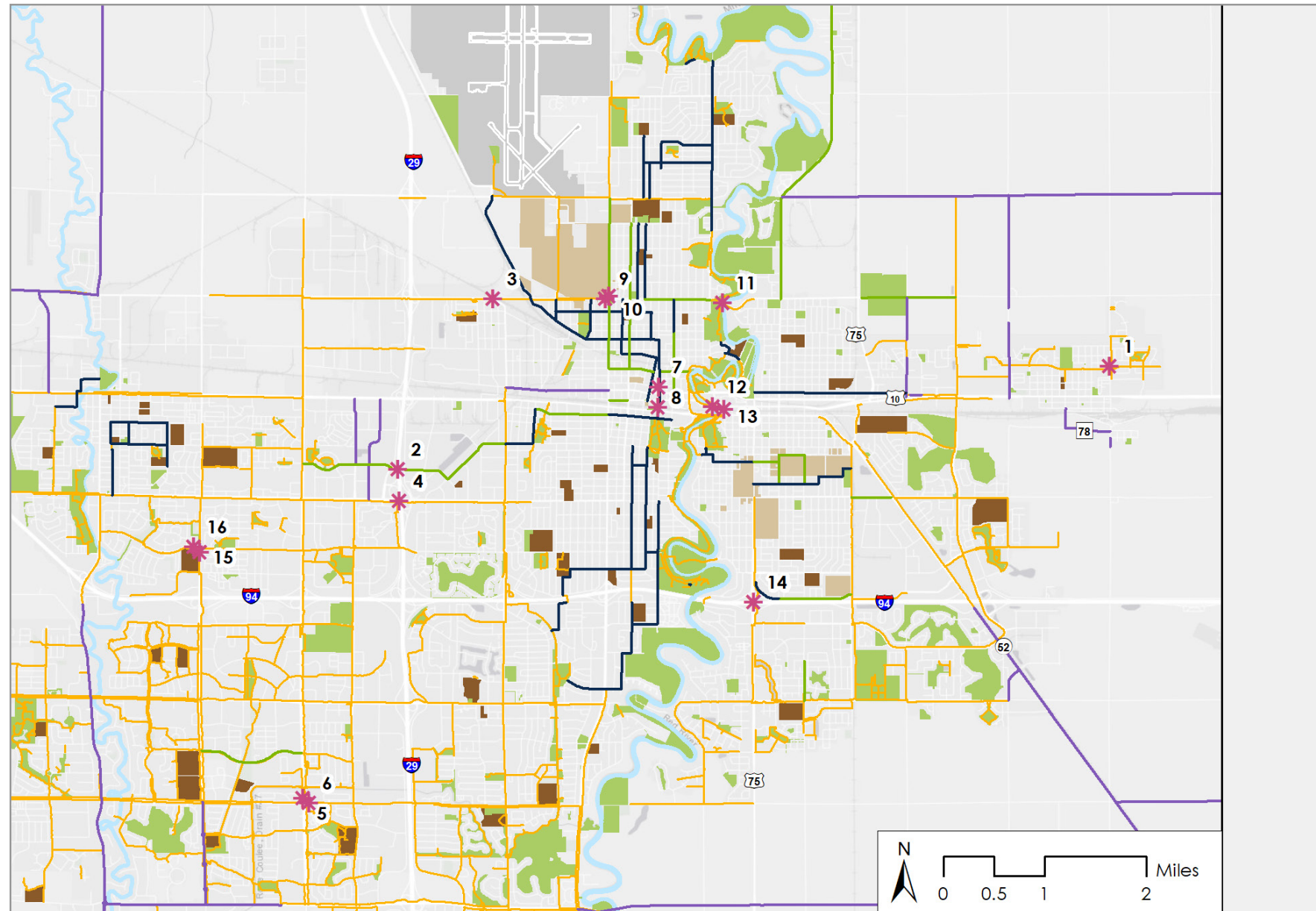
 = project installed in 2017

2016 BICYCLE AND PEDESTRIAN PLAN - IMPROVEMENTS MAP



*2016 BICYCLE AND PEDESTRIAN PLAN - IMPROVEMENTS MAP FOUND IN THE 2016 BICYCLE AND PEDESTRIAN PLAN AS DEVELOPED AND UPDATED BY METRO COG. PROJECTS WERE IDENTIFIED AS BEING IMPLEMENTED IN 2017 PER JURISDICTIONAL FEEDBACK.

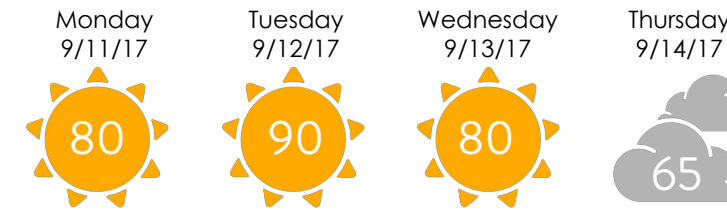
2017 BICYCLE & PEDESTRIAN COUNT MAP



PERFORMANCE MEASURES

BICYCLE & PEDESTRIAN COUNTS

In 2017, Metro COG staff conducted bicycle and pedestrian counts between Monday, September 11th and Thursday, September 14th. The weather on each day was as indicated below.



LEGEND

- Bicycle & Pedestrian Count Location
- Bike Lane / Separated Bike Lane
- Shared Lane with Markings or Signage
- Bike on Shoulder
- Shared Use Path
- College / University
- Public / Private School
- Park
- River / Stream
- Railroad

In order to conduct as many counts within the same timeframe, Metro COG staff with the assistance of volunteers and traffic cameras manually counted bicycle and pedestrian traffic at each location. The locations of each count can be seen on the Bicycle and Pedestrian Count Map on page 24.

Depending on resources available, some locations were counted only on one day, while other locations were counted on two consecutive days. Locations 5, 6, 8 and 12 were counted on one day, while locations 1, 2, 4, 7, 9, 10, 11, and 14 were counted on two consecutive days. All locations with the exception of 9 and 10 were counted between the hours of 3:00pm and 7:00pm.

In order to more accurately count the bicycle and pedestrian movements adjacent to North Dakota State University, the timeframe of the counts was adjusted to 1:00pm to 6:00pm for two consecutive days at locations 9 and 10.

Due to the resources available in 2017, locations 3, 13, 15 and 16 were not counted.

Further information about bicycle and pedestrian counts and detailed counts can be found on Metro COG's website at: www.fmmetrocog.org/resources/planning/bicycle-pedestrian-planning

*BIKEWAY AND PEDESTRIAN COUNT MAP DEVELOPED AND USED BY METRO COG TO CONDUCT BICYCLE AND PEDESTRIAN COUNTS FROM YEAR TO YEAR WITH CONSISTENT LOCATIONS.

PERFORMANCE MEASURES

2017 EQUIPMENT

FLEET INVENTORY

9 - 35' Buses in service in Moorhead

27 - 35' Buses in service in Fargo

4 - 40' Buses in service in Fargo

1 - 35' Bus removed from service

2 - 35' Buses authorized for purchase, to be put in service in Sept. 2018

PARATRANSIT INVENTORY

4 - Cutaway Buses owned by Moorhead

11 - Cutaway Buses owned by Fargo

2 - Sold in May 2017 and not replaced

VALLEY SENIOR SERVICE INVENTORY

4 - Dodge Caravans in service in Moorhead

2017 FACILITY

PURCHASES, REPLACEMENTS & IMPROVEMENTS

MTG

- Purchased and replaced security cameras
- Added security readers to several doors

2017 PURCHASES

4 fixed route buses replaced

9 new fixed route buses purchased, delivered in 2018

1 replacement van for Metro Senior Ride purchased, delivered in 2018

4 replacement Paratransit buses purchased, delivered in 2018

1 mini-van purchased by Fargo

- As a support vehicle utilized for transfer of drivers between busses & routes, staff events, and shop runs

1 Replacement Printing & Encoding Machine (PEM) purchased by Moorhead

GTC

- Purchased and replaced security cameras
- Added security readers to several doors
- Replaced perimeter fencing
- Replaced several display monitors
- Removed large planters to create more space for potential street furniture in the future

TRANSIT NETWORK

2017 EQUIPMENT,
PROJECTS,
RIDERSHIP & ON TIME
PERFORMANCE
SERVICES

2017 RIDERSHIP

FIXED ROUTES

930,718 Fargo riders, down 4.88% from 2016

451,934 Moorhead & Dilworth riders, up 1.42% from 2016

490,576 NDSU route riders, down 4.47% from 2016

MAT PARATRANSIT ROUTES

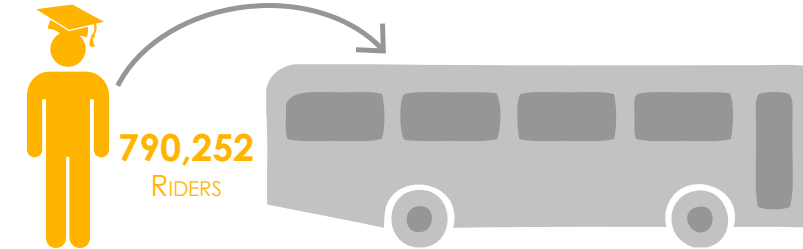
10,673 Moorhead & Dilworth riders, down 0.25% from 2016

41,836 Fargo & West Fargo riders, up 0.28% from 2016

SENIOR RIDE & RURAL TRANSIT ROUTES

10,907 Moorhead & Dilworth riders, up 1.32% from 2016

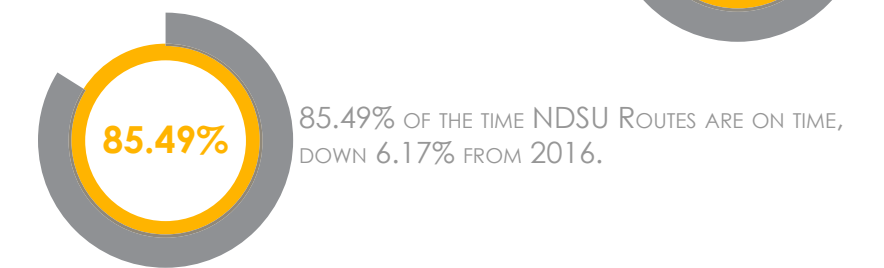
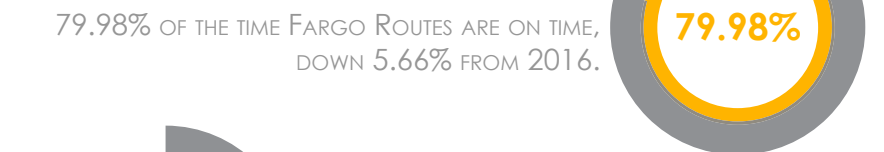
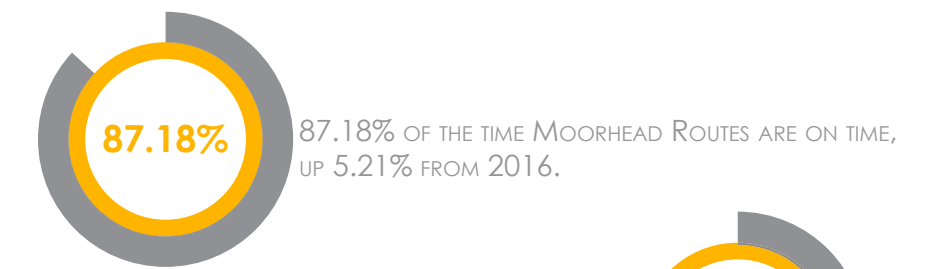
U-PASS



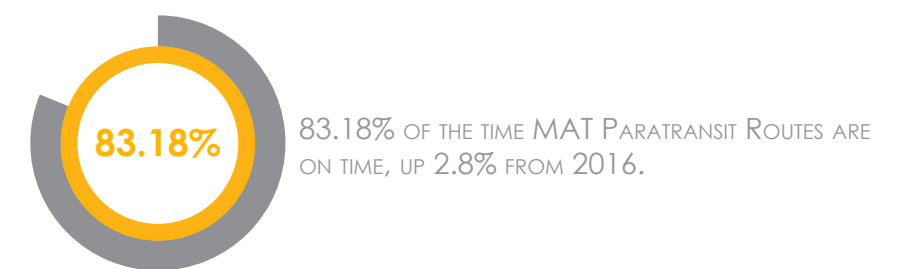
DURING THE 2016-2017 ACADEMIC YEAR

2017 ON TIME PERFORMANCE

FIXED ROUTES

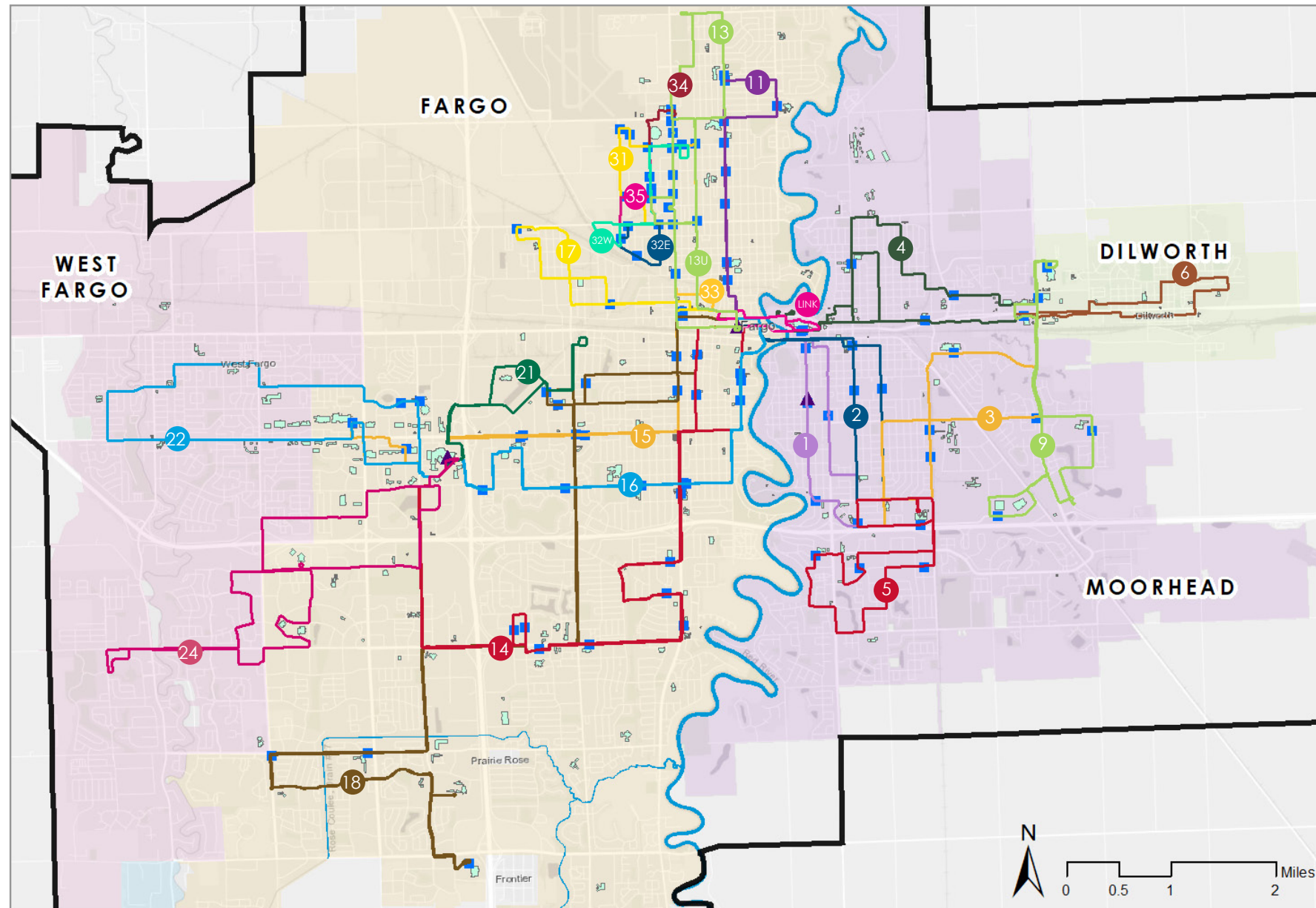


MAT PARATRANSIT ROUTES



*DATA PROVIDED BY MATBUS.

2017 MATBUS ROUTE MAP



ROUTE CHANGES



EFFECTIVE 3/1/17

- Replaced Rt. 7 evening service to north Moorhead with Rt. 4 evening service with 30-minute frequency
- Revised Route 4 to move from 20th ST to 17th ST between 8th Ave and 13th Ave N
- Revised Rt. 8 to travel by Hornbachers near campus

EFFECTIVE 7/1/17

- Added Rt. 24 service between West Acres and the new Sanford Medical Center / West Fargo
- Added Sunday Paratransit service to Moorhead & Dilworth from 7 A.M. to 5 P.M.
- Revised Rt. 5 near M|State due to road changes and adjusted route between Grand Inn & Hornbachers to avoid traffic on 8th ST
- Replaced Rt. 8 evening service to south Moorhead with Rt. 1, 2, 3, & 5
- Added 2nd bus for 30-minute frequency on Saturday Rt. 1, 2, 3 & 5
- Implemented Transit Development Plan route changes to Rt. 13, 14, 16, 17, & 18
- Added Rt. 21, 22, 24
- Combined Rt. 18 with old Rt. 23 and added the 25th ST corridor
- Added U32 Apartment loop to Rt. 13
- Removed West Fargo loop on Rt. 16 and the route became hour-long route instead of 90-minutes
- Removed 2.5 revenue hours at night on Rt. 13U
- Added 2 revenue hours at night on Rt. 17

LEGEND

Shelter	
Hub	
Route 1	Route 16
Route 2	Route 17
Route 3	Route 18
Route 4	Route 21
Route 4 Extension	Route 22
Route 5	Route 24
Route 6	Route 31
Route 9	Route 32E
Route 11	Route 32W
Route 13	Route 33
Route 13U	Route 34
Route 14	Route 35
Route 15	Link FM

*DATA PROVIDED BY MATBUS. METRO COG DEVELOPED THE MAP.

2017 PROJECTS

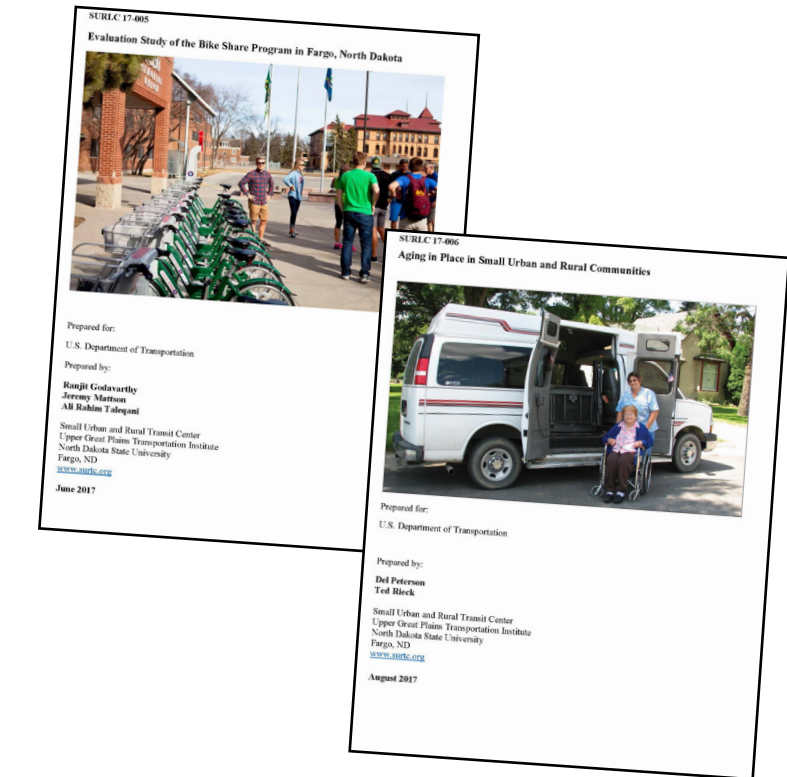
- Refinished GTC Deck & filled cracks; Moved & replaced ground air exchanger from parking lot to south curb; Removed slippery overlay in pedestrian area
- Moved bus stop by M | State from 24th Ave to door N2 due to Rt. 5 changes
- Moved shelter at M | State on 28th Ave to southside of the street & further east due to Rt. 5 changes
- Moved bus stop by Hornbachers on Main Ave in Moorhead due to road narrowing
- Removed shelter by Safari Theater in Moorhead due to Rt. 5 changes
- Ordered a new shelter for Cash Wise location in Moorhead, to be delivered in 2018
- Installed a fall restraint protection system in the Metro Transit Garage for the technicians hwn working on the taller hybrid vehicles

2017 FARES, ROUTE & SERVICE CHANGES

- Implemented a new 30-day Downtown Business Pass at a discount price of \$22.50. Pass can be purchased by downtown businesses for their employees.
- Approved new 90-day youth pass at \$26 discount price; replaces 30-day Youth Pass and Summer Youth Pass (effective 1/1/18)
- Fargo approved TapRide program on NDSU campus from 8 PM to 11:15 PM during academic year under 6-month pilot program (to begin 1/8/18) and suspension of Route 35 effective 1/15/18
- Fargo Implemented Transit Development Plan route changes to Routes 13, 14, 16, 17, and 18. Added Routes 21, 22, and 24. Removed Route 23
- Moorhead implemented Transit Development Plan route changes to Routes 4, 7 and 8
- Moorhead revised Route 5 near M | State due to road changes and adjusted route between Grand Inn and Hornbachers to avoid traffic on 8th Street 7/1/17
- Moorhead implemented various service expansions under a two-year New Service Expansion (NSE) pilot program funded by the State of Minnesota 7/1/17:
- Moorhead added Sunday Paratransit Service in Dilworth & Moorhead (Fargo has provided Sunday Paratransit Service for several years)

2017 STUDIES

- Began ADA Transition Plan for sidewalks, curbcuts, transit facilities through Metro COG & Moorhead Public Works with SRF (to be completed in 2018)
- Purchased Remix Route Planning Software
- Began Transit Hub & Facility Analysis through Metro COG with KLJ (to be completed in 2018)
- Participated in a study by Small Urban and Rural Transit Center (SURTC): Evaluation Study of the Bike Share Program in Fargo, ND
- Participated in a study by Small Urban and Rural Transit Center (SURTC): Aging in Place in Small Urban and Rural Communities





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