METROCOG Fargo-Moorhead Metropolitan Council of Governments

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526th Transportation Technical Committee
Fargo-Moorhead Metropolitan Council of Governments
THURSDAY, February 10, 2022 – 10:00 a.m.
AGENDA

1. Call to Order and Introductions
2. Approve the Agenda — Action Item
3. Consider Minutes of the January 13, 2022 TTC Meeting — Action Item
4. Public Input Opportunity — Public Input
5. ATAC Addendum – Dynamic Traffic Assignment Model — Action Item
6. ATAC Addendum – Review and Adjustment to HH and Job Data — Action Item
7. ATAC Addendum – Moorhead Intersection Data Collection — Action Item
8. ATAC Addendum – Regional ITS Architecture Update — Action Item
9. ATAC Addendum – Travel Demand Model Update — Action Item
10. 2022-2025 Transportation Improvement Program Amendment #1 — Action Item
11. Performance Measures 2022 — Action Item
12. West Fargo Traffic Calming Study Final Report — Action Item
13. Update of Federal Functional Class System — Discussion Item
14. IIJA Planning Emphasis Areas & Future Projects — Discussion Item
15. AARP Funding Opportunity — Discussion Item
16. Agency Updates — Discussion Item
    a. City of Fargo
    b. City of Moorhead
    c. City of West Fargo
    d. City of Dilworth
    e. City of Horace
    f. Cass County
    g. Clay County
    h. Other Member Jurisdictions
17. Additional Business — Information Item
18. Adjourn

REMINDER: The next TTC meeting will be held **Thursday, March 10, 2022** at 10:00 a.m.

Due to ongoing public health concerns related to COVID-19, Metro COG is encouraging citizens to provide their comments on agenda items via email to leach@fmmetrocog.org. To ensure your comments are received prior to the meeting, please submit them by 8:00 a.m. on the day of the meeting and reference which agenda item your comments address. If you would like to appear via video or audio link for comments or questions on a regular agenda or public hearing item, please provide your e-mail address and contact information to the above e-mail at least one business day before the meeting.

For Public Participation, please REGISTER with the following link:
https://us02web.zoom.us/webinar/register/WN_VPNIDUnzQJW3pbNuO0_ILA

Red Action Items require roll call votes.

NOTE: Full Agenda packets can be found on the Metro COG Web Site at http://www.fmmetrocog.org – Committees

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525th Meeting of the
FM Metro COG Transportation Technical Committee
Thursday, January 13, 2022 – 10:00 am

Members Present:

Jonathan	Atkins	City of Moorhead Traffic Engineering
Jason	Benson	Cass County Highway Engineering
Julie	Bommelman	City of Fargo, MATBUS
Nicole	Crutchfield	City of Fargo Planning
Jeremy	Gorden	City of Fargo Transportation Engineering
Cindy	Gray	Metro COG
Robin	Huston	City of Moorhead Planning
Matthew	Jacobson	Clay County Planning
Don	Lorsung	City of Dilworth Administration
Aaron	Nelson	West Fargo City Planning
Grace	Puppe	Cass County Planning
Mary	Safgren	MnDOT – District 4
Russ	Sahr	City of Horace Planning
Lori	Van Beek	City of Moorhead, MATBUS
Mark	Wolter	Freight Representative, Midnite Express
Andrew	Wrucke	City of West Fargo Engineering
Wayne	Zacher	NDDOT – Local Government Division

Members Absent:

Joe	Raso	GFMEDC
Justin	Sorum	Clay County Engineering
Brit	Stevens	NDSU – Transportation Manager

Others Present:

Adam	Altenburg	Metro COG
Dan	Bergerson	HDR
Jaron	Capps	Metro COG
Luke	Champa	Metro COG
Jim	Dahlman	Interstate Engineering / City of Horace
Ari	Del Rosario	Metro COG
Dan	Farnsworth	Metro COG
Wade	Frank	Stantec
Scott	Harmstead	SRF
Matthew	Huettl	HDR
Will	Kerns	Ulteig
Matt	Kinsella	Apex Engineering
Savanna	Leach	Metro COG
Michael	Maddox	Metro COG
Brent	Muscha	Apex Engineering
Eric	Oberhart	CPCS
Anna	Pierce	MnDOT
Jordan	Smith	MATBUS
Tom	Soucy	Cass County Highway
Kristen	Sperry	FHWA
Steve	Strack	Houston Engineering
Kyle	Weiler	HDR

1. CALL TO ORDER AND INTRODUCTIONS

The meeting was called to order at 10:00 am, on January 13, 2022 by Chair Gray. A quorum was present.

2. Approve the 525th TTC Meeting Agenda

Chair Gray asked if there were any questions or changes to the 525th TTC Meeting Agenda.

> ***Motion:* Approve the 525th TTC Meeting Agenda.**
> **Mr. Benson moved, seconded by Mr. Wolter**
> ***MOTION*, PASSED.**
> **Motion carried unanimously.**

3. APPROVE December 9, 2021 TTC MEETING MINUTES

Chair Gray asked if there were any questions or changes to the December 9, 2021 TTC Meeting Minutes.

> ***Motion:* Approve the December 9, 2021 TTC Minutes.**
> **Mr. Sahr moved, seconded by Ms. Safgren**
> ***MOTION*, PASSED**
> **Motion carried unanimously.**

4. Public Comment Opportunity

No public comments were made or received.

5. US10 through Dilworth Corridor Study Consultant Selection

Mr. Maddox presented Apex Engineering as the highest-ranking consulting firm that proposed on, and interviewed for the US10 Corridor Study through Dilworth. The study will analyze multimodal transportation needs along the corridor as well as context-sensitive features through the corridor.

The study has a project budget of $160,000 ($128,000 from federal CPG funds and $32,000 from local funds provided by MnDOT). Metro COG received four proposals prior to the proposal deadline on Monday, January 29, 2021. Proposals were received from HDR, KLJ, Bolton & Menk, and Apex Engineering.

Ms. Safgren asked if Dilworth would be contributing financially in any extra, non-eligible scoping. Mr. Maddox said a draft scope was just received, and believes the land-use scoping that Dilworth had requested may be CPG eligible. Ms. Gray added that she believes Dilworth has designated some local funds to be used for this study, and that over the course of the study, it may become more evident where those funds could be best put to use, if needed.

> ***Motion:* Recommend Policy Board approval of Apex Engineering as the preferred firm recommended by the study's consultant selection panel to complete the study; and recommend Policy Board approval for the Executive Director to enter into a contract with said consulting team for the TH 10 Corridor Study through Dilworth.**
> **Ms. Safgren moved, seconded by Mr. Lorsung**
> ***MOTION*, PASSED**

Motion carried unanimously.

6. 25th Street Corridor Study Consultant Selection

Mr. Maddox presented KLJ as the highest-ranked consulting firm that proposed on, and interviewed for the 25th Street Corridor Study. The City of Fargo would like to identify any improvements that could be made to improve vehicular circulation, improve bicycle and pedestrian movements, enhance the context/character of the roadway, and forward the goals of Fargo's Go2030 Comprehensive Plan.

Metro COG received four proposals from SRF Consulting Group, KLJ with subconsultant TC2, Bolton & Menk with subconsultant Houston Engineering, and Stantec with subconsultant Quality Counts.

The study has a project budget of $125,000 to complete the 25th Street Corridor Study ($100,000 COG - 80%, $25,000 - local match provided by City of Fargo – 20%).

***Motion:* Recommend Policy Board approval of KLJ with subconsultant TC2, as recommended by the study's consultant selection panel to complete the study; and recommend Policy Board approval for the Executive Director to enter into a contract with said consulting team for the 25th Street Corridor Study**
Mr. Gorden moved, seconded by Ms. Bommelman
***MOTION*, PASSED**
Motion carried unanimously.

7. Amendment #4 to the 2021-2022 Unified Planning Work Program (UPWP)

Ms. Gray presented Amendment #4 to the 2021-2022 Unified Planning Work Program (UPWP). She stated that the amendment includes the following two changes: the inclusion of the Metro-wide Housing Needs Analysis in the work program along with the reallocation of staff hours from other categories to the Metro-wide Housing Needs Analysis and the inclusion of more details about this project in the work program, and the purchase of a license for StreetLight software, which is used across the metropolitan area for transportation planning, traffic studies, and traffic impact studies. Ms. Gray went through the budgetary impacts of the two changes, and showed the local match that would be required of each jurisdiction to complete the purchase of the StreetLight subscription.

After this amendment, there will still be $15,500 in unused carryover CPG funds, which could potentially be programmed at a future date.

***Motion:* Recommend approval to the Policy Board of Amendment #4 to the 2021-2022 UPWP, including the addition of the Metro-wide Housing Needs Analysis, the adjustment to staff hours as described, and the purchase of StreetLight using $29,500 in 2021 operational carryover funds.**
Mr. Gorden moved, seconded by Mr. Lorsung
***MOTION*, PASSED**
Motion carried unanimously.

8. MnDOT D4 Freight Plan

Mr. Oberhart from CPCS presented an update on the MnDOT D4 Freight Plan.

9. Agency Updates

Metro COG – TIP Administrative Amendment processed for the 2022-2025 TIP.

Fargo – RR Greenway Study, Bike/Ped Plan, Interstate Ops Study, Fargo Transportation Plan, Veterans Blvd Study all underway. Starting the 25th St Corridor Study and University/10th Street Study soon. 2nd Street Pedestrian Bridge project starting soon, Bison Village Shared-use Path in design process, Main Ave (25th – University) consultant selection, Broadway Bridge to be demolished, 52nd Ave (Deer Creek) roundabout updates, and new signals on Veterans Blvd/Sheyenne.

MATBUS – Triennial Review upcoming and spending a lot of time preparing materials for that review

Moorhead – Center Ave construction upcoming, new signal installation. Comp Plan draft under review.

West Fargo – no major updates

Dilworth – US10 study, Housing Study

Horace – New developments in progress. Potential new Community Development Director starting March.

Cass County – $400M Soybean crushing facility to be constructed near Casselton.

Clay County – Clay County Comp Plan draft under review, public open house upcoming in February.

MnDOT – Rail Service Improvement Program – funding available. Statewide Multimodal Transportation Plan upcoming public comment period.

NDDOT – no major updates

FHWA – hoping spending bill will pass, awaiting guidance

10. Additional Business

Mr. Farnsworth shared a survey for the Minnesota Rail Crossing Safety Action Plan. There is a link to a survey and interactive map. Ms. Sperry shared the North Dakota Rail Crossing Safety Action Plan as well.

11. Adjourn

The 525th Regular Meeting of the TTC was adjourned on January 9, 2022 at 11:32 a.m.

THE NEXT FM METRO COG TRANSPORTATION TECHNICAL COMMITTEE MEETING WILL BE HELD February 10, 2022, 10:00 A.M.

Respectfully Submitted,

Savanna Leach
Executive Assistant

METROCOG Fargo-Moorhead Metropolitan Council of Governments

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To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Dynamic Traffic Assignment Modeling to Optimize Transportation Project Staging – Scope of Work and Addendum to ATAC Master Contract**

In the fall of 2021, Metro COG entered into a new master contract with the Upper Great Plains Transportation Institute's (UGPTI) Advanced Traffic Analysis Center (ATAC) at North Dakota State University for technical support services. The contract extends from fall of 2021 until fall of 2024.

Our 2022 work program includes a project that will use the work done on the Dynamic Traffic Assignment (DTA) model, which was developed under a previous addendum, to study the impacts of different construction projects and combinations of construction projects expected to take place within the timeframe of the TIP, or in some cases, beyond the timeframe of the current TIP. The Principal Investigator on the project will be Diomo Motuba, Ph.D.

The attached scope of work **(Attachment 1)** and addendum **(Attachment 2)** have been reviewed by Metro COG and the necessary clarifications or revisions have been made by ATAC.

Requested Action: Recommend approval to the Policy Board of the ATAC contract addendum and scope of work for the Dynamic Traffic Assignment Modeling to Optimize Transportation Project Staging.

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ADVANCED TRAFFIC ANALYSIS CENTER

To: Cindy Gray, FM Metro COG

From: Bradley Wentz, UGPTI/ATAC

Re: DTA Use To Optimize Transportation Project Staging, Metro COG Scope of Work

Date: January 2022

Background

The advanced Traffic Analysis Center recently completed the development, calibration, and validation of a Dynamic Traffic Assignment Model (DTA) for the FM Metro COG. The model was developed using NEXTA an open-source software and calibrated to reflect the 2015 base year condition. Additionally, future year models were developed to reflect the Long Range Transportation Plan, the Mid-range 2025 Model-Year, and documentation and tutorials for using the model.

The modeling process involved exporting model output from the FM 2015 TDM into the DTA modeling framework, collecting calibration and validation data from Streetlight, converting the FM 2015 Model into NEXTA files, developing a base model, calibrating the model, validating the model to ground truths, testing the model for resilience through analysis of different scenarios, and producing a final model with calibrated and validated parameters.

The DTA model provides several improvements in comparison to the TDM including overcoming Volume delay function algorithm limitations, more detailed and time-variant congestion, buildup, spillback, and oversaturated conditions. DTA models also provide the additional capabilities to model different scenarios and studies including but not limited to:

- Bottleneck removal and additional capacity studies
- Active Transportation and Demand Management (ATDM)
- Integrated Corridor Management (ICM)
- Incident management and diversions
- Special events
- Work zone impacts – Project Staging
- Pricing, managed lanes, reversible lanes, and tolling projects
- Improved public transportation
- Real-time applications
- Demand management strategies
- Other ITS and operational strategies

Purpose of Study

The purpose of this study is to evaluate the transportation impacts of several construction projects occurring at the same time have on the FM Metro Area. These projects are the projects that are included in Metro COGs Trasnportation Improvement Program in addition to locally funded projects that are not included in the TIP as well as other projects that Metro COG deems important beyond the four-year TIP projects. The Transportation Improvement Program (TIP) is a

compilation of surface transportation improvements scheduled for implementation in the Fargo-Moorhead metropolitan area over the next four Federal Fiscal Years (FFY). The TIP provides a staged, multiyear, multimodal program of transportation projects, which is consistent with the most current Metro COG Metropolitan Transportation Plan (MTP). A literature review of project staging showed that although there is a fair amount of literature regarding staging particular projects during their construction, there is very little literature about evaluating the impacts of several projects occuring at the same time. This study will evaluate how the staging of various future transportation construction projects and the impacts they will have on transportation in the Fargo-Moorhead metro area. Even when projects are scheduled to be completed in different construction seasons, their schedules can sometimes fall behind, resulting in overlaps with the start of another projects, the impacts of which can also be evaluated as part of this project. The overall objective is to develop a method that will facilitate the staging of TIP projects by minimizing their impacts and providing the data needed for local jurisdictions to be better prepared to provide improved information, alternative routes and alternative travel modes to the traveling public.

Data and methods

This study will conist of two main methods: 1) developing an estimate of transportration impacts of selected transportation construction projects that are scheduled over a period of time, and 2) developing an optimization model that will stage these projects over the same time period. DTA models will be used to estimate the impacts of the different combinations of transportation projects using the DTA model previously developed by ATAC. A cost optimization model that will take into account the important transportation output from the different combinations of the DTA output. The optimization model will seek to minimize the transportation cost impacts based on different constraints that will be imposed on the model. The optimization model will be developed using tools such as excel solver and will use input from the MPO and local jurisdictions. This input will include data such as maximum travel cost that the MPO and local jursidictions want to impose on the network given each scenario. It will take into account a matrix of how the MPO and local jurisdiction prioritize and weight the different transportation output from the DTA model. The optimization model will determine the optimal project staging scenario based on these prioritization.

Data for the major construction projects that will be included in the model will be provided by FM Metro COG in cooperation with state and local partners.

Project Tasks

UGPTI has outlined the project tasks as follows:

1. Project Scoping and Identification of Initial scenarios to be modeled.
2. Project and Scenario Development: Each construction project goes through different phases. For example, there could be 100% lane closures at a certain time of the project while at other times, there could be 50% lane closures. This information will probably not be available for all the different phases for each of the projects. UGPTI will collaborate with Metro COG and all jurisdictions to identify the most effective work-zone traffic impacts that should be modeled.
3. Impact evaluation matrices: UGPTI will work with Metro COG and all interested jurisdictions to identify the most meaningful measures of effectiveness to be used to evaluate the different scenarios.

4. Alternative Scenario Analysis
   UGPTI will analyze the different scenarios provided at different geographies (full network and subarea) as accepted in Task 2 and 3 above. Additional changes to the network and sociodata if so desired will be developed during this task. Given the scope of the project, it may be necessary to add some local roadways that traffic might use when roadways being constructed or reconstructed are closed. A maximum of 15 scenarios will be evaluated. The scenarios will include a combination of different construction projects for different years.
5. Optimization Model – Using the output from #4, an optimization model will be developed that will be used to minimize the overall construction project impacts for all the scenarios included.
6. Documentation and Model Delivery
   The output of the scenarios analysis will be added to the DTA model documentation already developed through Addendum #5 (2018-2021 master contract). Preliminary and final results of the analysis will be presented to Metro COG and applicable state and local partners. The model will be delivered to FM Metro COG and consultants upon demand.

Major Milestones and Deadlines

The major milestones for this project and their deadlines are:

Milestone	Deadline
Kick-off	February 2022- March 2022
Scenario Selection and Completion	March 2022
Model Scenarios	March -May 2022
Presentation of Preliminary Results	May-June 2022
Optimization Model Development	June - July 2022
Documentation	July-August 2022
Presentation of Final Results	August-September 2022
Model Delivery	August-September 2022
Model Delivery	October-November 2022

Deliverables

Deliverables in this project will consist of the following:

- Report, presentations, tutorial and model files.

North Dakota MPO Planning Support Program Master Agreement

Fargo Moorhead Metro COG Addendum to the Master Agreement

Upon execution by the parties below, this Addendum and any attachments shall become attached to and incorporated into the *'North Dakota MPO Planning Support Program Master Agreement'* between 'Fargo Moorhead Metro COG' and North Dakota State University.

1. *Project Title*: **DTA Use To Optimize Transportation Project Staging**
2. *Effective Dates*: **February 18, 2022, through November 30, 2022**
3. *Statement of Work*: ATAC will develop a DTA model and an optimization model to stage TIP projects for FM Metro COG for major construction projects in Moorhead.
4. *Principal Investigator*: Diomo Motuba
5. *Desired Deliverables*:
    a. DTA model output for different construction projects included in different scenarios for future projects in Moorhead. Up to 15 scenarios will be developed.
    b. Presentations to Metro COG and applicable state and local jurisdictions regarding preliminary and final model results.
    c. Optimization model output and files –an optimization Model that uses the output from the step 1 to optimize project staging.
    d. Documentation and Training: Training on using the DTA model and the optimization model plus website and the project report.
6. *Contract Amount:* $ 9,912

AUTHORIZATION:

Fargo Moorhead Metro COG

_____
Authorized Signature

_____
Name and Title Date

North Dakota State University

_____
Authorized Signature

_____
Name and Title Date

BUDGET:

Project Title: # 7 DTA Transportation Improvement Project (TIP) Staging

Cost Item	Amount
Staff Salaries	$ 3,233
Benefits	$ 1,326
Grad Student Salaries	$ 2,250
Undergrad Student Salaries	$ -
Benefits	$ 113
Operating	$ -
Total direct costs	$ 6,922
NDSU overhead (43.2%)	$ 2,990
Total project cost	**$ 9,912**

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To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Review and Adjustment to Household and Job Data – Scope of Work and Addendum to ATAC Master Contract**

In the fall of 2021, Metro COG entered into a new master contract with the Upper Great Plains Transportation Institute's (UGPTI) Advanced Traffic Analysis Center (ATAC) at North Dakota State University for technical support services. The contract extends from fall of 2021 until fall of 2024.

Our 2022 work program includes a project to be done under that master contract that will involve ATAC in Metro COG's update of the existing household and jobs data. This work will lead into the updating of the travel demand model (TDM). The Principal Investigator on the project will be Diomo Motuba, Ph.D.

The attached scope of work **(Attachment 1)** and addendum **(Attachment 2)** have been reviewed by Metro COG and the necessary clarifications or revisions have been made by ATAC.

Requested Action: Recommend approval to the Policy Board of the ATAC contract addendum and scope of work for the Review and Adjustment to Household and Job Data.

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FM Metro COG Review and Adjustment to Household and Job Data for the TDM

Scope of Work

January 2022

Prepared for:
Fargo-Moorhead Metropolitan Council of Governments

Prepared by:
Advanced Traffic Analysis Center
Upper Great Plains Transportation Institute
North Dakota State University
Fargo, North Dakota

This proposal outlines the scope of work for completing an update for the FM Metro COG's household and jobs data for the update to the 2020 Travel Demand Model (TDM). The update will assign jobs and household data to the base year traffic analysis zones (TAZ) that will be used for the TDM. FM Metro COG has obtained both household and Jobs Data from Data Axle. From previous experience, this data typically has errors regarding the spatial placement of household and jobs data. In addition to the Data Axle data, the FM Metro COG will obtain census/ACS population and household data, school enrollment data, and additional data from each of the cities with respect to building permits. The overall objective of this project is to evaluate the obtained data and assign them to the TAZs.

Travel Demand Model TAZ Data

The data collected will be used in the travel demand model for the FM Metro COG. There are two main sets of data that need to be provided, household and employment data. All data should have the capabilities to be aggregated into the TAZ geographies for the FM Metro COG Travel demand model. The data does not need to be provided in the TAZ geographies structure, however, the data should be easily aggregated into the TAZ geographies. Point GIS data for the different households and employment data are possible formats that will fit this purpose. GIS shapefiles are the preferred data delivery format. Two main data are required - household and employment data as described next.

Household Data

The household data shows the characteristics of the households in the area aggregated into TAZ geographies. Therefore, any data provided should have the capability to be aggregated into individual TAZ geographies for each data category. The main data that will be required for households are persons in households cross tabbed with vehicle ownership data, persons in households cross tabbed with:

A. **Persons in Households and vehicle ownership cross tabs (HH_PPX_VY)** – (Number of Persons Per Households cross tabbed with the number of vehicles per household for each TAZ).
    i. Where HH = households,
    ii. PPX is the persons per household with X representing the number of persons per household. X ranges from 1 to greater than or equal to 5 (all households greater than five are included in the 5).
    iii. V represents vehicles and Y is the number of vehicles and ranges from 0 to 3 ($0<Y\leq3$)

For example, HH_PP1_V0 is the number of households with one person and 0 vehicles. Similarly, HH_PP5_V3 is the number of households with 5 persons that own 3vehicles. Table 1 shows the structure of the persons per household/vehicle ownership data that will be used in the travel demand model. For this example, TAZ 1 has 15 households that have one person and zero cars, 7 households that have 1 person and 1 vehicle, and 3 households that have 5 persons and 3 vehicles. The data provided does not have to be in this format, however, FM Metro COG should have the capability to convert the data into this format.

Table 1 Travel Demand Model Household and Vehicle Ownership Cross Tab Example

TAZ #	HH_PP1_V0	HH_PP1_V1	HH_PP2_V0	…	HH_PP5_V3
1	15	7	6	…	3
2	8	12	2	…	4
3	3	5	12	…	6

B. **Persons in Household and income cross tabs for each TAZ (HH_PPX_IncW)**

This shows the number of persons in different household sizes cross tabbed with income ranges for each TAZ. Household sizes range from 1 to greater than equal to 5. HH_PPX_IncW are defined as follows

i. HH= households,
ii. PPX is the persons per household with X representing the number of persons per household. X ranges from 1 to greater than or equal to 5 (all households greater than five are included in the 5).
iii. Inc represents income and W is the income range with four income classes (W ranges from 1-4)
    1. Households with income less than $35,000 (Inc<$35,000)
    2. Households with income greater than or equal to $35,000 and less than $50,000 ($35K≤ Inc <$50K)
    3. Households with income greater than or equal to $50,000 and less than or equal to $100,000 ($50K≤ Inc< $100K)
    4. Households with income greater than or equal to $100,000 ($Inc≥$100K)

For example, HH_PP1_Inc1 is the number of households with one person and an income class 1 i.e. household income less than $35K. Similarly, HH_PP5_Inc3 is the number of households with 5 persons with household income between $50K and less than $100K. **Table 2** shows the structure of the persons per household/vehicle ownership data that will be used in the travel demand model. For this example, TAZ 1 has 5 households that have one person and are in income class 1, 6 households that have 1 person and in income class 2, and 15 households that have 5 persons and are in income class 3. The data provided does not have to be in this format, however, FM Metro COG should have the capability to convert the data into this format.

Table 2 Travel Demand Model Household and income classes Cross Tab Example

TAZ #	HH_PP1_Inc1	HH_PP1_Inc2	HH_PP1_Inc3	…	HH_PP5_Inc3
1	5	6	12	…	15
2	8	5	6	…	9
3	7	13	9	…	6

C. **K-12 Age Ranges and College Age Range**

This data will show the total number of children in K-12 for different age groups including grade, middle, high school age groups, and for college-age students 19-23-year-olds per TAZ. **Table 3** shows an example of how the data will be represented in the travel demand model. For example, TAZ # 1 has 2 kids in grade school, 3 kids in middle school, 6 kids in high school, and 7-college age kids.

Table 3 Travel Demand Model Total Number of kids for each School Grade

	School Grade and Age Range			
TAZ #	**5-10 (Grade)**	**11-13 (Middle)**	**14-18 (High)**	**18-23(College)**
1	2	3	6	7
2	5	1	5	5
3	4	2	3	2

Employment data

The employment data should show the number of people employed grouped in the 2-digit NAICS categories listed below for each TAZ or the FM Metro COG should have the capability to group the data into the TAZs using the 2-digit NAICs code.

i. **Manufacturing (NAICS 31-33)**

ii. **Construction and resources (NAICS 21, 23)**

iii. **Retail (NAICS 44-45)**

iv. **Service (NAICS 52,53,55,56,56,51,,62,71,81,99)**

v. **Agriculture (NAICS 11)**

vi. **Wholesale Trade, Trans Utilities (NAICS:22,48-49,42)**

vii. **Education (NAICS 61)**

Update Plan

Project Management

The FM COG oversees all activities undertaken by ATAC for this project in accordance with the approved contract. FM Metro COG will coordinate with ATAC to set up initial strategy meetings as to how to approach the project, and will schedule and attend all meetings with local jurisdictions to discuss growth areas. Once Metro COG begins the assignment of jobs and households to TAZs and begins the process of assigning persons per household, vehicles per household, and incomes levels to both existing and future data, we will coordinate with ATAC's project manager to ensure we are in agreement regarding the methodology and data being used.

Tasks

It is anticipated that the majority of all meetings will be held virtually. Although ATAC has video conferencing capabilities via Microsoft Teams and Zoom, the appropriate meeting platform will be chosen in consultation with the COG.

1. TAZ spatial/geographic review
    a. Review the current 2015 TAZ structure and make changes to the TAZs based on input from different jurisdictions
2. Household Data Allocation
    a. Assign Data Axle Household to TAZs geographically
    b. Tabulate household data for each TAZ by census tract
    c. Compare to previous data and document any major differences
    d. Compare tabulated Data Axle data to census data
    e. For census tracts with differences, use local data to review and adjust TAZ data
    f. Develop a procedure to adjust data and adjust TAZ data

3. Jobs Data Allocation
    a. Assign Data Axle Socioeconomic data to TAZ data
    b. Develop methods to evaluate the accuracy of Data Axle for TAZs at an aggregate level (census tract) and at the TAZ level
    c. Assign final jobs data to TAZs

Deliverables

1. Updated TAZ data to reflect 2021 conditions
2. Report detailing the steps taken to assign household and TAZs

Duration

Metro COG's goal with this project is to update TAZ geographies and existing household and job data within TAZs by May 31, 2022 and future job and household data within TAZs by September 30, 2022. The project will begin on March 1, 2022 and end in September or October, 2022.

North Dakota MPO Planning Support Program Master Agreement

Fargo Moorhead Metro COG Addendum to the Master Agreement

Upon execution by the parties below, this Addendum and any attachments shall become attached to and incorporated into the *'North Dakota MPO Planning Support Program Master Agreement'* between 'Fargo Moorhead Metro COG' and North Dakota State University.

1. *Project Title*: **FM Metro COG Review and Adjustment to Household and Job Data for the TDM**

2. *Effective Dates*: **March 1, 2022 through October 31, 2022**

3. *Statement of Work*: ATAC will work with Metro COG to update and assign the Base 2021 TAZ data.

4. *Principal Investigator*: Diomo Motuba

5. *Desired Deliverables*:
    1. Base 2021 TAZ data

    2. Report: Report detailing the methods used for assigning the base 2021 data to TAZs.

6. *Contract Amount:* $ 7,189

AUTHORIZATION:

Fargo Moorhead Metro COG	**North Dakota State University**
_____	_____
Authorized Signature	Authorized Signature
_____	_____
Name and Title Date	Name and Title Date

BUDGET:

Project Title: #8 FM Metro COG Review and Adjustment to Household and Job Data for the TDM

Cost Item	Amount
Staff Salaries	$ 2,649
Benefits	$ 1,086
Grad Student Salaries	$ 1,224
Undergrad Student Salaries	$ -
Benefits	$ 61
Operating	$ -
Total direct costs	$ 5,020
NDSU overhead (43.2%)	$ 2,169
Total project cost	**$ 7,189**

METROCOG Fargo-Moorhead Metropolitan Council of Governments

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To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Moorhead Intersection Data Collection – Scope of Work and Addendum to ATAC Master Contract**

In the fall of 2021, Metro COG entered into a new master contract with the Upper Great Plains Transportation Institute's (UGPTI) Advanced Traffic Analysis Center (ATAC) at North Dakota State University for technical support services. The contract extends from fall of 2021 until fall of 2024.

The City of Moorhead began working with ATAC to complete an intersection data collection and Synchro model update project in 2020, but much of the work was delayed until 2021 due to the pandemic's effects on traffic volumes during 2020. The first phase of the work was completed in 2021. The City now wishes to continue the work that was started, and the continuation of the project is in Metro COG's 2022 work program. Since the proposed addendum includes 2022, 2023 and 2024, Metro COG will need to budget for this project in both years of the next UPWP. The Principal Investigator on the project will be Kshitij Sharma.

The attached scope of work **(Attachment 1)** and addendum **(Attachment 2)** have been reviewed by Metro COG and the necessary clarifications or revisions have been made by ATAC.

Requested Action: Recommend approval to the Policy Board of the ATAC contract addendum and scope of work for the Moorhead Intersection Data Collection project.

NDSU | UPPER GREAT PLAINS TRANSPORTATION INSTITUTE
ADVANCED TRAFFIC ANALYSIS CENTER

To: Cindy Gray, FM Metro COG

From: Kshitij Sharma, UGPTI/ATAC

Re: Traffic Data Collection & Model Update for City of Moorhead.

Date: November 9, 2021

Background/Purpose
With support from the Fargo Moorhead Metropolitan Council of Governments (Metro COG), Upper Great Plains Transportation Institute's Advanced Traffic Analysis Center (ATAC) recently updated the existing conditions Synchro model for City of Moorhead. The purpose of this project is to assist the City in their planned yearly traffic data collection as well as to initiate the 3-year traffic signal retiming/ optimization, progression design, and Synchro traffic model updates. This effort will inform the City's planning efforts and as a result provide the traveling public with streamlined operations and increased safety. Over the three years of its duration, this project will consider approximately one third of the City's network per year.

Project Tasks
ATAC has outlined the project tasks as follows:

1. Field Data Collection (City)
   The associated City staff will collect field data such as geometrics, lane assignments, storage-bay lengths, detector lengths and locations etc. at up to two intersections total

2. Video Data Recording (City and FM Metro COG)
   The associated City and Metro COG staff will record traffic solely for turning movement count purposes for two hours each during the AM-, Midday-, and PM-peak periods. This will be done for approximately 16 intersections per year.

3. TMC Data Collection (ATAC)
   ATAC staff will count traffic from the videos recorded by the City and FM Metro COG. The data will be collected in per lane format instead of the conventional per lane-group format, which will help in the simulation model calibration. This data is to be provided to the City of Moorhead in Petra Pro format. This will be done for approximately 16 intersections per year.

4. Synchro Model Update (ATAC)
   ATAC staff will enter the data collected from tasks 1 through 3 into the base Synchro traffic model provided by the City. This will be done for approximately 16 intersections per year.

5. Signal Timing Update (City & ATAC)
   The associated City staff, with assistance from UGPTI, will update the Signal Timing in the updated Synchro model. This will be done for approximately 16 intersections per year.

6. Synchro Model Optimization (ATAC & City)
   ATAC staff, with assistance from City will then run the up-to-date SimTraffic model for optimization purposes ensuring that it conforms to local existing conditions. This will be done for approximately 16 intersections per year.

Major Milestones and Deadlines

The major milestones for this project and their deadlines are:

Milestone	Deadline
Kickoff	February 18, 2022
TMC video recording – 1st third	May 31, 2022
Counting + Modeling + Implementation – 1st third	September 30, 2022
TMC video recording – 2nd third	May 31, 2023
Counting + Modeling + Implementation – 2nd third	September 30, 2023
TMC video recording – 3rd third	May 31, 2024
Counting + Modeling + Implementation – 1st third	September 30, 2024

Resources Required

ATAC's requirements are listed below:

1. City and COG staff to provide recorded turning movement count videos
2. City staff to coordinate signal timing update
3. City staff to coordinate synchro model optimization
4. City staff to update traffic signal controller programming based on optimized models

Deliverables

Deliverables in this project will consist of the following:

- Optimized synchro models for 1/3rd of signalized intersections by September 30th every year during the 2022-2024 timeframe

North Dakota MPO Planning Support Program Master Agreement

Fargo Moorhead Metro COG Addendum to the Master Agreement

Upon execution by the parties below, this Addendum and any attachments shall become attached to and incorporated into the *'North Dakota MPO Planning Support Program Master Agreement'* between 'Fargo Moorhead Metro COG' and North Dakota State University.

1. *Project Title*: **Turning Movement Counts and Traffic Signal Timing Optimization Support**

2. *Effective Dates*: **February 18, 2022 through September 30, 2024**

3. *Statement of Work*: ATAC will assist on a yearly basis in processing turning movement counts and traffic signal timing optimization for 1/3rd of signalized intersections within City of Moorhead.

4. *Principal Investigator*: Kshitij Sharma

5. *Desired Deliverables*:
    1. Updated synchro models
       City staff will reprogram the traffic signal controllers accordingly

6. *Contract Amount:* $ 37,111 ($12,370.33 annually for 2022, 2023, and 2024)

AUTHORIZATION:

Fargo Moorhead Metro COG

_____

Authorized Signature

_____

Name and Title Date

North Dakota State University

_____

Authorized Signature

_____

Name and Title Date

BUDGET:

Project Title: Turning Movement Counts and Traffic Signal Timing Optimization Support

Cost Item	Amount
Staff Salaries	$ 9,050
Benefits	$ 3,711
Grad Student Salaries	$ -
Undergrad Student Salaries	$ 12,528
Benefits	$ 626
Operating	$ -
Total direct costs	$ 25,915
NDSU overhead (43.2%)	$ 11,195
Total project cost	**$ 37,111**

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To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Regional ITS Architecture Update – Scope of Work and Addendum to ATAC Master Contract**

In the fall of 2021, Metro COG entered into a new master contract with the Upper Great Plains Transportation Institute's (UGPTI) Advanced Traffic Analysis Center (ATAC) at North Dakota State University for technical support services. The contract extends from fall of 2021 until fall of 2024.

The Regional Architecture (RA) for Intelligent Transportation Systems (ITS) was last updated in 2014. An update was originally scheduled in Metro COG's 2021 work program, then moved to 2022. Each jurisdiction will be involved in the update of the RA as part of the Study Review Committee and other local departments will be included as stakeholders. The Principal Investigator on the project will be Sharijad Hasan. Metro COG's project manager will be Dan Farnsworth.

The attached scope of work **(Attachment 1)** and addendum **(Attachment 2)** have been reviewed by Metro COG and the necessary clarifications or revisions have been made by ATAC.

Requested Action: Recommend approval to the Policy Board of the ATAC contract addendum and scope of work for the Regional Architecture Update.

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Fargo-Moorhead Regional ITS Architecture Update

Scope of Work

January 2022

Prepared for:
Fargo-Moorhead Metropolitan Council of Governments

Prepared by:
Advanced Traffic Analysis Center
Upper Great Plains Transportation Institute
North Dakota State University
Fargo, North Dakota

This proposal outlines the scope of work for completing an update of the Fargo-Moorhead Regional ITS Architecture (F-M RA) following FHWA requirements. The RA provides a comprehensive framework that can be used to plan future ITS, define system requirements, coordinate agency roles, and integrate functions across jurisdictional lines. The original F-M RA was completed in 2005 by the Advanced Traffic Analysis Center (ATAC) under the sponsorship of the Fargo-Moorhead Metropolitan Council of Governments (F-M Metro COG) and has been updated periodically since.

Regional Architecture

The Regional Architecture (RA) provides a roadmap for integrating Intelligent Transportation Systems (ITS) in a region to ensure desired functions are performed while maximizing regional benefits. The objective of the RA is aimed at achieving higher benefits compared to agency or jurisdiction-specific systems working independently. In addition, the RA is function-oriented and not technology-specific, which allows it to remain valid over time as technology may change.

The RA typically has the following main components:

1. A description of the region
2. Identification of participating agencies and other stakeholders
3. An operational concept that identifies the roles and responsibilities of participating agencies and stakeholders in the operation and implementation of the systems included in the regional ITS architecture
4. Any agreements (existing or new) required for operations including, at a minimum, those affecting ITS project interoperability, utilization of ITS related standards, and the operation of the projects identified in the regional ITS architecture
5. System functional requirements
6. Interface requirements and information exchanges with planned and existing systems and subsystems
7. Identification of ITS standards supporting regional and national interoperability
8. The sequence of projects required for implementation

The geographic boundaries of the F-M Metro COG fall within North Dakota and Minnesota, and each state maintains a separate statewide ITS architecture. Such unique positioning requires special attention to maintain consistency and avoid conflicts between the regional and statewide architectures. In North Dakota, the three MPO regional architectures and NDDOT statewide architecture are developed and supported by ATAC. The statewide architecture scope focuses on state-level services, while the MPO architectures focus on local and urban services resulting in limited overlap and seamless integration. In Minnesota, one architecture is maintained by MnDOT that covers the entire scope of services, including at the state and local levels. Due to the large number of agencies involved, MnDOT utilizes generic descriptions to cover multiple agencies (e.g., Local Transit Management Centers is an element that represents all Minnesota transit agencies outside of the Twin Cities metro area). In contrast, in the F-M regional architecture, the elements and services are customized (e.g., Metro Area Transit (MATBUS) is identified as the transit agency in the region, and transit service packages reflect MATBUS's operations and plans). The Principal Investigator reviews Minnesota's statewide architecture to ensure consistency with the F-M regional architecture allowing the F-M Metro COG to recognize both architectures while avoiding conflicts.

Regional Architecture Update

Similar to other transportation plans, the RA must be updated to reflect relevant transportation changes in the region. Further, the update is mandated by the FHWA under the ITS Architecture Conformity Rule. The update addresses changes in regional needs, stakeholders, the scope of services, deployment of ITS projects in the region, and any revision in the national ITS architecture.

Update Plan

The success of updating the RA depends on the effective participation of key transportation stakeholders. Although a wide range of stakeholders will be involved in the RA, their involvement varies depending on the degree to which they own/operate/use transportation system components. This section describes the various parties involved in the project and their respective roles.

Project Management

The FM Metro COG oversees all activities undertaken by ATAC for this project in accordance with the approved contract. ATAC will coordinate project activities with the FM Metro COG, especially stakeholder meetings and any public input required for completing the update. FM Metro COG staff will chair all RA stakeholder meetings unless they delegate that task to ATAC.

Project Advisory Group

The role of this group is to guide the overall project, facilitate project activities, and approve project deliverables. In addition, the group is expected to have a comprehensive knowledge of the area's transportation system and maintain key contacts with relevant stakeholders.

Candidate-members include:

1. F-M Metro COG
2. City of Fargo Traffic Engineer
3. City of Moorhead Traffic Engineer
4. City of West Fargo Traffic Engineer
5. NDDOT Traffic Engineering Staff Member(s)
6. MnDOT Traffic Engineering Staff Member(s)
7. FHWA-ND Division
8. FHWA-MN Division

Technical Stakeholders

The technical stakeholders provide ATAC with technical information on existing and planned systems and input the architecture update. The stakeholder group will consist of agencies that own, operate, or maintain existing or planned systems and can potentially include:

1. FM Metro COG
2. Fargo, Moorhead, and West Fargo
    a. Engineering
    b. Public works
    c. MATBUS (Transit)
    d. Emergency management
    e. IT
3. Cass and Clay County
    a. Engineering

    b. Public works
    c. Emergency management
4. FHWA ND Division
5. FHWA MN Division
6. NDDOT Fargo District
7. MnDOT District 4
8. NDDOT Central Office
9. North Dakota Highway Patrol (NDHP)
10. Minnesota State Patrol (MSP)

Tasks

It is anticipated that the majority of all meetings will be held virtually. Although ATAC has video conferencing capabilities via Microsoft Teams and Zoom, the appropriate meeting platform will be chosen in consultation with Metro COG.

1. Hold project kickoff meeting (by February/ March 2022)
    a. Present RA update process
    b. Identify key regional contacts
    c. Finalize ITS stakeholders and sort them into small groups based on technical expertise.

2. Hold stakeholder small group meetings (by May 2022)
    a. Outline steps for RA update
    b. Identify roles and responsibilities
    c. Explain the data collection process
        i. Inventory
        ii. Planned systems/activities
        iii. Operational Requirements
    d. Meet each stakeholder small group individually to gather updated data; There will be at least four different meetings, and each session will last for a maximum of 90 minutes

3. Update system inventory (by August 2022)
    a. Identify changes to systems deployed since the previous RA update by reviewing with the ITS Deployment Strategy document
    b. Identify systems planned for deployment
    c. Identify potential agreements
    d. Summarize data and present to project advisory group for discussions (meeting duration approximately 60 minutes)
        i. Devices and systems
        ii. Communication networks and systems
        iii. Other support systems

4. Review service packages and functional requirements (by September 2022)
    a. Update ITS service packages
    b. Incorporate appropriate service packages from the National ITS Reference Architecture (ARC-IT 9.0)
    c. Identify potential new elements in the RA
    d. Map service packages to MPO planning goals and objectives

e. Summarize the changes and present to stakeholders and project advisory group for verification (meeting duration approximately 60 minutes)

5. Implement RA updates (by October 2022)
    a. Enter all pertinent information into Regional Architecture Development for Intelligent Transportation (RAD-IT), previously Turbo, software
    b. Create RA update report

6. Convene Transportation Technical Committee (TTC) and Policy Board (in November 2022)
    a. Submit the draft document for review
    b. Present updated RA elements

7. Prepare RA update document (in December 2022)
    a. Finalize document
    b. Create RAD-IT website
    c. Provide guidance to Metro COG regarding the final submittal of the document to the necessary agencies

Deliverables

1. Updated RAD-IT database
2. RA update report
3. RAD-IT website

Duration

The project will begin on February 18, 2022, and end on December 31, 2022.

North Dakota MPO Planning Support Program Master Agreement

Fargo Moorhead Metro COG Addendum to the Master Agreement

Upon execution by the parties below, this Addendum and any attachments shall become attached to and incorporated into the *'North Dakota MPO Planning Support Program Master Agreement'* between 'Fargo Moorhead Metro COG' and North Dakota State University.

1. *Project Title*: **Fargo-Moorhead Regional ITS Architecture Update**

2. *Effective Dates*: **February 18, 2022, through December 31, 2022**

3. *Statement of Work*: ATAC will update the Fargo-Moorhead Regional ITS Architecture following FHWA requirements.

4. *Principal Investigator*: Sharijad Hasan

5. *Desired Deliverables*:
    1. Updated RAD-IT database
    2. Regional Architecture (RA) update report
    3. RAD-IT website

6. *Contract Amount:* $ 27,970

AUTHORIZATION:

Fargo Moorhead Metro COG

_____

Authorized Signature

_____

Name and Title Date

North Dakota State University

_____

Authorized Signature

_____

Name and Title Date

BUDGET:

ND MPO Planning Support Program 2021-2024

Addendum: Fargo-Moorhead Regional ITS Architecture Update

Cost Item	Amount
Staff Salaries	$ 13,853
Benefits	$ 5,680
Grad Student Salaries	$ -
Undergrad Student Salaries	$ -
Benefits	$ -
Operating	$ -
Total direct costs	$ 19,532
NDSU overhead (43.2%)	$ 8,438
Total project cost	**$ 27,970**

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To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Travel Demand Model Update – Scope of Work and Addendum to ATAC Master Contract**

In the fall of 2021, Metro COG entered into a new master contract with the Upper Great Plains Transportation Institute's (UGPTI) Advanced Traffic Analysis Center (ATAC) at North Dakota State University for technical support services. The contract extends from fall of 2021 until fall of 2024.

Metro COG's travel demand model (TDM) needs to be updated in preparation for the next Metropolitan Transportation Plan update. An update was originally scheduled to begin in Metro COG's 2021 work program, then moved to 2022-2023. Each jurisdiction will be involved in the update of the model, as Metro COG and ATAC will need to meet with you to update roadway networks and geometrics, among other things. The Principal Investigator on the project will be Diomo Motuba, Ph.D.

The attached scope of work **(Attachment 1)** and addendum **(Attachment 2)** have been reviewed by Metro COG and the necessary clarifications or revisions have been made by ATAC.

Requested Action: Recommend approval to the Policy Board of the ATAC contract addendum and scope of work for the Travel Demand Model Update.

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ADVANCED TRAFFIC ANALYSIS CENTER

To: Cindy Gray, FM Metro COG

From: Diomo MOtuba, UGPTI/ATAC

Re: FM Metro COG 2021 Base Year Travel Demand Model Update- Scope of Work

Date: February 1, 2022

Major Tasks	Subtasks	MPO Role	ATAC Role	Deliverables
1. Develop 2021 Base Year Network and TAZ	1.1.Update GIS TAZ shapefile to reflect 2021 base year	1.1.1. Review current TAZ geographies and provide any potential input changes to ATAC	1.1.1. Develop and provide a methodology for updating TAZs to MPO	Draft 2021 TAZ shapefile
		1.1.2. Create new and update TAZs in ArcGIS	1.1.2.Collaborate with Metro COG on boundary changes and perform QC/QA	
		1.1.3. QC/QA new TAZs	1.1.3. QC/QA new TAZs	
	1.2.Develop 2021 Network to include Transit and highway Network	1.2.1 Provide Aerial Photos	1.2.1 Add new roads/links to network	Draft 2021 Network Shapefile and Online Map showing the major attributes as requested by Metro COG
		1.2.2 Provide Network Updates made between 2021 and 2021	1.2.2 Add new TAZ centroids and centroid connectors	
		1.2.3 Provide other changes to network e.g. functional classifications	1.2.3 Update nomenclature for assign groups	
		1.2.4 Provide input on any changes to network speeds	1.2.4 Review and update network speeds in GIS network	
		1.2.5 Participate in meetings with Jurisdictions on Network geometry updates	1.2.5 Review and update network geometry/Meet with Jurisdictions	
		1.2.6. Provide Transit Network Files to ATAC	Create Transit Network and add to Highway Network	
		1.2.7 Provide 2021 traffic count file with Peak hour additions	1.2.7 Add 2021 Traffic counts to network including Truck Counts	
		1.2.8 QC/QA Network - present to jurisdictions for update	1.2.8 QC/QA network - Provide Base 2021 Final Network, Both as ArcGIS files and online for easy viewing and reviewing by Jurisdictions	
2. Socio-Economic Data/Finalize TAZ and Network Shapefiles	2.1. TAZ with sociodata	2.1.1. Provide initial categorized socioeconomic data, jobs, households, school data from data axle.	2.1.1.QC/QA draft socioeconomic data, work with Metro COG to check, clean, and update Data Axle files to reflect true ground conditions	Final 2021 Socioeconomic Data and TAZ shapefile with online map
	2.2.Review and update final network	2.2.1 Review final TAZ file with socioeconomic data included	2.2.1. Provide final TAZ file with socioeconomic updates online	Final 2021 Base Year GIS Network Shapefile and online map
3. Trip Generation	3.1. Passenger Trip Generation	3.1.1 Review trip generation rates	3.1.1 Develop passenger trip production and attraction rates to incorporate the effects of COVID 19.	Passenger trip generation table by trip purpose
		3.1.2 Review Trip rates for Transit trips	3.1.2 Develop trip generation rates for transit trips for all trip purposes	
		3.1.3 Review trip generations	3.1.3 External trip generation models	
		3.1.4 Review trip generations	3.1.4 Produce balanced trip generations for all trip purposes for each peak	
		3.1.5 Review final passenger trip generation output	3.1.5 QC/QA Validate/test trip generation module, sensitivity testing and satisfy validation performance measures	

Major Tasks	Subtasks	MPO Role	ATAC Role	Deliverables
	3.2. Freight Trip Generation	3.2.1 Review FAF data	3.2.1 Obtain Freight Analysis Data for ND/MN	Freight trip generation table by tons for each TAZ
		3.2.2 Review disaggregated FAF generations	3.2.2 Disaggregate statewide FAF data to MPO level for each industrial group	
		3.2.3 Review TAZ freight generations	3.2.3 Disaggregate and develop FAF data for each industrial group to TAZ level data	
		3.2.4 Review final freight generation output	3.2.4 QC/QA freight trip generations for each TAZ/sensitivity analysis and satisfying validation standards	
4. Modal Split	4.1. Passenger and Transit Trips	4.1.1 Review Vehicle occupancy ratios, work with ATAC to obtain ACS Data	4.1.1 Apply Vehicle occupancy ratios to trip generations and develop modal passenger and transit trips	Passenger trip generation table by trip purpose
	Freight Modal Split Model	4.2.1 Provide input and review process	4.2.1 Disaggregate freight tonnage into different modes based on industry group	Freight trip generation table by Number of trucks for each TAZ

Travel Demand Modeling Support Program
Fargo Moorhead Metro COG Addendum to Master Agreement

Upon execution by the parties below, this Addendum and any attachments shall become part of and incorporated into the *Travel Demand Modeling Support Program Master Agreement* between the ***Fargo Moorhead Metro COG and North Dakota State University.***

Project Title: Travel Demand Model Update for the Fargo Moorhead Metro COG for the 2021 Base Year

Effective Dates February 18th, 2022 – March 30th, 2023

Statement of Work: Develop and calibrate the Fargo Moorhead Metro COG Travel Demand Model to 2021 Base Year Conditions.

Tasks:

1. Data collection
    a. Roadway Network and Transportation Analysis Zone Data Update
        i. FM METRO COG will work with ATAC to update the base 2021TAZ and network data (GIS). This task will start with the 2015 base year network and be updated to reflect 2021 conditions.
        ii. Transit Network Data – ATAC will develop and incorporate transit network data into the 2021 base year model to reflect the 2021 base year data. COVID 19 impacts, which could consist of lower traffic volumes during 2021, should be taken into account especially for future year projections. Therefore, data collected before 2020 will also be collected, reviewed, documented and compared with 2020 and 2021 data so that future year models are not based on a model calibrated to abnormally low traffic volumes.
        iii. Socioeconomic Data Updates: FM Metro COG will provide Data Axle socioeconomic data to ATAC in addition to any other local data that is relevant to updating socio-economic data. This data will include
            1. Household data
            2. Jobs Data by industrial group
            3. School enrollment data
            4. College enrollment data (all colleges in the metropolitan area)
            5. Special generators data (airport enplanements, mall size, Wal-Mart size, hospital data (number of beds/number of employees), Amazon distribution center data, and information about other atypical types of trip generators within the metro area)
            6. ATAC and Metro COG will work to assign this data to each TAZ.
        iv. Traffic Counts FM METRO COG will provide 2021 highway traffic

count data divided into peak periods.
    1. ATAC will assign this data to the transportation network.
    2. ATAC will work with Metro COG to obtain transit system data including headway, average loadings. COVID 19 impacts will be incorporated into this data.

v. Node Delays – ATAC will develop a methodology to estimate node delays for different functional classes and for each area type using online tools and Streetlight data.

vi. OD Data for Model Calibration- The FM METRO COG working with ATAC will obtain Origin Destination data that will be used to calibrate and validate the model

b. Deliverables
    i. 2021 base year network in GIS or Online Maps
    ii. 2021 TAZ and SE data

2. Trip Generation Development
    a. Develop new passenger trip generation tables
    b. Develop freight generation tables
    c. Deliverables
        i. Passenger trip generation tables
        ii. Includes trips by modes
        iii. Freight trip generation tables
3. Trip Distribution
    a. FM METRO COG will provide ATAC access to Streetlight data for calibrating and validating trip distribution
    b. Develop trip distribution module for passengers
    c. Develop trip distribution module for freight
    d. Deliverables
        i. Trip Distribution Matrix
4. Modal Split: Split trips distributed for different modes including non-single vehicle modes
        i. Vehicle trips
        ii. Transit
        iii. Bike/Peds
        iv. Work from Home
    b. Deliverables
        i. Trip tables for different modes

5. Trip Assignment/Model Calibration
    a. Develop trip assignment model including parameters for calibrating and validation of the model
    b. Calibrate model to 2020 base year conditions for both passenger, transit, and freight models
    c. Validate model to 2021 base year conditions for freight, transit, and passenger

modes
    i. Validate screen line volumes
    ii. Validate VMT
    iii. Validate Traffic volumes
    iv. Validate Trip length distributions
    v. Validate transit trips
d. Deliverables
    i. Calibrated and validated multi-modal model

6. Documentation and Meetings
    a. Deliverables
        i. Technical Memorandum
        ii. Model Output Online
        iii. Model files as needed by consultants
        iv. Attend meetings present and discuss model output as needed

Principal Investigator: Diomo Motuba

Project Cost: **$59,169**.

AUTHORIZATION:

Fargo-Moorhead Metropolitan Council of Goverments	North Dakota State University
_____	_____
Authorized Signature	Authorized Signature
_____	_____
Name and Title	Name and Title
_____	_____
Date	Date

Project Title: Travel Demand Model Update for FM Metro COG 2021 Base Year Model

Cost Item	Amount
Staff Salaries	$ 22,200
Benefits	$ 9,102
Grad Student Salaries	$ 9,540
Undergrad Student Salaries	$ -
Benefits	$ 477
Operating	$ -
Total direct costs	$ 41,319
NDSU overhead (43.2%)	$ 17,850
Total project cost	**$ 59,169**

METROCOG Fargo-Moorhead Metropolitan Council of Governments

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To: Transportation Technical Committee
From: Luke Champa, Associate Transportation Planner
Date: 02/04/2022
Re: **2022-2025 Transportation Improvement Program (TIP) Amendment #1**

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) will hold a virtual public hearing via Zoom Video Communications on Thursday, February 17, 2022 at 4:00 p.m. to consider public comments regarding a proposed amendment to the 2022-2025 Transportation Improvement Program (TIP) for the FM Metropolitan Area. The proposed amendment to the 2022-2025 TIP reflects updated federally funded projects within the Metropolitan Planning Area (MPA).

A public notice was published in the Forum of Fargo-Moorhead on Wednesday, February 2, 2022, advertising the public hearing, how to request more information, and detailed public comment information such as where to send written comments regarding the proposed amendment. The public notice advertised that public comments will be accepted until 12:00 p.m. (noon) on Thursday, February 17, 2022. As of the writing of this memo, no written comments have been received.

The proposed amendment to the 2022-2025 TIP is as follows:

1. **Removal of Project 5200010:** City of Moorhead reconstruction project on 34th St S from 4th Ave S to 24th Ave S (2023). Project has been removed.

2. **Modification of Project 3210019:** West Fargo bike & pedestrian new multi-use path project on Drain 45 from 7th Ave E to Main Ave (2022). The total project cost increased 35% from $442,500 to $598,300 of which the Federal Transportation Alternatives (TA) funds remained $290,000 and local funds increased 102% from $152,500 to $308,300.

3. **Addition of Project 9221001:** NDDOT chip seal rehabilitation project on ND 18 from ND 10 to Cass/Traill County line (2022). The total project cost is $794,400 of which $635,200 (80%) is Federal Non National Highway System - State Rural Project (Non-NHS-S) funds and $158,800 is state funds.

4. **Addition of Project 9221002:** NDDOT wrong way detection system (Intelligent Transportation Systems) safety project on I-29 at Exit 69 (2022). The total project cost is $92,000 of which $82,800 (90%) is Federal Highway Safety Improvement Program (HSIP) funds and $9,200 is state funds.

5. **Addition of Project 9221003:** NDDOT upgrade automated traffic recorder (Intelligent Transportation Systems) rehabilitation project on I-94 at RP 352.33 (2022). The total project cost is $105,000 of which $84,000 (80%) is Federal Non National Highway System - State Rural Project (Non-NHS-S) funds and $21,000 is state funds.

6. **Modification of Project 9210010:** NDDOT curb ramp rehabilitation project on ND 18 from 7th St S to 3rd St N in Casselton (2022). The total project cost increased 10% from $334,765 to $369,000 of which the Federal Non National Highway System – State Rural Project (Non-NHS-S) funds increased 10% from $267,812 to $295,000 and state funds increased 10% from $66,953 to $73,800.

7. **Modification of Project 9162665:** NDDOT rehabilitation project on I-94 E from W Wheatland to E of Casselton (2022). The total project cost decreased 46% from $1,283,344 to $689,000 of which the Federal Interstate Maintenance (IM) funds decreased 46% from $1,155,010 to $620,100 and state funds decreased 40% from $114,534 to $68,900.

8. **Modification of Project 9192639:** NDDOT rehabilitation project on I-94 W from Wheatland E to E of Casselton (2022). The total project cost decreased 46% from $1,283,344 to $689,000 of which the Federal Interstate Maintenance (IM) funds decreased 46% from $1,155,010 to $620,100 and state funds decreased 40% from $114,534 to $68,900.

9. **Modification of Project 9200012:** NDDOT high tension cable median guardrail safety project on I-94 from W of Main Ave to 42nd St grade separation (2022). The total project cost decreased 63% from $2,036,000 to $748,000 of which the Federal Highway Safety Improvement Program (HSIP) funds decreased 63% from $1,832,000 to $673,200 and state funds decreased 63% from $204,000 to $74,800.

10. **Modification of Project 9210006:** NDDOT high tension cable median guardrail safety project on I-94 from W Lynchburg interchange to E Kindred interchange (2022). The total project cost increased 22% from $3,918,300 to $4,797,200 of which the Federal Highway Safety Improvement Program (HSIP) funds increased 22% from $3,526,470 to $4,317,480 and state funds increased 22% from $391,830 to $479,720.

11. **Addition of Project 9221007:** NDDOT high tension cable median guardrail project on I-94 from W of Ayr interchange to W of Lynchburg interchange (2022). The total project cost is $4,797,200 of which $4,317,480 (90%) is Federal Highway Safety Improvement Program (HSIP) funds and $479,720 is state funds. The project is associated with project 9210006 and the cost estimate is reflective of both 9210006 and 9221007.

12. **Addition of Project 9221004:** NDDOT LED lighting update rehabilitation project at various locations including 52nd Ave S, University Dr, Main Ave, 12th Ave N, and 19th Ave N (2023). The total project cost is $1,000,000 of which $800,000 (80%) is Federal Non National Highway System - State Rural Project (Non-NHS-S) funds and $200,000 (20%) is state funds.

13. **Modification of Project 9191007:** NDDOT lift station and storm sewer rehabilitation project on I-94 E from 25th St interchange to the Red River (2024). The total project cost decreased 20% from $2,600,000 to $2,073,000 of which the Federal Interstate Maintenance (IM) funds decreased 20% from $2,340,000 to $1,865,700 and state funds decreased 20% from $260,000 to $207,300.

14. **Addition of Project 9221006:** NDDOT slide repair rehabilitation project Main Ave/US 10 near the Sheyenne River (2024). The total project cost is $5,001,000 of which $4,047,000 (80%) is Federal National Highway System - Urban (NHS-U) funds, $454,000 (9%) is state funds, and $500,000 (11%) is local funds.

15. **Modification of Project 9220025:** NDDOT structural deck overlay rehabilitation project on I-94 E at the Red River bridge structure (2025) – project is being modified to include I-94 W so both projects are part of one TIP project. The total project cost increased 100% from $1,601,806 to $3,204,000 of which the Federal Interstate Maintenance (IM) funds increased 100% from $1,441,625 to $2,883,600 and state funds increased 100% from $160,181 to $320,400.

16. **Removal of Project 9220026:** NDDOT structural deck overlay rehabilitation project on I-94 W at the Red River bridge structure (2025) – project is being included as part of project 9220025 as described above. Project has been removed.

17. **Addition of Project 9221005:** NDDOT minor rehabilitation including shoulder repair project on ND 46 from 9 miles east of Enderlin E to I-29 (2025). The total project cost is $5,300,000 of which $4,240,000 (80%) is Federal Non National Highway System - State Rural Project (Non-NHS-S) funds and $1,060,000 is state funds.

18. **Modification of Project 2190039:** Clay County mill and overlay rehabilitation project on CSAH 52 from CR 67 in Sabin to I-94 bridge in Moorhead (2022) – project is an Advance Construction project and is associated with project 2200009. The total project cost increased 67% from $1,067,760 to $1,778,484 of which the Federal Surface Transportation Block Grant Program - Regional (STBGP-R) funds remained $468,160 and local funds increased 119% from $599,600 to $1,310,324. AC project 2200009 remains unchanged with STBGP-R funding of $1,032,240. Total AC project estimate (projects 2190039 & 2200009) increased 35% from $2,082,760 to $2,810,724.

See **Attachment 1** for more detailed project information.

Requested Action: Recommend approval of Amendment #1 of the Metro COG 2022-2025 Transportation Improvement Program (TIP) to the Policy Board.

Lead Agency	Metro COG ID State Number	Project Year	Project Location	Length	Project Limits From	 To	Project Description	Improvement Type	Total Project Cost	Federal Revenue Source	Other Revenue Source	Revenue
AMENDMENT 1 - 2022-2025 METRO COG TIP												
Moorhead Transit												
Fargo Transit												
City of Fargo												
City of Moorhead												
~~City of Moorhead~~	~~5200010 144-135-016~~	~~2023~~	~~34th St~~	~~1.0~~	~~4th Ave S~~	~~24th Ave S~~	~~On 34th Street, From 4th Ave S to 24th Ave S in Moorhead, Reconstruction~~	~~Reconstruction~~	~~$ 2,100,000~~	~~STBGP-U~~	~~Local~~	~~$ 807,600 $ 1,292,400~~
City of West Fargo												
City of West Fargo	3210019 22953 8016	2022	Drain 45	1.5	7th Ave E	Main Ave	Construction of a Multi-Use Path along Drain 45 (Phase 2)	Bike/Ped	**$ 598,300** ~~$ 442,500~~	TA	Local	$ 290,000 **$ 308,300** ~~$ 152,500~~
North Dakota Department of Transportation												
NDDOT	**9221001 23450**	**2022**	**ND 18**		**ND 10**	**Cass/Traill County Line**	**Chip Seal**	**Rehabilitation**	**$ 794,000**	**Non-NHS-S**	**State**	**$ 635,200 $ 158,800**
NDDOT	**9221002 23378**	**2022**	**I-29**		**I-29 Exit 69**		**Wrong Way Detection System *ITS**	**Safety**	**$ 92,000**	**HSIP**	**State**	**$ 82,800 $ 9,200**
NDDOT	**9221003 23213**	**2022**	**I-94 RP 352.33**		**ATR on I-94 @ RP 352.33**		**Upgrade Automated Traffic Recorder *ITS**	**Rehabilitation**	**$ 105,000**	**Non-NHS-S**	**State**	**$ 84,000 $ 21,000**
NDDOT	9210010 22828 8002	2022	ND 18 N	0.8	7th St S	3rd St N	Curb Ramps - Casselton	Rehabilitation	**$ 369,000** ~~$ 334,765~~	Non NHS-S	State	**$ 295,200** ~~$ 267,812~~ **$ 73,800** ~~$ 66,953~~
NDDOT	9162665 22992 8006	2022	I-94E	8.0	W Wheatland	E of Casselton	Concrete Pavement Repair, Hot Bituminous Pavement on Ramps, Sand Seal ***associated with project 9192639 - cost estimate is for both projects**	Rehabilitation	**$ 689,000** ~~$ 1,283,344~~	IM	State	**$ 620,100** ~~$ 1,155,010~~ **$ 68,900** ~~$ 128,334~~
NDDOT	9192639 22993 8007	2022	I-94W	7.2	Wheatland E	E of Casselton	Concrete Pavement Repair, Hot Bituminous Pavement on Ramps, Sand Seal ***associated with project 9162665 - cost estimate is for both projects**	Rehabilitation	**$ 689,000** ~~$ 1,145,344~~	IM	State	**$ 620,100** ~~$ 1,030,810~~ **$ 68,900** ~~$ 114,534~~

Lead Agency	Metro COG ID State Number	Project Year	Project Location	Length	Project Limits From	 To	Project Description	Improvement Type	Total Project Cost	Federal Revenue Source	Other Revenue Source	Revenue
NDDOT	9200012 22443 8129	2022	I-94	4.1	W of Main Ave	42nd St Grade Separation	High Tension Cable Median Guardrail	Safety	$ 748,000 ~~$ 2,036,000~~	HSIP	 State	$ 673,200 ~~$ 1,832,000~~ $ 74,800 ~~$ 204,000~~
NDDOT	9210006 23329	2022	I-94	13.1	W Lynchburg Interchange	E Kindred Interchange	High Tension Cable Median Guardrail ***associated with project 9221007 - cost estimate is for both projects**	Safety	$ 4,797,200 ~~$ 3,918,300~~	HSIP	 State State	$ 4,317,480 ~~$ 3,526,470~~ $ 479,720 ~~$ 391,830~~
NDDOT	**9221007 23328**	**2022**	**I-94**	**10.9**	**W of Ayr Interchange**	**W of Lynchburg Interchange**	**High Tension Median Cable Guardrail *associated with project 9210006 - cost estimate is for both projects**	**Safety**	**$ 4,797,200**	**HSIP**	 **State**	**$ 4,317,480 $ 479,720**
NDDOT	**9221004 23280**	**2023**	**Fargo District**		**52nd Ave S, University Dr, Main Ave, 12th Ave N, 19th Ave N**		**LED Lighting Update**	**Rehabilitation**	**$ 1,000,000**	**Non-NHS-S**	 **State**	**$ 800,000 $ 200,000**
NDDOT	9191007 22628 8210	2024	I-94E	1.9	25th St Interchange	Red River	Lift Station, Storm Sewer	Maintenance	$ 2,073,000 ~~$ 2,600,000~~	IM	 State	$ 1,865,700 ~~$ 2,340,000~~ $ 207,300 ~~$ 260,000~~
NDDOT	**9221006**	**2024**	**Main Ave (US 10)**		**Main Ave near the Sheyenne River**		**Slide Repair**	**Rehabilitation**	**$ 5,001,000**	**NHS-U**	 **State** **Local**	**$ 4,047,000 $ 454,000 $ 500,000**
NDDOT	9220025 23520	2025	I-94E **& I-94W**		ND-MN Border Bridge		Deck Overlay	Rehabilitation	$ 3,204,000 ~~$ 1,601,806~~	IM	 State	$ 2,883,600 ~~$ 1,441,625~~ $ 320,400 ~~$ 160,181~~
~~NDDOT~~	~~9220026 8319~~	~~2025~~	~~I-94W~~		~~ND-MN Border Bridge~~		~~Deck Overlay~~	~~Rehabilitation~~	~~$ 1,601,806~~	~~IM~~	 ~~State~~	~~$ 1,441,625 $ 160,181~~
NDDOT	**9221005 23390**	**2025**	**ND 46**		**9 Mi E of Enderlin E**	**I-29**	**Minor Rehabilitation Including Shoulder Repair**	**Rehabilitation**	**$ 5,300,000**	**Non-NHS-S**	 **State**	**$ 4,240,000 $ 1,060,000**
Cass County												
Minnesota Department of Transportation												
Clay County												
Clay County	2190039 014-652-016	2022	CSAH 52	6.1	CR 67 in Sabin	I-94 Bridge in Moorhead	**AC**: On CSAH 52, from CR 67 in Sabin to I-94 Bridge in Moorhead, Bituminous Mill and Overlay (AC Project, Payback in 2023, AC Total = 1,032,240 for a project total of 2,810,724) See project 2200009	Rehabiilitation	**$ 1,778,484** ~~$ 1,067,760~~	STBGP-R	Local	$ 468,160 **$ 1,310,324** ~~$ 599,600~~

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To: Transportation Technical Committee
From: Ari Del Rosario
Date: February 4, 2022
Re: Performance Measure 1 (PM1) – 2022 Safety Target Adoption ND

As a part of the Fixing America's Surface Transportation (FAST) Act, which was signed into law on December 4, 2015, State DOTs and MPOs are required to establish quantifiable targets for performance measures. There are three performance measures.

Performance Measure 1 (PM1) is meant to establish performance targets related to safety. This falls under §490 Subpart B. As such, each state must annually establish and report performance targets for the Highway Safety Improvement Program (HISP) for the following five (5) safety performance measures:

1. Number of Fatalities
2. Rate of Fatalities
3. Number of Serious Injuries
4. Rate of Serious Injuries
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries

As an MPO, Metro COG is required by FHWA to either

1. Agree to program projects in each state's portion of the Metropolitan Planning Area (MPA) to support the performance targets established by the respective state and/or
2. Establish MPO specific safety performance targets for all or some of the above five measures.

These are reviewed and revised annually. 2022 is the fourth year we are reviewing and adopting PM1 targets for the MPA.

Since 2018, TTC recommended to Policy Board to adopt NDDOT's Safety Performance Measures for the MPA. Based on the crash data available to us, **Metro COG again requests that TTC recommend adoption NDDOT's Safety Performance Measures for the MPA.** This information is based on the following analysis and timeframe.

In December 2021, FHWA determined whether a State has met or made significant progress toward meeting 2016-2020 HSIP targets. FHWA used 2014-2018 data as a baseline period for assessing significant progress. In March 2022, FHWA will report their findings to States indicating whether the State has met or made significant progress towards meeting their 2016-2020 HSIP targets.

FHWA uses the following table to determine if a State has met or made significant progress towards their 2020 Performance Measure 1 Targets (received from https://safety.fhwa.dot.gov/hsip/spm/pm_progress_fs.cfm).

Example Significant Progress Determination for CY 2020 Safety Performance Targets

Performance Measure	5-year Rolling Averages			Target Achieved?	Better than Baseline?	Met or Made Significant Progress?
	TARGET 2016 – 2020[A]	ACTUAL 2016–2020[B]	BASELINE 2014–2018[C]			
Number of Fatalities	465	472.4	474	No	✓ Yes	**Yes** (4 out of 5 targets met or made significant progress)
Fatality Rate	0.980	0.990	0.988	No	No	
Number of Serious Injuries	2,560.0	2,578.4	2,703.2	No	✓ Yes	
Serious Injury Rate	4.126	4.214	4.288	No	✓ Yes	
Number of Non-motorized Fatalities and Serious Injuries	108.0	107.6	113.2	✓ Yes	N/A	

(A) CY 2020 **Targets** are established and reported in the August 31, 2019 HSIP Annual Report.
(B) **Actual performance** is the 5-year rolling average ending in the year for which the targets were established. In this case that is CY 2016-2020.
(C) **Baseline performance** is the 5-year rolling average that ends prior to the year in which the targets were established. In this case, that is CY 2014-2018, since the targets were established in 2019. Baseline performance is calculated in order to compare whether the actual outcome for CY 2016-2020 was better than the baseline performance (in this case CY 2014-2018), for the targets that were not met.

Then by mid-2022 States that did not meet or make significant progress toward meeting 2016-2020 HSIP targets must submit an HSIP Implementation Plan to FHWA. If a State did not meet or make significant progress toward meeting their 2016-2020 HSIP targets, the State must:

1. Use obligation authority equal to the Fiscal Year 2019 HSIP apportionment only for highway safety improvement projects for October 1, 2022 through September 30, 2023.
2. Develop and submit a HSIP Implementation Plan that describes actions the State will take to meet or make significant progress toward meeting its targets.

Then in December 2022, FHWA will start the process over again and determine whether a State has met or made significant progress toward meeting 2017-2021 HSIP targets. FHWA uses 2015-2019 data as a baseline period for assessing significant progress for this reporting period.

To compare and determine how Metro COG's metropolitan planning area (MPA) contributes to each state's targets, staff have compiled Assessment Tables for PM1 targets for 2020, 2021 and 2022 for each state's portion of the MPA.

Below are the Assessment Tables. The Assessment Tables NDDOT's portion of the MPA are included with numbers that demonstrate how we continue to meet the statewide targets.

2020 Performance Measure 1 Target Assessment - NDDOT

2016-2020 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2014-2018 Baseline Performance	Statewide 2016-2020 Targets Evaluated based on 5yr Rolling average	MPO 2016-2020 Actual Performance (ND portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	5.8	106.8	6.6	Yes	No	
Fatality Rate (per 100M VMT)	0.251	1.116	0.308	Yes	No	
Number of Serious Injuries	40.4	398.6	37.0	Yes	Yes	
Serious Injury Rate (per 100M VMT)	1.774	4.172	1.660	Yes	Yes	Yes
Number of Non-Motorized Fatalities & Serious Injuries	5.00	31.0	5.40	Yes	No	

2021 Performance Measure 1 Target Assessment - NDDOT

2017-2021 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2015-2019 Baseline Performance	Statewide 2017-2021 Targets Evaluated based on 5yr Rolling average	MPO 2017-2021 Actual Performance (ND portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	5.8	101.5				
Fatality Rate (per 100M VMT)	0.242	1.105				
Number of Serious Injuries	39.4	378.7				
Serious Injury Rate (per 100M VMT)	1.651	4.130				
Number of Non-Motorized Fatalities & Serious Injuries	5.40	30.4				

2022 Performance Measure 1 Target Assessment - NDDOT

2018-2022 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2016-2020 Baseline Performance	Statewide 2018-2022 Targets Evaluated based on 5yr Rolling average	MPO 2018-2022 Actual Performance (ND portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	6.6	96.4				
Fatality Rate (per 100M VMT)	0.308	1.094				
Number of Serious Injuries	37.0	359.7				
Serious Injury Rate (per 100M VMT)	1.660	4.089				
Number of Non-Motorized Fatalities & Serious Injuries	5.40	29.8				

Within the Assessment Tables, staff have compared the rate of fatalities and the rate of serious injuries to the state targets, they have a common factor of determining the rate based on per 100 million Vehicle Miles Travelled at either level.

In order for the MPO to compare the MPO target (portion of the data for the MPA within the state the targets are adopted in) to the statewide target for the number of fatalities, number of serious injuries, and number of non-motorized fatalities/number of non-motorized serious injuries, MPO staff needed to determine a common factor to compare the data against. It's important to note that FHWA does not illustrate what this common factor is. Therefore, Metro COG staff determined that the best common factor would be population.

The following **Populations table** illustrates the statewide population, jurisdictions within the MPO within that state, a summary of the jurisdictional total population within the MPO, the county population within the that state, and the Fargo-Moorhead Metropolitan Statistical Area (MSA) population. Note that the Census Bureau doesn't collect population for the MPA, instead it collects it based on the MSA, which the Fargo-Moorhead MSA includes all of Cass County, ND and Clay County, MN.

North Dakota Populations - Based on the 2020 Census

	Population	% of State Population	% of MSA Population
North Dakota	779,094	100%	N/A
Fargo, ND	125,990	16.17%	50.43%
West Fargo, ND	38,626	4.96%	15.46%
Horace, ND	3,085	0.40%	1.24%
Prairie Rose, ND	47	0.01%	0.02%
Briarwood, ND	43	0.01%	0.02%
Frontier, ND	168	0.02%	0.07%
North River, ND	58	0.01%	0.02%
Reile's Acres, ND	497	0.06%	0.20%
Urbanized Area Jurisdiction Total	168,514	21.63%	67.45%
Cass County, ND	184,525	23.69%	73.86%
F-M MSA	249,843	N/A	100%

Take note that in North Dakota the **Member Jurisdictional total percentage is 21.15%** of the statewide population and the **Cass County population total is 23.69%** of the statewide population. These are the population percentages that staff compared to the percentages listed in gray and parentheses in the 'MPO 2016-2020 Actual Performance*' column in the assessment tables.

In each Performance Measure 1 Target Assessment table, the MPO Actual Performance column lists the actual 5-year rolling average number for each category (in black) and the percent of the total Statewide target number in that category (in gray). The percent of the Statewide target number is then compared to the percent of the State Population that the Member Jurisdiction Total population is.

For example:

The 2020 PM1 Target Assessment – NDDOT table states that the Number of Fatalities for is 106.8 statewide, which is assessed based on a 5-year rolling average of 2016-2020 statewide data.

The MPO 2016-2020 actual performance for the North Dakota portion of the MPA was 6.6, which is **6.2%** of the total 106.8 target.

The Urbanized Area Jurisdiction total population is **21.63%** of the statewide population and Cass County's population is **23.69%** of the statewide population.

When compared to either the Urbanized Area Jurisdiction population or Cass County population percentages, 6.2% is still significantly lower.

Therefore, the MPO is achieving (supporting) the Statewide Target, as adopted in 2020.

Based on the Target Assessment tables for each state that indicate that the Fargo-Moorhead MPO is meeting or making significant progress towards the targets previously adopted, Metro COG requests the TTC recommend the Policy Board approve the attached resolutions for each state that are in support of adopting the statewide Performance Measure 1 – Safety targets, as these targets are in line with the actual performance data.

Once approved by the Policy Board, the resolutions will be signed and distributed to the applicable jurisdictions and programming will occur in accordance.

Requested Action: Metro COG requests a favorable recommendation to the Policy Board to adopt NDDOT's 2022 Safety Performance Measures.

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Agenda Item 11

To: Transportation Technical Committee

From: Ari Del Rosario

Date: February 4, 2022

Re: Technical Report on FHWA National Performance Management Measure 2 – Pavement Condition (Subpart C) & Bridge Condition (Subpart D) ND

Overview

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was passed. This law continues the performance measure methodology established in MAP-21 with further clarification and the establishment of performance measure targets. These revisions include the establishment of quantifiable targets for each performance measure identified in §490 Subpart C to assess NHS pavement condition and §490 Subpart C to assess NHS bridge condition.

As part of the target establishment, Metro COG must (1) report their established targets to the respective State DOTs (i.e. resolutions) and (2) report the baseline condition/performance and progress toward the achievement of the targets in the system performance report in the LRTP.

§490 Subpart C

Per §490 Subpart C every four years each State DOT is required by Federal Highway Administration (FHWA) to establish four (4) pavement condition performance measure targets. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for pavement conditions:

- Percent of Interstate Pavement in Good Condition
- Percent of Interstate Pavement in Poor Condition
- Percent of Non-interstate NHS Pavement in Good Condition
- Percent of Non-interstate NHS Pavement in Poor Condition

Each jurisdiction assesses a variety of roadway factors for each segment to calculate the pavement condition. Then those assessments are combined and an output of a standard Pavement Condition Index (PCI) is produced. The following are PCI ratings and their associated range of scores:

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

§490 Subpart D

Per §490 Subpart D every four years each State DOT is required by Federal Highway Administration (FHWA) to establish two (2) bridge condition performance measure targets. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for pavement conditions:

- Percent of NHS Bridges in Good Condition
- Percent of NHS Bridges in Poor Condition

Each bridge on the NHS system is assessed annually and the score is entered into the National Bridge Inventory (NBI). The score is based on the inspection ratings of the bridge's deck, superstructure, and substructure. Each bridge is given an overall rating based on the lowest score of the three elements. The scores are based on the following ranges:

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

Data

§490 Subpart C – Pavement Condition Data

Within each portion of the MPA the pavement condition has been assessed. The following table illustrates the PM2 – pavement conditions within the ND portion of the MPA and the associated State DOT set performance targets.

	ND Portion of MPA	**NDDOT set Targets**
% of Interstate Pavement in Good Condition	77.35%	75.6%
% of Interstate Pavement in Poor Condition	0%	3%
% of Non-interstate NHS Pavement in Good Condition	15.55%	58.3%
% of Non-interstate NHS Pavement in Poor Condition	0.87%	3%

* Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets. Cells filled in pink mean that the relative portion of the MPA does not meet the associated State DOT set targets.

The type of target depends on how the measurement is determined to meet or not meet the target. To meet a good condition target, the percentage needs to be equal to or greater than the target percentage. In order to meet a poor condition target, the percentage needs to be less than or equal to the target percentage.

§490 Subpart D – Bridge Condition Data

Within the ND portion of the MPA the bridge condition has been assessed. The following table illustrates the PM2 – bridge conditions within ND's portion of the MPA and the associated State DOT set performance targets.

	ND Portion of MPA	NDDOT set Targets
% of NHS Bridges in Good Condition	54.05%	60%
% of NHS Bridges in Poor Condition	0%	4%

*Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets.

The type of target depends on how the measurement is determined to meet or not meet the target. To meet a good condition target, the percentage needs to be equal to or greater than the target percentage. In order to meet a poor condition target, the percentage needs to be less than or equal to the target percentage.

Penalties

There are no penalties for not meeting the "good condition" targets. Although, if a "poor condition" percentage is exceeded (i.e. not met), at the State DOT level, the penalty is that according to 23 CFR 490.413 "(1) during the fiscal year following the determination, the State DOT shall obligate and set aside in an amount equal to 50 percent of funds apportioned to such State for fiscal year 2009 to carry out 23 U.S.C. 144 (as in effect the day before enactment of MAP-21) from amounts apportioned to a State for a fiscal year under 23 U.S.C. 104(b)(1) only for eligible projects on bridges on the NHS. (2) The set-aside and obligation requirement for bridges on the NHS in a State in paragraph (a) of this section for a fiscal year shall remain in effect for each subsequent fiscal year until such time as less than 10 percent of the total deck area of bridges in the State on the NHS is located on bridges that have been classified as Structurally Deficient as determined by FHWA."

Summary

For PM2 – Pavement and Bridge Conditions, the respective State DOT sets performance measure targets for calendar year 2018-2021. New targets will be set later in 2022.

The MPA is meeting and exceeding most targets related to pavement condition. Metro COG funds some of the Non-Interstate NHS roadways and can plan and maintain those roadways through the LRTP, TIP, and UPWP. The Interstate roadways are planned and maintained by the respective State DOTs.

In regards to bridge conditions, Metro COG does not fund the maintenance of the bridges on the NHS.

Requested Action: No action required.

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Agenda Item 11

To: Transportation Technical Committee

From: Ari Del Rosario

Date: February 4, 2022

Re: Technical Report on FHWA National Performance Management Measure 3 – Performance of the NHS (Subpart E) & Freight Movement on the Interstate (Subpart F) ND

Overview

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was passed. This law continues the performance measure methodology established in MAP-21 with further clarification and the establishment of performance measure targets. These revisions include the establishment of quantifiable targets for each performance measure identified in §490 Subpart E to assess performance on the NHS and §490 Subpart F to assess freight movement on the Interstate.

As part of the target establishment, Metro COG must (1) report their established targets to the respective State DOTs (i.e. resolutions) and (2) report the baseline condition / performance and progress toward the achievement of the targets in the system performance report in the LRTP.

§490 Subpart E

Per §490 Subpart E every four years each State DOT is required by Federal Highway Administration (FHWA) to establish two (2) travel reliability performance measure targets. Travel time reliability is defined by the consistency or dependability of travel times from day to day or across different times of the day. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for travel reliability:

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the Non-Interstate NHS that are reliable

FHWA requires the use of National Performance Management Research Data Set (NPMRDS) to calculate the travel reliability for each roadway segment. NPMRDS uses passive travel data (probe data) to anonymously track how people travel and at what speed the vehicle travels. The NPMRDS provides a monthly archive of probe data that includes average travel times that are reported every 5-minutes when data is available on the NHS.

Using the NPMRDS probe data, the Level of Travel Time Reliability (LOTTR) can be calculated for four (4) analysis periods using the following ratio:

Longer travel times (80th percentile of travel times)
to
Normal travel times (50th percentile of travel times)

The analysis periods are:

Morning Weekday (6am-10am)
Midday Weekday (10am -4pm)
Afternoon Weekday (4pm-8pm)
Weekends (6am-8pm)

Reliable segments of roadway are considered to have a ratio of 1.50 or less, whereas segments of roadway with a ratio above 1.50 are considered unreliable.

It is important to note that between 2016 and 2017, NPMRDS switched probe data providers from HERE to INRIX. With that switch there was a dramatic increase in the reliability of the data.

§490 Subpart F

Per §490 Subpart F every four years each State DOT is required by Federal Highway Administration (FHWA) to establish one (1) freight movement on the Interstate performance measure target. The State DOTs also need to report annually on each of these targets. Below is the performance measure target for freight movement:

- Truck Travel Time Reliability Index

The NPMRDS provides truck travel times on the Interstate system in 15-minute increments.

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

Data

§490 Subpart E – Auto Travel Time Reliability Data

Within the ND portion of the MPA the Travel Time Reliability (TTR) has been assessed. The following table illustrates the PM3 – TTR within ND's portion of the MPA and the associated State DOT set performance targets.

	2020 ND Portion of MPA	NDDOT set Targets
% of Reliable Person Miles on the Interstate	100%	85%
% of Reliable Person Miles on the Non-Interstate NHS	67%	85%

* Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets. Cells filled in pink mean that the relative portion of the MPA does not meet the associated State DOT set targets.

Travel time reliability is about consistency. The higher the percentage of reliability, it means that more often the travel time is the same. For example, it takes a person to travel from point A to point B 15 minutes. If the travel time reliability is 90%, it will take that person 15 minutes to get from point A to point B, 9 out of 10 times. The 10th time it may take the person a longer time or a short time to travel that distance.

§490 Subpart F – Truck Travel Time Reliability Data

Within the ND portion of the MPA the Truck Travel Time Reliability (TTTR) Index has been assessed. The following table illustrates the PM3 – TTTR Index within ND's portion of the MPA and the associated State DOT set performance targets.

	2020 ND Portion of MPA	NDDOT set Targets
Truck Travel Time Reliability Index	1.23	1.50

*Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets.

Truck Travel Time Reliability (TTTR) Index is meant to assess the reliability of the travel time it takes to travel a segment of the Interstate System. The higher the number the more unreliable the segment of roadway is. Thus, it is better to have a lower TTTR Index than a higher one. For example, the Twin Cities MPA has a TTTR Index of 1.41 for 2020. That region is significantly more congested along the Interstate system than the Fargo-Moorhead MPA.

Penalties

The penalties for PM3 are unclear.

Summary

For PM3 – System Reliability, the respective State DOT sets performance measure targets for calendar year 2018-2021. New targets will be set later in 2022.

The current NDDOT targets are as follows:

- Percentage of Person Miles Traveled on the Interstate that are Reliable: 85%
- Percentage of Person Miles Traveled on the Non-Interstate NHS that are Reliable: 85%
- Truck Travel Time Reliability Index: 1.5

Requested Action: No action required.

Methodology

$$100 \times \frac{\sum_{i=1}^{R} SL_i \times AV_i \times OF_j}{\sum_{i=1}^{T} SL_i \times AV_i \times OF_j}$$

R = total number of Interstate System reporting segments that are exhibiting an LOTTR below 1.50 during all of the time periods identified in § 490.511(b)(1)(i) through (iv);

I = Interstate System reporting segment "i";

SL_i = length, to the nearest thousandth of a mile, of Interstate System reporting segment "i";

AV_i = total annual traffic volume to the nearest single vehicle, of the Interstate System reporting segment "i";

J = geographic area in which the reporting segment "i" is located where a unique occupancy factor has been determined;

OF_i = occupancy factor for vehicles on the NHS within a specified geographic area within the State/Metropolitan planning area; and

T = total number of Interstate System reporting segments.

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To: Transportation Technical Committee
From: Ari Del Rosario
Date: February 4, 2022
Re: Performance Measure 1 (PM1) – 2022 Safety Target Adoption MN

As a part of the Fixing America's Surface Transportation (FAST) Act, which was signed into law on December 4, 2015, State DOTs and MPOs are required to establish quantifiable targets for performance measures. There are three performance measures.

Performance Measure 1 (PM1) is meant to establish performance targets related to safety. This falls under §490 Subpart B. As such, each state must annually establish and report performance targets for the Highway Safety Improvement Program (HISP) for the following five (5) safety performance measures:

1. Number of Fatalities
2. Rate of Fatalities
3. Number of Serious Injuries
4. Rate of Serious Injuries
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries

As an MPO, Metro COG is required by FHWA to either

1. Agree to program projects in each state's portion of the Metropolitan Planning Area (MPA) to support the performance targets established by the respective state and/or
2. Establish MPO specific safety performance targets for all or some of the above five measures.

These are reviewed and revised annually. 2022 is the fourth year we are reviewing and adopting PM1 targets for the MPA.

Since 2018, TTC recommended to Policy Board to adopt MnDOT's Safety Performance Measures for the MPA. Based on the crash data available to us, **Metro COG again requests that TTC recommend adoption of MnDOT's Safety Performance Measures for the MPA.** This information is based on the following analysis and timeframe.

In December 2021, FHWA determined whether a State has met or made significant progress toward meeting 2016-2020 HSIP targets. FHWA used 2014-2018 data as a baseline period for assessing significant progress. In March 2022, FHWA will report their findings to States indicating whether the State has met or made significant progress towards meeting their 2016-2020 HSIP targets.

FHWA uses the following table to determine if a State has met or made significant progress towards their 2020 Performance Measure 1 Targets (received from https://safety.fhwa.dot.gov/hsip/spm/pm_progress_fs.cfm).

Example Significant Progress Determination for CY 2020 Safety Performance Targets

Performance Measure	5-year Rolling Averages			Target Achieved?	Better than Baseline?	Met or Made Significant Progress?
	TARGET 2016 – 2020[A]	ACTUAL 2016–2020[B]	BASELINE 2014–2018[C]			
Number of Fatalities	465	472.4	474	No	✓ Yes	**Yes** (4 out of 5 targets met or made significant progress)
Fatality Rate	0.980	0.990	0.988	No	No	
Number of Serious Injuries	2,560.0	2,578.4	2,703.2	No	✓ Yes	
Serious Injury Rate	4.126	4.214	4.288	No	✓ Yes	
Number of Non-motorized Fatalities and Serious Injuries	108.0	107.6	113.2	✓ Yes	N/A	

(A) CY 2020 **Targets** are established and reported in the August 31, 2019 HSIP Annual Report.
(B) **Actual performance** is the 5-year rolling average ending in the year for which the targets were established. In this case that is CY 2016-2020.
(C) **Baseline performance** is the 5-year rolling average that ends prior to the year in which the targets were established. In this case, that is CY 2014-2018, since the targets were established in 2019. Baseline performance is calculated in order to compare whether the actual outcome for CY 2016-2020 was better than the baseline performance (in this case CY 2014-2018), for the targets that were not met.

Then by mid-2022 States that did not meet or make significant progress toward meeting 2016-2020 HSIP targets must submit an HSIP Implementation Plan to FHWA. If a State did not meet or make significant progress toward meeting their 2016-2020 HSIP targets, the State must:

1. Use obligation authority equal to the Fiscal Year 2019 HSIP apportionment only for highway safety improvement projects for October 1, 2022 through September 30, 2023.
2. Develop and submit an HSIP Implementation Plan that describes actions the State will take to meet or make significant progress toward meeting its targets.

Then in December 2022, FHWA will start the process over again and determine whether a State has met or made significant progress toward meeting 2017-2021 HSIP targets. FHWA uses 2015-2019 data as a baseline period for assessing significant progress for this reporting period.

To compare and determine how Metro COG's metropolitan planning area (MPA) contributes to each state's targets, staff have compiled Assessment Tables for PM1 targets for 2020, 2021 and 2022 for each state's portion of the MPA.

Below are the Assessment Tables. The Assessment Tables for MnDOT's portion of the MPA are included with numbers that demonstrate how we continue to meet the statewide targets.

2020 Performance Measure 1 Target Assessment - MnDOT

2016-2020 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2014-2018 Baseline Performance	Statewide 2016-2020 Targets Evaluated based on 5yr Rolling average	MPO 2016-2020 Actual Performance (MN portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	1.8	375.4	2.0	Yes	No	Yes
Fatality Rate (per 100M VMT)	0.169	0.626	0.222	Yes	No	
Number of Serious Injuries	9.2	1714.2	8.4	Yes	Yes	
Serious Injury Rate (per 100M VMT)	0.870	2.854	0.824	Yes	Yes	
Number of Non-Motorized Fatalities & Serious Injuries	0.6	317.0	0.6	Yes	No	

2021 Performance Measure 1 Target Assessment - MnDOT

2017-2021 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2015-2019 Baseline Performance	Statewide 2017-2021 Targets Evaluated based on 5yr Rolling average	MPO 2017-2021 Actual Performance (MN portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	1.4	352.4				
Fatality Rate (per 100M VMT)	0.124	0.582				
Number of Serious Injuries	9.4	1579.8				
Serious Injury Rate (per 100M VMT)	1.068	2.606				
Number of Non-Motorized Fatalities & Serious Injuries	0.6	218.2				

2022 Performance Measure 1 Target Assessment - MnDOT

2018-2022 Assessment Table

	5-Year Rolling Averages			Assessment		
	MPO 2016-2020 Baseline Performance	Statewide 2018-2022 Targets Evaluated based on 5yr Rolling average	MPO 2018-2022 Actual Performance (MN portion of MPA)	Statewide Target Achieved? Compares to state goal	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	2.0	352.4				
Fatality Rate (per 100M VMT)	0.222	0.582				
Number of Serious Injuries	8.4	1463.4				
Serious Injury Rate (per 100M VMT)	0.824	2.470				
Number of Non-Motorized Fatalities & Serious Injuries	0.6	258.4				

Within the Assessment Tables, staff have compared the rate of fatalities and the rate of serious injuries to the state targets, they have a common factor of determining the rate based on per 100 million Vehicle Miles Travelled at either level.

In order for the MPO to compare the MPO target (portion of the data for the MPA within the state the targets are adopted in) to the statewide target for the number of fatalities, number of serious injuries, and number of non-motorized fatalities/number of non-motorized serious injuries, MPO staff needed to determine a common factor to compare the data against. It's important to note that FHWA does not illustrate what this common factor is. Therefore, Metro COG staff determined that the best common factor would be population.

The following **Populations table** illustrates the statewide population, jurisdictions within the MPO within that state, a summary of the jurisdictional total population within the MPO, the county population within the that state, and the Fargo-Moorhead Metropolitan Statistical Area (MSA) population. Note that the Census Bureau doesn't collect population for the MPA, instead it collects it based on the MSA, which the Fargo-Moorhead MSA includes all of Cass County, ND and Clay County, MN.

Minnesota Populations - Based on the 2020 Census

	Population	**% of State Population**	**% of MSA Population**
Minnesota	5,706,494	100%	N/A
Moorhead, MN	44,505	0.78%	17.81%
Dilworth, MN	4,612	0.08%	1.85%
Member Jurisdiction Total	49,117	0.86%	19.66%
Clay County, MN	65,318	1.14%	26.14%
F-M MSA	249,843	N/A	100%

Take note that in Minnesota the **Member Jurisdictional total percentage is 0.86%** of the statewide population and the **Clay County population total is 1.14%** of the statewide population. These are the population percentages that staff compared to the percentages listed in gray and parentheses in the 'MPO 2016-2020 Actual Performance*' column in the assessment tables.

In each Performance Measure 1 Target Assessment table, the MPO Actual Performance column lists the actual 5-year rolling average number for each category (in black) and the percent of the total Statewide target number in that category (in gray). The percent of the Statewide target number is then compared to the percent of the State Population that the Member Jurisdiction Total population is.

For example:

The 2020 PM1 Target Assessment – MnDOT table states that the target for the Number of Fatalities for 2016-2020 is a maximum of 375.4 statewide, which is assessed based on a 5-year rolling average of 2016-2020 statewide data.

The MPO 2016-2020 actual performance for the Minnesota portion of the MPA was 2.0, which is **0.53%** of the total 375.4 target.

The Member Jurisdiction total population is **0.86%** of the statewide population and Clay County's population is **1.14%** of the statewide population.

When compared to either the Member Jurisdiction population or Clay County population percentages, 0.53% is still significantly lower.

Therefore, the MPO is achieving (supporting) the Statewide Target, as adopted in 2020.

Based on the Target Assessment tables for each state that indicate that the Fargo-Moorhead MPO is meeting or making significant progress towards the targets previously adopted, Metro COG requests the TTC recommend the Policy Board approve the attached resolutions for each state that are in support of adopting the statewide

Performance Measure 1 – Safety targets, as these targets are in line with the actual performance data.

Once approved by the Policy Board, the resolutions will be signed and distributed to the applicable jurisdictions and programming will occur in accordance.

Requested Action: Metro COG requests a favorable recommendation to the Policy Board to adopt MnDOT's 2022 Safety Performance Measures.

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Agenda Item 11

To: Transportation Technical Committee

From: Ari Del Rosario

Date: February 4, 2022

Re: Technical Report on FHWA National Performance Management Measure 2 – Pavement Condition (Subpart C) & Bridge Condition (Subpart D) MN

Overview

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was passed. This law continues the performance measure methodology established in MAP-21 with further clarification and the establishment of performance measure targets. These revisions include the establishment of quantifiable targets for each performance measure identified in §490 Subpart C to assess NHS pavement condition and §490 Subpart C to assess NHS bridge condition.

As part of the target establishment, Metro COG must (1) report their established targets to the respective State DOTs (i.e. resolutions) and (2) report the baseline condition/performance and progress toward the achievement of the targets in the system performance report in the LRTP.

§490 Subpart C

Per §490 Subpart C every four years each State DOT is required by Federal Highway Administration (FHWA) to establish four (4) pavement condition performance measure targets. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for pavement conditions:

- Percent of Interstate Pavement in Good Condition
- Percent of Interstate Pavement in Poor Condition
- Percent of Non-interstate NHS Pavement in Good Condition
- Percent of Non-interstate NHS Pavement in Poor Condition

Each jurisdiction assesses a variety of roadway factors for each segment to calculate the pavement condition. Then those assessments are combined and an output of a standard Pavement Condition Index (PCI) is produced. The following are PCI ratings and their associated range of scores:

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

§490 Subpart D

Per §490 Subpart D every four years each State DOT is required by Federal Highway Administration (FHWA) to establish two (2) bridge condition performance measure targets. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for pavement conditions:

- Percent of NHS Bridges in Good Condition
- Percent of NHS Bridges in Poor Condition

Each bridge on the NHS system is assessed annually and the score is entered into the National Bridge Inventory (NBI). The score is based on the inspection ratings of the bridge's deck, superstructure, and substructure. Each bridge is given an overall rating based on the lowest score of the three elements. The scores are based on the following ranges:

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

Data

§490 Subpart C – Pavement Condition Data

Within each portion of the MPA the pavement condition has been assessed. The following table illustrates the PM2 – pavement conditions within the MN portion of the MPA and the associated State DOT set performance targets.

	MN Portion of MPA	**MnDOT set Targets**
% of Interstate Pavement in Good Condition	67.43%	55%
% of Interstate Pavement in Poor Condition	0%	2%
% of Non-interstate NHS Pavement in Good Condition	52.94%	50%
% of Non-interstate NHS Pavement in Poor Condition	0%	4%

* Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets.

The type of target depends on how the measurement is determined to meet or not meet the target. To meet a good condition target, the percentage needs to be equal to or greater than the target percentage. In order to meet a poor condition target, the percentage needs to be less than or equal to the target percentage.

§490 Subpart D – Bridge Condition Data

Within the MN portion of the MPA the bridge condition has been assessed. The following table illustrates the PM2 – bridge conditions within MN's portion of the MPA and the associated State DOT set performance targets.

	MN Portion of MPA	MnDOT set Targets
% of NHS Bridges in Good Condition	11.87%	50%
% of NHS Bridges in Poor Condition	5.95%	4%

* Cells filled in pink mean that the relative portion of the MPA does not meet the associated State DOT set targets.

The type of target depends on how the measurement is determined to meet or not meet the target. To meet a good condition target, the percentage needs to be equal to or greater than the target percentage. In order to meet a poor condition target, the percentage needs to be less than or equal to the target percentage.

Penalties

There are no penalties for not meeting the "good condition" targets. Although, if a "poor condition" percentage is exceeded (i.e. not met), at the State DOT level, the penalty is that according to 23 CFR 490.413 "(1) during the fiscal year following the determination, the State DOT shall obligate and set aside in an amount equal to 50 percent of funds apportioned to such State for fiscal year 2009 to carry out 23 U.S.C. 144 (as in effect the day before enactment of MAP-21) from amounts apportioned to a State for a fiscal year under 23 U.S.C. 104(b)(1) only for eligible projects on bridges on the NHS. (2) The set-aside and obligation requirement for bridges on the NHS in a State in paragraph (a) of this section for a fiscal year shall remain in effect for each subsequent fiscal year until such time as less than 10 percent of the total deck area of bridges in the State on the NHS is located on bridges that have been classified as Structurally Deficient as determined by FHWA."

Summary

For PM2 – Pavement and Bridge Conditions, the respective State DOT sets performance measure targets for calendar year 2018-2021. New targets will be set later in 2022.

The MPA is meeting and exceeding the targets related to pavement condition. Metro COG funds some of the Non-Interstate NHS roadways and can plan and maintain those roadways through the LRTP, TIP, and UPWP. The Interstate roadways are planned and maintained by the respective State DOTs.

In regards to bridge conditions, Metro COG does not fund the maintenance of the bridges on the NHS.

Requested Action: No action required.

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Agenda Item 11

To: Transportation Technical Committee

From: Ari Del Rosario

Date: February 4, 2022

Re: Technical Report on FHWA National Performance Management Measure 3 – Performance of the NHS (Subpart E) & Freight Movement on the Interstate (Subpart F) MN

Overview

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was passed. This law continues the performance measure methodology established in MAP-21 with further clarification and the establishment of performance measure targets. These revisions include the establishment of quantifiable targets for each performance measure identified in §490 Subpart E to assess performance on the NHS and §490 Subpart F to assess freight movement on the Interstate.

As part of the target establishment, Metro COG must (1) report their established targets to the respective State DOTs (i.e. resolutions) and (2) report the baseline condition / performance and progress toward the achievement of the targets in the system performance report in the LRTP.

§490 Subpart E

Per §490 Subpart E every four years each State DOT is required by Federal Highway Administration (FHWA) to establish two (2) travel reliability performance measure targets. Travel time reliability is defined by the consistency or dependability of travel times from day to day or across different times of the day. The State DOTs also need to report annually on each of these targets. Below are the performance measure targets for travel reliability:

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the Non-Interstate NHS that are reliable

FHWA requires the use of National Performance Management Research Data Set (NPMRDS) to calculate the travel reliability for each roadway segment. NPMRDS uses passive travel data (probe data) to anonymously track how people travel and at what speed the vehicle travels. The NPMRDS provides a monthly archive of probe data that includes average travel times that are reported every 5-minutes when data is available on the NHS.

Using the NPMRDS probe data, the Level of Travel Time Reliability (LOTTR) can be calculated for four (4) analysis periods using the following ratio:

Longer travel times (80th percentile of travel times)
to
Normal travel times (50th percentile of travel times)

The analysis periods are:

Morning Weekday (6am-10am)
Midday Weekday (10am -4pm)
Afternoon Weekday (4pm-8pm)
Weekends (6am-8pm)

Reliable segments of roadway are considered to have a ratio of 1.50 or less, whereas segments of roadway with a ratio above 1.50 are considered unreliable.

It is important to note that between 2016 and 2017, NPMRDS switched probe data providers from HERE to INRIX. With that switch there was a dramatic increase in the reliability of the data.

§490 Subpart F

Per §490 Subpart F every four years each State DOT is required by Federal Highway Administration (FHWA) to establish one (1) freight movement on the Interstate performance measure target. The State DOTs also need to report annually on each of these targets. Below is the performance measure target for freight movement:

- Truck Travel Time Reliability Index

The NPMRDS provides truck travel times on the Interstate system in 15-minute increments.

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

Data

§490 Subpart E – Auto Travel Time Reliability Data

Within the MN portion of the MPA the Travel Time Reliability (TTR) has been assessed. The following table illustrates the PM3 – TTR within each MN's portion of the MPA and the associated State DOT set performance targets.

	2020 MN Portion of MPA	MnDOT set Targets
% of Reliable Person Miles on the Interstate	100%	80%
% of Reliable Person Miles on the Non-Interstate NHS	85%	90%

* Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets.

Travel time reliability is about consistency. The higher the percentage of reliability, it means that more often the travel time is the same. For example, it takes a person to travel from point A to point B 15 minutes. If the travel time reliability is 90%, it will take that person 15 minutes to get from point A to point B, 9 out of 10 times. The 10th time it may take the person a longer time or a short time to travel that distance.

§490 Subpart F – Truck Travel Time Reliability Data

Within the MN portion of the MPA the Truck Travel Time Reliability (TTTR) Index has been assessed. The following table illustrates the PM3 – TTTR Index within MN's portion of the MPA and the associated State DOT set performance targets.

	2020 MN Portion of MPA	MnDOT set Targets
Truck Travel Time Reliability Index	1.14	1.50

*Cells filled in green mean that the relative portion of the MPA meets or exceeds the associated State DOT's set targets.

Truck Travel Time Reliability (TTTR) Index is meant to assess the reliability of the travel time it takes to travel a segment of the Interstate System. The higher the number the more unreliable the segment of roadway is. Thus, it is better to have a lower TTTR Index than a higher one. For example, the Twin Cities MPA has a TTTR Index of 1.41 for 2020. That region is significantly more congested along the Interstate system than the Fargo-Moorhead MPA.

Penalties

The penalties for PM3 are unclear.

Summary

For PM3 – System Reliability, the respective State DOT sets performance measure targets for calendar year 2018-2021. New targets will be set later in 2022.

The current MnDOT targets are as follows:

- Percentage of Person Miles Traveled on the Interstate that are Reliable: 80%
- Percentage of Person Miles Traveled on the Non-Interstate NHS that are Reliable: 90%
- Truck Travel Time Reliability Index: 1.5

Requested Action: No action required.

Methodology

$$100 \times \frac{\sum_{i=1}^{R} SL_i \times AV_i \times OF_j}{\sum_{i=1}^{T} SL_i \times AV_i \times OF_j}$$

R = total number of Interstate System reporting segments that are exhibiting an LOTTR below 1.50 during all of the time periods identified in § 490.511(b)(1)(i) through (iv);

I = Interstate System reporting segment "i";

SL_i = length, to the nearest thousandth of a mile, of Interstate System reporting segment "i";

AV_i = total annual traffic volume to the nearest single vehicle, of the Interstate System reporting segment "i";

J = geographic area in which the reporting segment "i" is located where a unique occupancy factor has been determined;

OF_i = occupancy factor for vehicles on the NHS within a specified geographic area within the State/Metropolitan planning area; and

T = total number of Interstate System reporting segments.

METROCOG Fargo-Moorhead Metropolitan Council of Governments

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To: Transportation Technical Committee
From: Luke Champa, Associate Transportation Planner
Date: February 4, 2022
Re: **West Fargo Traffic Calming Study Final Report**

In March 2021, Metro COG, in cooperation with the City of West Fargo, kicked-off the West Fargo Traffic Calming Study. Metro COG conducted the Study internally, with continuous cooperation and direction from West Fargo professional and technical staff.

This study takes a look at traffic calming on residential local and collector roadways in West Fargo. The identification of issues and subsequent traffic calming analysis is derived from (6) priority traffic calming locations in the community. The priority locations were identified by City departmental staff based upon residents' concern about excessive speeds and unsafe conditions on specific residential streets in West Fargo.

The purpose of this study is to establish a traffic calming toolbox and strategies to address speeding and safety on residential (local or collector) West Fargo streets by strategically engaging residents, reviewing the existing conditions and traffic conditions, and developing an implementation strategy for the community (West Fargo residents included) to address traffic calming. In addition, evaluation and prioritization, specific traffic calming implementation scenarios or alternatives, and associated planning-level cost estimates have been developed for each of the six (6) priority locations, which may be found in Appendix A. The Study was guided by a 9-member Study Review Committee (SRC) and successful public feedback received from residents impacted by speeding on residential neighborhood streets.

In addition, the West Fargo Traffic Calming Study will forward the goals, objectives and policy direction related to safety, livability, and a multi-modal transportation system as outlined in *West Fargo 2.0,* the City's Comprehensive Plan and *Metro Grow,* the long-range Metropolitan Transportation Plan.

To view/download digital copies of the Study and Appendices please use the following links:

- **West Fargo Traffic Calming Study Final Report**
- **Appendix A – Traffic Calming Analysis, Evaluation, and Concept Recommendations**
- **Appendix B – Public Engagement Summary**
- **Appendix C – West Fargo Capital Improvement Program (CIP) Process**

Or you may also visit the project webpage: **http://fmmetrocog.org/WF-Traffic-Study**

Metro COG shared the final draft Study report and collected feedback on the final draft from the general public. People were given the opportunity to provide feedback on the Study report until final action occurred on January 17, 2022. One public comment was received on the Final Draft Report.

The West Fargo Planning & Zoning Commission recommended approval and forwarded two comments to the Board of Commissioners for consideration prior to final action:

1. Wanted clarification about why stop signs, speed limit signs, or other traffic control devices are not considered traffic calming measures.

2. Raised concern about showing mini roundabouts as a traffic calming feature as they receive a lot of complaints from the public about how awful they are. Specific examples include those which were retrofitted into the existing street network (19th Ave W/10th/7th St W & 15th Ave E/6th St E.

The West Fargo Board of Commissioners voted unanimously to approve the West Fargo Traffic Calming Study at their January 17, 2022 meeting.

Requested Action: Recommend approval of the West Fargo Traffic Calming Study to the Policy Board.

City of WEST FARGO METROCOG
FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION

West Fargo Traffic Calming Study

West Fargo, North Dakota | December 2021

Acknowledgements

A sincere thank you to the following for their involvement in guiding this Study and contributing to the pursuit of safety and traffic calming for neighborhoods throughout the City of West Fargo.

City of West Fargo Staff

Andrew Wrucke

Denis Otterness

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Scott Tiffany

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This document does not constitute a standard, specification, or regulation. The United States Government, the State of North Dakota, and the Fargo-Moorhead Metropolitan Council of Governments do not endorse products or manufacturers. Trade or manufacturers' names may appear herein only because they are considered essential to the objective of this document.

Prepared for: City of West Fargo

RESOLUTION OF APPROVAL FOR THE WEST FARGO TRAFFIC CALMING STUDY

WHEREAS, the City of West Fargo City Commission is the duly elected governing body for West Fargo, North Dakota and is responsible for the planning and development of a safe and functional transportation system; and

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG), is the Metropolitan Planning Organization designated by the Governors of North Dakota and Minnesota to maintain the metropolitan area's transportation planning process in accordance with Federal regulations; and

WHEREAS, Metro COG has undertaken the task of conducting the West Fargo Traffic Calming Study which is essential to mitigate negative transportation system impacts and increase safety, livability, and quality of life in West Fargo; and

WHEREAS, the traffic calming study process was guided by the Study Review Committee and the general public; and

WHEREAS, the West Fargo Traffic Calming Study provides a vision and policy direction for traffic calming in West Fargo; and

WHEREAS, Metro COG has conducted this study in a comprehensive, coordinated, and continuing fashion that will improve the urban transportation system as well as quality of life in West Fargo; and

WHEREAS, the West Fargo Traffic Calming Study forwards goals, objectives, and policy direction of the West Fargo Comprehensive Plan, *West Fargo 2.0* and the long-range Metropolitan Transportation Plan, *Metro Grow*;

NOW, THEREFORE, be it resolved by the City Commission of the City of West Fargo, North Dakota that the City of West Fargo does hereby approve the West Fargo Traffic Calming Study and agrees to use it as a tool to implement traffic calming improvements on residential streets with a federal functional classification of local or collector.

APPROVED:

BY: _____
President of the Board of City Commissioners

ATTEST:

_____
Tina Fisk, City Administrator

Table of Contents

1 | Introduction

The West Fargo Traffic Calming Study addresses concerns received from residents of West Fargo about excessive traffic speeds on neighborhood streets. The City of West Fargo continuously improves city streets in order to address safety. This Study will help the City develop a targeted implementation strategy for traffic calming measures which, when appropriately applied can have a positive impact on travel speeds, traffic volumes, and safety of roadways in neighborhoods of West Fargo.

The purpose of this study is to provide an overview of what traffic calming is, research and understand the traffic calming issue at specific priority locations in West Fargo, identify potential traffic calming measures that can be applied to streets where frequent complaints about traffic speeds are occurring, provide public information to engage residents on existing issues and potential traffic calming interventions, provide planning-level cost estimates for traffic calming measures, identify funding sources or strategies for implementation, and summarize findings of the research, analysis, and public input to create a user-friendly report that can be utilized by West Fargo staff and residents alike.

What is traffic calming?

Traffic calming is the implementation of physical roadway features for the purpose of slowing motor vehicle speeds and altering driver behavior. These features can be installed on a street to help reduce the speed at which vehicles travel, discourage through traffic, improve traffic safety, and improve the comfort level for non-motorized users.

Why use traffic calming?

Traffic calming can improve the quality of life for residents on streets where traffic calming measures are applied, slowing vehicle speeds, and increasing safety for non-motorized users of the street. Although this Study was prompted by six (6) priority West Fargo locations, traffic calming interventions should be looked as a community-wide strategy to ensure that volume and speed concerns are not transferred to adjacent streets.

Where can traffic calming measures be applied?

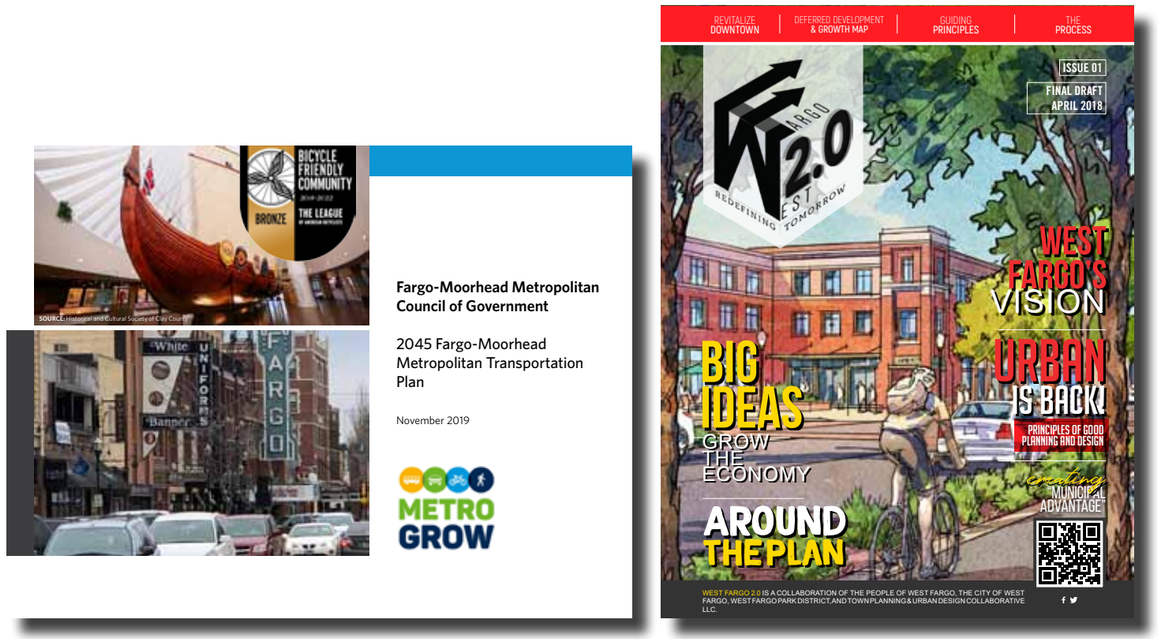
Physical traffic calming measures should only be applied to residential West Fargo roadways and those with a road classification of local or collector. It should be noted that West Fargo does not allow heavy trucks on most local and collector roadways in the City and roadways are signed as such.

Why is it important?

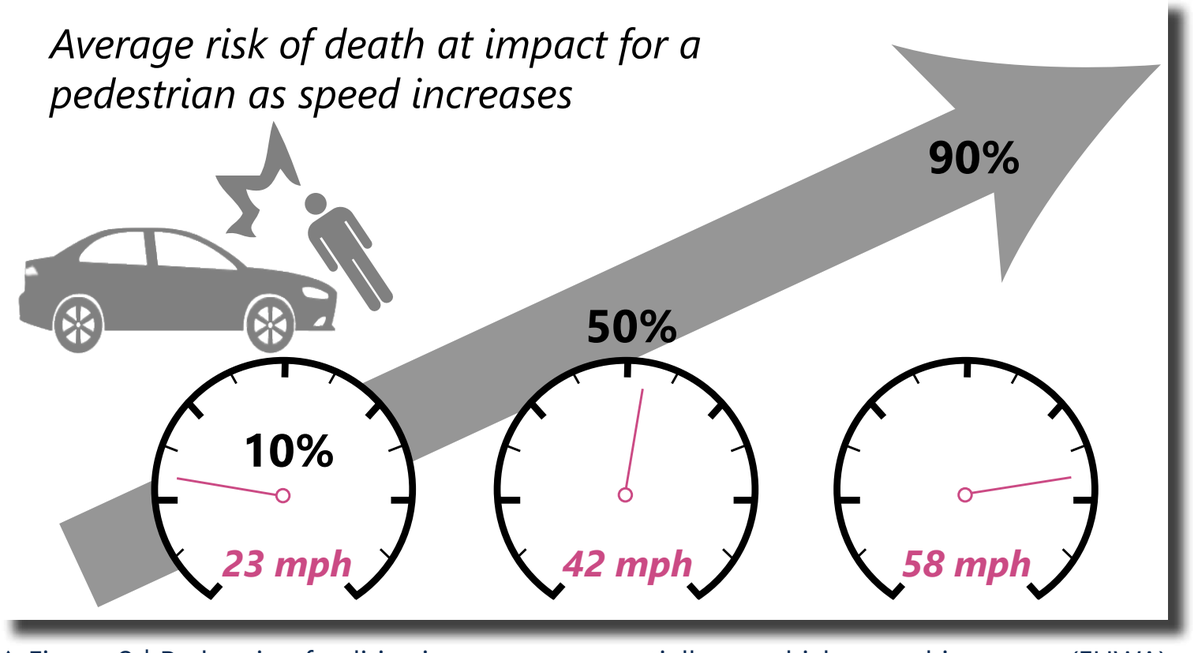
Traffic calming is important, especially in residential areas of West Fargo. The City's Comprehensive Plan, *West Fargo 2.0* sets a policy direction for walkability that balances many modes of transportation in the built environment. *West Fargo 2.0* also emphasizes Metro COG's complete streets policy as a critical component toward reaching the goals and objectives of enhancing the livability and character of West Fargo:

Complete Streets is an on-going and comprehensive planning, design, construction, and operations process, with a long-range perspective, aimed at improving safety, usability, and quality of life. By embracing Complete Streets, Metro COG seeks to plan and program public rights of way that fully integrate and balance the needs of all street users, including bicyclists, pedestrians, transit users, commercial vehicles, emergency services, vehicles, and passenger vehicles. Users of all ages and abilities will be considered.

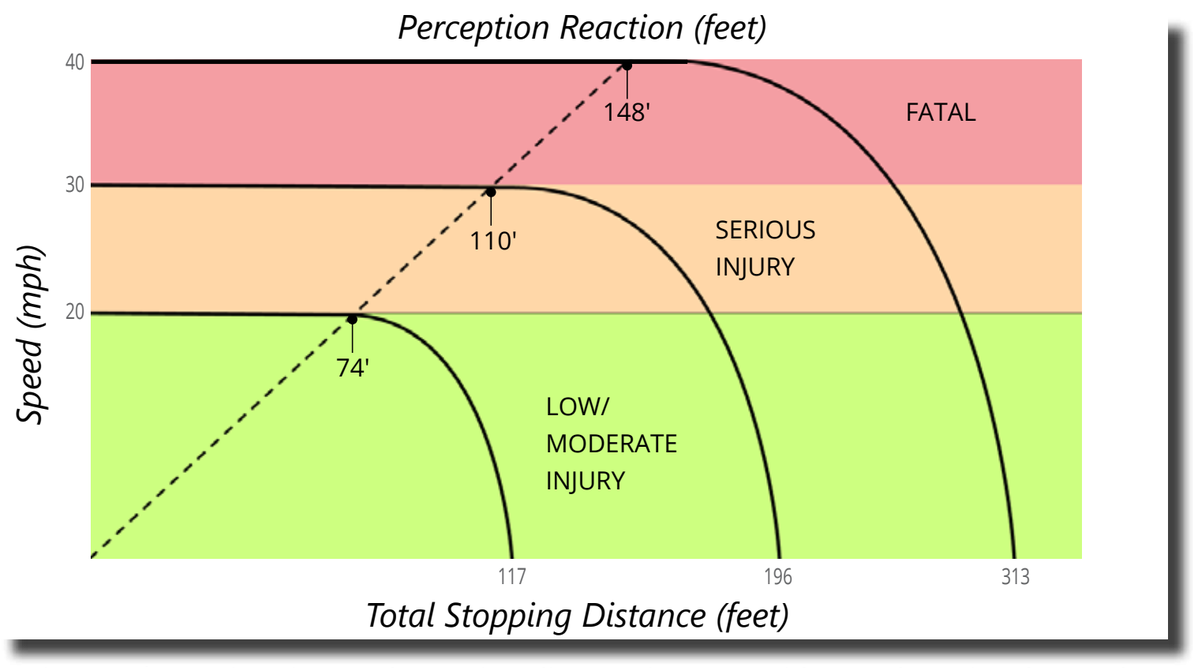
In addition to the West Fargo Comprehensive Plan, Metro COG's Metropolitan Transportation Plan, *Metro Grow,* sets the policy direction for transportation across the Fargo-Moorhead Area (FM Area). *Metro Grow* also provides strong direction for a safer transportation system for all users and increased walking and biking as a viable mode of travel. Both of these plans have guided the City of West Fargo to pursue traffic calming as a way to forward the goals and objectives of both of these important planning documents.



^ Figure 1 | Core transportation planning documents for the City of West Fargo



^ Figure 2 | Pedestrian fatalities increase exponentially as vehicle speed increases (FHWA)



^ Figure 3 | Reaction time and stopping distance increase with speed (National Complete Streets Coalition)

The figures on the left-side of this page represent how speeding vehicles create exponentially more dangerous environments for pedestrians, therefore making traffic calming an essential tool for enhancing safety, walkability, and livability of West Fargo neighborhoods.

What is NOT traffic calming?

It is important to clarify potential options that are not considered traffic calming measures. Through the public engagement efforts, several commonly requested options arose including stop sign installation requests, dynamic radar speed signs, and increased speed enforcement from police. Stop signs and other traffic control devices such as signs are traffic operations management techniques and should not be considered traffic calming measures because they are not self-enforcing. Self-enforcing measures are physical treatments that are engineered to change motorist behavior to change vehicle speed or direction of travel. Stop signs and other traffic control signs signal to motorists to change behavior and reduce speed however, enforcement is required from authorities in order to be effective rather than the motorists' voluntary behavior modification. Enforcement can and should occur at given times where speeding may be prevalent along certain corridors; however, the West Fargo Police Department has indicated that continual enforcement of problematic areas is not sustainable or efficient for Police Officers. The Police Department will continue to use a targeted enforcement approach and plans to utilize data from the traffic analysis portion of this Study to focus enforcement in areas where and at times when speeding may be more prevalent.

Temporary traffic calming devices such as signage or roadway striping may be considered in portions of West Fargo where urban development has not yet occurred and should be considered temporary solutions. Self-enforcing traffic calming measures should be considered at the time of development and/or urbanization of the roadway if temporary traffic calming devices were installed prior to urbanization.

2 | Study Process

Priority Locations

Alternate Locations

Through the Study process and West Fargo's efforts to respond to speeding on residential streets, six (6) priority and four (4) alternate locations were identified to be studied as part of this report. The Study is aimed at the identification of traffic calming problems as they exist today and to develop a toolbox that can be used to address traffic calming issues across the entire community.

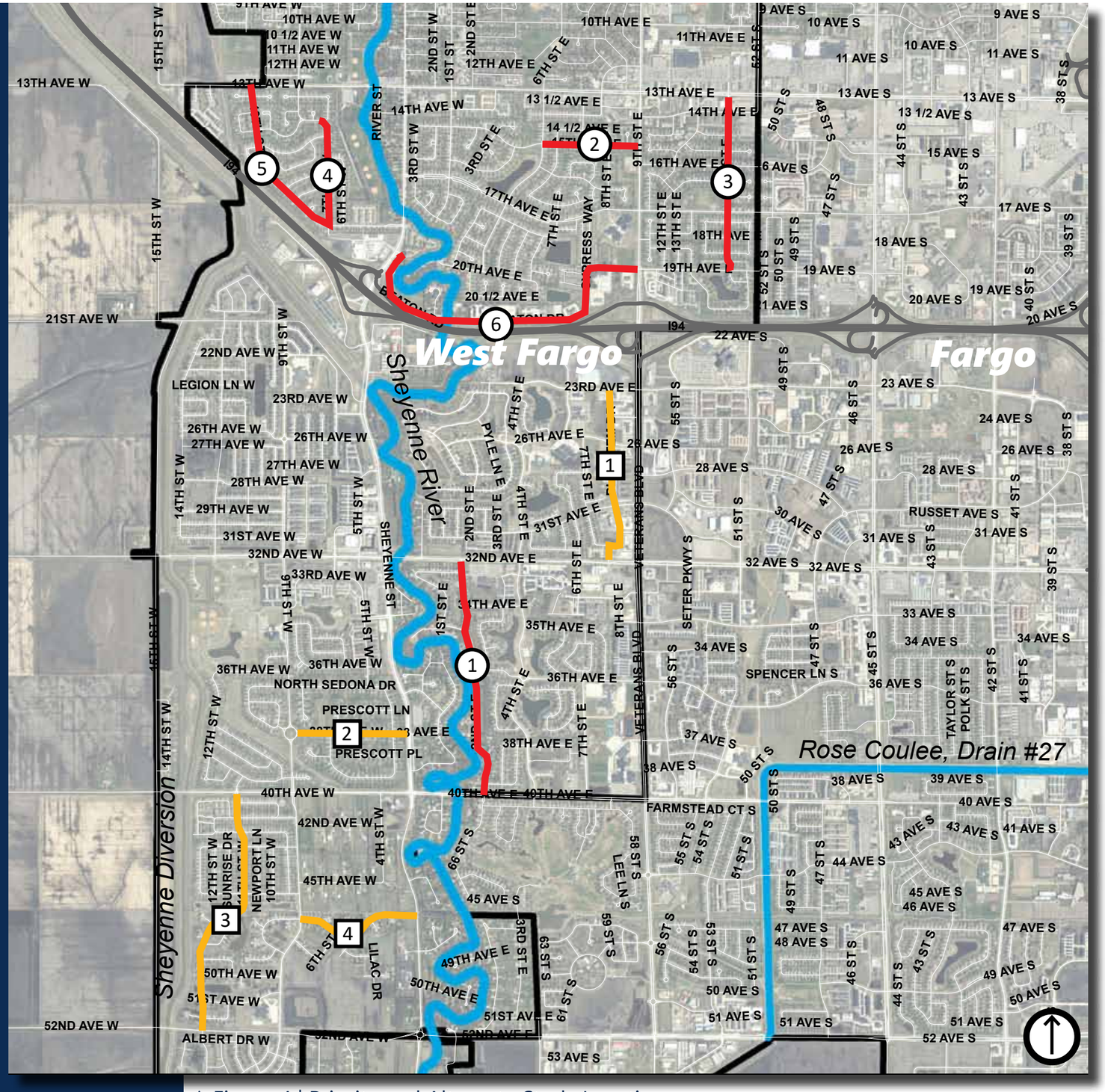
The locations listed below are based on numerous resident complaints that have been received by various City departments over the past ten (10) years including Engineering, Planning, Public Works, and Police Departments.

While the Study provides general introduction, analysis, and implementation recommendations for traffic calming across West Fargo, this effort also stems from very specific complaints at the following locations which were used to identify and understand the root of the traffic calming issue in West Fargo, engage and educate the public about traffic calming, and develop planning-level cost estimates. Through this process, the City and Metro COG developed a city-wide traffic calming toolbox and implementation strategy to address speeding and safety concerns that may arise in the future.

1. 2nd Street East, south of 32nd Ave E
2. 15th Avenue East, between 6th and 9th St E
3. 16th Street East, south of 13th Ave E
4. 7th Street West, between 15th and 19th Ave W
5. 10th Street West, south of 13th Ave W
6. Beaton Drive, between Sheyenne St and 9th St E

1. Bluestem Drive, between 23rd and 32nd Ave E
2. 38th Avenue West, between 9th St W and Sheyenne St
3. 11th Street West, between 40th and 52nd Ave W
4. 47th Avenue West, between 9th St W and Sheyenne St

Study Area Map



^ Figure 4 | Priority and Alternate Study Locations

Public Engagement

During the West Fargo Traffic Calming Study, public engagement occurred at two (2) critical stages: (1) during the information gathering stage to understand the traffic calming issues including speeding, cut-through traffic, safety concerns, among other things and (2) during the development of the traffic calming measure toolbox to gauge the level of public support for the various infrastructure options that may be used to calm traffic in West Fargo.

Existing Conditions

Data was collected at the six (6) priority locations to create existing conditions and to analyze whether there were components of the built environment that may be contributing to a traffic calming problem. Existing conditions information includes roadway width, driving-lane width, parking-lane width if applicable, land use and nearby destinations, and other key features including but not limited to bicycle and pedestrian infrastructure, signage, striping, boulevard trees, and driveway access. Site-specific existing conditions can be found in **Appendix A**.

In many cases, the existing conditions revealed that local and collector classified neighborhood roadways in West Fargo are built much wider than the recommended minimums for an urban neighborhood setting. With existing driving-lanes ranging anywhere from 12 to 20-feet wide, the wider driving-lanes may be contributing to excessive vehicular speeds on residential streets across West Fargo. Under-utilized parking lanes also contribute to speeding, as on-street parking lanes can make the driving lanes appear wider than they actually are, exacerbating the tendency to speed.

Access driveways from residential properties along the street may also contribute to traffic calming challenges because the spacing of said driveways contributes to on-street parking underutilization. In some cases, there is not

Traffic Conditions

enough space to park a vehicle on-street between access driveways, again causing the driving-lanes to appear wider than they actually are.

Boulevard trees may also be a factor. Mature boulevard trees help to visually narrow a roadway which can help decrease speeds; however, a majority of neighborhoods in West Fargo have been recently developed, leaving little time for boulevard trees to mature. In some cases, in these newer developments, boulevard trees have not yet been planted, leaving open sightlines for drivers to comfortably travel at higher rates of speeds.

The existing conditions analysis also indicates that a big factor in traffic calming in West Fargo may lie in the urban design of neighborhoods and how the configuration of neighborhoods has often times created a single roadway spine of connectivity that causes speeding due to roadway circuity. Roadway circuity is the ratio of network to Euclidian distances (as the crow flies) and describes the directness of trips and the efficiency of the transportation network. An inefficient network can lead to speeding, as people travel round-about or indirect routes to get to most destinations. For example, a traditional grid street network is much more efficient (lower circuity ratio) than a street network with limited connectivity or frequent curves, circles, and, or dead-ends.

The existing conditions analysis highlights certain components of the built environment that may be contributing to higher vehicular speeds on residential streets in West Fargo. Some of the obvious issues such as driving-lane width, on-street parking, boulevard trees, and access drive spacing may be proactively addressed by revising the West Fargo Development Code with traffic calming in mind.

Traffic data was collected through portable pneumatic tube counters that were strategically deployed along the six (6) priority locations. The counters were deployed for a minimum of 48 hours during weekdays to collect traffic

speed and volume. An adjustment factor was applied to the collected traffic volume based upon the time of year and day of the week in which the traffic data was collected, which provides an Annualized Average Daily Traffic (AADT) estimate which is a standard traffic volume measurement. Standard traffic speed measurements such as median speed and 85th-percentile speed were also collected.

Metro COG also used StreetLight Data to calculate cut-through traffic by percentage of volume for each of the six (6) priority locations. Streetlight Data uses Location Based Services (LBS) data sets obtained from cellular data and GPS data to calculate origin-destination and estimated traffic volumes.

The cut-through percentage was estimated by first, defining a neighborhood geometry or boundary adjacent to the street being studied and then, calculated trips with an external origin and external destination from said boundary. The cut-through percentages help identify how streets may be functioning. For example, a high percentage of cut-through traffic on a local classified roadway may indicate that the roadway is functioning more as a collector. Cut-through traffic can also exacerbate the speeding problem associated with some residential streets in West Fargo and is one of the major secondary concerns the public had in relation to traffic calming aside from speeding. The traffic data collected through this study helped to identify and validate speeding or cut-through concerns identified by the West Fargo community.

Planning-Level Cost Estimates

General estimated costs based on national traffic calming resources were developed for each traffic calming measure and can be found in **Chapter 4.** Rather than specific numbers, a graphical scale indicates the level of investment the City of West Fargo may expect when implementing different options.

Planning-level cost estimates were developed for each traffic calming alternative scenario at the six (6) priority locations. The cost estimates include costs for implementing the recommended traffic calming measures and any incidentals that may be required. Cost estimates are only intended to be used at a planning level and should be refined with future project development. Site-specific cost estimates were developed for the six (6) priority locations based upon each location's preliminary traffic calming policy evaluation. Site-specific cost estimates may be found in **Appendix A**.

The cost estimates are based on West Fargo average bid prices and were developed by identifying major pay items and estimating rough quantities for implementation. Cost estimates do not include engineering, easement or right-of-way acquisition, permitting, inspection, construction management, surveying, geotechnical investigation, environmental documentation, site remediation, escalation, operations and maintenance, or unforeseen project-specific cost items. The cost estimate includes a 25% contingency that may account for some of the aforementioned costs. Cost estimates have been rounded up to to the nearest $5,000 and should be considered fiscal year 2021 dollars. Estimates may need to be inflated for the year in which a project is programmed.

Construction costs will vary based on project scope, site conditions and constraints, schedule, and the economic conditions at the time of construction.

Study Review Committee

Metro COG and the project team worked with a Study Review Committee (SRC) comprised of professional staff from various City of West Fargo departments. The SRC was involved through the entire duration of the Study and oversaw the study process, provided expert and technical advice, and guided key components of the project. The project team hosted three (3) SRC meetings throughout the process, covering the following topics:

Meeting 1

SRC meeting #1 was the kickoff meeting for the project and established the project process and ensured that all study participants or SRC members and the project team (Metro COG) shared a common understanding of the project goals and desired outcomes. There was a high-level overview of the six (6) priority locations including conversations about existing traffic calming issues and what complaints have been received by various departments. The meeting also introduced the methods used for traffic data collection and traffic calming resources being used to develop a traffic calming "menu". Consensus was established from the group for the public engagement approach to gather early input from residents living in the vicinity of streets being studied as part of the project.

Meeting 2

SRC meeting #2 occurred after the first round of public engagement occurred. Public feedback was discussed and themes of residents' concerns were established. Existing conditions and existing traffic conditions including initial traffic data were summarized. The focus of the meeting was on the preliminary traffic calming options and robust discussion was had about each specific option and the feasibility of implementation for each within the City. The SRC wanted to ensure that any traffic calming option shown to the public was within the realm of possibility for the City to build, operate, and maintain. Pros and cons for each option were established. The public engagement strategy to get residents' feedback on the options was discussed and solidified.

Meeting 3

SRC meeting #3 occurred after the second round of public engagement occurred. Discussion included public feedback, traffic calming alternative matrix, site-specific alternatives, and traffic calming policy. The focus of the meeting was on the site-specific alternatives and traffic calming policy. The SRC wanted to ensure that an objective, technical evaluation process was established to identify traffic calming projects. Based upon the discussion it was determined that the six (6) priority locations provided a baseline understanding of traffic calming issues occurring throughout West Fargo and would be used to craft the traffic calming policy. With the traffic calming policy and preliminary technical evaluation criteria established, the six (6) locations would then be evaluated for a traffic calming project in an appendix, Appendix A.

Study Review Committee Members

Andrew Wrucke, West Fargo Engineering

Ari Del Rosario, Metro COG

Cindy Gray, Metro COG

Dan Farnsworth, Metro COG

Denis Otterness, West Fargo Police

Luke Champa, Metro COG

Malachi Petersen, West Fargo Planning

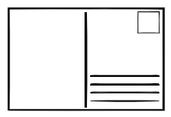
Scott Tiffany, West Fargo Public Works

Tim Solberg, West Fargo Administration

3| Community Engagement Overview

Community engagement occurred between May and August of 2021. There were **386 surveys** taken by residents. Two (2) surveys were used during the public engagement for the Study including the first survey, which was used to identify specific traffic calming concerns along the priority locations and the second survey, which was used to understand the level of support for potential traffic calming measures. Metro COG and the City of West Fargo also hosted three (3) separate pop-up meetings which were in-person events used to chat with interested residents face to face and receive feedback regarding the different traffic calming options. Over 12 people attended the pop-up events. For detailed public engagement results, see **Appendix B.**

With the continued and evolving landscape of the COVID-19 public health crisis, the project team chose to approach public engagement with a focus on virtual or online opportunities however, in-person outdoor options were also offered for those more interested in providing feedback in a traditional setting. The following outreach methods were used to engage with the West Fargo community during the project, including:



Postcards

Social Media (Facebook)

Surveys

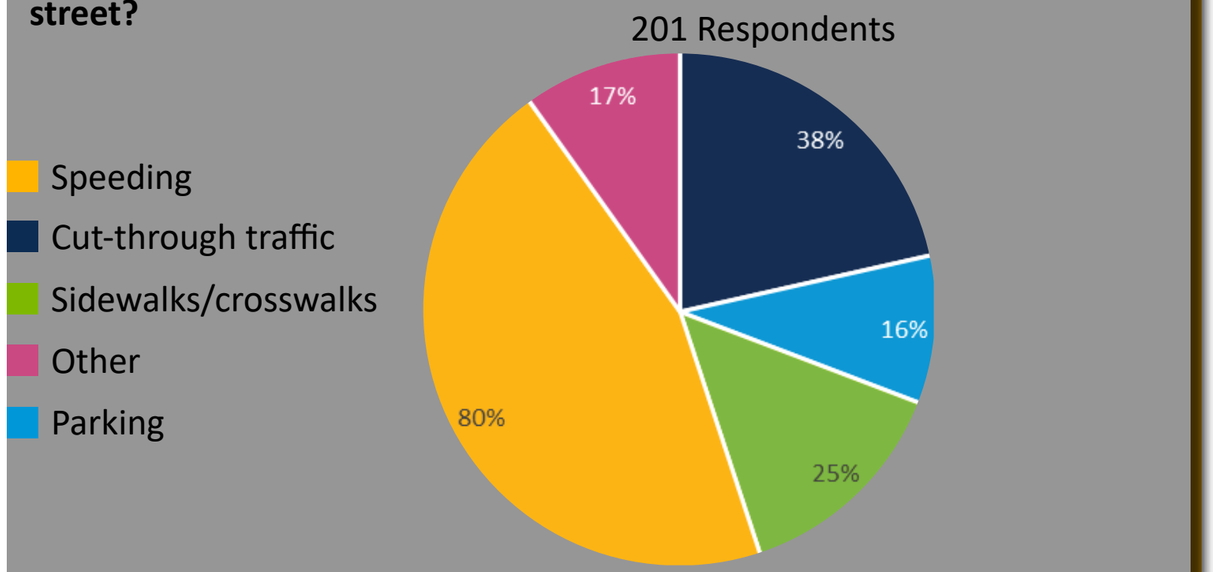
Pop-up Events

Emails

Webpage Updates

Interesting Survey Results

What major concerns do you have in regards to traffic calming along the street?



^ Figure 5 | What major concerns do you have in regards to traffic calming along the street? (priority locations)

One of the survey questions asked respondents if they personally speed along one of the streets being studied; interestingly a vast majority of survey respondents did not admit to speeding very often. However, of the 135 respondents that admitted to driving above the speed limit at times, they believed not paying attention (31%) and street design (29%) were the top reasons causing them to speed.

Most respondents (89% of respondents) perceived more speeding between 3:00 p.m and 5:59 p.m. than any other time of day.

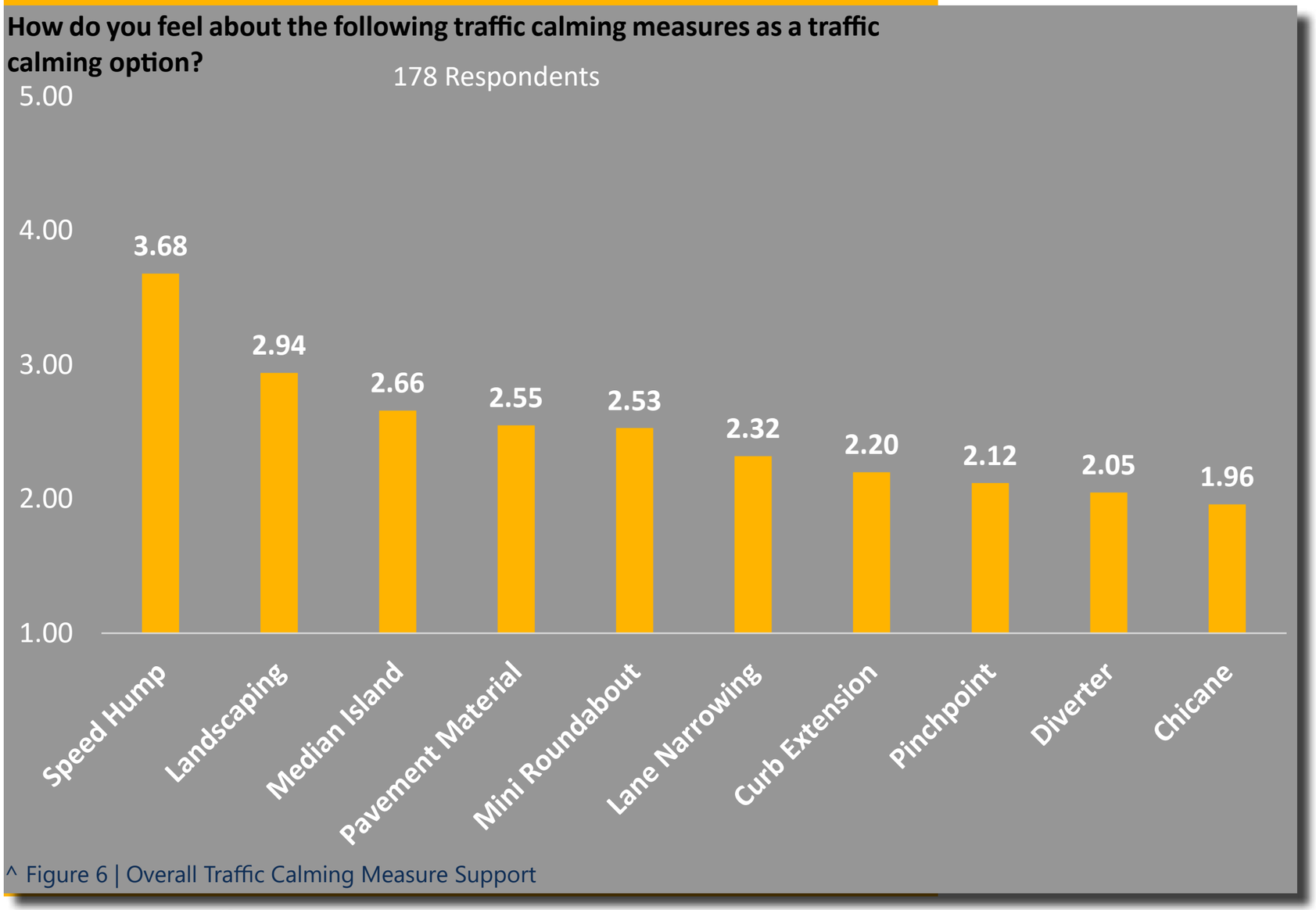
Respondents indicated their primary mode of travel along the priority locations is driving or riding in a vehicle with walking or running happening less and bicycling or other similar mode trips occurring least of all. Interestingly, respondents indicated feeling more safe in a vehicle, less safe walking or running, and least safe biking or other similar mode.

Pop-up engagement event held at Elmwood Park August 9, 2021

Pop-up engagement event held at Shadow Wood Park and Splash Pad August 10, 2021.

Overall Traffic Calming Measure Support

The second survey included graphics and text explaining each traffic calming measure. For each traffic calming measure, community members were asked “How do you feel about [insert traffic calming measure] as a traffic calming option?” The chart on this page reflects the overall results of the online survey and the in-person survey activity from the pop-up events. Ratings are on a 1 to 5 scale, with 5 = strongly support.



^ Figure 6 | Overall Traffic Calming Measure Support

4 | Traffic Calming Measures

The project team developed a complete set of potential implementable traffic calming solutions based upon national literature. The primary resources to develop a comprehensive list of options included reports published by the Institute of Transportation Engineers (ITE) and the National Association of City Transportation Officials (NACTO). The project team, with major contribution from the SRC, then narrowed down the list to realistic and feasible traffic calming solutions for the City of West Fargo to implement. By focusing on budget feasibility, effectiveness, maintenance, and other criteria such as emergency services or vehicular impacts, an implementable list of traffic calming measures was derived. The team also looked for examples that have been implemented successfully in the FM Area or broader region where similar weather, roadway operations, and maintenance occurs. The list of traffic calming measures is as follows:

Lane Narrowing

Curb Extension

Pinchpoint

Chicane

Median Island

Mini Roundabout

Speed Hump

Pavement Material

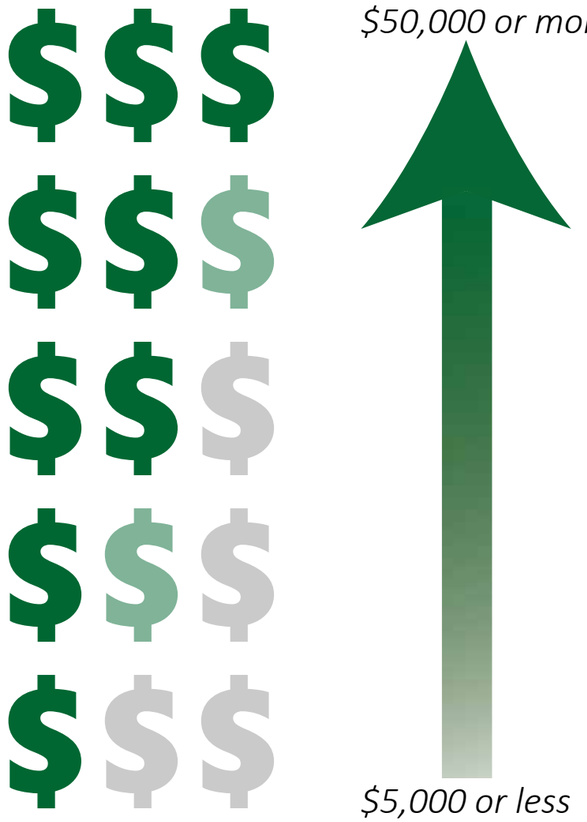
Diverter

Landscaping

This section lists each traffic calming option and includes information about cost, maintenance, and effectiveness or potential speed reduction for each.

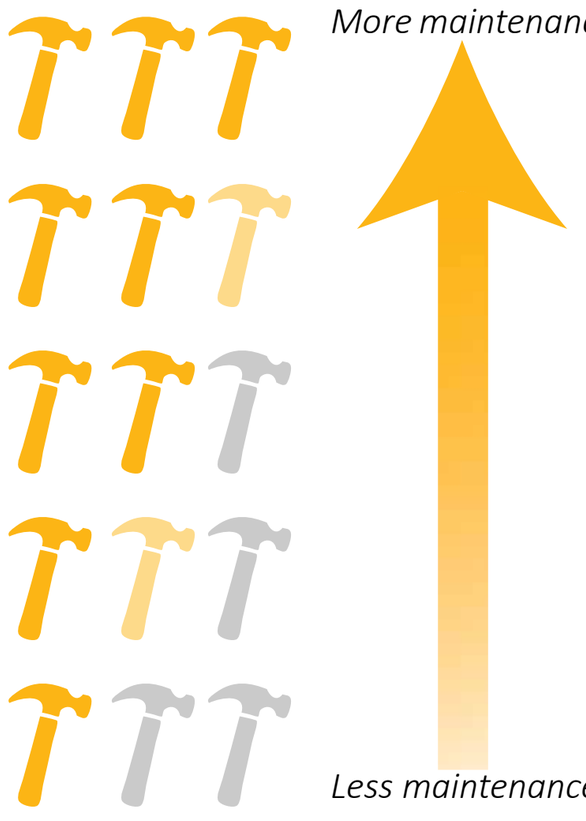
Cost

The scale below is given for traffic calming measures to represent the estimated cost of construction based upon City of West Fargo Engineering Department estimates.



Maintenance

The scale below is given for traffic calming measures to represent the long-term operations and maintenance effort based upon City of West Fargo Streets Department estimates.

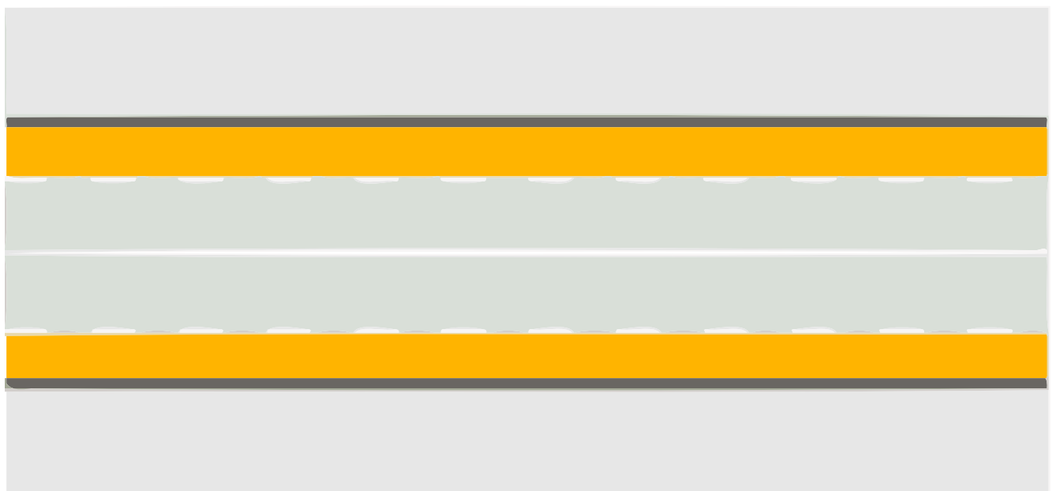


Effectiveness

The following ribbons indicate speed reduction potential of each traffic calming measure that may be expected after implementation and is based upon FHWA and ITE literature and research on traffic calming effectiveness.

Lane Narrowing

(Road Diet, On-Street Parking, Pavement Striping)



^ Figure 7 | Plan View Graphic, Lane Narrowing (NACTO)

Potential Speed Reduction
-1 to -2 MPH
Basic

Description

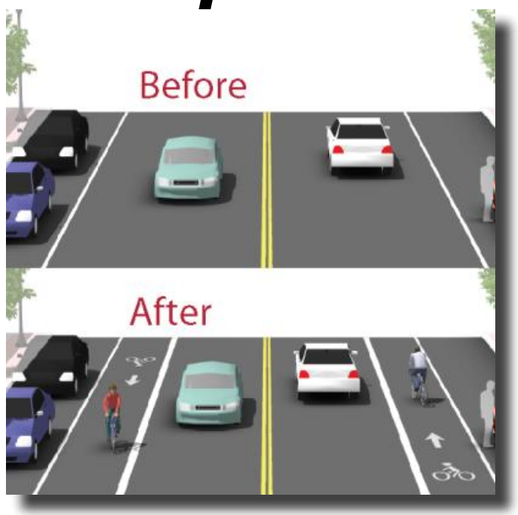
Narrow lanes are well known to reduce speed and keep drivers more alert on the street. Lane narrowing, also known as a road diet, can be achieved through pavement striping or reduction of pavement however, due to the estimated cost of reducing pavement, that option for lane narrowing is much less likely to be implemented in West Fargo. Reduced travel lane widths allow for other roadway features that may add to livability including extended curbs, bike lanes, or on-street parking.

Cost & Maintenance

$$$ TTT

Dependent on roadway length. Costs increase exponentially if pavement reduction is pursued which moves or adds curb and gutter.

Examples



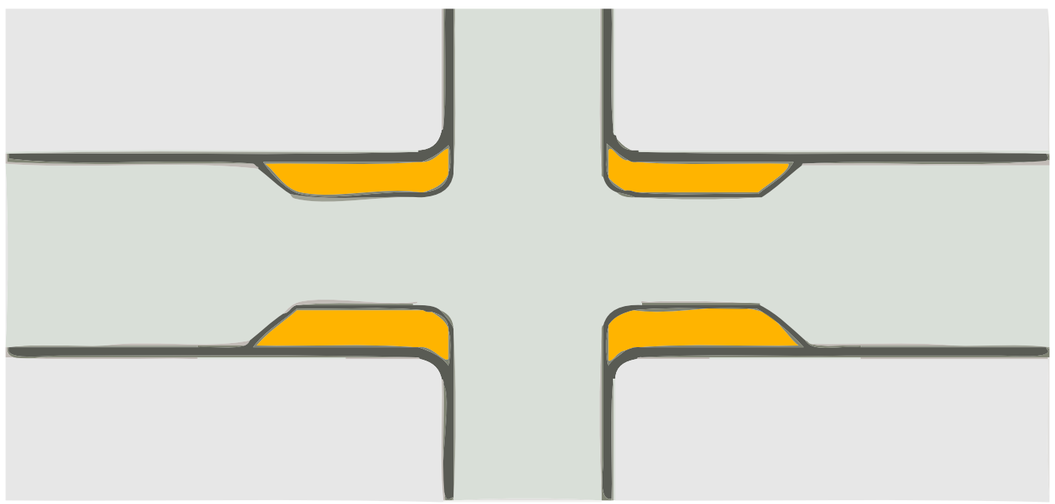
Braintree, MA neighborhood traffic calming visualization.

Roland, IA shoulder markings used to narrow travel lanes.

Pros	*Cons*
+ May allow for bike lanes, additional parking, or other roadway features that enhance livability	- May not be effective if lanes are not significantly narrowed
+ Low cost solution	

Curb Extension

(Corner Extension, Corner Radii, Bulb-Out)



^ Figure 8 | Plan View Graphic, Curb Extensions (NACTO)

Potential Speed Reduction
-3 to -4 MPH
Fair

Description

Extensions of the sidewalk and curb can narrow the street at strategic intersections. Curb extensions can improve safety by slowing vehicle turning speeds, reducing pedestrian crossing distances, and increasing pedestrian visibility. Curb extensions can increase the livability of neighborhoods by enhancing pedestrian friendliness and safety. Historically, West Fargo has used curb extensions to delineate on-street parking or to improve pedestrian safety at high pedestrian traffic locations.

Cost & Maintenance

$$$ TTT

Dependent on length and width of extension. Winter maintenance is the biggest concern with curb extensions.

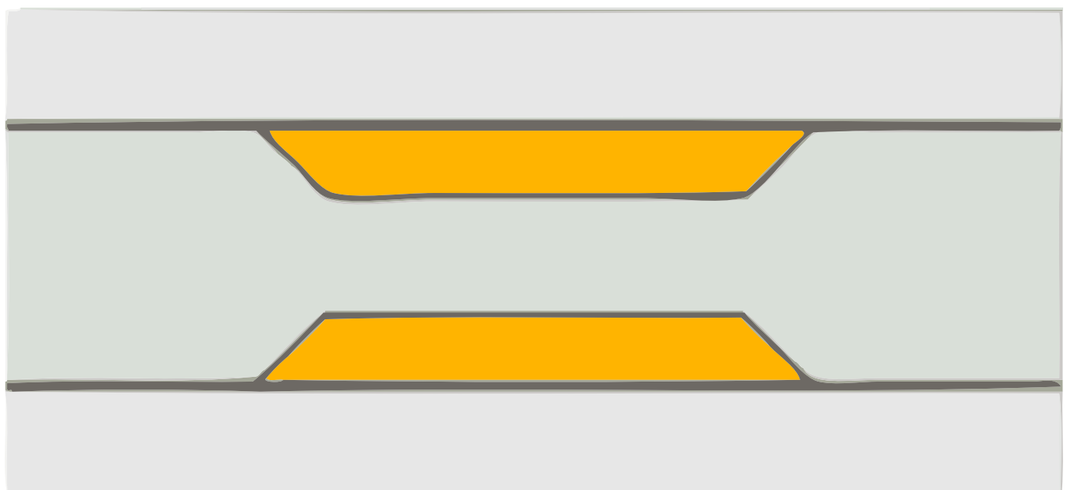
Pros	*Cons*
+ Slows vehicular turning and through movements	- Buses and heavy trucks including some emergency vehicles may have difficulty making turns
+ Improves pedestrian visibility and safety	- Realigned drainage may increase costs and maintenance
	- Snow removal impacts

Examples

Yellow-painted curb extension narrows the roadway along 30th Ave E in West Fargo, ND

Curb extension narrows crossing of 1st St E near South Elementary School in West Fargo, ND

Pinchpoint
(Choker)



^ Figure 9 | Plan View Graphic, Pinchpoint (NACTO)

Potential Speed Reduction
-3 to -4 MPH
Fair

Description

Pinchpoints narrow the roadway at a strategic mid-block point which helps lower vehicular speeds. The pinchpoint can narrow travel lanes at strategic locations and provides a visual constriction of the roadway to influence driver behavior. A more dramatic example, the one-lane choker, can force two-way traffic to take turns entering through the pinchpoint, reducing vehicular speeds and keeping drivers alert.

Cost & Maintenance

$$$ TTT

Dependent on roadway length. Costs increase exponentially if pavement reduction is pursued which moves or adds curb and gutter.

Examples

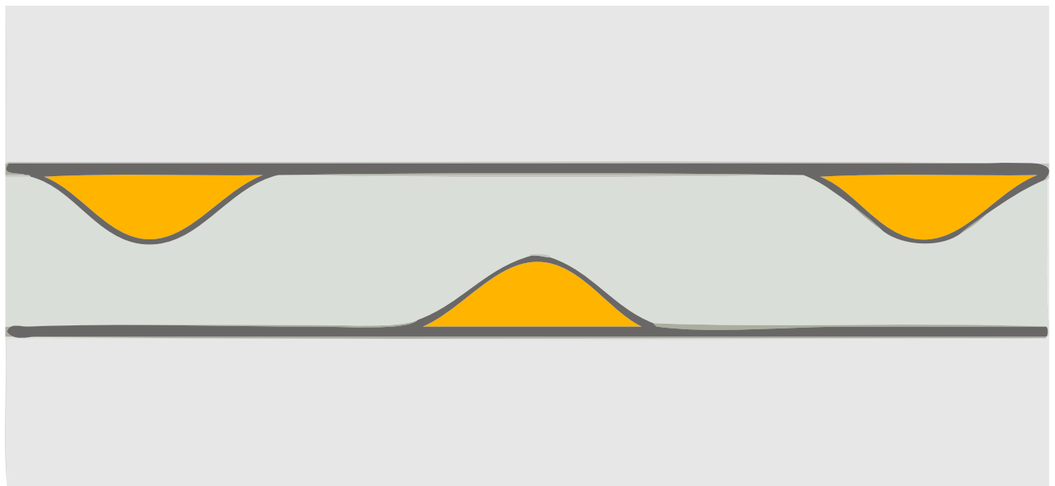
Choker narrows the roadway in St. Louis Park, MN

Traffic island narrows a roadway in Toronto, ON

Pros	*Cons*
+ Slows traffic at mid-block locations	- May require on-street parking removal
+ Keeps drivers alert	- Uncomfortable for bicyclists whom may be sharing the travel lane
	- Snow removal impacts

Chicane

(Lane Shift, Lateral Shift, Realigned Intersection)



^ Figure 10 | Plan View Graphic, Chicane (NACTO)

Potential Speed Reduction
-6 to -9 MPH
Good

Description

Chicanes slow vehicular traffic by alternating curves or lane shifts, creating an S-shaped travel path. Chicanes are strategically created by placing parking, curb extensions, or edge islands along the roadway to force motorists to steer back and forth. This method can greatly impact driver behavior through visual and physical roadway design cues, causing vehicular traffic to slow down.

Cost & Maintenance

$$$ TTT

Dependent on length and width of chicane. Winter maintenance, drainage, and street-sweeping are the biggest concerns with chicanes.

Examples

Chicane with added landscaping in Seattle, WA

Chicane shifts traffic on a one-way street in Toronto, ON

Pros	Cons
+ Significantly slows vehicular traffic	- Buses and heavy trucks including some emergency vehicles may have difficulty moving through chicanes
+ Typically does not require utility relocation	- Realigned drainage may increase costs and maintenance
	- Snow removal impacts
	- Street-sweeping impacts

Median Island

(Median, Refuge Island, Median Island Intersection, Median Island Midblock)

Potential Speed Reduction
-3 to -6 MPH
Fair

^ Figure 11 | Plan View Graphic, Median Island (NACTO)

Description

Raised median islands in the center of the roadway can slow vehicular traffic by narrowing travel lanes and creating a visual constriction of the roadway. Medians, when designed properly can also be used as a pedestrian refuge, increasing pedestrian safety at strategic crossing locations. Historically, West Fargo has implemented medians on busier roadways across the City to increase safety and aesthetics.

Cost & Maintenance

$$$ TTT

Dependent on roadway length. Costs increase exponentially if pavement reduction is pursued which moves or adds curb and gutter.

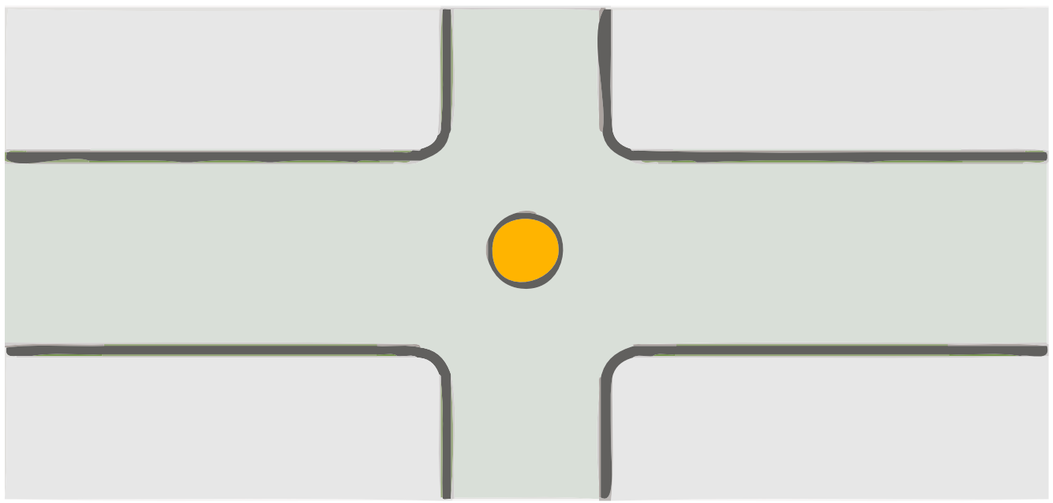
Examples

Median island on 13th Ave W in West Fargo, ND

Median refuge island on 18th Ave W in Fargo, ND

Pros	*Cons*
+ Slows traffic by narrowing travel lanes	- May restrict turning access into or out of driveways
+ Can shorten pedestrian crossing distances and enhance safety	- May require removal of on-street parking

Mini Roundabout
(Traffic Circle)



^ Figure 12 | Plan View Graphic, Mini Roundabout (NACTO)

Potential Speed Reduction
-4 MPH
Fair

Description

Roundabouts can help slow and organize vehicular traffic at intersections. Roundabouts keep drivers alert, requiring vehicles to move with caution and yield to other vehicles. West Fargo has implemented roundabouts across the City however, admits the design and implementation of mini roundabouts has not been a straightforward success.

Examples

Mini roundabout on 19th Ave W in West Fargo, ND

Mini roundabout in Athens, OH

Cost & Maintenance

$$$ TTT

Depends upon the design and dimensions of the roundabout which may impact right-of-way (ROW) acquisition.

Pros	*Cons*
+ Slows vehicular traffic at intersections	- Buses and heavy trucks including some emergency vehicles may have difficulty moving through roundabouts
+ Can reduce crash severity	- Uncomfortable for bicyclists whom may be sharing the travel lane

Speed Hump

(Speed Cushion, Speed Table, Raised Intersection, Raised Crosswalk)

^ Figure 13 | Plan View Graphic, Speed Hump (NACTO)

Potential Speed Reduction
-6 to -8 MPH
Good

Description

Speed humps, speed cushions, or speed tables use a vertical offset to slow vehicles at strategic locations. Raised intersections are similar to speed tables however, the entire intersection is raised. By forcing part or all of a vehicle's wheelbase upward, drivers must slow down in order to travel over speed humps comfortably. West Fargo has recently implemented more speed humps on lower traffic volume streets or other strategic parts of the City to slow down traffic and increase safety.

Cost & Maintenance

$$$ TTT

Dependent on design and pavement material choice.

Examples

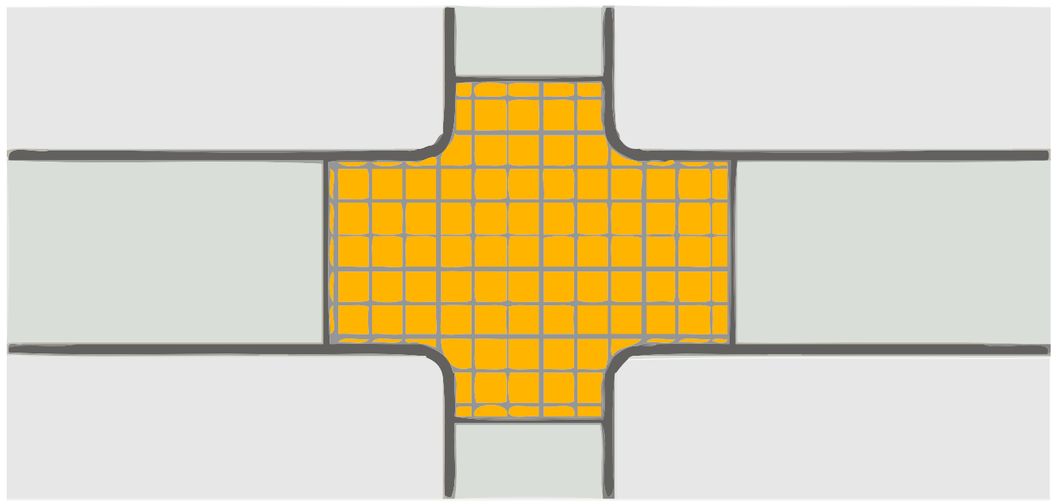
Raised crosswalk on 19th Ave W in West Fargo, ND

Speed bump on Golf Course Road in Fargo, ND

Pros	*Cons*
+ Forces a significant speed reduction	- Speeds may increase after or between speed humps
+ Can be an effective yet low-cost solution	- Speed humps force emergency vehicles to slow down

Pavement Material

(Pavement Markings)



^ Figure 14 | Plan View Graphic, Pavement Material (NACTO)

Potential Speed Reduction
-1 to -2 MPH
Basic

Description

Pavement appearance can be uniquely altered through treatments that add visual interest, such as colored or pattern-stamped asphalt, concrete, or brickwork. Pavement material is typically used to alert drivers, particularly at strategic crossings or intersections. Aside from the visual appearance, certain pavement textures may also physically vibrate vehicles, causing drivers to feel and hear the difference in driving surface which can slow travel speed and increase awareness on the roadway.

Cost & Maintenance

$$$ TTT

Depends upon the quantity and type of paving material or if paired with a raised intersection.

Pros	*Cons*
+ Can be low-cost depending on material used	- Minimal speed reduction
+ No impact on drainage or access	- Pavement may require more long-term maintenance especially if brickwork is used

Examples

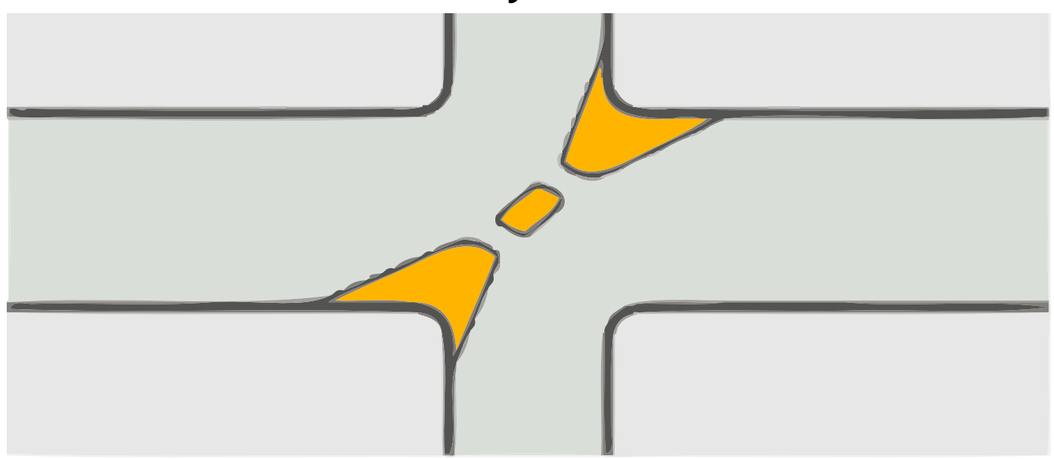
Raised, stamped, and stained intersection near Freedom Elementary in West Fargo, ND

Intersection pavement material in downtown Fargo, ND

Diverter

(Closure, Partial Closure, Diagonal Diverter, Median Barrier, Forced Turn Island, Forced Turn Island, Bicycle Boulevard, Semi-Diverter)

Potential Speed Reduction
NA
Traffic is Diverted
Fair



^ Figure 15 | Plan View Graphic, Diverter (NACTO)

Description

Diverters and other traffic volume management strategies restrict movement along a roadway while maintaining access for bicyclists and pedestrians. Diverters move traffic to other parallel streets. West Fargo has not utilized diverters in the past and given the non-traditional development patterns of the project study area, the only feasible locations for application are in older West Fargo neighborhoods, where a traditional development pattern with gridded street network exists.

Cost & Maintenance

$$$ TTT

Costs increase with more complex designs and full closures.

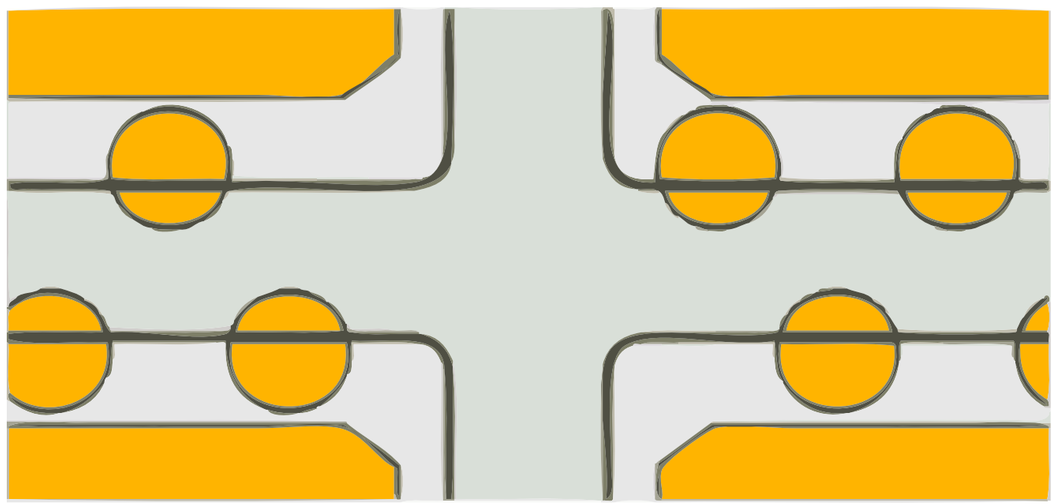
Examples

Diverter in residential area of Minneapolis, MN

Bicycle boulevard diverts vehicular traffic in Rochester, NY

Pros	*Cons*
+ Reduces traffic volumes and speeds along the corridor	- May increase traffic on nearby streets
+ Improves pedestrian and bicycle safety	- May impact ease of access to properties

Landscaping
(Building Lines, Street Trees)



^ Figure 16 | Plan View Graphic, Landscaping (NACTO)

Potential Speed Reduction
NA
Depends on Context
Basic

Description

A denser built environment with street trees or no significant building setbacks can narrow a driver's visual field. This can help keep drivers more alert and aware of neighborhood surroundings and can create a visual constriction of the roadway to influence driver behavior.

Cost & Maintenance

$$$ TTT

Depends upon landscaping size and quantity. Operations and maintenance efforts may increase in some areas and decrease in others.

Pros	Cons
+ Does not alter roadway use of space or access	- May not be as effective unless tree coverage is significant or building setbacks are reduced to zero
+ Increases roadway aesthetics and livability	- May take decades for boulevard trees to fully mature

Examples

Very mature street trees providing canopy coverage of 4th St N in Fargo, ND

Large street trees maturing in the Charleswood neighborhood of West Fargo, ND

Local Traffic Calming Examples

The study team, with help from the SRC, identified numerous local examples of existing traffic calming infrastructure that has been implemented in West Fargo and Fargo. Although the effectiveness of local traffic calming infrastructure was not studied through this report, there is precedent that traffic calming infrastructure can be implemented successfully and maintained through the oftentimes harsh climate and weather events experienced in this region.

Median Island

13th Ave W in West Fargo, ND

18th Ave W in Fargo, ND

Curb Extensions

30th Ave E in West Fargo, ND

1st St E near South Elementary School in West Fargo, ND

Mini Roundabout

19th Ave W in West Fargo, ND

Speed Hump

19th Ave W in West Fargo, ND

Golf Course Road in Fargo, ND

Pavement Material

Freedom Elementary in West Fargo, ND

Downtown Fargo, ND

Landscaping

4th St N in Fargo, ND

Charleswood neighborhood of West Fargo, ND

Evaluation Matrix - Traffic Calming Measures

Traffic Calming Measure	*Estimated Cost*	*Maintenance*	*Potential Speed Reduction*	*Public Support Score*	*Technical Support Score[1]*	*Access Friendly*	*Parking Friendly*	*Neighborhood Enhancement[2]*
Lane Narrowing	$	🔨	-1 to -2 MPH	2.32	4.00	✓	✓	✗
Curb Extension	$$	🔨🔨	-3 to -4 MPH	2.20	4.17	✓	✗	✓
Pinchpoint	$$	🔨🔨	-3 to -4 MPH	2.12	3.50	✗[3]	✗	✓
Chicane	$$$	🔨🔨🔨	-6 to -9 MPH	1.96	2.67	✗[3]	✗	✓
Median Island	$	🔨🔨	-3 to -6 MPH	2.66	4.00	✗	✗	✓
Mini Roundabout	$$	🔨🔨	-4 MPH	2.53	3.17	✓	✓	✓
Speed Hump	$	🔨🔨	-6 to -8 MPH	3.68	3.33	✗[3]	✗[3]	✗
Pavement Material	$$	🔨🔨	-1 to -2 MPH	2.55	3.50	✓	✓	✓
Diverter	$$$	🔨🔨	NA	2.05	2.33	✗	✓	✓
Landscaping	$$$	🔨	NA	2.94	4.67	✓	✓	✓

The alternative evaluation matrix may be used by the City of West Fargo during future traffic calming project development to weigh different options side-by-side based upon the existing conditions and various factors of the street being evaluated.

[1]Similar to the public support score, the technical support score is derived from SRC-specific survey responses regarding support of the traffic calming options.

[2]Neighborhood enhancement options are those which may enhance the character of West Fargo by adding greenspace or other elements of detailed aesthetic. These measures may also be considered a neighborhood enhancement project that may be programmed outside of a traffic calming specific project.

[3]Pinchpoints, chicanes, and speed humps may be harder to fit in certain areas with access driveways on both sides of the street. Speed humps also may not impact on-street parking depending on the design.

5 | Traffic Calming Recommendations

Chapter 5 provides community-wide prioritized recommendations for the City of West Fargo to address traffic calming concerns. The recommendations are based upon analysis of the root issues identified at the six (6) priority locations defined in Chapter 2 of this report. The recommendations found in this Chapter (Chapter 5) should be considered the priority recommendations to address traffic calming issues across the City of West Fargo.

Step 1 | Traffic Calming Policy

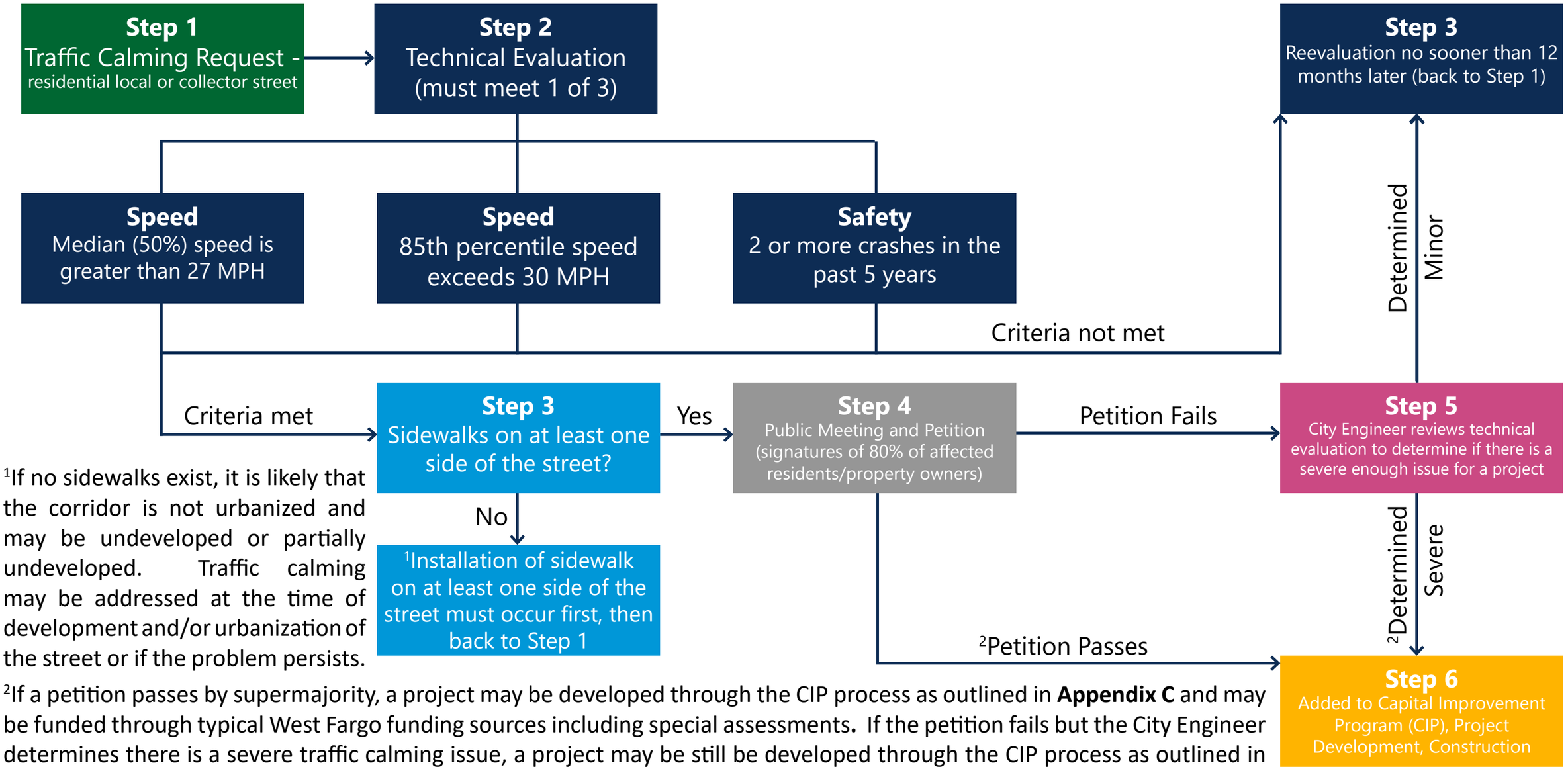
Highest Priority

This Study lays out a preliminary traffic calming policy flow-chart that establishes objective technical criteria that would warrant a traffic calming project. Traffic calming projects should only be considered on roadways with a federal functional classification of local or collector.

The City of West Fargo should *develop* and *adopt* a Traffic Calming Policy based upon objective technical criteria. The policy should only be a few pages long and clearly describe the process and technical evaluation criteria that all traffic calming project requests will go through in West Fargo.

Draft Traffic Calming Policy Flowchart

One of the highest priority recommendations of the West Fargo Traffic Calming Study is for the City Commission to establish and approve a traffic calming warrant policy. The warrant policy will be used by Engineering Department staff to evaluate whether requests for traffic calming are warranted based upon technical criteria. The traffic calming policy will provide transparent and clear guidance to the public, and help ensure objectivity when programming traffic calming projects. The City Engineer will conduct the review of all traffic calming requests. The flowchart below, details the request



[1]If no sidewalks exist, it is likely that the corridor is not urbanized and may be undeveloped or partially undeveloped. Traffic calming may be addressed at the time of development and/or urbanization of the street or if the problem persists.

[2]If a petition passes by supermajority, a project may be developed through the CIP process as outlined in **Appendix C** and may be funded through typical West Fargo funding sources including special assessments**.** If the petition fails but the City Engineer determines there is a severe traffic calming issue, a project may be still be developed through the CIP process as outlined in **Appendix C** however, special assessments may not be used to fund the project and alternate sources will be pursued.

Step 2 | Priority Locations

The evaluation of the six (6) priority locations against the preliminary traffic calming policy indicates that the following locations meet the criteria to be eligible for a traffic calming project. See **Appendix A** for site-specific evaluation and prioritization details. Locations below are listed in order of priority based upon technical evaluation and should be considered for project programming through the Traffic Calming Policy process:

1st | 16th St E, south of 13th Ave E

2nd | 15th Ave E, between 6th and 9th St E

3rd | Beaton Dr, between Sheyenne St and 9th St E

4th | 10th St W, south of 13th Ave W

5th | 7th St W, between 15th and 19th Ave W

6th | 2nd St E, between 32nd and 40th Ave E

See **Appendix A** for site-specific existing conditions, traffic conditions, planning-level cost estimates, and preliminary technical evaluation matrix.

Step 3 | Alternate Locations

The City should collect existing conditions and traffic data at the four (4) alternative locations identified in this Study. These locations should be next on the list for formal traffic calming policy evaluation based upon complaints received by City departments over the last several years.

Step 4 | Development Code

This Study also identifies areas within the City's development code that should be revised to proactively address root traffic calming issues caused by development across the City including the following:

Boulevard Trees | Chapter 4, Title IV, Section 4-449-A
West Fargo should consider strengthening the boulevard tree standard to require minimum spacing of boulevard trees by classification of the roadway and timing of boulevard tree planting after development. Clarification for the responsibility of boulevard tree planting on double-fronting lots should also be considered.

Based on the existing conditions analysis of priority corridors, consistency of boulevard tree planting could also be improved in West Fargo. One way to accomplish this would be to make the planting boulevard trees the sole responsibility of the City, funded through an adjustment to forestry department fees. An alternative could be more strict enforcement of landscaping standards to ensure consistent planting and establishment of boulevard trees.

Driveway Spacing | Title II, Chapter 2, Section 2-0119
The City should consider increased driveway spacing in certain contexts where on-street parking may also be present. Factors to consider when determining proper driveway spacing should include land use such as whether or not twin homes or town homes abut the street and if parking will be allowed on both sides. Existing conditions analysis of priority corridors indicates that on-street parking is underutilized under certain conditions, effectively creating wider travel-lanes that contribute to higher vehicular speeds. Driveway spacing can negatively impact on-street parking utilization and boulevard tree spacing.

On-Street Parking | Title IV, Chapter 4, Section 4-434.4
West Fargo should consider establishing more robust on-street parking

regulations on local and collector roadways. Encouraging on-street parking in applicable areas where utilization may be high, can visually narrow the roadway, making higher vehicular speeds less comfortable for drivers and provides a buffer between traveling vehicles on the street and pedestrians along the sidewalk.

Road/Lane Width | Title IV, Chapter 4, Section 4-0406.3

West Fargo may consider revising ordinance language in regards to local and collector street widths to have a maximum width or not to exceed width (rather than a minimum width) based upon the number of travel- and on-street parking lanes. An 11-foot maximum travel lane and 8-foot maximum parking lane is encouraged however, different standards could be modified within reason based upon land use. Narrowing roadway pavement is one of the most effective ways to proactively discourage speeding, enhance safety, and is much more financially sustainable in the long-term task of roadway operations and maintenance.

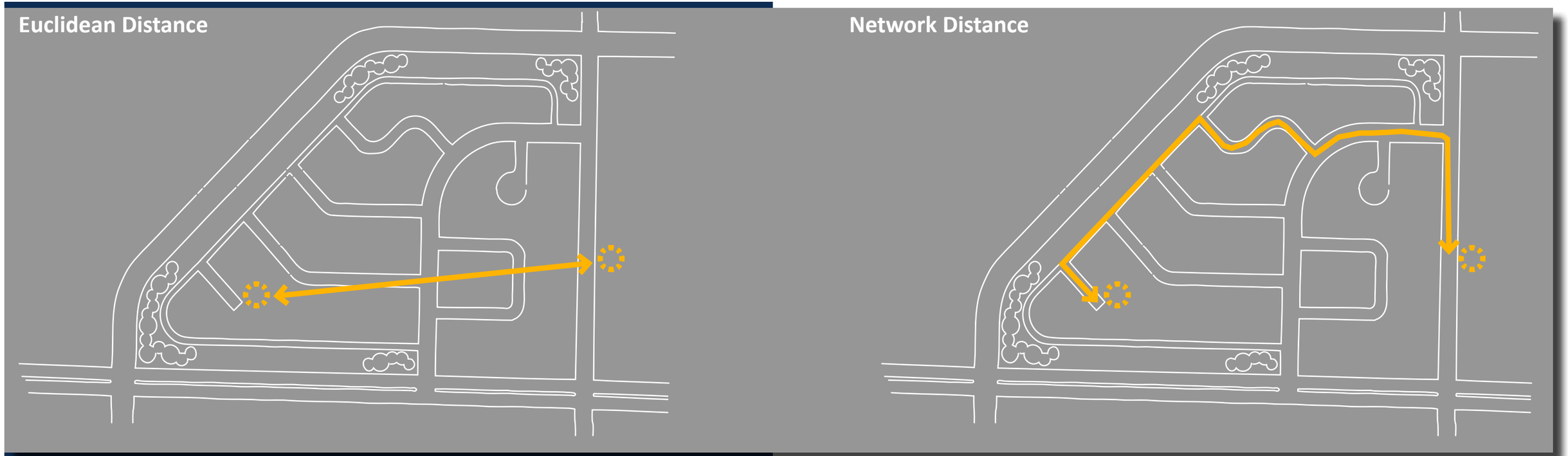
Road Network Circuity | Title IV, Chapter 4, Section 4-04

The City should add language regarding roadway network circuity or network efficiency to the Subdivision Regulations. Even as a simple concept, encouraging network efficiency will help improve traffic operations and safety on City of West Fargo streets, proactively calming traffic by increasing directness of vehicular travel.

See below regarding how Road Network Circuity can be calculated. The figure on the following page shows the basic concept of network circuity and how connectivity increases directness of vehicular travel.

$$\textbf{Road Network Circuity Ratio} = \frac{\textbf{Network Distance}}{\textbf{Euclidian Distance}}$$

The lower the calculated ratio, the higher the connectivity and directness of travel.



<^ Figure 17 | Road Network Circuity Concept

Step 5 | Refinement

West Fargo should refine and update the Traffic Calming Policy and this Study to reflect what is working and what is not. For example, if every project evaluated through the Traffic Calming Policy meets the criteria, the City may want to adjust the technical evaluation criteria to weed out roadways with less of a traffic calming problem. This will help ensure that major traffic calming issues are being programmed and that budget is being prioritized for locations with the worst problems. The Traffic Calming Study itself may also need updating to reflect best practices, effectiveness, and/or public support for various traffic calming measures identified within.

Step 6 | Traffic Calming Program

The City should have in place a clear and transparent Traffic Calming Program that residents, City staff, and policy-makers can easily understand. The Traffic Calming Program is the City's Traffic Calming Policy in action and will ultimately help meet the goals and objectives of West Fargo's Comprehensive Plan, *West Fargo 2.0* and to uphold the City's reputation as a wonderful place to live.

6 | Traffic Calming Program Funding

The traffic calming program should be funded by the typical funding sources West Fargo uses to pay for capital improvements. Funding sources may include:

Capital Sales Tax

Utility Fees

Outside Funds
- **-Local & State Agencies - Cost Shares**
- **-State and Federal Grants**

Special Assessments

General and/or other Bonds

Other City Funds
- **-Special use funds (TIF, Economic Development)**

Highway Safety Improvement Program (HSIP)

The North Dakota Department of Transportation (NDDOT) Highway Safety Improvement Program (HSIP) provides discretionary or competitive federal funding for projects to achieve significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related safety improvements which would include traffic calming measures. If there are high instances of crashes at a given location being evaluated through the Traffic Calming Policy, a traffic calming project or portions thereof, may be eligible for HSIP funds. HSIP program funds can provide up to 90% federal cost participation for eligible projects and should be pursued for applicable traffic calming projects in West Fargo to help offset the costs associated with implementing traffic calming.

7 | Resources

In the West Fargo Traffic Calming Study, there are numerous references to national standards for traffic calming and roadway design engineering from the following sources:

-Federal Highway Administration (FHWA) Office of Safety. Traffic Calming ePrimer. Available: https://safety.fhwa.dot.gov/speedmgt/traffic_calm.cfm Accessed June 2021. Last Modified: February 15, 2017.

-Institute of Transportation Engineers (ITE). Traffic Calming Measures Guide. Available: https://www.ite.org/technical-resources/traffic-calming/traffic-calming-measures/ Accessed June 2021. Last Modified:

-National Association of City Transportation Officials (NACTO). Urban Street Design Guide. https://nacto.org/publication/urban-street-design-guide/design-controls/design-speed/speed-reduction-mechanisms/ Accessed June 2021. Last Modified: September, 2013.

-Federal Highway Administration (FHWA). Manual on Uniform Traffic Control Devices (MUTCD). Available: https://mutcd.fhwa.dot.gov/ Accessed June 2021. Last Modified: June 21, 2021.

West Fargo Traffic Calming Program Contact

Dustin Scott, PE
City Engineer
Contact Form (link)
(701) 515-5000

METROCOG Fargo-Moorhead Metropolitan Council of Governments

Case Plaza Suite 232 | One 2nd Street North
Fargo, North Dakota 58102-4807
p: 701.232.3242 | f: 701.232.5043
e: metrocog@fmmetrocog.org
www.fmmetrocog.org

To: Transportation Technical Committee

From: Ari Del Rosario

Date: February 4, 2022

Re: Update on Federal Functional Class System

The last official update to the ND side of Fargo's Federal Functional Classification System was back in 2008. Policy Board approved a list of changes to the MPO's Urban Functional Classification network for NDDOT's consideration at their March 21, 2019 meeting. The approval indicated MPO member jurisdictions' support to update the network. This update reflected changes that address new roadway developments, the expanded negotiated Urbanized Area Boundary, and new FHWA Guidance.

In the past month, this large update, which has been under review by NDDOT for over two years, has been completed and approved by NDDOT and will now be submitted to FHWA for their review and approval.

Since a number of roadway improvements have been completed since this update was initiated, we will likely need to process another smaller update within the next year.

Requested Action: None. We will update the TTC once FHWA has reviewed the update request.

METROCOG Fargo-Moorhead Metropolitan Council of Governments

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Fargo, North Dakota 58102-4807
p: 701.532.5100 | f: 701.232.5043
e: metrocog@fmmetrocog.org
www.fmmetrocog.org

To: Transportation Technical Committee
From: Cindy Gray, Executive Director
Date: February 4, 2022
Re: **Infrastructure Investment and Jobs Act (IIJA) Planning Emphasis Areas and Future Needs for Metro COG Studies and Plans**

Attachment 1 to this memo is a document that summarizes the planning emphasis areas of the IIJA. They include:

- Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future
- Equity and Justice40 in Transportation Planning
- Complete Streets
- Public Involvement
- Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination
- Federal Land Management Agency (FLMA) Coordination
- Planning and Environment Linkages (PEL)
- Data in Transportation Planning

We will be learning more about the specific intent of each of these emphasis areas in the near future.

Attachment 2 to this memo is an updated list of projects that have been suggested in the past as well as one or two new projects for MPO required plans such as our Metropolitan Transportation Plan, which is due for an update by fall of 2024. Since estimates for the 2023 budget will be prepared in the spring, followed by the 2023-2024 Unified Planning Work Program (UPWP) during the summer for adoption in the fall of 2022, it is important that we revisit this list to identify new project needs and to prioritize projects for inclusion in future UPWPs. I do not expect the TTC to come up with projects at our February meeting. Instead, I will bring this back to you at our March meeting, and will incorporate whatever I hear from you between the February and March meetings.

As we plan for future projects, it will be important that we address and incorporate the IIJA Planning Emphasis Areas.

Requested Action: None. This item will be discussed again on the March agenda.

U.S. Department of Transportation
Federal Highway Administration

Federal Transit Administration

Office of the Administrator

1200 New Jersey Ave., SE
Washington, D.C. 20590

December 30, 2021

Attention: FHWA Division Administrators
FTA Regional Administrators

Subject: 2021 Planning Emphasis Areas for use in the development of Metropolitan and Statewide Planning and Research Work programs.

With continued focus on transportation planning the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) Offices of Planning are jointly issuing updated Planning Emphasis Areas (PEAs). The PEAs are areas that FHWA and FTA field offices should emphasize when meeting with the metropolitan planning organizations, State departments of transportation, Public Transportation Agencies, and Federal Land Management Agency counterparts to identify and develop tasks associated with the Unified Planning Work Program and the Statewide Planning and Research Program. We recognize the variability of work program development and update cycles, so we encourage field offices to incorporate these PEAs as programs are updated.

Please note that this letter is intended only to provide clarity regarding existing requirements. It is not binding and does not have the force and effect of law. All relevant statutes and regulations still apply.

Sincerely,

Nuria Fernandez
Administrator
Federal Transit Administration

Stephanie Pollack
Deputy Administrator
Federal Highway Administration

Enclosure

2021 Planning Emphasis Areas:

Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future

Federal Highway Administration (FHWA) divisions and Federal Transit Administration (FTA) regional offices should work with State departments of transportation (State DOT), metropolitan planning organizations (MPO), and providers of public transportation to ensure that our transportation plans and infrastructure investments help achieve the national greenhouse gas reduction goals of 50-52 percent below 2005 levels by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change. Field offices should encourage State DOTs and MPOs to use the transportation planning process to accelerate the transition toward electric and other alternative fueled vehicles, plan for a sustainable infrastructure system that works for all users, and undertake actions to prepare for and adapt to the impacts of climate change. Appropriate Unified Planning Work Program work tasks could include identifying the barriers to and opportunities for deployment of fueling and charging infrastructure; evaluating opportunities to reduce greenhouse gas emissions by reducing single-occupancy vehicle trips and increasing access to public transportation, shift to lower emission modes of transportation ; and identifying transportation system vulnerabilities to climate change impacts and evaluating potential solutions. We encourage you to visit FHWA's Sustainable Transportation or FTA's Transit and Sustainability Webpages for more information.

(See EO 14008 on *"Tackling the Climate Crisis at Home and Abroad," EO 13990 on "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis." EO 14030 on "Climate-Related Financial Risk," See also FHWA Order 5520 "Transportation System Preparedness and Resilience to Extreme Weather Events," FTA's "Hazard Mitigation Cost Effectiveness Tool,"* FTA's *"Emergency Relief Manual," and "TCRP Document 70: Improving the Resilience of Transit Systems Threatened by Natural Disasters")*

Equity and Justice40 in Transportation Planning

FHWA Division and FTA regional offices should work with State DOTs, MPOs, and providers of public transportation to advance racial equity and support for underserved and disadvantaged communities. This will help ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas. We encourage the use of strategies that: (1) improve infrastructure for non-motorized travel, public transportation access, and increased public transportation service in underserved communities; (2) plan for the safety of all road users, particularly those on arterials, through infrastructure improvements and advanced speed management; (3) reduce single-occupancy vehicle travel and associated air pollution in communities near high-volume corridors; (4) offer reduced public transportation fares as appropriate; (5) target demand-response service towards communities with higher concentrations of older adults and those with poor access to essential services; and (6) consider equitable and sustainable practices while developing transit-oriented development including affordable housing strategies and consideration of environmental justice populations.

Executive Order 13985 (***Advancing Racial Equity and Support for Underserved Communities***) defines the term "equity" as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian

Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the preceding definition of "equity." In addition, Executive Order 14008 and M-21-28 provides a whole-of-government approach to advancing environmental justice by stating that 40 percent of Federal investments flow to disadvantaged communities. FHWA Division and FTA regional offices should work with State DOTs, MPOs, and providers of public transportation to review current and new metropolitan transportation plans to advance Federal investments to disadvantaged communities.

To accomplish both initiatives, our joint planning processes should support State and MPO goals for economic opportunity in disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, recreation, and health care.

Complete Streets

FHWA Division and FTA regional offices should work with State DOTs, MPOs and providers of public transportation to review current policies, rules, and procedures to determine their impact on safety for all road users. This effort should work to include provisions for safety in future transportation infrastructure, particularly those outside automobiles.

A complete street is safe, and feels safe, for everyone using the street. FHWA and FTA seek to help Federal aid recipients plan, develop, and operate streets and networks that prioritize safety, comfort, and access to destinations for people who use the street network, including pedestrians, bicyclists, transit riders, micro-mobility users, freight delivery services, and motorists. The goal is to provide an equitable and safe transportation network for travelers of all ages and abilities, including those from marginalized communities facing historic disinvestment. This vision is not achieved through a one-size-fits-all solution – each complete street is unique and developed to best serve its community context and its primary role in the network.

Per the National Highway Traffic Safety Administration's 2019 data, 62 percent of the motor vehicle crashes that resulted in pedestrian fatalities took place on arterials. Arterials tend to be designed for vehicle movement rather than mobility for non-motorized users and often lack convenient and safe crossing opportunities. They can function as barriers to a safe travel network for road users outside of vehicles.

To be considered complete, these roads should include safe pedestrian facilities, safe transit stops (if present), and safe crossing opportunities on an interval necessary for accessing destinations. A safe and complete network for bicycles can also be achieved through a safe and comfortable bicycle facility located on the roadway, adjacent to the road, or on a nearby parallel corridor. Jurisdictions will be encouraged to prioritize safety improvements and speed management on arterials that are essential to creating complete travel networks for those without access to single-occupancy vehicles.

Public Involvement

Early, effective, and continuous public involvement brings diverse viewpoints into the decisionmaking process. FHWA Division and FTA regional offices should encourage MPOs, State DOTs, and providers of public transportation to increase meaningful public involvement in transportation planning by integrating Virtual Public Involvement (VPI) tools into the overall public involvement approach while ensuring continued public participation by individuals without access to computers and mobile devices. The use of VPI broadens the reach of information to the public and makes participation more convenient and affordable to greater numbers of people. Virtual tools provide increased transparency and access to transportation planning activities and decisionmaking processes. Many virtual tools also provide information in visual and interactive formats that enhance public and stakeholder understanding of proposed plans, programs, and projects. Increasing participation earlier in the process can reduce project delays and lower staff time and costs. More information on VPI is available here.

Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination

FHWA Division and FTA regional offices should encourage MPOs and State DOTs to coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure and connectivity needs for STRAHNET routes and other public roads that connect to DOD facilities. According to the Declaration of Policy in 23 U.S.C. 101(b)(1), it is in the national interest to accelerate construction of the Federal-aid highway system, including the Dwight D. Eisenhower National System of Interstate and Defense Highways, because many of the highways (or portions of the highways) are inadequate to meet the needs of national and civil defense. The DOD's facilities include military bases, ports, and depots. The road networks that provide access and connections to these facilities are essential to national security. The 64,200-mile STRAHNET system consists of public highways that provide access, continuity, and emergency transportation of personnel and equipment in times of peace and war. It includes the entire 48,482 miles of the Dwight D. Eisenhower National System of Interstate and Defense Highways and 14,000 miles of other non-Interstate public highways on the National Highway System. The STRAHNET also contains approximately 1,800 miles of connector routes linking more than 200 military installations and ports to the primary highway system. The DOD's facilities are also often major employers in a region, generating substantial volumes of commuter and freight traffic on the transportation network and around entry points to the military facilities. Stakeholders are encouraged to review the STRAHNET maps and recent Power Project Platform (PPP) studies. These can be a useful resource in the State and MPO areas covered by these route analyses.

Federal Land Management Agency (FLMA) Coordination

FHWA Division and FTA regional offices should encourage MPOs and State DOTs to coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands. Through joint coordination, the State DOTs, MPOs, Tribal Governments, FLMAs, and local agencies should focus on integration of their transportation planning activities and develop cross-cutting State and MPO long range transportation plans, programs, and corridor studies, as well as the Office of Federal Lands

Highway's developed transportation plans and programs. Agencies should explore opportunities to leverage transportation funding to support access and transportation needs of FLMAs before transportation projects are programmed in the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP). Each State must consider the concerns of FLMAs that have jurisdiction over land within the boundaries of the State (23 CFR 450.208(a)(3)). MPOs must appropriately involve FLMAs in the development of the metropolitan transportation plan and the TIP (23 CFR 450.316(d)). Additionally, the Tribal Transportation Program, Federal Lands Transportation Program, and the Federal Lands Access Program TIPs must be included in the STIP, directly or by reference, after FHWA approval in accordance with 23 U.S.C. 201(c) (23 CFR 450.218(e)).

Planning and Environment Linkages (PEL)

FHWA Division and FTA regional offices should encourage State DOTs, MPOs and Public Transportation Agencies to implement PEL as part of the transportation planning and environmental review processes. The use of PEL is a collaborative and integrated approach to transportation decisionmaking that considers environmental, community, and economic goals early in the transportation planning process, and uses the information, analysis, and products developed during planning to inform the environmental review process. PEL leads to interagency relationship building among planning, resource, and regulatory agencies in the early stages of planning to inform and improve project delivery timeframes, including minimizing duplication and creating one cohesive flow of information. This results in transportation programs and projects that serve the community's transportation needs more effectively while avoiding and minimizing the impacts on human and natural resources. More information on PEL is available here.

Data in Transportation Planning

To address the emerging topic areas of data sharing, needs, and analytics, FHWA Division and FTA regional offices should encourage State DOTs, MPOs, and providers of public transportation to incorporate data sharing and consideration into the transportation planning process, because data assets have value across multiple programs. Data sharing principles and data management can be used for a variety of issues, such as freight, bike and pedestrian planning, equity analyses, managing curb space, performance management, travel time reliability, connected and autonomous vehicles, mobility services, and safety. Developing and advancing data sharing principles allows for efficient use of resources and improved policy and decisionmaking at the State, MPO, regional, and local levels for all parties.

2022 Solicitation for Future Transportation Planning Project Needs in the Fargo-Moorhead Metropolitan Planning Area

METROCOG
FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION

Suggested Year	Project Name	Location	Description	Juris-dictions	Probable Cost Range	Relevant Planning Factors	Suggested By:
Not Programmed							
2023-2024	Metropolitan Transportation Plan - 2050	Metro Area	The 2050 update of the Metropolitan Transportation Plan	All	$350,000	All	Metro COG
2023-2024	Clay County Heartland Trail Alignment Analysis	Moorhead to Hawley	The Clay Co Heartland Trail Task for has been working on planning of the Heartland Trail since 2014. With a planned trail alignment already proposed, the next step is to conduct in-depth analysis of the planned alignment in order to (a) determine any obstacles associated with the alignment, (b) determine efforts to overcome the obstacles, and (c) determine easements needed to construct the trail. This study would analyze the trail between Moorhead/Dilworth and Hawley.	Clay County, Moorhead, Dilworth, Glyndon, Hawley	$100,000 to $200,000, depending upon extent of study	A, E, J	Metro COG
2023 or 2024	TDM Review Study	Metro Area	Thorough technical review of the TDM	Metro COG	Cost range needed.	F, G, I (all factors to some extent)	Consultant
2024	Regional Traffic Signal System Master Plan	Metro Area	Description needed. Develop scope of work after commpletion of ITS Regional Architecture Plan if this project moves forward.	All	Cost range needed.	B, D, E, G	HDR (MTP Consultant)
2023	Electric Vehicle Readiness Study	Metro Area	Outline steps the region can take to support and encourage electric vehicle adoption	Metro COG	Cost range needed.	A, D, E, F, G, I, J	Metro COG
2024	Traffic Calming Alternatives Study	Moorhead - 4th Street and 5th Street from Main Avenue to 22nd Avenue S	The purpose of this study would be to review traffic calming alternatives along 4th Street S and 5th Street S in Moorhead. The roadways currently have a varied cross section width, which encourages faster vehicular speeds on the northerly blocks just south of Main Avenue. Alternatives would look at pedestrian mobility, safety, reducing the need for enforcement,safety improvements, and bicycle accommodations, and potential for transit improvements. Citizens have already met during a meeting organized by walkability advocates to discuss these roadways and potential future configurations.	Moorhead	$200,000	B, E, F, G, H, I	Metro COG
2023 or 2024	East Dilworth / Moorhead N/S Arterial Corridor	I-94 to Clay Co Rd. 83	Planning Study to review alignment for north/south corridor between Highway 336 and 14th Street. Includes need and feasibility of RR grade separation and I-94 connection.	Dilworth, Moorhead, Clay Co,	$200,000	A, B, D, E, F, G	Metro COG
2024	Vehicular Bridge Crossing Feasibility Study	Metro Area	Building on work completed over 20 years ago, conduct a feasibility study of additional vehicular bridge crossings between 100th Ave S (Fargo) to 76th Ave N/Cass Co 22 to determine regional priorities, impacts, current opportunities and constraints, and planning level cost estimates associated with various crossing alignments in developed and currently undeveloped areas. A study of this nature should also look at regional connectivity to existing or planned corridors.	Fargo, Moorhead, Cass and Clay Counties	Cost range needed.	A, B, C, D, E, F, G, J	Metro COG

Beyond 2024?	Rails to Trails Study - Moorhead to Kragnes	Moorhead to Kragnes	The rail line from north Moorhead to Kragnes is abandoned. This presents an opportunity for a rails-to-trails project. This study would looks at the costs, feasibilty, and coordination necessary for a potential trail between Moorhead and Kragnes utilizing the abandon rail alignment.	Moorhead, Clay County	$100,000 - $200,000	A, B, D, E, F, J	Moorhead
2024 or 2025	15th Street / I-94 / Sheyenne Diversion Overpass Study	West Fargo / Cass County	The purpose of this study would be to study the costs, benefits, impacts, implementation, and other attributes associated with an overpass that would span I-94 and the Sheyenne Diversion just west of West Fargo. Per the 13th Avenue Corridor Study, this overpass would be located in the vicinity of 13th Ave W and CR 28 (15th St NW). This study could also look at roadway connectivity and a future roadway network on the southwest side of I-94/Sheyenne Diversion.	West Fargo, Cass County, NDDOT	$75,000 - $200,000	A, B, D, E, F, G, J	HDR, West Fargo
	Regional Pavement Management Study	UZA or subset of streets within UZA		Could be any or all cities			Metro COG
	Access to Downtown from Interstate Highways	From I-94 and I-29	Planning study to examine alternatives for improved access and way-finding from Interstate Highway system to downtown. Could this be added to the interstate study due to potential relationship with interstate access?				
Recently Programmed or Under Contract							
2020-21	Veterans Blvd Corridor Study Programmed for 2020. In 2021, project scope expanded to study at Sheyenne Street and 64th Ave S.	Veterans Blvd south of 40th Avenue S. Sheyenne Street south of 40th Avenue S. and 64th Avenue S from Sheyenne Street to 45th Street S	The purpose of this study would be to take a more detailed look at the transportation needs along the Veterans Blvd section line as it estends south of 52nd Avenue S and into Fargo's future growth area. Some of the unique challenges along this corridor include a drain crosing, future regional stormwater pond, and potential joint jurisdiction with Horace south of 64th Avenue S. We anticipate development pressures in this area in the not too distant future, and this may be an area that warrants some additional attention at some point.	City of Fargo, City of Horace, Cass County, West Fargo	$150,000 - $200,000 $60,000	A, D, E, G	Fargo Planning Department
2021-2022	Red River Greenway Study - scoped for 2021-2022	Fargo	Drawing upon the results of the Bike Gap Study, and based on significant ped/bike input as part of the MTP, study and plan wayfinding, public improvements along the river including extensions of the existing trail, improved connectivity both within the greenway and to nearby neighborhoods and attractions, access to open space, and connectedness to nature and potential sites for human restoration and recreation.	Fargo	$155,000 + $15,000 from Fargo Park District	A, E, F, J	Metro COG (based on Fargo's request in 2018)
2021	TH 10 - Scheduled for 2022	34th St through Dilworth	Planning Study in preparation for reconstruct in 2027.	Dilworth, MNDOT	$160,000	A, D, E, G	MNDOT
2021-22-23	Metro Bike and Ped Plan Update - Under contract for 2021	Metro Wide	The metropolitan area bike and ped plan was last completed inhouse in 2016 and will be due for an update in 2021. We could consider hiring a consultant for all or portions of the update.	All	$175,000	A, B, D, E, F, H, J	Metro COG

2021	Interstate Operations Study (Update to 2011)	I-94 and I-29 throughout Metro Area	Study and provide detailed recommendations for short-term and long-term improvement needs (capacity, system management, etc.) on the Interstate system. Potentially could include some TSMO strategies. MNDOT has expressed concern for I-94 lane configuration through Moorhead. 2028-2029 Reconstruction in Minnesota. Include study of ring route (reliever route) around outside of FM Diversion in Cass County.	NDDOT, MnDOT, Fargo, Moorhead, West Fargo	$400,000	A, B, C, D, E, F, G, H, I	NDDOT, MnDOT, HDR (MTP Consultant)
2021-22	Fargo Transportation Plan - under contract for 2021	Within City and ETA	Deep dive into future transportation network, focusing on policy and planning for an efficient, connected and continuous network of transportation facilities for all modes of transportation. This could be done as part of an overall comp plan update for the City of Fargo.	City of Fargo	$200,000	A, D, E, F, I, J	Fargo Engineering
2022-23	US-81 Corridor Study (University Drive & 10th Street)	Fargo	Study and provide detailed recommendations for short-, mid-, and long-term improvement needs (capacity, system management, etc.) primarily on the one-way pair system. Could include feasible network design alternatives.	Fargo	$275,000	A, B, C, D, E, F, G, [I(?)]	Metro COG
2024	25th Street S Corridor Study	32nd Ave S to 58th Ave S	25th St S from 32nd Ave S to 58th Ave S - The health of the asphalt section will need major work in the near future and peak hour capacity issues are occurring.	City of Fargo	$150,000 - 200,000	A, B, D, E, G	Fargo Engineering

IIJA Planning Emphasis Areas

- Tackling the Climate Crisis - Transition to a Clean Energy, Resilient Future
- Equity and Justice40 in Transportation Planning
- Complete Streets
- Public Involvement
- Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination
- Federal Land Management Agency (FLMA) Coordination
- Planning and Environmental Linkages (PEL)
- Data in Transportation Planning

FAST Act Planning Factors

A. support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
B. increase the safety of the transportation system for motorized and nonmotorized users;
C. increase the security of the transportation system for motorized and nonmotorized users;
D. increase the accessibility and mobility of people and for freight;
E. protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local
F. enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
G. promote efficient system management and operation;
H. emphasize the preservation of the existing transportation system;
I. improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
J. enhance travel and tourism.

AARP

AARP COMMUNITY CHALLENGE

A GRANT PROGRAM TO MAKE COMMUNITIES MORE LIVABLE FOR PEOPLE OF ALL AGES WITH TANGIBLE IMPROVEMENTS THAT JUMP-START LONG-TERM CHANGE

$9.3M GRANTED for quick-action PROJECTS

804 GRANTS delivered in first FIVE YEARS

63% OF GRANTS have gone to local NONPROFITS

37% OF GRANTS have gone to local GOVERNMENTS

GRANTS BY LOCATION:

42%	38%	20%
URBAN	RURAL	SUBURBAN

Have a great project idea for your community?

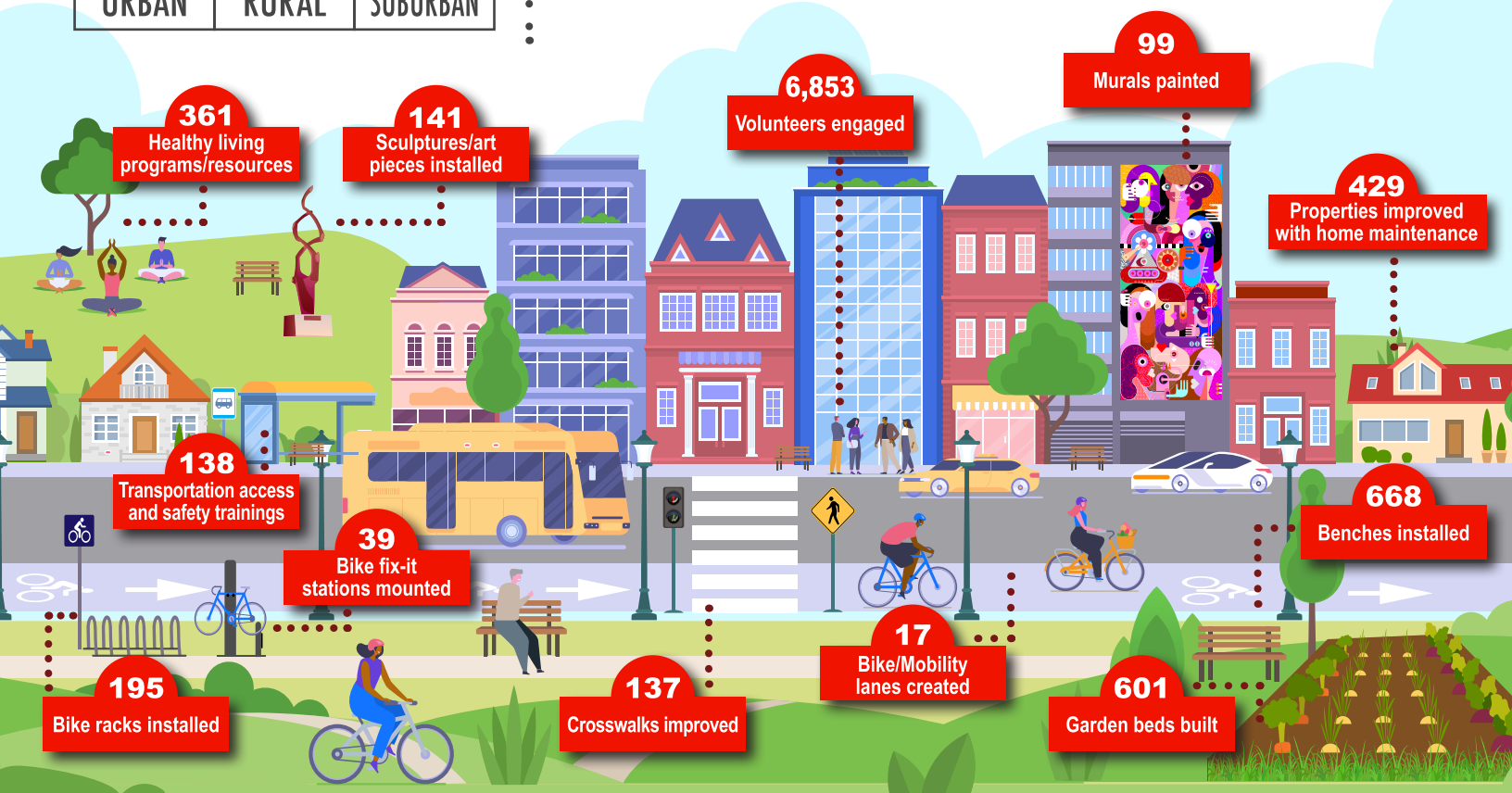
APPLY FOR A 2022 GRANT TODAY!

Eligible applications for the 2022 grant program will be accepted from:

January 25 - March 22, 2022 at 5:00 pm ET

Learn more and apply:
AARP.org/CommunityChallenge

Since 2017, grantees have installed 8,306 tangible permanent or temporary improvements in their communities, and created 1,697 resources, activities or programs, including the ones below.



SMALL DOLLARS, BIG IMPACT

45%* *of grantees demonstrate the grant helped them leverage additional funds and support from public and private organizations.

"Our design efforts catalyzed city-led fundraising for the project, with $100,000 coming from Capital Improvement Project Funds." – *Utah grantee*

81%* *of grantees demonstrate the grant helped to overcome policy barriers or advance change.

"The City has updated the master plan map to incorporate the new route (where the Complete Streets demonstration was held). It was unanimously approved by City Council." – *New York grantee*

100%* *of grantees demonstrate the grant led to greater awareness, engagement, and new relationships.

"More than 500 people have visited our project to learn more after the initial installation." – *Oregon grantee*

GRANT FUNDING CATEGORIES

The Community Challenge grant program is part of AARP's nationwide Livable Communities initiative, which supports the efforts of cities, towns, neighborhoods and rural areas to become great places to live for people of all ages. Projects are funded in these categories:

PUBLIC PLACES that improve open spaces, parks and access to other amenities

TRANSPORTATION and mobility options that increase connectivity, walkability, bikeability, and access

HOUSING support that increases the availability of accessible and affordable choices

Focus on **DIVERSITY, EQUITY and INCLUSION** while improving the built and social environment of a community.

CIVIC ENGAGEMENT projects that bring residents and local leaders together to address challenges

OTHER investments in projects that address additional community priorities

2022 NEW CATEGORY

Support communities' efforts to **BUILD ENGAGEMENT AND LEVERAGE FUNDING** available under new federal programs through laws like the American Rescue Plan Act, the Infrastructure Investment and Jobs Act, and more.

Grants to make communities livable for people of all ages
aarp.org/CommunityChallenge

Frequently Asked Questions

1. WHAT TYPES OF ORGANIZATIONS ARE ELIGIBLE FOR FUNDING?

The program is open to the following types of organizations:

- 501(c)(3), 501(c)(4) and 501(c)(6) nonprofits
- Government entities
- Other types of organizations, considered on a case-by-case basis

2. HOW DO I APPLY?

All applications must be submitted through aarp.org/communitychallenge by March 22, 2022 at 5:00 p.m. ET. All applications must be completed through the online portal; no emailed applications will be accepted.

3. WHAT IS YOUR TYPICAL GRANT SIZE?

Grants have ranged from several hundred dollars for smaller, short-term activities to tens of thousands of dollars for larger projects. Since 2017, our average grant amount is $11,500 and 76% of grants have been under $15,000. While AARP reserves the right to award compelling projects of any dollar amount, the largest grant that has been awarded under the Community Challenge is $50,000.

4. MAY I SUBMIT MORE THAN ONE APPLICATION?

Yes, your organization can submit as many applications as you like.

5. HOW CAN I SAVE OR PRINT A COPY OF MY APPLICATION?

You can save a copy of your application as a PDF or print the entire application at any time. First, go to "My Account" and click on "My Applications" from the menu on the left-hand side. Then locate the application you would like to print and select "Print" on the far-right side. From there, you have a copy you can hold onto, email or print.

6. WHEN AND HOW WILL I BE NOTIFIED IF OUR APPLICATION WAS SUCCESSFUL?

Selected grant recipients and unselected applicants will be notified by email in May. Grantees must complete a binding Memorandum of Understanding and completed vendor forms to AARP by June 15, 2022. Noncompliance with this deadline may result in disqualification or delayed funding.

7. I LIVE IN A SMALL COMMUNITY, IS THIS JUST A PROJECT FOR BIG CITIES?

No. In fact, 38% of the Challenge projects AARP has funded have gone to rural communities with another 20% going to suburban communities. Communities with populations as small as several hundred residents have received grants.

8. DOES THE PROJECT HAVE TO TAKE PLACE IN A COMMUNITY THAT BELONGS TO THE AARP NETWORK OF AGE-FRIENDLY STATES AND COMMUNITIES?

No. Hundreds of grants have been delivered to NAFSC communities since 2017, but projects can benefit any community so long as they satisfy all other eligibility criteria.

9. MY ORGANIZATION RECEIVED A GRANT PREVIOUSLY. ARE WE ELIGIBLE TO APPLY?

Yes, absolutely.

10. MY ORGANIZATION APPLIED AND DID NOT RECEIVE A GRANT RECENTLY. ARE WE ELIGIBLE TO APPLY AGAIN?

Yes. You are eligible to apply again, and several grantees have been selected after previously applying and not receiving a grant. Please carefully review the project examples that are provided in **Attachment C** to help inform your application.

11. WHAT TYPE OF PROJECTS WILL YOU NOT FUND?

The following projects are **NOT** eligible for funding:

- Partisan, political or election-related activities
- Planning activities and assessments and surveys of communities without tangible engagement
- Studies with no follow-up action
- Publication of books or reports
- Acquisition of land and/or buildings
- Purchase of vehicles (such as a car or truck)
- Sponsorships of other organizations' events or activities
- Research and development for a nonprofit endeavor
- Research and development for a for-profit endeavor
- The promotion of a for-profit entity and/or its products and services

12. WHAT IS DIFFERENT FROM PREVIOUS YEARS?

In 2022, AARP will prioritize projects that support residents age 50 and over, are inclusive, address disparities, and directly engage volunteers. The 2022 AARP Community Challenge is very similar to previous years with some notable additions:

- **NEW CATEGORY – Engagement Under New Federal Programs:** AARP will fund projects that support communities' efforts to build engagement and leverage funding available under new federal programs through laws like the American Rescue Plan Act, the Infrastructure Investment and Jobs Act, and more.
- **COMBINED CATEGORY – Other Community improvements:** AARP has moved coronavirus recovery projects from a separate category to one combined with health services and community development.
- **DEEPER FOCUS – Older Population:** In 2022, the program will place added emphasis on projects that engage older volunteers and focus on the 50-plus population, while improving communities for all.
- **EARLIER TIMELINE:** The grant cycle is beginning earlier in the year to maximize time for grantees to complete their projects.
- **APPLICATION WEBSITE:** The Community Challenge is using a new grant management system, OpenWater, to enhance user experience and ease of use.

13. WHERE CAN I FIND EXAMPLES OF PREVIOUS STANDOUT PROJECTS?

Please view **Attachment C** for examples of projects that AARP has funded in the past. While these projects can help inform your thinking, we are also interested in innovative and fresh ideas!

You can see videos of previous projects, videos of each category, descriptions of previously funded projects, and more at AARP.org/communitychallenge.

14. IF MY APPLICATION IS NOT SELECTED, CAN I RECEIVE FEEDBACK ON WHY IT WAS NOT FUNDED?

Unfortunately, due to the high volume of applications we receive, we cannot offer feedback on individual applications.

15. CAN WE APPLY WITH A PARTNER?

Yes, you can. On the "Organization Name" line, you can list the main applicant name and add "in partnership with" and list the second name. From there, we only need the information for the primary point of contact.

16. CAN CHALLENGE GRANTS BE USED FOR ADMINISTRATIVE COSTS OR CONSULTANT FEES?

Typically, Challenge grants do not fund indirect costs such as salaries or administrative fees. The majority of Challenge funds will need to go directly to project execution or implementation – we would not pay for a significant portion of administrative overhead, staff time, ongoing program costs or the hiring of a designer or surveyor or facilitator, such as a project planner, graphic designer, landscape designer or site surveyor unless those indirect costs were a very small part (*0-15%*) of the overall request. If the application demonstrates that these types of activities are part of a broader project which shows a commitment to engage residents with some tangible demonstration, then a larger percentage of paying for a consultant or facilitator may be eligible and warranted.

17. CAN CHALLENGE FUNDS BE USED TO SUPPORT ONGOING PROGRAMS?

Challenge grants do not typically support ongoing programming; however, we would fund a tangible, short-term purchase that would benefit a current, ongoing program. For example, Challenge funds wouldn't pay for the staff, training, vehicle upkeep or gas needed to implement a current, year-round food delivery program, but funds could be used to purchase new technology or items such as a new freezer, storage pantry, reusable coolers/delivery bags, tables, benches, etc. Funds could also be used to host a temporary demonstration, civic engagement opportunity or pop-up event related to an ongoing program.

18. WHAT ARE YOUR REVIEW CRITERIA?

Eligible projects will be assessed on:

- IMPACT (60 points) – The project addresses a clear need that brings positive change and demonstrates the ability to overcome barriers and accelerate, grow and/or sustain the community's efforts to become more livable for residents (especially those age 50 and older), focuses on diversity, inclusion and addresses disparities.

- EXECUTION (30 points) – Applicants demonstrate capacity to deliver the AARP Community Challenge project on time and within the awarded budget, effectively engage residents and key stakeholders, and leverage volunteers (especially those age 50 and older) in the execution.

- INNOVATION (10 points) – The project demonstrates creativity or unique design or engagement elements which will contribute to its impact on residents (especially those age 50 and older)

In addition to the criteria provided, AARP will also evaluate each project based on its consistency with the AARP mission to serve the needs of people 50-plus.

19. WHAT IF I AM HAVING TECHNICAL DIFFICULTIES WITH THE LOGIN OR THE ONLINE APPLICATION?

Please look for the "REQUEST SUPPORT" link in the bottom left of the application log-in screen. From there, you can fill out a help ticket and someone from the online platform's tech support will get back

to you.

20. ARE THERE OTHER AARP GRANT OPPORTUNITIES AVAILABLE?

By submitting a proposal for the AARP Community Challenge initiative, you and your organization give AARP permission to reach out to you and others at your organization about other possible AARP funding opportunities that your proposal may be eligible for based on the AARP Community Challenge criteria. However, please note that AARP is not obligated in any way to consider your proposal for any additional AARP funding.

AARP might be contacted by other potential funders that could be interested in funding projects that were not funded through the AARP Community Challenge. The potential funders may have additional process steps and funding requirements than those of the AARP Community Challenge. If requested, AARP would like to send your contact information, organization name and a short description of the proposal, including the community where the project would take place ("Project Information"). Please note that these projects will be subject to any potential funder's own terms, conditions and review. Please indicate in your application whether or not you give permission to AARP to share your contact information and a description of your proposal. If you select "yes," you agree on behalf of yourself and your organization to release AARP and its affiliates and their respective officers, directors, employees, contractors, agents and representatives from all liability associated with sharing the Project Information with potential funders.

21. AARP BRANDING

If your application is funded, you will receive detailed guidance about branding, including a package with AARP logo files and pre-approved language. For now, we are looking for a general idea of how you will incorporate the AARP name/logo/message in your promotions. For instance, if you'll be installing a sign at the site of your project, it should include the AARP logo. If you'll be putting out press releases or social media posts, those should include verbiage about how the project was funded by AARP. If your project is ultimately funded, you will design and secure your own signage or banners, but we'll provide plenty of examples and guidance at that time. You may include funding to pay for this signage to your grant request and project budget. You will also be invited to coordinate publicity with your state office.

22. I DON'T KNOW MY AARP STATE OFFICE CONTACT. WHERE CAN I FIND IT?

You can go to states.aarp.org to find contact information for your AARP State Office. Click on your state and then you will find it on the next page.

23. I DON'T SEE THE ANSWER TO MY QUESTION HERE. WHO CAN I CONTACT?

If your question and answer are not on this page, please email us at CommunityChallenge@AARP.org.