Overcoming Barriers **Strengthening Connections**

M.P.O. M.P.O. M.P.O.

Grand Forks - East Grand Forks Metropolitan Planning Organization

Ensuring Opportunities **Planning One Community**

"A community that provides a variety of complementary transportation choices, that are fiscally constrained, for people and goods."

TECHNICAL ADVISORY COMMITTEE MEETING

WEDNESDAY, MAY 15TH, 2019 – 1:30 P.M.

EAST GRAND FORKS CITY HALL TRAINING ROOM

MEMBERS

Kadrmas/Lang _____	Laesch/Konickson_____	West _____
Ellis _____	Johnson/Hanson _____	Magnuson _____
Bail/Emery _____	Kuharenko/Williams _____	Sanders _____
Gengler/Halford _____	Bergman/Rood _____	Christianson _____
Riesinger/Audette _____		

1. CALL TO ORDER

2. CALL OF ROLL

3. DETERMINATION OF A QUORUM

4. MATTER OF APPROVAL OF THE APRIL 10TH, 2019, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE

5. MATTER OF NORTH DAKOTA FTA CANDIDATE PROJECTS..... KOUBA

6. MATTER OF UPDATE ON CAT/UND SHUTTLE MERGER STUDY ..... KOUBA

7. MATTER OF UPDATE ON FUNCTIONAL RECLASSIFICATION..... HAUGEN

8. OTHER BUSINESS
   a. 2019 Annual Work Program Project Update

9. ADJOURNMENT

ANY INDIVIDUAL REQUIRING A SPECIAL ACCOMMODATION TO ALLOW ACCESS OR PARTICIPATION AT THIS MEETING IS ASKED TO NOTIFY EARL HAUGEN, MPO EXECUTIVE DIRECTOR AT (701) 746-2660 OF HIS/HER NEEDS FIVE (5) DAYS PRIOR TO THE MEETING. ALSO, MATERIALS CAN BE PROVIDED IN ALTERNATIVE FORMATS: LARGE PRINT, BRAILLE, CASSETTE TAPE, OR ON COMPUTER DISK FOR PEOPLE WITH DISABILITIES OR WITH LIMITED ENGLISH PROFICIENCY (LEP) BY CONTACTING THE MPO EXECUTIVE DIRECTOR (701) 746-2667 FIVE (5) DAYS PRIOR TO THE MEETING.

PROCEEDINGS OF THE
TECHNICAL ADVISORY COMMITTEE
Wednesday, April 10th, 2019
East Grand Forks City Hall Training Conference Room

CALL TO ORDER

Earl Haugen Chairman, called the April 10th, 2019, meeting of the MPO Technical Advisory Committee to order at 1:48 p.m.

CALL OF ROLL

On a Call of Roll the following members were present: David Kuharenko, Grand Forks Engineering; Stephanie Halford, Grand Forks Planning; Brad Bail, East Grand Forks Consulting - Engineer; Dale Bergman, Cities Area Transit; Ryan Riesinger, Airport Authority; Paul Konickson, MnDOT; Jane Williams, Grand Forks Engineering; and Michael Johnson, NDDOT-Local Government (Via Phone).

Absent: Steve Emery, Richard Audette, Jesse Kadrmas, Nancy Ellis, Darren Laesch, Dustin Lang, Ryan Brooks, Brad Gengler, Lane Magnuson, Ali Rood, Stacey Hanson, Mike Yavarow, Lars Christianson, and Rich Sanders.

Guest(s): Mohammad Smadi, NDSU-ATAC; Michael Huot, Property Owner; Nancy Graham, MnDOT Acting Planning Director; Patrick Hopkins, MnDOT Planning Engineer; and Jim Mertz, Bolton And Menk.

Staff: Earl Haugen, GF/EGF MPO Executive Director; Teri Kouba, GF/EGF MPO Senior Planner; Jairo Viafara, GF/EGF MPO Senior Planner; and Peggy McNelis, GF/EGF Office Manager.

DETERMINATION OF A QUORUM

Haugen declared a quorum was present.

INTRODUCTIONS

Haugen stated that because we have some new people present today, he would ask that everyone please state their name and the organization they represent.

PROCEEDINGS OF THE
TECHNICAL ADVISORY COMMITTEE
Wednesday, April 10th, 2019

MATTER OF APPROVAL OF THE MARCH 13TH, 2019, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE

MOVED BY BERGMAN, SECONDED BY KUHARENKO, TO APPROVE THE MARCH 13TH, 2019, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE, AS PRESENTED.

MOTION CARRIED UNANIMOUSLY.

MATTER OF ITS REGIONAL ARCHITECTURE PRESENTATION

Haugen reported that this is our Technical Advisory Committee kick-off of our update to our ITS Regional Architecture.

Viafara stated that we have Mohammad Smadi from A.T.A.C. here today to give us a presentation on the ITS Regional Architecture. He said that Mr. Smadi's role is to provide information on the new update for the Regional ITS Architecture.

Viafara commented that last time this was updated was about five years ago, and one of the ideas is to assist in the development of elements to implement new ITS initiatives and strategies; most of them are included in the Metropolitan Plan and also to assist different agencies that are users of the system in terms of making every effort to address their needs.

Viafara stated that the key objectives for this update are:

1) Address changes in regional needs
2) Changes in the number of stakeholders as many have moved on to other positions or are no longer in the agencies they represented.
3) Changes in the scope of services that were considered when the scope was under due consideration
4) There are new ITS deployment projects in the region
5) Bring some ideas about the National ITS Architecture

Viafara said that a wide range of stakeholders have been invited to attend this presentation and the one that will be at 3:30 today to provide further guidance and insight into what is expected to be, so with this in mind he would like to introduce Mohammad Smadi.

Smadi commented that he would be giving a brief presentation today just to introduce the process. He said that as part of the overview he will quickly go over the conditions of what the public transportation systems are and what the architecture provides for us; then he will touch on the previous versions of the Grand Forks/East Grand Forks Regional Architecture; then he will discuss what the update process is; and then he will talk a bit about what the next steps will be.

Presentation (a copy of which is included in the file and available upon request) ensued.

Smadi summarized, stating that Regional ITS Architecture is a planning tool for ITS deployment. He said that the architecture is a living product, and that happens through constant updates.

Smadi stated that one nice thing about the architecture is that it is technology independent, so we focus on services rather than specific pieces of technology, and that gives the architecture a little bit more of a life because technology, as we all know, changes faster a lot of the time; and when we are planning we focus on what our needs are and what sort of services can satisfy these needs.

Smadi commented that this effort will help us meet the federal requirements for ITS project funding. He explained that federal requirements require us to have an up-to-date architecture in place in order to be eligible to receive funding from the Highway Trust Fund.

Smadi referred to a slide illustrating how the regional ITS architecture is an integral part of the planning process, and went over it briefly, pointing out that there are four objectives; safety, infrastructure condition, congestion reduction, and system reliability, that are supported by the regional ITS architecture. He added that they then come up with the service packages that address each of the planning objectives, as explained here for Objective 3, congestion reduction.

Smadi pointed out that the Grand Forks/East Grand Forks Regional Architecture was developed in 2005, updated in 2008 and 2014. He stated that there isn't really a set update horizon, but as Mr. Viafara said, a five-year timeframe seems reasonable. He pointed out that there are six services areas within the architecture; and there are subservices within those, such as for Centers there is traffic management, emergency management, transit management, information service provider, archived data management, and maintenance and construction management. He stated that for each of those they would customize it for what exists in Grand Forks; who are the players, who are the stakeholders that own and operate the center, and all the interconnections that are required in order to perform.

Smadi commented that the reason we update is because the architecture needs to be a living document and that is done through constant updates; and we need to account for changes in the region with stakeholders, priorities, goals, objectives, project status, etc. He said that there are also changes in the national architecture as well; and the latest version of the national architecture integrates connected vehicle services. He explained that previously this wasn't the first product, but in this version these are combined and it really reorganizes the whole architecture of different service areas now and we also have different service packages.

Smadi referred to a slide and stated that this is how we started, with this ITS picture that shows vehicles and communication efforts. He said that this is kind of what we are going towards at this point, this is the connected environment where we have vehicles that interconnect among each other, and also with the infrastructure; and we also have the user personal devices, the smart phone essentially, that also interacts with the vehicle and the infrastructure. He stated that this kind of environment provides us with options that we did not have before. He explained that if you wanted to get a message out to motorists you will use dynamic message signs, and that is

really one of the few avenues that we had to get information out to the drivers, whereas now the information can go directly to the vehicle and would be displayed to the vehicle operator directly, so in this connected environment each vehicle can potentially be a senor for us providing valuable data.

Smadi commented that, as Mr. Viafara mentioned, later this afternoon we will have the official project kick-off, and then after that we will be meeting with stakeholders based on their focus area. He stated that then he will work on updating the system inventory based on the results of the small group meetings; will update the regional needs based on the MPOs consistent plan and also update everything else that you would like to add. He said that they will also update the different service area.

Smadi stated that they are hoping to implement the updates in October/November and will have a draft and final report for your review in December.

DISCUSSION:

Bergman said that he has a lot of questions. He said that you are talking about having national and regional and trying to make that stuff all incorporated together, but they have had difficulty trying to make things work together; an example is they have Synchromatics for their GPS stuff, which changes their head signs, which they had to fight with GFI, a paradox company that has the stuff, and they refused to talk to each other until they paid them $800 to have that conversation to just send the information, so how is it going to work if we start getting bigger than that. Smadi responded that they have a transit feeding, and he would have to look at what you had in the previous regional architecture. He said that one thing that the architecture focuses on is the use of standards; so he isn't sure if your vendors were using standards as required so that is something that he would be happy to work closely with Mr. Bergman on. Bergman commented that it would be interesting to see how they are going to come up with all that, they used the same connection point 21808, it is just the language they are using back and forth, a simple little process, and we have to pay all that money for something so simple.

Bergman commented that he understands vendors wanting to keep their stuff, that is all fine and dandy, but if it just needs to talk; we've got that same issue right now, if we start looking at and use GTT stuff on the opticoms that they have, and sometimes they have had a lot of difficulty getting even those to talk back and forth; so when he writes specs now he includes that they have to be able to talk to anyone they have because he refuses to listen to them say that they don't. Smadi added that they can also talk about some things that they can do on the architecture side to kind of help alleviate some of these issues that you are having.

Information only.

MATTER OF APPROVAL OF DRAFT MINNESOTA SIDE 2020-2023 T.I.P.

Haugen reported that normally in April we are producing a Draft T.I.P. document, and under our ideal processes we would have a document that covers both sides of the Red River, however

today, as well as in the recent past, we are looking at only the Minnesota side document for consideration.

Haugen stated that a public notice was issued letting the public know that this document has been available in our offices and on-line for review and comment. He said that they did have MnDOT do some corrections that he will go over right now.

Haugen referred to the 2020-2023 T.I.P. document and went pointed out that some of the numbering was incorrect. He stated that 19a and 19b have been changed to 20a and 20b.

Williams asked about East Grand Forks Project #3, where it states that the local share is coming from the City of Grand Forks, and asked if that was correct. Haugen responded that it is correct.

Haugen referred to East Grand Forks Project #14, the Bygland Road/Rhinehart Drive intersection project, and stated that the project number should be changed from 129 to 119.

Haugen reported that they have been working with the District Office and the MnDOT Central Office for Transit to reach an agreement on the funding amounts for the transit projects. He said that they have gone back and forth several times and they believe that these are the numbers that should be incorporated into the Draft ATIP and the Draft STIP.

Haugen stated that we did publish a public notice for the public to submit comments by noon today. He said that other than MnDOT comments they did not receive any other written comments by noon today. He asked if there was anyone present for comments, there was no one present.

Haugen said that with the changes discussed staff is recommending that the Technical Advisory Committee forward a recommendation to the MPO Executive Policy Board approve the Draft Minnesota Side 2020-2023 T.I.P.

Williams asked, if the expenditure is from Grand Forks for the local, does it need to be shown on the North Dakota side as well. Haugen responded that it does not need to be. He added that if it were a joint procurement it would need to be, such as the bridge projects we have been doing where we show both sides, but in this case this is Minnesota Federal dollars being used and the local match is being provided by the City of Grand Forks, there are no Minnesota State Funds, there are no East Grand Forks funds attached to the project. He said that it is a way for Minnesota FTA dollars to contribute to facilities that are used by East Grand Forks but are located in North Dakota.

Haugen commented that he would also like to make everyone aware that our T.I.P. also serves as the Transit Operators Program of Projects.

MOVED BY KONICKSON, SECONDED BY BERGMAN, TO APPROVE FORWARDING A RECOMMENDATION TO THE MPO EXECUTIVE POLICY BOARD TO APPROVE THE DRAFT MINNESOTA SIDE 2020-2023 T.I.P., SUBJECT TO CHANGES AS DISCUSSED.

Voting Aye: ***Bail, Halford, Riesinger, Konickson, Johnson, Kuharneko, and Bergman.***
Voting Nay: ***None.***
Absent: ***Kadrmas, Lang, Ellis, Emery, Gengler, Audette, Laesch, Hanson, Rood, West, Magnuson, Sanders, and Christianson.***

Haugen reported that as noted in the staff report North Dakota is still working on a document. He said that the North Dakota MPO Directors met with NDDOT staff on Monday and there might be an opportunity that we will have a draft in May. Johnson agreed that that may be a possibility. Haugen stated that we are all trying to work towards having a combined T.I.P. document this fall.

MATTER OF APPROVAL OF DOWNTOWN TRANSPORTATION PLAN RFP

Haugen reported that in our work program is a study of the Downtown Transportation between Grand Forks and East Grand Forks. He said that there was a lot of discussion on the scope of work; and he would like to note that the dollar amount in the staff report does have an extra "1" in it, so the budget should be $120,000.

Haugen stated that the consultant will begin in 2019 and complete the work in 2020. He referred to the scope of work and went over the timeline briefly, pointing out that they hope to have this on the NDDOTs Qualification Based Selection site by the end of April; the proposals are requested to be in by the end of May, which will give us almost two weeks to review and a selection made. He added that on June 18th we hope to finalize the final scope of work, present it to the MPO Board on June 19th for their approval, and then a document will be submitted to the NDDOT for their concurrence, process, etc.; so the notice to proceed will be at the end of June. He said that the first draft is scheduled for May of 2020 and the final draft by the end of June 2020.

Haugen pointed out that there will be a seven member selection committee. He added that they will be working with the soon to be released Downtown Action Plan for Grand Forks. He said that they are also working off of the Greater Minnesota Mobility Plan that identified some mobility issues in East Grand Forks and are also working with the knowledge that the Sorlie Bridge project being just a repaint and the DeMers Avenue reconstruction just providing the capacity that is there to-date, that in the future we have higher demand than what the capacity shows so a lot of this work will be to try to see how we can address the traffic issues without looking at capacity expansions.

Haugen said that, kind of piggy-backing off of the ITS Regional Architecture, MnDOT is scheduling updates to the traffic signals in Downtown East Grand Forks in 2023. He added that one of the issues in past studies between the two downtowns has been difference of equipment and their inability to communicate and coordinate well, so we are hoping that in conjunction with this and the ITS Regional Architecture update the equipment that is installed on the Minnesota side will better coordinate and communicate with the equipment on the North Dakota side so that we can take advantage of some of the coordination progression etc through the signal system.

Haugen commented that we also know that we are doing the Grand Forks Downtown Parking Plan so some of the analysis and data that is being used for that will feed into this Downtown Transportation Plan.

Haugen stated that a Steering Committee will be formed for this. He said that he did notice that he left off the NDDOT Central Office and the North Dakota Federal Highways; they have in the past requested that they be included on all Steering Committees, so he will add them to the list.

Haugen pointed out that beside the general public meetings, they also added presentations as part of the general public meetings to both City Councils to assist with the process.

Haugen commented that there are a lot of recent studies where data was gathered to work from; the MPO staff, with temporary help just collected turning movement counts at all remaining intersections that we don't have video counts taking place already.

Haugen stated that the last piece is the study are is covering essentially the DeMers overpass touchdown point to the DeMers Avenue intersection with Central Avenue in East Grand Forks and University to the north, and the railroad plaza to the south.

Haugen reported that the draft scope of work was provided to key agencies several weeks ago for review and comment. He said that they did receive some comments, which have been addressed, and with that they would like to see if there are any further comments, changes, or a motion to recommend approval.

Halford referred to the scope of work; Item H – Other Requirements, where it says that the consultant will update the Study Project Manager on an on-going basis, and asked if that would also go to the committee as well. She pointed out that there are five meetings scheduled so would they also get those updates at those meetings as well. Haugen responded that they will get updates at the meetings as well.

Williams stated that she has a question on terminology; this is a study so is it going to have alternatives in it or are you developing a finite plan. Haugen responded that it will have a mixture of both, it will have alternatives. Williams said, then, that it isn't really a plan it is a study. She stated that a plan infers that you've done your footwork and now you have the plan and now implementation is next, so this is a study. Haugen responded what the definition of "is" is, it is going to have components of all of these things in it, it will have alternatives, it will have a range of alternatives, some will be reviewed and possibly removed from further consideration because of inconsistency with the overall transportation plan, so that is the plan component; and it will also have study things that aren't in the plan, they aren't true alternatives, as many of us would consider alternatives as being when you do a round about or a traffic signal, or duel left turn lanes displaced, etc.; there will be study things that we will look at different ways for traffic, particularly multi-modal ways to look at how traffic demand can be met without looking at vehicle capacity expansion, so it is going to have kind of all three of those pieces so one thing versus another probably isn't as accurate as to try to take it down to a specific one or the other. Williams said, then, that it is a non-binding document, it isn't something that once it is done it

has to be implemented. Haugen responded that ultimately it could be binding, it could be considered a fantastic document that we want to adopt and update our Long Range Transportation Plan to incorporate. Williams said, though, that that isn't necessarily how it is going to go. Haugen responded that until we go through the process we don't know how it will end up.

Kuharenko asked if we maybe want to call this a study instead of a plan, because if we are looking at the alternatives, we don't necessarily know if it is something that we are going to want incorporated or have as binding, so if we call it a study instead that might give us more flexibility in the future. Williams added that a plan is something that you are going to do while a study is going to give you alternatives to develop a plan. Haugen responded, again, that this might get us to both; some point to a plan and some point to a study. Williams stated that this is similar to what Mr. Grasser said in an e-mail about the word "project"; she thinks this is kind of the same thing and she doesn't want anyone to get the idea that when it is done that this is going to be "the" plan, this is a study to develop a plan, and that all depends on dollars and everything else.

MOVED BY KUHARENKO, SECONDED BY HALFORD, TO INCORPORATE THE PROVISIONS DISCUSSED FOR THE STEERING COMMITTEE; TO REVISE THIS FROM DOWNTOWN TRANSPORTATION PLAN TO DOWNTOWN TRANSPORTATION STUDY; AND TO ENSURE THE TECHNICAL ADVISORY COMMITTEE GETS A MONTHLY UPDATE.

Voting Aye: ***Bail, Halford, Riesinger, Konickson, Johnson, Kuharneko, and Bergman.***
Voting Nay: ***None.***
Absent: ***Kadrmas, Lang, Ellis, Emery, Gengler, Audette, Laesch, Hanson, Rood, West, Magnuson, Sanders, and Christianson.***

MATTER OF LISTING OF OBLIGATIONS

Haugen reported that normally with our Draft T.I.P. document we include two items that are described in the staff report; one is a progress report on all of the projects that are scheduled to be done this construction year or are being funded out of this year's federal fiscal year; and then the other one is the Annual List of Obligations.

Haugen referred to the staff report and pointed out that it explains what the Annual List of Obligations is and why we need to do it. He explained that the Annual List of Obligation is more of a direct requirement from the Federal Government where we identify what federal funds were programmed versus what were obligated to the projects. He added that the requirement is that we also make sure that we provide enough information so that someone can look at the T.I.P. and be able to see what relationship to the T.I.P. the project obligations are, and to meet that requirement we have been using our T.I.P. spreadsheet by just adding in a highlighted section. He cited an example of a project in East Grand Forks and went over it briefly.
Haugen stated that they asked all of the agencies that had projects identified to give us both the progress report and then also the Annual Listing of Obligations. He said that for the most part

we were able to get that information, and Mr. Bergman is now giving us his information for his projects, so we will include them in as well.

Haugen commented that a lot of the obligation lists come directly from the NDDOT on the North Dakota side. He said that for the Minnesota side, since there are very few MnDOT only projects, most of the information comes from the locals.

Haugen said that you will notice that there are a couple of projects on the North Dakota side where the consultant has been hired but there has been no expenditures yet, so we aren't showing any obligations for those projects yet. He added that some are bid this week, but when the projects go to bid we also have an agreement already signed with the feds as to what their obligations will be for those projects. He pointed out that on the reconstruction of downtown DeMers the numbers for that one block stretch are a little less, so you can see that in this case the obligation is considerably less than what it was programmed to be.

Haugen commented that the other point of this exercise is to also manage our T.I.P.; to see what T.I.P. modifications or amendments we should be doing. He referred to the traffic signal on DeMers and Columbia Road West, and explained that it came in considerably higher, the obligations are considerably higher, so the federal amount rose beyond our limits so there should be a T.I.P. amendment coming on that project.

Haugen reported that one thing that was discussed at the NDDOT MPO Directors meeting on Monday is exactly when are these things really expected to be provided. He stated that because we haven't been doing Draft ND T.I.P.s in the past, all of this information has been put into an appendix of our Final T.I.P. document, and there it becomes kind of "old news"; so you will notice in the staff report that we really don't have an action item on this, so we are treating it as an informational item and we will get further guidance and agreement from both States as to when these documents, or what documents should be included in, or a separate document at some point.

Haugen stated that a lot of the projects are either already bid, or are in progress; although there are a few that are intentionally going to be bid later in the year, and those are noted.

Information only.

MATTER OF JOINT CITY COUNCIL BRIDGE MEETING

Haugen reported that a copy of the agenda for the Joint City Council meeting that was announced last week is included in the packet. He pointed out that the meeting will be held at 5:30 p.m. tonight in the Grand Forks City Hall Council Chambers.

Haugen stated that he was asked to give a presentation on our 2045 process, so he is preparing that, but it is information that we have all seen before, as far as the Technical Advisory Committee and the Executive Policy Board, and hopefully both City Councils, Planning Commissions and State Agencies have all seen it as well, so he isn't creating anything new he is

just copying and pasting old stuff into a shortened document that still provides sufficient information.

Halford said that she has a question on this; we are in kind of a unique situation with the timing of the closure of the Sorlie and Point bridges right now, but where do you think our traffic levels are at on that one bridge and then is that something that that level of traffic would be at where we would expect it to be at in 20 years from now, and what that level of service is if we do or don't add another bridge, is this kind of where the traffic might be at in the future. Haugen responded that he can't give an answer on that, unless someone else knows the exact number of traffic pouring over the Kennedy. Mertz responded that there is about 20,000 now and in 2035 it is expected to be about 30,000 for the Kennedy Bridge Plan, but that was the last he saw. Haugen said that he thinks Ms. Halford is asking, because the other two bridges are changing how people cross, there is only one, so the media went and found numbers and assumed that everybody from the Point will go to the Kennedy, everybody from the Sorlie will go to the Kennedy, but right now he can't say whether that is true or did the fact that there is only the Kennedy that there are people that are taking a trip just to see what it is like, adding to the volume, so unless someone counted the traffic, and he is sure that yesterdays traffic will be different than todays traffic, versus Fridays traffic because people will adjust, so he really can't answer that question.

Information only.

OTHER BUSINESS

a. 2019 Annual Work Program Project Update

Haugen reported that the monthly progress report is included for your review.

Williams commented that they have been going back and forth with the classification thing, and it is being shown to start mid-summer, but we were talking about May, is that correct. Haugen responded that to him May is summer, school is out for some of the time. Williams said that to her May is still spring, so she just wanted to verify when it was that you were going to start, but she guesses it will start in May. Haugen responded that that is correct.

Information only.

b. Skewed Intersection Open House April 11th

Haugen reported that tomorrow night, in the Grand Forks City Hall Council Chambers is the Skewed Intersection Study Open House.

Information only.

c. Mn220No Open House April 16th

Haugen reported that next Tuesday, here in the East Grand Forks Training Room, will be the Mn220No Corridor Study Open House.

Information only.

d. NDDOT/MNDOT POSITION CHANGES

Haugen reported that on Monday we heard that the North Dakota Federal Highway liaison has been reassigned to Virginia Federal Highway, he is going to be leaving at the end of May so, on a temporary basis our Federal Highway lead person will be from Minnesota.

Haugen said that if you aren't familiar with North Dakota Federal Highway, it was Stephanie Hickman that retired at the end of the year and her job has been filled, and it is a staff person out of Montana DOT, so that position will be filled. He added that, for those that are familiar, Wendall Meyer was the District Administrator, but he has shifted to Minnesota, so that position is vacant. He said that there was communication saying that they might hold off on; Richard Duran was our liaison, but they might hold off filling his position until the final District Administrator is filled so that is why there is a temporary assignment.

Haugen asked Mr. Johnson if he had any further information for this item.

Johnson responded that, as some of you may be aware, Chad Oren was the Assistant Director of STIP Development is moving to Project Development and the Transportation Director, Tom Sorel announced his retirement and he will be done at the end of this legislative session, but he will remain the interim director until the Governor appoints a new director.

Information only.

ADJOURNMENT

MOVED BY BERGMAN, SECONDED BY KUHARENKO, TO ADJOURN THE APRIL 10TH, 2019 TECHNICAL ADVISORY COMMITTEE MEETING AT 2:30 P.M.

Respectfully submitted by,

Peggy McNelis,
Office Manager

Grand Forks - East Grand Forks
Metropolitan Planning Organization

MPO Staff Report
Technical Advisory Committee: May 15, 2019
MPO Executive Board: May 22, 2019

RECOMMENDED ACTION: Approve priorities of the Grand Forks Cities Area Transit 5339 & 5310 Grant application with the priority order given.

Matter of Approval of priorities of the Grand Forks Cities Area Transit 5339 & 5310 Grant application.

Background: In March, the MPO, together with NDDOT, solicited applications for FTA 5339 & 5310 projects. The NDDOT has a deadline of May 23, 2019. All applications from the MPO area need to have MPO submittal to NDDOT through Black Cat; applications were due to the MPO by May 1st. This ensured the candidate projects could be vetted through the MPO in time to meet the NDDOT deadline. The only application that the MPO received for 5339 & 5310 projects was from Cities Area Transit (CAT). This staff report will list each FTA program separately below. There is a total of $10.7 million in funding available for 5339, 5310, and 5311 combined.

The 5339 program focuses funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus related facilities. CAT is looking at a funding request of $744,392.

CAT 5339 funding request includes the following projects in priority order:

1. **Replacement of Roof:** This project involves re-roofing the existing bus storage area (22,000 sf). The roof of the building has been patched up in several places over the 34 years since it was built, and it is due for complete replacement. The total cost of the project is $157,000. CAT is requesting $125,600 in Section 5339 funding; the 20% match of $31,400 will be paid out of the Grand Forks City Public Transportation budget.

2. **Upgrade Oil Dispensing & Disposal System:** This project involves the following to bring CAT's oil dispensing and disposal systems to a state of good repair:

a. Replace the buried waste oil tank with an above ground tank. This is an old buried tank and should be removed and replaced with an above ground, dual wall tank. Old tanks can be susceptible to damage and leakage into the ground if not replaced or resorted. The 34 year-old tank is due for replacement.
b. Replace the existing oil dispensing tank system, with new high-pressure lines/hose reels, pumps and monitoring system. The existing lube lines are black pipe and do not meet current requirements for high pressure lines. This replacement would also include a monitoring system for the oil and lube dispensing system.

The total cost of the project is $65,026. CAT is requesting $52,020 in Section 5339 funding; the 20%, local match of $13,006 will be paid out of the Grand Forks City Public Transportation budget.

3. **Upgrade Lighting, Electrical & Fire Alarm System:** This project involves the following to bring CAT's lighting, electrical and fire alarm systems to a state of good repair:
    a. Replace the interior non-LED lighting fixtures in the bus storage: Half or the existing bus storage space has undergone replacement to LED, but half of it is still left. A full replacement to LED will increase efficiency and light quality in the bus storage and maintenance areas.
    b. Upgrade the exterior lighting: The existing parking lot lights are high pressure sodium lights and there are several different styles on the site. Replacement to consistent LED fixtures will improve aesthetics, light quality, and security for the site.
    c. Replace the existing electrical distribution (main service switchboard, transformers, and distribution panels). The main service is original to the building. The 208/120-volt branch circuit panel boards do not have spare capacity, and the step-down transformer enclosures out side are in poor condition due to rust.
    d. Replace the obsolete fire alarm zone panel and devices with a code compliant addressable system. The existing building does not have a code compliant fire alarm system and should be updated to meet code.

    The total cost of the project is $152,000. CAT is requesting $121,600 in Section 5339 funding; the 20% local match of $30,400 will be paid out of the Grand Forks City Public Transportation budget.

4. **Parking Lot Improvements:** This project involves the following improvements to the parking area at the CAT Maintenance Facility:
    a. Replace 7 of the head-bolt posts. These stations are used by employees to plug in their vehicles during the winter, and most of these do not currently work and need to be replaced.
    b. Add 12 parking stalls: Due to the growth of the transit system over the last 34 years and changes in operations at the existing building, there is a higher

demand for off-street parking. Adding 12 stalls (concrete paving, stripping, etc.) to the parking lot will help meet the current and future demands.

The total cost of the project is $67,500. CAT is requesting $54,000 in Section 5339 funding; the 20% local match of $13,500 will be paid out of the Grand Forks City Public Transportation budget.

5. **Upgrade Shop Ventilation:** This project involves the following to bring the ventilation systems in the CAT maintenance and storage area to a state of good repair:
    a. Replace ductwork in the bus storage area to be code compliant. The size of the ductwork in the existing bus storage area is not large enough to meet the current requirements for proper air flow and distribution. Replacement would increase the size of the ducts to meet current code.
    b. Replace (3) make-up air units for the bus storage/maintenance area. This equipment has exceeded its usable life (34 years-old) and should be replaced
    c. Replace roof mounted exhaust fan. This equipment has exceeded its usable life (34 year-old) and should be replaced.
    d. Provide code compliant air quality monitor and control. The building currently has very basic temperature control, if any. We recommend new temperature controls throughout, updating the sequenced of operation for code compliant ventilation, air quality monitoring and energy efficiency.
    e. Replace the existing vehicle exhaust system. The underground vehicle exhaust system doesn't work in the maintenance bays. Replacement of the system is needed to remove vehicle exhaust from building up and preventing carbon monoxide when vehicles are started in the shop storage area and when vehicle repairs are being done. (The underground exhaust piping would be abandoned in place.)

    The total cost of this project is $139,950. CAT is requesting $111,960 in Section 5339 funding; the 20% local match of $27,990 will be paid out of the Grand Forks City Public Transportation budget.

6. **Exterior Maintenance:** This project involves the following to bring the building envelope to a state of good repair and improve energy efficiency:
    a. Replace the existing north Kalwall system with a vertical translucent panel system. The original (34 years) translucent panel system above the maintenance storage are is separating and leaking. The system was designed as part of a sloped roof and this has contributed to the deterioration. There are also connection/flashing issues as it meets the existing burnished block exterior wall. The replacement solution is a modern vertical translucent wal panel that will provide increased efficiency, more natural daylight, and mitigate the current water leakage and moisture issues.
    b. Re-seal the existing burnished block on the building: The building sits on the site at a 45-degree angle, and most of the burnished block on the

exterior of the building has been exposed to the elements (sun and wind). This has caused the seal to wear and the block has started to fade in color. Resealing the block will provide protection for the block and bring back the original color.

c. Re-caulk/repair deteriorated precast joints: The caulking joints between the exterior precast panels on the east/northeast side have not been touched on 34 years. Most of these vertical joints (every 8 feet) need to be replaced/repaired so the interior of the wall/building can be protected from potential water penetration that would further damage the panels and also the building from heat loss due to missing caulking.

d. Replace the existing maintenance bay windows: There are 6 high, 42" diameter round window openings in the precast panels on the east/northeast side that are 34 years old The glazing panels do not meet today's low-e glazing standards, and the seal around the windows are peeling off causing water leaks and heat loss.

e. Replace the overhead doors: The overhead doors are at least 15 years old and are made of solid panels. Replacement of these would include introduction some glazing in the panels so that there is more natural daylight being provided in the storage/fueling bays. The replacement would also include a safety sensing system so that the doors remain open when a bus is in the fuel or wash bay to prevent injuries from a door closing on someone or equipment.

The total cost of this project is $98,965. CAT is requesting $79,172 in Section 5339 funding; the 20% local match of $19,793 will be paid out of the Grand Forks City Public Transportation budget.

7. **Auto Vehicle Location Equipment:** This project involves the purchase of two sets of equipment for CAT's AVL system. This equipment will be installed in vehicles to meet the required ADA announcements, data collection, and GPS tracking across the CAT fleet. The total cost of this project is $20,000. CAT is requesting $16,000 in Section 5339 funding; the 20% local match of $4,000 will be paid out of the Grand Forks City Public Transportation budget.

8. **Disc Brake Tool:** This project involves the purchase of tooling required to properly maintain disc brakes that are presently on new heavy-duty buses. This tooling equipment will prevent personal injury risks of back problems from excess heavy lifting of large equipment and parts. The total cost of this project is $20,000. CAT is requesting $8,840 in Section 5339 funding; the 20% local match of $2,210 will be paid out of the Grand Forks City Public Transportation budget.

9. **Concrete for ADA Boarding:** This project involves the installation of concrete at four bus stops to allow for the placement of a shelter and ADA boarding area. The total cost of this project is $11,050. CAT is requesting $16,000 in Section 5339 funding; the 20% local match of $4,000 will be paid out of the Grand Forks City Public Transportation budget.

10. **Bus Shelter Replacements:** This project involves the replacement of seventeen (17) bus shelters that were purchased in 1987 and have exceeded their useful life. The total cost of this project is $136,000. CAT is requesting $108,800 in Section 5339 funding; the 20% local match of $27,200 will be paid out of the Grand Forks City Public Transportation budget.

11. **Shop Pickup Replacement:** This project involves the replacement of a shop pickup that was purchased in 2009 and has exceeded its useful life. The total cost of this project is $25,000. CAT is requesting $20,000 in Section 5339 funding; the 20% local match of $5,000 will be paid out of the Grand Forks City Public Transportation budget.

12. **Staff car replacement:** This project involves the replacement of a staff car that was purchased in 2010 and has exceeded its useful life. The total cost of this project is $18,000. CAT is requesting $14,400 in Section 5339 funding; the 20% local match of $3,600 will be paid out of the Grand Forks City Public Transportation budget.

13. **Shop Pickup:** This project involves the purchase of an additional shop pickup. This is necessary to support CAT staff in the performance od tasks related to the maintenance and repair of vehicles, facilities, bus shelters, and grounds. The total cost of this project is $20,000. CAT is requesting $16,000 in Section 5339 funding; the 20% local match of $4,000 will be paid out of the Grand Forks City Public Transportation budget.

The 5310 program focuses funding to Elderly and Individuals with Disabilities. Projects can be submitted by public transit providers, nonprofit agencies, social service agencies and others. All projects must show consistency with the locally adopted Human Services Public Transportation Coordination Plan in the current TDP. Those other than the public transit provider need to go through the transit agency in their area. CAT is looking at a funding request of $196,157.

CAT 5310 funding request includes the following projects in priority order:

1. **Mobility Manager:** The Mobility Manager serves as a regional transit coordinator and is responsible for planning, marketing, education and outreach for Cities Area Transit. The Mobility Manager provides bus training for senior citizens and persons with disabilities and is the agency contact for local human service providers. The total cost for the Mobility Manager position (wages and benefits) is $91,197. CAT is requesting $72,971 in Section 5310 funding; the 20% local match of $18,226 will be paid out of the Grand Forks City Public Transportation budget.

2. **Replacement of ADA Minivan:** 2015 Dodge Grand Caravans #151, #152, #153, and #154 are nearing the end of its useful life of 4 years or l 00,000 miles. The vehicles are scheduled to be replaced at a cost of $38,500 each. CAT is requesting

$123,200 in Section 5310 funding for four replacement vehicles: the 20% local match of $30,800 will be paid out of the Grand Forks City Public Transportation budget.

Findings and Analysis:

- The TDP does list priority on State of Good Repair and Transit Asset Management. Meeting Federal Guidelines for transit service is always part of the State of Good Repair.
- 5339 Priorities 1 through 6 are to complete the current Transit Maintenance Facility remodel project. Listed in TDP as a 5339 candidate project.
- 5339 Priorities 7 and 9 to meet ADA standards.
- 5339 Priorities 8 and 10 were unfulfilled requests in 2019.
- 5339 Priorities 11 through 13 are listed in the TDP as candidate projects for 5339 funding. The replacement of vehicles is following useful life benchmarks.
- The Coordinated Human Service Transportation Plan emphasizes the need for marketing and education. This work falls under the Mobility Manager's responsibilities.
- The replacement of ADA Minivans falls under the State of Good Repair, coupled with the need to meet Federal Guidelines to meet useful life benchmarks. Listed in the TDP as a 5310 candidate project.
- Staff recommends approval of the 5339 & 5310 application as being consistent with the TDP.

Support Materials:

- CAT Staff reports
- Section 5339 & 5310 Applications

Overcoming Barriers Strengthening Connections

Grand Forks - East Grand Forks Metropolitan Planning Organization

Ensuring Opportunities Planning One Community

"A community that provides a variety of complementary transportation choices, that are fiscally constrained, for people and goods."

MPO Staff Report
Technical Advisory Committee: May 15, 2019
MPO Executive Board: May 22, 2019

RECOMMENDED ACTION: Update of the CAT/UND Shuttle Merger Study.

Matter of Update of the CAT/UND Shuttle Merger Study.

Background:
Cities Area Transit and University of North Dakota have been having continued discussions about merging the two systems. Essentially, the merger is conceptually considered that UND would contract with CAT to operate a public transportation service like the current UND Campus Shuttle system.

In March SRF started more in-depth review of costs and put a report together for a review by CAT and UND. On April 24th CAT and UND met with the MPO and SFR to go over the costs and discuss if this is still a viable venture. Since then a more in-depth review of what it would cost for CAT to run the campus shuttle service. A final cost is still being worked on and will be presented soon.

On April 24th the possibility of this merger was presented to the public. A meeting was held in the Lecture Bowl in the Memorial Union on the UND campus. While it was open to the public it was held a time that the students could attend and get information. A meeting was also held that day in Grand Forks City Hall aimed at the general public. The last day for comments was May 10th.

At the start of this study it was thought that if CAT started running the campus shuttle service it would be for the 2019-2020 school year. UND has decided to run the campus shuttle for the 2019-2020 school year. CAT could start running the service on Aug. 2020.

Findings and Analysis:
- Update

Support Materials:
- Current operating cost analysis summary.

Memorandum

SRF No. 12512

To: Teri Kouba, Senior Transportation Planner
Grand Forks/East Grand Forks MPO
255 North 4th Street
Grand Forks ND 58203

From: Menno Schukking, Planner

Date: April 16, 2019

Subject: UND – CAT Transit Integration Feasibility Study

Purpose of Memo

The purpose of this memorandum is to provide a summary of merge proposal and cost analysis associated with Cities Area Transit (CAT) providing service consistent with the current UND shuttle operations. Information included in this memo is from technical memos distributed earlier in the study.

Assumptions

Listed below are key assumptions of the merge analysis:

- Routes included: Red Route, Blue Route, Purple Route and Night Route.
- Routes Excluded: Aviation Shuttle and athletics shuttle.
- Service days and hours would remain consistent with current of operations during session periods only.
- CAT-type buses would replace buses rented through North Dakota State Fleet Services.

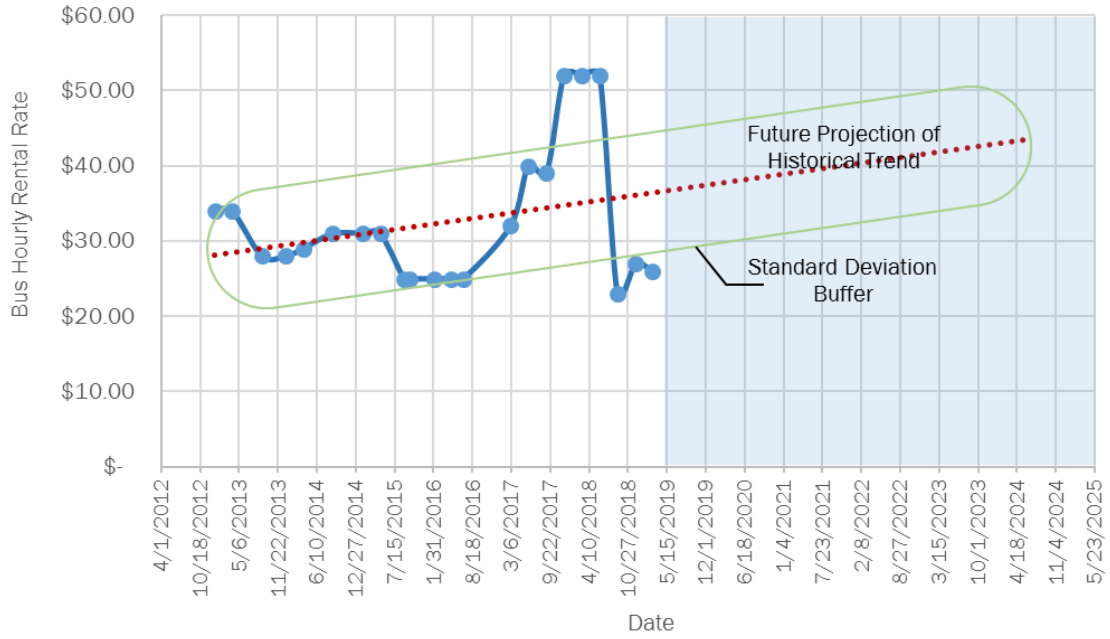
Current UND Campus Shuttle Operating Costs

Annual operating costs comprise the following components:

- Vehicle rent
- Driver labor
- Administration

Driver and administration costs are relatively consistent year to year, as long as the level of service provided is similar. Vehicle rent costs are more variable as maintenance costs influence the annual hourly rate charged for vehicles. Figure 1 displays hourly rates charged from 2012 through 2019. Over the period, the hourly rate charged for each vehicle ranged from $23.00 to $52.00, for essentially the same vehicle pool. The variability reflects periods when significant maintenance costs (i.e. engine or transmission replacements) were incurred.

Figure 1. UND Shuttle Hourly Rent Per Vehicle by Year (2013-2019)



Rates are reviewed throughout the year and, as demonstrated in the figure information, can change within an academic year. The hourly rental rate for recent periods was $52.00 per hour, the highest in the seven year period. Rates anticipated for the beginning of the 2019-20 academic year are expected to be $26.00 per hour. As rent changes, overall system cost changes. An expectation of merging with CAT is a more consistent year-to-year cost, which will enhance budgeting capabilities.

The most recent budget, shown in Table 1, for the four shuttle routes was approximately $440,200.

Table 1. UND Shuttle Operational Expenditures (2018)

Source	Expense
Vehicle Cost	$281,253
Operating Cost	$156,059
Miscellaneous and Communications Costs	$2,931
Total	**$440,243**

Understanding the influence vehicle rent charges have on total operating cost, an estimate of annual cost associated with the trending hourly estimate was also prepared. The trending hourly rate represents the rate derived through establishing a trend line associated with the 2012 through 2019 actual charged rates. The current trending current rate is approximately $37.50 per hour, which reduces the actual academic year cost from $440,200 to approximately $361,800.

Federal Funding Analysis

Transferring shuttle operations to CAT would allow annual revenue miles, revenue hours and passenger counts to be included in figures CAT uses to calculate federal funding. If the reporting values provide increases in revenue miles or revenue hours adequate to surpass performance thresholds established by the Federal Transit Administration (FTA), CAT could receive additional funding. Analysis of adding shuttle miles, passengers and hours to the CAT pool did not represent increments that would support added federal funding.

Scenario	Passenger Miles per Vehicle Revenue Mile	Passenger Miles per Vehicle Revenue Hour	Vehicle Revenue Mile per Capita	Vehicle Revenue Hour per Capita	Passenger Miles per Capita	Passenger Trips per Capita
CAT	2.22	26.75	9.69	0.81	21.56	5.44
CAT + UND Campus Shuttle	2.36	27.74	10.34	0.88	24.43	8.30
CAT + UND Airport Shuttle	2.22	30.23	13.21	0.97	29.39	6.85
CAT + UND Campus Shuttle + Aviation Shuttle	2.22	31.22	13.86	1.05	32.26	9.71
Average for UZAs with populations 200,000 - 999,999	6.00	105.11	11.63	0.74	79.17	12.14
**Vehicle Revenue Hour Per Capita Criteria was met by CAT in 2019 so the over estimation of shuttle revenue hours is not a matter of concern.*						
Gray - Not calculated, Need Data						
Green - Met category in Scenario						

Overcoming Barriers Strengthening Connections

Grand Forks - East Grand Forks Metropolitan Planning Organization

Ensuring Opportunities Planning One Community

MPO Staff Report
Technical Advisory Committee: May 15, 2019
MPO Executive Board: May 22, 2019

RECOMMENDED ACTION: Update on Functional Re-Classification

Matter of the Functional Re-Classification.

Background: FHWA updated its guide on functional classification in Fall of 2013. Together with this major update, the 2010 Census changed the urbanized area geography which typically created need to make changes to roadway functional classification. Lastly, MAP-21 automatically converted all existing principal arterials to the National Highway System; continued with FAST. This NHS designation may be significant due to the fact that the majority of funding in FAST is focused towards the NHS routes.

The MPO, working with our partners, updated the urbanized area boundary in 2012 and then updated the functional classification that were necessary due to the boundary changes. Minnesota completed a statewide functional re-classification in 2015 that ended with the MPO and its partners updating the Minnesota side of our MPO Study area's functional classification.

For the North Dakota side, there has been identified necessary changes to the functional classification throughout the recent years; however, the general agreement was to wait until after the 2045 MTP was completed. In addition, NDDOT has adopted a policy on how to consider functional classification.

Therefore, the Work Program identified the we would complete a review of our functional classification in 2019.

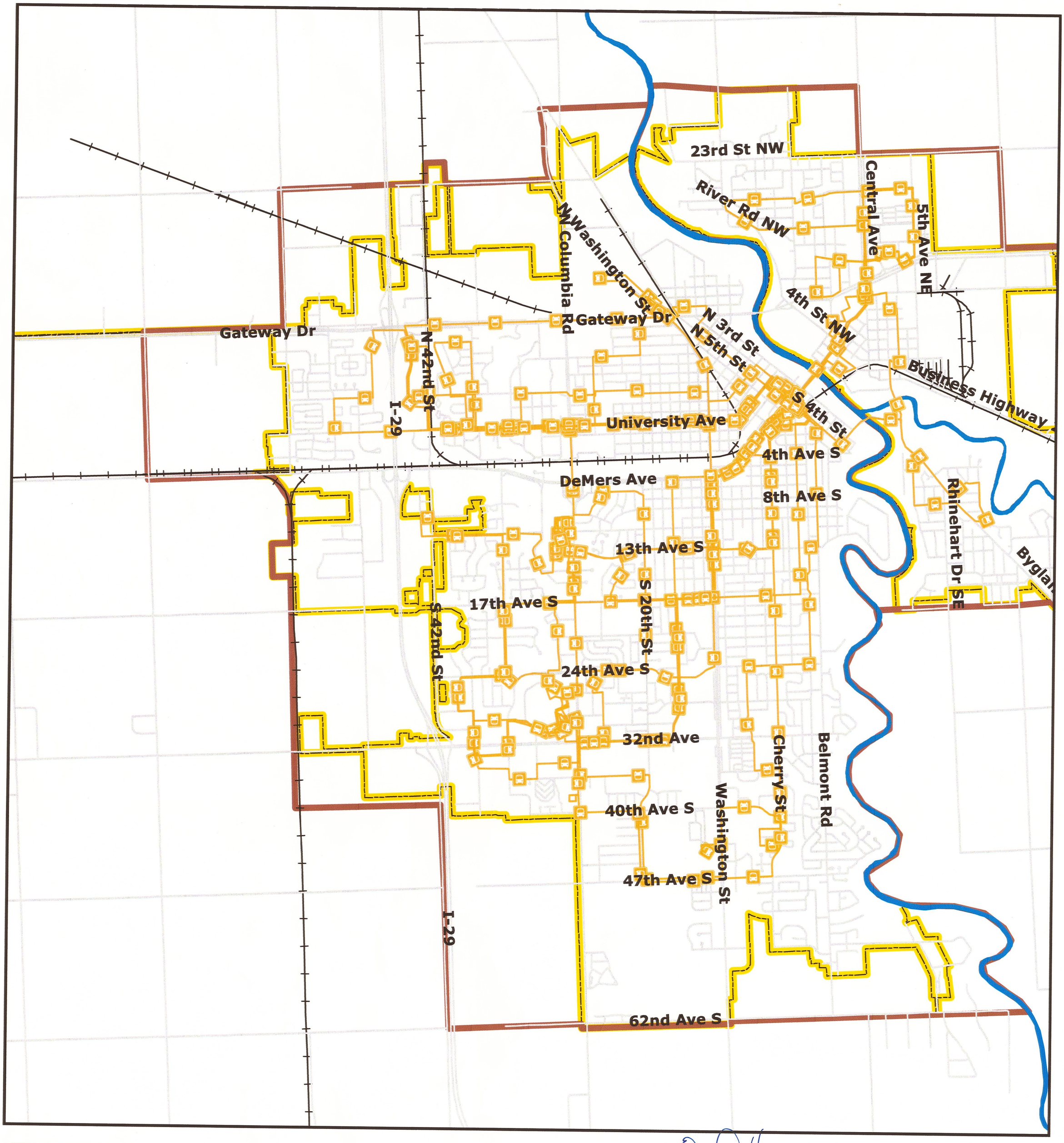
Findings and Analysis:

- The functional classification needs to be reviewed and updated.
- FHWA updated their guidance in functional classification and this will be the primary guide used. Each state has promulgated state specific guides that will be followed.
- The Minnesota side was recently updated so the review will be more limited.
- The North Dakota side will require more review due to this is the first update under the new guides.
- The Work Program has identified this activity being done this year.

Support Materials:

- Information on current functional classification and the guide

Grand Forks Federal Aid/Urban Boundary



Adopted June 2013

M.P.O. M.P.O. M.P.O. Grand Forks - East Grand Forks Metropolitan Planning Organization

Carol Harg 20 June 2013
MPO Executive Director

Paul M. Benning 9-4-13
North Dakota Department of Transportation

Stephanie J Hickman 9/25/2013
FHWA

2012 Functional Classification
Grand Forks, ND

N 69th St
Gateway Dr
N 3rd St
N 5th St
10th Ave N
8th Ave N
6th Ave N
N 51st St
N 55th St
N 42nd St
4th Ave N
S 4th St
University Ave
4th Ave S
DeMers Ave
8th Ave S
11th Ave S
13th Ave S
Walnut St
I-29
17th Ave S
S 42nd St
S 29th St
S 20th St
S 17th St
Cottonwood St
Chestnut St
24th Ave S
S 10th St
32nd Ave
Cherry St
Belmont Rd
36TH AVE S
40TH AVE S
47TH AVE S
S Columbia Rd
S Washington St

Functional Classification

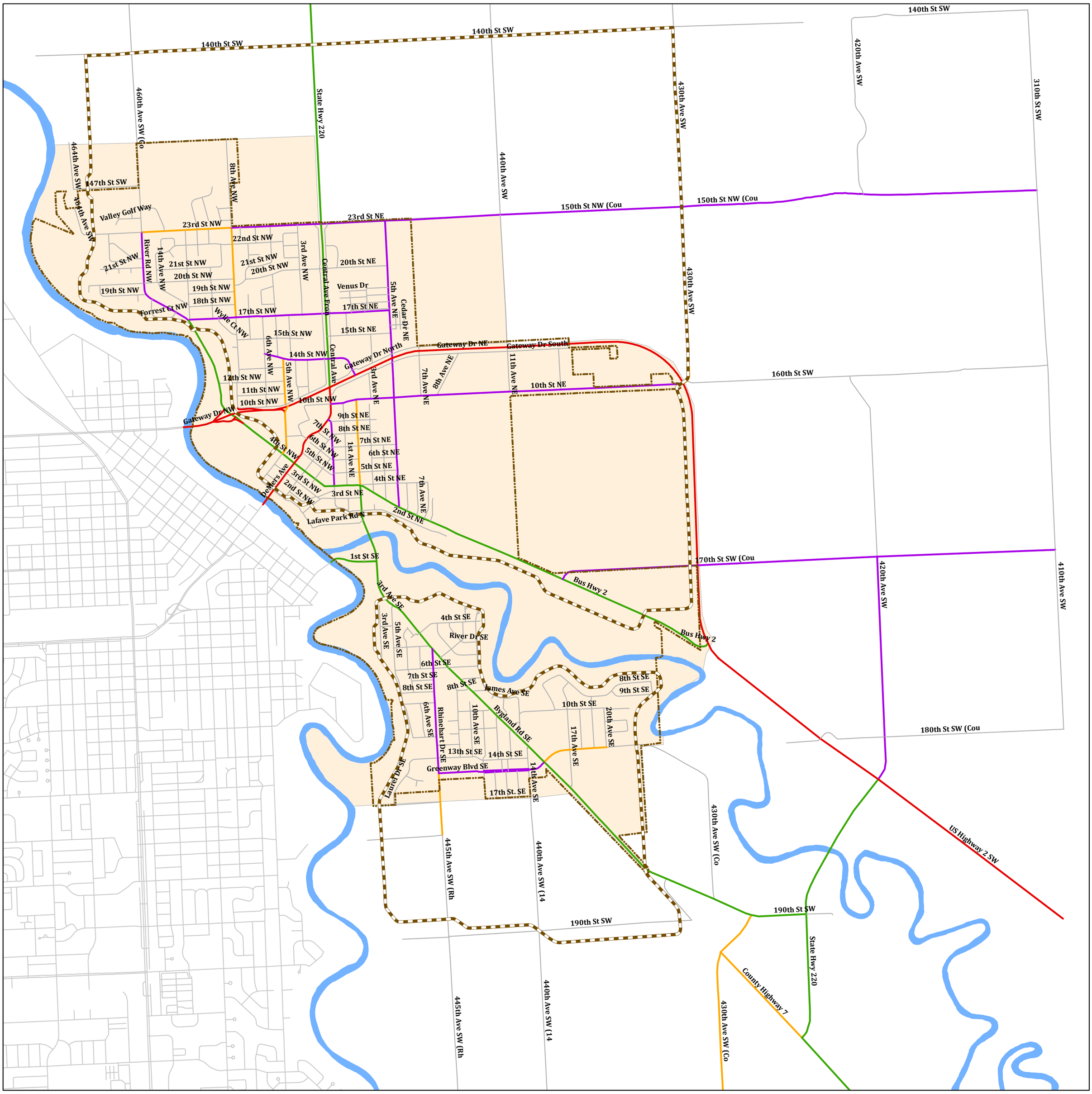
- Interstate
- Principal Arterial
- Minor Arterial
- MPO Study Area
- Major Collector
- Minor Collector
- Local
- City Limits

N
W E
S

0 0.5 1 Miles

Grand Forks - East Grand Forks Metropolitan Planning Organization

City of East Grand Forks Functional Classification, 2015



Functional Classification

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- Dike
- Urbanized Area
- City Limits

N
W E
S

0 0.5 1 Miles

M.P.O. M.P.O. M.P.O.
Grand Forks - East Grand Forks Metropolitan Planning Organization

Grand Forks-East Grand Forks MPO, Executive Director — Date

Minnesota Department of Transportation- District 2 — Date

Federal Highway Administration, Minnesota — Date

MEMO TO: Steve Salwei, Transportation Programs Director

FROM: Paul Benning, Local Government Engineer PB
Scott Zainhofsky, Planning/Asset Management Engineer SDZ

DATE: June 26, 2015

SUBJECT: Roadway Functional Classification Policy Document

In 2013 the Federal Highway Administration (FHWA) released the *Highway Functional Classification Concepts, Criteria and Procedures* guidance document. This document provides the procedures and processes for assigning functional classification to roadways and adjusting urban area boundaries. This document serves as an update to the 1989 document of the same title, as well as the update document released in 2008.

The new guidance prompts a discussion as a Department on changes to the current process, along with developing the process moving forward. This document will outline the items that need attention and propose a process that internal staff will utilize, as well as outside entities that coordinate their functional classification efforts through NDDOT.

Functional Classification Categories

1989 Guidance Document

This guidance document provides four classification categories for both rural and urban roadway systems. The four main categories are identified in ***Table 1*** and ***Table 2*** for the rural and urban systems, respectively. Also in the table are the percentage splits of each category as they relate to the entire system. These tables act as the baseline for the functional classification system as it exists today in North Dakota. Slight variances to these splits have been granted in the past if the request was appropriate to the overall system designation.

Table 1 – Rural

	Range	(percent)
Rural Systems	**VMT**	**Miles**
Principal arterial system	30-55	2-4
Principal arterial plus minor arterial road system	45-75	6-12
Collector road system	20-35	20-25
Local road system	5-20	65-75

Source: 1989 FHWA Functional Classification Guidance

Table 2- Urban

	Range	(percent)
Urban Systems	**VMT**	**Miles**
Principal arterial system	40-65	5-10
Principal arterial plus minor arterial street systems	65-80	15-25
Collector street system	5-10	5-10
Local street system	10-30	65-80

Source: 1989 FHWA Functional Classification Guidance

2013 Guidance Document

This guidance document expands on these categories to further define the functional classification system within a community, region, or state. The new guidance still defines four distinct categories of functional classification, with the addition of some types having sub-categories for classifying the roadway system. The types are as follows:

- Principal Arterial
  - Interstate
  - Other Freeways and Expressways
  - Other
- Minor Arterial
- Collector
  - Major
  - Minor
- Local

The principal arterial category now has three sub-categories. The Interstate sub-category is an obvious designation in terms of the Interstate systems throughout the state. The Other Freeways and Expressways designation is a sub-category that may not apply all too well to North Dakota, with one example being US Highway 2 through the city of Minot. The Other category will then include all principal arterials not addressed by the first two sub-categories.

The subdivision of the collector system may provide the most challenges in terms of updating the system into major and minor sub-categories. Both collector categories serve the same types of areas or neighborhoods; however, the two categories separate themselves in terms of density, distance, speed, and intersection spacing. The Major Collectors will serve higher density land access over a longer trip length, at a higher speed and with less access locations; while the Minor collectors serve a lower density along shorter trips, at a reduced speed and with more access.

Functional Classification Roadway Distribution

One of the main differences from the 1989 to the 2013 guidance is how each category is split across the system. The 1989 guidance is straight forward with the percentage splits identifiable in the tables above. In contrast, the 2013 guidance is, at least on the surface, a much more in-depth analysis of the roadway system for each category type. The distribution tables from the 2013 guidance document are in ***Appendix A*** of this document for reference.

Each category has typical design characteristics tied to each functional classification designation. These characteristics include lane and shoulder widths, daily traffic, divided/undivided, and access control. These parameters help entities developing their functional classification system essentially "break ties" on which category a roadway should be labeled. For example, if a segment of roadway is on the fence between a collector and a local road, the design parameters can provide a metric for determining which side of that fence the roadway may fall.

Additional Guidance Document Highlights

There are a number of other guidance criteria from the update document that warrant discussion and recommendations. They are as follows:

- *Future roadways may only be functionally classified if they are within the timeframe of the approved STIP and are to be constructed during the STIP life.*
    - This is not always true for some of our urban areas within the state.
    - This should have little effect on the State Highway System and County System designations.

- *A roadway should be classified as it exists today; upgrades to classification may happen after construction upgrades have occurred.*
    - This also does not match current practices within an urban or urbanized area boundary as a certain functional classification may need to coincide with jurisdictional ordinances for zoning or access control.
    - This should have little effect on the State Highway System and County System designations.

- *Looking at the entire system after an update to the urban area boundaries.*
    - Federal Highway Administration has made the comment this will not be a requirement for our urban areas.
    - The Minnesota Department of Transportation (MnDOT) did do this process at the state level and then had the urban areas comment on the changes. This process engaged MnDOT and the local jurisdiction(s) into an iterative give and take discussion. This point is key in that two of our Metropolitan Planning Organizations (MPO) our bi-state MPOs with Minnesota.

Proposed Policy Recommendations

1. Other Freeways and Expressways

   These additional classifications to the principal arterial network might only apply to a few select instances in the state, which may make it difficult to track and monitor these classifications.

   Recommendation: The NDDOT will continue to utilize and promote one Principal Arterial system for defining functional classification.

2. Major vs. Minor Collector

   This new distinction to the Collector system for a rural state like North Dakota may be difficult to analyze and implement as the roadways vying for one of these two categories will most likely be very similar in nature and function. This is true for both the State Highway System, systems within the confines of an urban area, and on the County System.

   Recommendation: The NDDOT will continue to utilize and promote one single Collector system for defining functional classification.

3. Roadway Defining Characteristics

   The update guidance document provides design characteristics for each functional classification category. While most of these characteristics may apply to the State Highway System in the rural areas of the state and on the County System, these characteristics do not generally follow functional classification within an urban area. Some of these characteristics may be difficult to implement in most areas, especially something like shoulder widths.

   Recommendation: The NDDOT will recognize the design characteristics as desired for new functional classification requests, but they will not be a requirement for previously approved classifications.

4. Future Roadways

   Future roadways may only be functionally classified if they are within the current approved STIP document.

   Recommendation: The NDDOT will implement this guidance moving forward. Proposed classifications will no longer be allowed on an approved functional classification map. An entity may develop and maintain a proposed map for their planning purposes but it will not be approved or displayed by the NDDOT.

5. Existing Classification

   All roadway functional classifications should be designated based on how the roadway currently functions and operates. An elevation in classification may only be considered after the roadway has been upgraded to match that classification.

   Recommendation: The NDDOT will implement this guidance moving forward for all future functional classification requests.

6. Urban Area Boundary Update

   An evaluation of the entire functional classification system should be done at the approval of the urban area boundary.

   Recommendation: The NDDOT will encourage but not require the urban areas within the state to do a full evaluation of their existing functional classification; instead the updated guidance document shall be used for all future requests.

Recommendation Concurrence:

Do you concur with the recommendations for the implementation of the 2013 *Highway Functional Classification Concepts, Criteria and Procedures* guidance document?

X Yes _____ No

Comments: _____

_____

_____

_____

Steve Salwei, P.E., Transportation Programs Director

6-29-15
Date

38/mej/sas
Attachments
F:\OTPS\85-Decision Documents\Functional Class Policy Document.docx

APPENDIX A

2013 MILEAGE GUIDELINES BY FUNCTIONAL CLASSIFICATION

Table 3-5: VMT and Mileage Guidelines by Functional Classifications - Arterials

	Arterials			
	Interstate	Other Freeways & Expressway	Other Principal Arterial	Minor Arterial
Typical Characteristics				
Lane Width	12 feet	11 - 12 feet	11 - 12 feet	10 feet - 12 feet
Inside Shoulder Width	4 feet - 12 feet	0 feet - 6 feet	0 feet	0 feet
Outside Shoulder Width	10 feet - 12 feet	8 feet - 12 feet	8 feet - 12 feet	4 feet - 8 feet
AADT[1] (Rural)	12,000 - 34,000	4,000 - 18,500[2]	2,000 - 8,500[2]	1,500 - 6,000
AADT[1] (Urban)	35,000 - 129,000	13,000 - 55,000[2]	7,000 – 27,000[2]	3,000 - 14,000
Divided/Undivided	Divided	Undivided/Divided	Undivided/Divided	Undivided
Access	Fully Controlled	Partially/Fully Controlled	Partially/Uncontrolled	Uncontrolled
Mileage/VMT Extent (Percentage Ranges)[1]				
Rural System				
Mileage Extent for Rural States[2]	1% - 3%	0% - 2%	2% - 6%	2% - 6%
Mileage Extent for Urban States	1% - 2%	0% - 2%	2% - 5%	3% - 7%
Mileage Extent for All States	1% - 2%	0% - 2%	2% - 6%	3% - 7%
VMT Extent for Rural States[2]	18% - 38%	0% - 7%	15% - 31%	9% - 20%
VMT Extent for Urban States	18% - 34%	0% - 8%	12% - 29%	12% - 19%
VMT Extent for All States	20% - 38%	0% - 8%	14% - 30%	11% - 20%
Urban System				
Mileage Extent for Rural States[2]	1% - 3%	0% - 2%	4% - 9%	7% - 14%
Mileage Extent for Urban States	1% - 2%	0% - 2%	4% - 5%	7% - 12%
Mileage Extent for All States	1% - 3%	0% - 2%	4% - 5%	7% - 114%
VMT Extent for Rural States[2]	17% - 31%	0% - 12%	16% - 33%	14% - 27%
VMT Extent for Urban States	17% - 30%	3% - 18%	17% - 29%	15% - 22%
VMT Extent for All States	17% - 31%	0% - 17%	16% - 31%	14% - 25%
Qualitative Description (Urban)	• Serve major activity centers, highest traffic volume corridors, and longest trip demands • Carry high proportion of total urban travel on minimum of mileage • Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area • Serve demand for intra-area travel between the central business district and outlying residential areas			• Interconnect with and augment the principal arterials • Serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials • Distribute traffic to smaller geographic areas than those served by principal arterials • Provide more land access than principal arterials without penetrating identifiable neighborhoods • Provide urban connections for rural collectors
Qualitative Description (Rural)	• Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel • Serve all or nearly all urbanized areas and a large majority of urban clusters areas with 25,000 and over population • Provide an integrated network of continuous routes without stub connections (dead ends)			• Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service • Spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an arterial roadway Provide service to corridors with trip lengths and travel density greater than those served by rural collectors and local roads and with relatively high travel speeds and minimum interference to through movement

1- *Ranges in this table are derived from 2011 HPMS data.*

2- *For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.*

Table 3-6: VMT and Mileage Guidelines by Functional Classifications – Collectors and Locals

	Collectors		Local
	Major Collector[2]	Minor Collector[2]	
Typical Characteristics			
Lane Width	10 feet - 12 feet	10 - 11 feet	8 feet - 10 feet
Inside Shoulder Width	0 feet	0 feet	0 feet
Outside Shoulder Width	1 feet - 6 feet	1 feet - 4 feet	0 feet - 2 feet
AADT[1] (Rural)	300 - 2,600	150 - 1,110	15 - 400
AADT[1] (Urban)	1,100 - 6,300[2]		80 - 700
Divided/Undivided	Undivided	Undivided	Undivided
Access	Uncontrolled	Uncontrolled	Uncontrolled
Mileage/VMT Extent (Percentage Ranges)[1]			
Rural System			
Mileage Extent for Rural States[3]	8% - 19%	3% - 15%	62% - 74%
Mileage Extent for Urban States	10% - 17%	5% - 13%	66% - 74%
Mileage Extent for All States	9% - 19%	4% - 15%	64% - 75%
VMT Extent for Rural States[3]	10% - 23%	1% - 8%	8% - 23%
VMT Extent for Urban States	12% - 24%	3% - 10%	7% - 20%
VMT Extent for All States	12% - 23%	2% - 9%	8% - 23%
Urban System			
Mileage Extent for Rural States[3]	3% - 16%	3% - 16%[2]	62% - 74%
Mileage Extent for Urban States	7% - 13%	7% - 13%[2]	67% - 76%
Mileage Extent for All States	7% - 15%	7% - 15%[2]	63% - 75%
VMT Extent for Rural States[3]	2% - 13%	2% - 12%[2]	9% - 25%
VMT Extent for Urban States	7% - 13%	7% - 13%[2]	6% - 24%
VMT Extent for All States	5% - 13%	5% - 13%[2]	6% - 25%
Qualitative Description (Urban)	• Serve both land access and traffic circulation in higher density residential, and commercial/industrial areas • Penetrate residential neighborhoods, often for significant distances • Distribute and channel trips between local streets and arterials, usually over a distance of greater than three-quarters of a mile	• Serve both land access and traffic circulation in lower density residential, and commercial/industrial areas • Penetrate residential neighborhoods, often only for a short distance • Distribute and channel trips between local streets and arterials, usually over a distance of less than three-quarters of a mile	• Provide direct access to adjacent land • Provide access to higher systems • Carry no through traffic movement
Qualitative Description (Rural)	• Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks, important mining and agricultural areas • Link these places with nearby larger towns and cities or with arterial routes • Serve the most important intra-county travel corridors	• Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within reasonable distance of a minor collector • Provide service to smaller communities not served by a higher class facility • Link locally important traffic generators with their rural hinterlands	• Serve primarily to provide access to adjacent land • Provide service to travel over short distances as compared to higher classification categories • Constitute the mileage not classified as part of the arterial and collectors systems

1- *Ranges in this table are derived from 2011 HPMS data.*

2- *Information for Urban Major and Minor Collectors is approximate, based on a small number of States reporting.*

3- *For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.*

This portion of State Mill Road needs to be added to the system through a change request, it doesn't happen automatically.

Proposed routes will no longer be placed on the maps; if the MPO would like to keep a map of proposed routes that is an option.

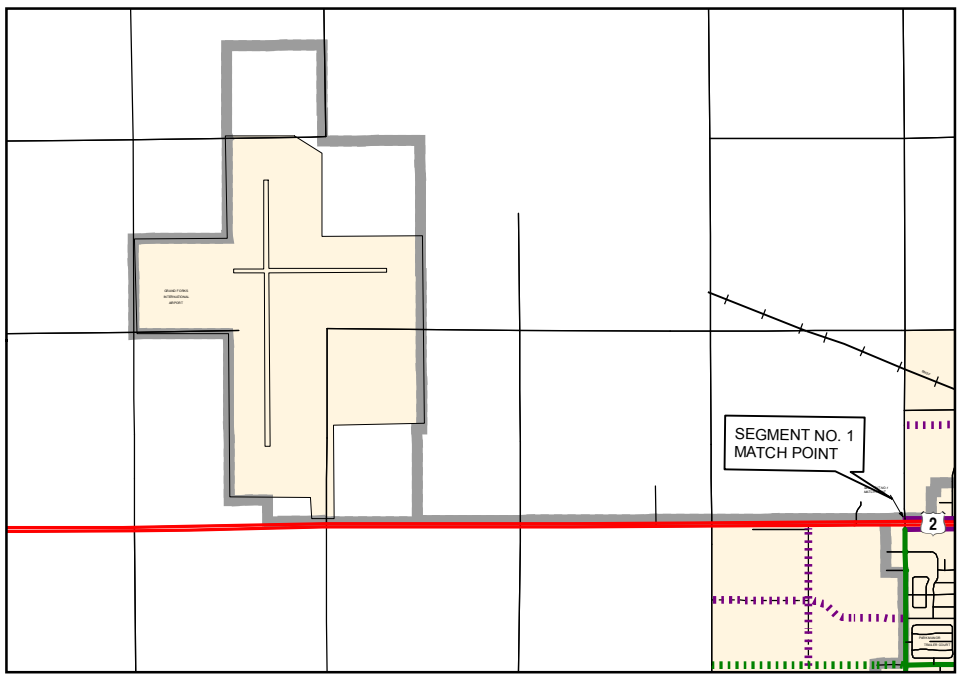
Stub routes that do not connect with another functionally classified road will no longer be allowed on the system. The exception to this rule are frontage roads, they can still be included on the system.

Legend	Existing	Proposed
Interstate		
Principal Arterials		
Minor Arterials		
Collectors		
2002 Urban Limits		
Corporate Limits		

*REVISED 05/30/2006
*REVISED 9/9/10 (Correct data error on Collector N Grand Forks on State Mill Road)
*REVISED 09/28/12, FHWA approved 08/30/10

Notice of Disclaimer

The North Dakota Department of Transportation (NDDOT) makes this map available on an "as is" basis as a public service. Under no circumstances does NDDOT warrant or certify the information to be free of errors or deficiencies of any kind. NDDOT specifically disclaims all warranties, express or implied, including but not limited to the warranties of merchantability and fitness for a particular purpose.
COPIES OF THIS MAP ARE AVAILABLE FOR PUBLIC USE AT A NOMINAL COST FROM:
MAP SALES, ND DEPARTMENT OF TRANSPORTATION, 608 E. BLVD. AVE., BISMARCK, N.D. 58505-0700



N

2004
FUNCTIONAL CLASSIFICATION
2010 POPULATION 52,838

GRAND FORKS
GRAND FORKS COUNTY
NORTH DAKOTA

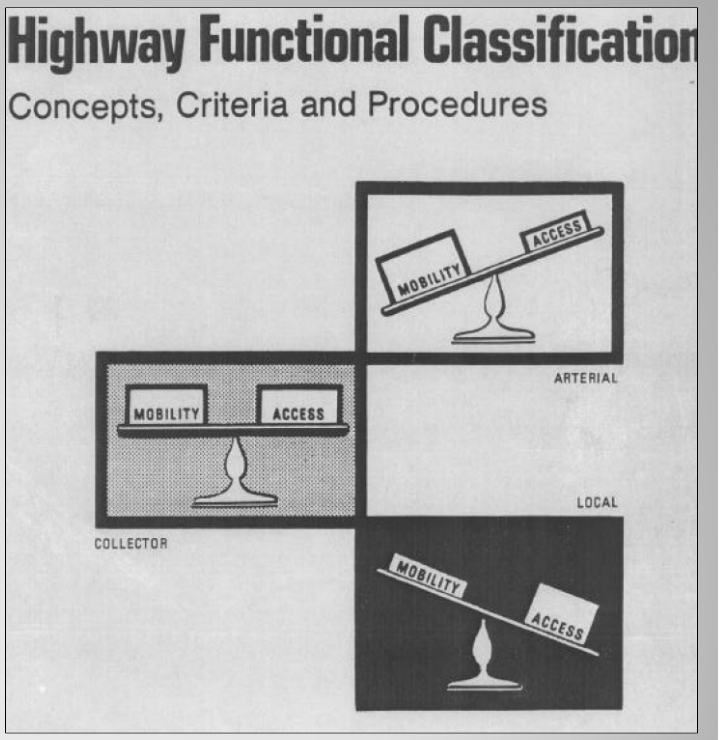
PREPARED BY
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PLANNING / ASSET MANAGEMENT DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 1,750 3,500 7,000 Feet

GRAND FORKS, NORTH DAKOTA

2013 Update Overview

- Document is not a departure, it is a refresh
- Acknowledges advances in mapping technologies and analysis capabilities
- Introduces relationship of design and functional classification
- Geared towards everyday practitioners and professionals with casual interest



U.S.Department of Transportation
Federal Highway Administration

- Builds upon 1989 guidance and 2008 update
- Provides tangible "how to" – process and technical tasks
  - Clarifies what is mandatory and what is not
- Describes concepts and ideas behind functional classification
  - Describes influence of functional class and factors that have an influence on functional class

Document Overview

Functional Classification Overview

- **3 broad classification categories:**
  - Arterials
  - Collectors
  - Local Roads
- **2 area classifications:**
  - Urban
  - Rural

- How and where functional classification used
- Definition of functional classifications
  - Retained original terms
  - Minimized urban and rural distinctions
  - Introduced OFE/minor and major collectors for all areas
- Description of mobility and access
- Updated mileage and VMT distribution ranges

Contents

ND guide

	Rural	**Urban**
1	Principal Arterial – Interstate	Principal Arterial - Interstate
2	Principal Arterial - Other Freeways & Expressways	Principal Arterial - Other Freeways & Expressways
3	Principal Arterial – Other	Principal Arterial – Other
4	Minor Arterial	Minor Arterial
5	Major Collector	Major Collector
6	Minor Collector	Minor Collector
7	Local	Local

U.S.Department of Transportation
Federal Highway Administration

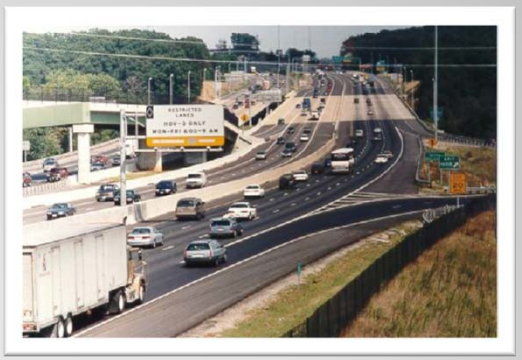
- Federal Aid system is mature
- For States, level of coordination for decision-making is high and increasing
- Geospatial technologies and data acquisition capabilities have grown considerably
- Roadway design options have increased, to accommodate non-auto modes

What's Changed?

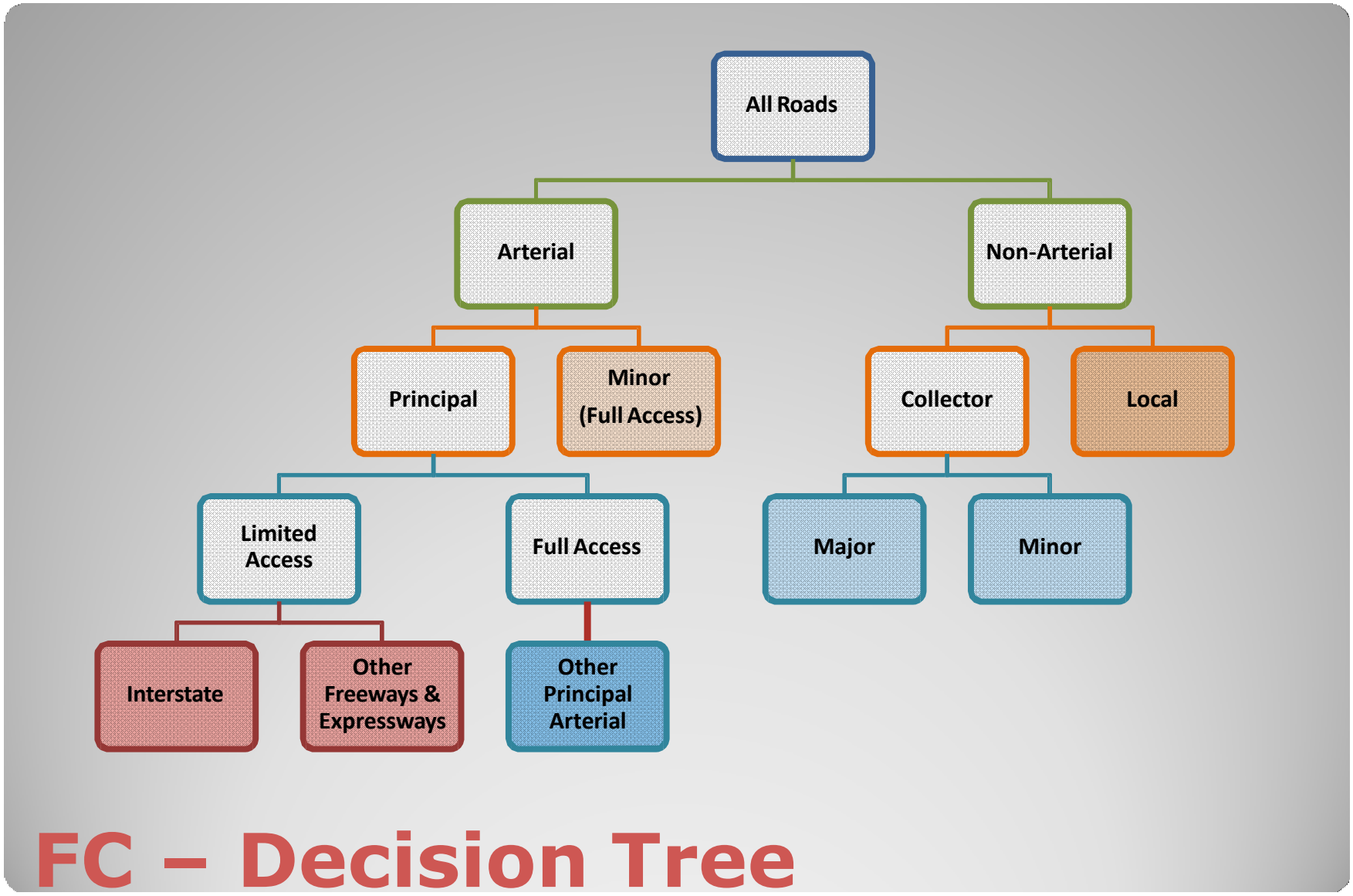
Guidance Highlights

- Urban and rural demarcation defined by function not urban area boundary
- All functional classification exist in urban and rural categories
  - New Urban Minor Collector
- "Rule of Thumb" recommendations on VMT and mileage distributions
- Future roads – include only if in STIP
- Assign same FC to ramps as highest FC of connecting roadways

Other Principal Arterial in California



HOV lane on Interstate 95 in Woodbridge, VA



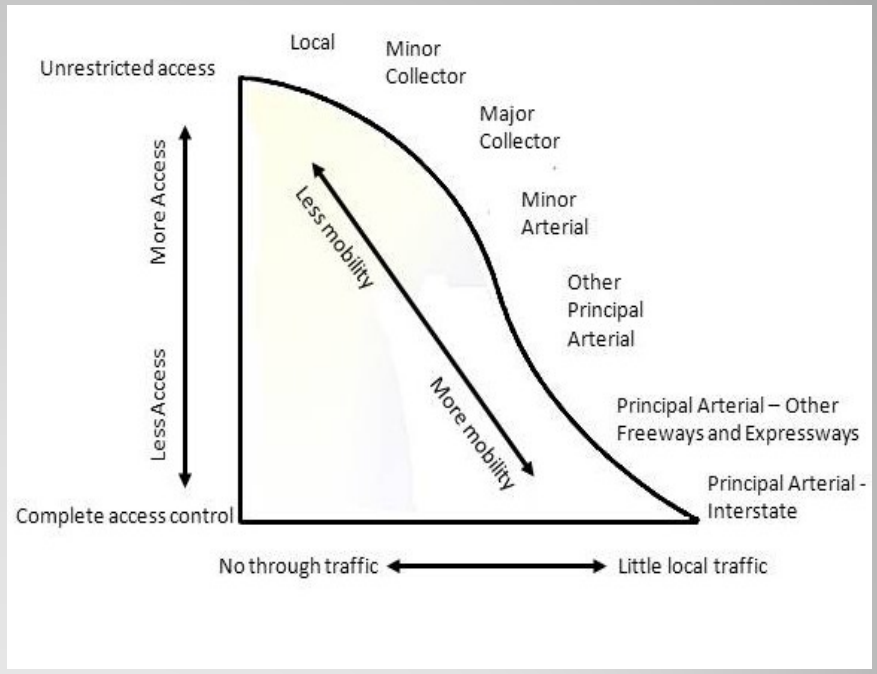
FC – Decision Tree

U.S.Department of Transportation
Federal Highway Administration

Functional Classification Overview

- **Roadways serve two primary functions:**
  - Access to property
  - Travel mobility
- All roadways perform these two functions to varying degrees
- Determining a roadway's primary purpose helps determine how to classify the roadway

- Mobility: Few opportunities for entry and exit and low travel friction
- Accessibility function: Provides many opportunities for entry and exit; higher travel friction



FC Concepts

U.S.Department of Transportation
Federal Highway Administration

- Trip length: Longer trips – More Principal Arterial use. Shorter trips – more Local/Collector use.
- Access points: In theory, Surface Arterials provide the least access for-grade roads – Access Management tries to preserve function.
- Speed limit
- Route spacing
- Usage / traffic volume
- Number of lanes
- Connections to activity centers

Intro Fig. Access Management - Caption: *Benefit of Access Management*

FC influencers

U.S.Department of Transportation
Federal Highway Administration

Urban	Rural
• **Serve major activity centers, highest traffic volume corridors and longest trip demands** • **Carry high proportion of total urban travel on minimum of mileage** • **Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area** • **Serve demand for intra-area travel between the central business district and outlying residential areas**	• Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel • Connect all or nearly all Urbanized Areas and a large majority of Urban Clusters with 25,000 and over population • Provide an integrated network of continuous routes without stub connections (dead ends)

Principal Arterials- Characteristics

U.S.Department of Transportation
Federal Highway Administration

Urban	Rural
• **Interconnect and augment the higher-level Arterials** • **Serve trips of moderate length at a somewhat lower level of travel mobility than Principal Arterials** • **Distribute traffic to smaller geographic areas than those served by higher-level Arterials** • **Provide more land access than Principal Arterials without penetrating identifiable neighborhoods** • **Provide urban connections for Rural Collectors**	• Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service • Be spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an Arterial roadway • Provide service to corridors with trip lengths and travel density greater than those served by Rural Collectors and Local Roads and with relatively high travel speeds and minimum interference to through movement

Minor Arterials- Characteristics

U.S.Department of Transportation
Federal Highway Administration

Urban	Rural
• **Serve both land access and traffic circulation in higher density residential, and commercial/industrial areas** • **Penetrate residential neighborhoods, often for significant distances** • **Distribute and channel trips between Local Roads and Arterials, usually over a distance of greater than three-quarters of a mile** • **Operating characteristics include higher speeds and more signalized intersections**	• Provide service to any county seat not on an Arterial route, to the larger towns not directly served by the higher systems and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks and important mining and agricultural areas • Link these places with nearby larger towns and cities or with Arterial routes • Serve the most important intra-county travel corridors

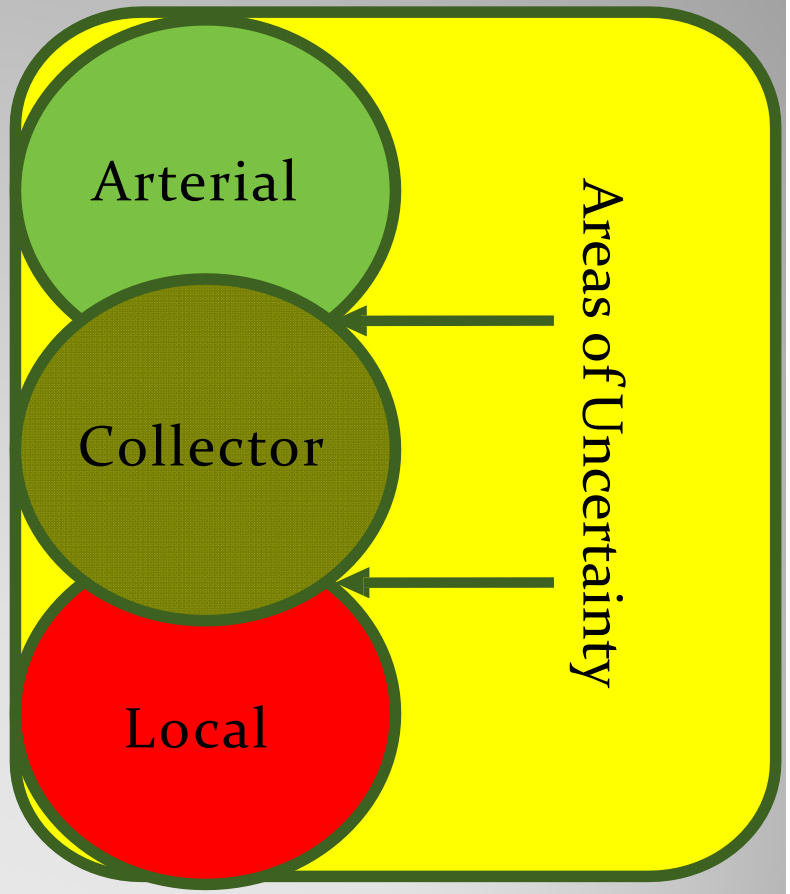
Major Collectors- Characteristics

U.S.Department of Transportation
Federal Highway Administration

Minor Collectors- Characteristics

Urban	Rural
• **Provide direct access to adjacent land** • **Provide access to higher systems** • **Carry no through traffic movement** • **Constitute the mileage not classified as part of the Arterial and Collector systems**	• Primarily, provide access to adjacent land • Provide service to travel over short distances as compared to higher classification categories • Constitute the mileage not classified as part of the Arterial and Collector systems

- Common sense should be guide
- Look at over all distribution and spacing when in doubt
- Be consistent with community standards



FC – Flexibility and Overlap

System Characteristics: Urban

Functional Classification	Range	
	Miles	VMT
Principal Arterial – Interstate	1–3%	17–31%
Principal Arterial – Other Freeways & Expressways	0–2%	0–12%
Principal Arterial – Other Principal Arterial	4–9%	16–33%
Minor Arterial	7–14%	14–27%
Major Collector	3–16%	2–13%
Minor Collector	3–16%	2–12%
Local	62–74%	9–25%

Notes:

- FHWA mileage and VMT ranges derived from 2011 HPMS data.
- Information for Urban Major and Minor Collectors approximate, based on

U.S.Department of Transportation
Federal Highway Administration

Typical Characteristics	Interstate	Other Freeways and Expressways	Other Principal Arterials	Minor Arterials
Lane Width	12 feet	11 - 12 feet	11 - 12 feet	10 feet - 12 feet
Inside Shoulder Width	4 feet - 12 feet	0 feet - 6 feet	0 feet	0 feet
Outside Shoulder Width	10 feet - 12 feet	8 feet - 12 feet	8 feet - 12 feet	4 feet - 8 feet
AADT (Rural)	12,000 - 34,000	4,000 - 18,500	2,000 - 8,500	1,500 - 6,000
AADT (Urban)	35,000 - 129,000	13,000 - 55,000	7,000 – 27,000	3,000 - 14,000
Divided/Undivided	Divided	Undivided/ Divided	Undivided/ Divided	Undivided
Access	Fully Controlled	Partially/Fully Controlled	Uncontrolled	Uncontrolled

FC – Typical Characteristics

U.S.Department of Transportation
Federal Highway Administration

Typical Characteristics	Major Collector	Minor Collector	Local
Lane Width	10 feet - 12 feet	10 - 11 feet	8 - 10 feet
Inside Shoulder Width	0 feet	0 feet	0 feet
Outside Shoulder Width	1 feet - 6 feet	1 feet - 4 feet	0 feet - 2 feet
AADT (Rural)	300 - 2,600	150 - 1,110	15 - 400
AADT (Urban)	1,100 - 6,300[2]		80 - 700
Divided/Undivided	Undivided	Undivided	Undivided
Access	Uncontrolled	Uncontrolled	Uncontrolled

FC – Mileage/VMT Guidelines

U.S.Department of Transportation
Federal Highway Administration

Factor: System Continuity

- **Roadways do not change their function/role when crossing a border**
- **Roadway classification changes should be gradual**

FC Update Triggers

- New significant roadways that may warrant Arterial or Collector status
- Any Principal Arterial roadway reconstructed as a divided facility
- Construction of major development that has caused traffic patterns to change
- Significant growth that causes new access or mobility needs
- Arterial or Collector roadways been extended or to attract more through trip movements?
- Significant growth in daily traffic volumes?

MPO UNIFIED PLANNING WORK PROGRAM -UPDATE , 2019

TABLE OF CONTENTS- UPDATE MAY, 2019

TRANSPORTATION PLAN UPDATE AND IMPLEMENTATION ACTIVITIES

CODE	AREA	TASK	%	ORIGINAL COMPLETION DATE	PROJECTED COMPLETION DATE
200.2	Public Participation Plan	Being scheduled to start mid-summer.		On-going	
3001	Functional Classification (Update)	Review of single centerline miles of each functional classification between the last update, the 2045 Street Plan, and the current centerline data is being done to understand the changes that have happened in the City.	15%	30-Jun-19	
300.1	ITS Regional Architecture (Update)	The project was officially kicked off in Grand Forks and a presentation made at the MPO TAC meeting. Background review of material continues and stakeholder meetings by focus area will be scheduled in the coming weeks.	10%	31-Dec-19	
	CAT Route Changes	The public comment period ended March 29th. Comments have been compiled and responses are being prepared for presentation to the City Council.	80%	30-Apr-19	
300.2 CORRIDOR PLANNING	US 2/US 81 Skewed Intersection Study	Alternatives are almost done. Internal review and steering committee review will be needed before they are presented to the public.	30%	30-Jun-19	
	Grand Forks Downtown Parking Study	The study alternatives were displayed as part of the Downtown Action Plan May 1 event. Many comments were received during this display and those comments are being considered.	75%	1-May-20	
	MN 220 N Corridor Study	The draft implementation plan has been submitted for MPO review. The project draft report is anticipated to be submitted on May 22.	70%	31-May-19	
	Downtown Transportation Study	The Request For Proposals (RFP) is out and several consultants are asking questions and requesting information. The submittals are due May 29th.	5%	30-Jun-19	
	Traffic Count Program	Vision Camera Data Collection & Traffic Analysis Enhancements.	10%	On-going	
300.5	SPECIAL STUDIES EGF ADA Transition Plan	A final document is done but transit stop information is needed to be added. This will be done in June	95%	Dec. 2018	
300.54	CAT/UND Shuttle Merger	Involved stakeholders currently working on final costs for service	NA	30-Jun-19	
300.6	PLAN MONITORING, REVIEW AND EVALUATION			On-going	
300.7	GIS Development			On-going	