

# Grand Forks - East Grand Forks Metropolitan Planning Organization

## Agenda

### TECHNICAL ADVISORY COMMITTEE MEETING WEDNESDAY, JUNE 14<sup>TH</sup>, 2017 – 1:30 P.M. EAST GRAND FORKS CITY HALL TRAINING ROOM

#### MEMBERS

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

1. CALL TO ORDER
2. CALL OF ROLL
3. DETERMINATION OF A QUORUM
4. MATTER OF APPROVAL OF THE MAY 10<sup>TH</sup>, 2017, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE
5. MATTER OF ADOPTION OF TRANSIT DEVELOPMENT PLAN.....KOUBA
6. MATTER OF APPROVAL OF THE I-29 TRAFFIC OPERATIONS STUDY REPORT..... HAUGEN
7. MATTER OF APPROVAL OF THE U.S.#2/U.S.BUS#2 STUDY REPORT ..... HAUGEN
8. MATTER OF MATTER OF ADOPTION OF AMENDMENT OT THE 2040 STREET/HIGHWAY ELEMENT ..... HAUGEN
9. MATTER OF DRAFT NDDOT S.T.I.P. ....NDDOT
10. MATTER OF 2045 STREET/HIGHWAY ELEMENT KICK-OFF..... KIMLEY-HORN
11. OTHER BUSINESS
  - a. 2017 Annual Work Program Project Update
12. 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, May 10<sup>th</sup>, 2017  
East Grand Forks City Hall Training Conference Room**

**CALL TO ORDER**

Earl Haugen, Chairman, called the May 10<sup>th</sup>, 2017, meeting of the MPO Technical Advisory Committee to order at 1:30 p.m.

**CALL OF ROLL**

On a Call of Roll the following members were present: Michael Johnson, NDDOT-Bismarck; Darren Laesch, MnDOT-District 2; Dale Bergman, Grand Forks Cities Area Transit; Richard Audette, Grand Forks Airport Authority; David Kuharenko, Grand Forks Engineering; Jane Williams, Grand Forks Engineering; Stephanie Erickson, Grand Forks Planning; Dustin Lang, NDDOT-Grand Forks District; and Nick West, Grand Forks County Engineer.

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

Guest(s) present: Al Grasser, Grand Forks Engineering; Matt Pacyna, SRF; Bobbi Retzlaff, MnDOT; Richard Duran, FHWA; Andrew Emanuele, FHWA; Stephanie Hickman, FHWA-ND; Darrell Washington, MnDOT- Central Office; and Brian Larson, UND-Facilities Manager.

**INTRODUCTIONS**

Haugen asked that, because there are some new faces here today, that everyone please state their name and the agency they represent.

**DETERMINATION OF A QUORUM**

Haugen declared a quorum was present.

**MATTER OF APPROVAL OF THE APRIL 12<sup>TH</sup>, 2017, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE**

***MOVED BY BERGMAN, SECONDED BY LAESCH, TO APPROVE THE APRIL 12<sup>TH</sup>, 2017, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE, AS PRESENTED.***

***MOTION CARRIED UNANIMOUSLY.***

**MATTER OF U.S.#2/U.S.BUS#2 STUDY UPATE**

Haugen referred to the staff report included in the packet, and commented that SRF is here to walk us through the process update.

Matt Pacyna, SRF, referred to a power point presentation (a copy of which is included in the file and available upon request) and gave a brief overview of the progress on the U.S.#2/U.S.Bus#2 Study that they have been working on the past six months or so.

Presentation ensued.

Pacyna referred to a slide showing the study area, and pointed out that the area in red is the general boundaries they looked at. He explained that the area they looked at along U.S.#2 included six intersections along the corridor; with the primary intersection being the U.S.#2 and U.S.Bus#2 intersection, which is kind of a focus area or hot spot that both the MnDOT and the City of East Grand Forks have been discussing for a long time, and he thinks they have made some good progress as part of this study to get some consensus on how to improve it.

Pacyna stated that, again, the key study area is that U.S.#2/U.S.Bus#2 intersection, and they initially started looking at the basic three to five year window from a crash perspective; but in working with the Steering Committee and hearing the history of this intersection they did start to look further and further out, as far as the crash data goes; actually going out twenty years.

Pacyna commented that there have been 26 crashes over the past ten years, which is about four times greater than a typical intersection with similar characteristics. He added that U.S.#2 is a high speed facility at 65 mile per hour at this location, and then the curve itself, from a geometric perspective, super-elevation is set at 6.5%, which is the max, so it is kind of pushing the limits from a design perspective as well.

Pacyna stated that some other contributing factors they feel, from a safety perspective, are with the lighter median, the way it is currently designed there is a dip so when heavy commercial vehicles travel through there they experience a kind of rollercoaster movement, and if they are turning at the same time it has a tendency to spill their loads, which creates additional debris.

Pacyna reported that they did develop a Steering Committee that includes members from the MPO, FHWA, MnDOT, the County, East Grand Forks City, and Business Owners. He added that they have held several meetings since January, and did come to some consensus as to what alternatives should be explored.

Pacyna stated that they also held two public involvement meetings throughout the project; an issues identification listening session concerning the preliminary alternatives and analysis in February, and an alternative review in April where they looked at the various alternatives.

Pacyna commented that in terms of alternatives, the focus was really the U.S.#2/U.S.Bus#2 intersection. He said that they did look at the other intersections, but from a crash frequency, crash rate and comparing it to other locations, there weren't any red flags, although there were

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some improvements that were identified as part of the study, but it was really building off of some previous plan recommendations that were already in place.

Pacyna stated that the Polk County Safety Plan was done back in May of 2013, and for the intersections at 10<sup>th</sup> Street, 173, 117, and Highway 220 to the south, it kind of takes that higher level look, although it doesn't really go into specific details of each of the crashes, because looking at such a large area it can't go into that kind of detail. He said that one thing they were able to do as part of this was to go into more detail and actually looked at the crashes, particularly at the Highway 220 intersection to the south and there were a number of crashes that were miscoded, thus some of those crashes shown to have occurred at the southern intersection should have been at the northern intersection; so when they took them out the southern intersection was no longer above average from a crash perspective.

Pacyna commented that another study that they looked at was the MnDOT District 2 Safety Plan, and it actually identified just closing the median, thus converting U.S.#2/U.S.Bus#2 from a full access intersection to a right-in/right-out intersection, which is a low cost improvement with high benefits, and this is kind of the starting point for them when they got into their alternatives, but they did look at a range of alternatives.

Pacyna went over the alternatives briefly:

Alternative 2A – would create an off-set left turn to provide a little bit better notification to drivers that there is a left turn lane there; it constructs an east-bound to south-bound acceleration lane; it would close the Stable Days access; and smooth out the median to get rid of the rollercoaster effect that is currently there. From a crash perspective, we expect a little over 25% reduction in crashes, and when they went into the evaluations, they wanted to determine what the life cycle benefit from a crash savings, and it is about a \$1.1 million dollar savings in crash costs over a twenty year period, and construction costs are about \$1.1 million dollars, so the benefit/cost ratio is 1.0%.

Alternative 2B – would take the west bound travel lanes of U.S.#2 and offset them further to the east. This will soften the curve, but it would remain about 4% super-elevation versus the existing 6% super-elevation. It will also widen out the median to provide some additional truck storage between the east bound and west bound lanes of U.S.#2. This is a favorable alternative from the Steering Committee's perspective, but from MnDOT and Mr. Laesch's perspective there are other locations within the district that have similar configurations, such as in Crookston, where there have been some safety issues. From the surface this alternative would provide some benefit from a crash perspective, would provide some crash reduction right around 40%, but when you look at the specific benefit from a safety perspective you see around a \$1.6 million dollar safety benefit, but the cost to do it is around \$3.3 million dollars, so the cost is much higher than the benefit.

Alternative 3A – this would, as discussed earlier the eastbound to northbound left turn movement is a low-lying movement, eliminate that movement from happening at the intersection on the curve in favor of directing motorists eastbound on U.S.#2, and would add an acceleration lane as well as a modified R-cut, or a reduced conflict U-turn intersection, so there would be room for

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motorists to complete their merge to get over to make the U-turn maneuvering. This really simplifies the left-turn movement from U.S.#2 to U.S.Bus#2, and reduces the conflicts and lets the grade and profile be smoothed out more, and reduces the confusion with the Stable Days access. Also, from a crash perspective, you would be looking at about a 35% crash reduction and the benefit to cost is about \$1.5 million and the actual construction cost is about \$1.2 million.

Alternative 3B – this is kind of a hybrid of the R-cut version, with the main difference being that they would be attempting to utilize the Stable Days access as the R-cut U-turn. Some things that can't be done with this alternative would be to have the eastbound acceleration lane, and there would be a very similar condition as what you have today when you are on U.S.#2 coming up 5<sup>th</sup> to the intersection, you would have to wait for your gap to come. Also, the U-turn turn lane would actually start essentially right at the intersection so if you were making that eastbound to northbound maneuver, you would be able to enter right into the U-turn left turn lane and make that maneuver. From a crash reduction perspective, there would be about a 35% reduction with \$1.5 million in crash savings, but the construction cost is a lot less at \$700,000, so your benefit to cost ratio is 2 so you get a lot of benefit for your buck with this one.

West reported present.

Pacyna stated that these are the four main alternatives that the Steering Committee and the evaluation process felt were the best ones to go forward with, however they did look at a pretty good range of alternatives including signals, roundabouts, median closure, and others as well.

Pacyna commented that there were three alternatives that were termed “above average”; and they were Alternative 2A, Alternative 3A, and Alternative 3B. He stated that the added alternatives were Alternative 2B, Alternative 5, Alternative 6A, and Alternative 6B. He said that Alternative 2B was the one they held the most discussion on, adding that it is the one that offset the westbound traffic because two lanes created that additional median space for additional truck storage. He said, though that in looking at it from an evaluation criteria perspective there was a clear distinction between it and those “above average” alternatives that rose to the top, thus the consensus was that those three should be looked at in more depth.

Pacyna explained that they understand that there would be additional enhancements that, through the design phase, would be incorporated; things such as lighting, ITS components like a rural intersection conflict warning system, or something as simple as flashers that warn motorists that there is a vehicle on the cross-street.

Pacyna stated that the draft report is out for review and comments, and they hope to wrap up the study by the end of May.

Laesch commented that MnDOT's next step is to look further at the three alternatives, and to work out some details such as access issues/changes to Stable Days and Todd's Trailers, and some other components; but their intent is to move forward over the next year. He added that they committed to the Steering Committee that after a selection is made that they will continue to work with them and to keep them up-to-date on the process.

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Haugen referred to the staff report, and pointed out that it identifies what we need to do next. He explained that, as we discussed some time ago, MnDOT identified that they were going to do the westbound lane pavement improvement on U.S.#2, and also replace the bridge over River Road on Gateway Drive; and when we did our Long Range Transportation Plan those were not identified as projects, so after further study of the projects, we will be asking for preliminary approval to amend our Long Range Transportation Plan to bring them in.

Haugen stated that, again, the draft report is available for comments. He said that they hope to have those comments by the end of May, after which they will proceed with adoption of the report and making the amendments for the planning document, then in August they will finalize the T.I.P., in which the U.S.#2 resurfacing project is included in FY2021.

Information only.

**MATTER OF DRAFT I-29 STUDY**

Haugen reported that back in March there was a Draft Implementation Chapter that was distributed for review and comment. He said that the final full draft of the document was distributed to the Steering Committee last week for their review, with a request for them to submit their comments by May 20<sup>th</sup>.

Haugen commented the upper management presentation is scheduled for Tuesday, May 23<sup>rd</sup>; and then based on the results of that process we will determine what needs to be done to finalize this study.

Haugen referred to the packet, and pointed out that there were some things that were updated based on the Technical Advisory Committee's previous discussion, and comments received. He said that the first item we discussed at the Technical Advisory Committee was the 47<sup>th</sup> Avenue Proposed Interchange, and the access facing from the ramp. He stated that SRF has generated some additional drawings to give us some conceptual idea of how access, and what type of access could be located along 47<sup>th</sup> Avenue if the ramp was located right at that corridor. He added that at the last meeting we also had a table that showed a range of access spacing for a rural type of interchange and an urban type of interchange, and we asked SRF to provide a drawing of what those two tables represented as being possible, and they did that as well.

Haugen stated that they also provided some concepts illustrating some alternative designs for this interchange as well. He added that there is a possibility of shifting the interchange to the south to avoid the campground, and they show how the roadway access would access the interchange and to give access to the rest of the development around the area.

Haugen reported that the next item is the Implementation Plan. He said that there was quite a bit of discussion on this, and the draft addresses all the comments that were received, including comments on the sequencing of the improvements.

Haugen went over the improvement sequencing timeline briefly.

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Haugen pointed out that they also included a chart of the level of service issues for 32nd Avenue South. He went over it briefly.

Haugen stated that the last item included in the packet is the Executive Summary of the full draft report, adding that the full document is several hundred pages long. He said that it captures all of the steps that have been completed. He explained that, for those new to the process, the NDDOT directed us to take a look at the full length of I-29 through our study area, which means we are looking at the North Washington Interchange all the way to the south end of the Merrifield Overpass.

Haugen commented that they found that the I-29 Corridor through movement is not going to have much issue, but where the interchanges are located there will be, or already are some issues. He explained that what is happening is that the through capacity is not terribly harmed, at the interchanges we start getting queuing back onto the interstate system because the interchanges themselves don't have the capacity to handle all of the traffic volume forecasted to go through them.

Haugen stated that the North Washington Interchange doesn't have much of an issue, but there could be some alignment changes made that would improve and reduce the potential for crashes. He said that the Gateway Drive Interchange does have some capacity and crash issues because of access spacing so we have alternatives that would help solve the problem. He stated that they are recommending a full diamond interchange at DeMers as there are some real queuing forecasted in the future where the interstate system will get backed up because of traffic trying to access on and off of DeMers. He added that at both Gateway Drive and DeMers Avenue they have an at-grade rail crossing that causes backage onto the interstate system. He commented that at 32<sup>nd</sup> Avenue, even if we were to go to eight lanes, we can't achieve a level of service that is acceptable.

Bergman asked what level of service they are trying to achieve at those intersections. Haugen responded that they are trying to achieve a Level of Service D or better.

Kuharenko commented that there were a couple of graphics that were added; Figures 8/2 and 8/3, that he feels are very helpful. He said that he believes that staff would like to get comments on the draft report by May 20<sup>th</sup>. Haugen responded that that is correct.

Williams referred to Figures 1-8 and 1-9, and asked if they are two separate ideas or are they supposed to be one continuous idea. Haugen responded that Figure 1-8 addresses the interchange itself and 1-9 is addressing the at-grade railroad crossing. Williams said that the access points don't match up, that is what she was concerned about. She pointed out that Figure 1-8 shows the McDonald access being relocated to the center of the frontage, and the 1-9 does not. Haugen responded that that is correct. He explained that Figure 1-8 is a more refined proposal.

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Grasser asked if he can assume that if we do do improvements someplace we are going to improve the level of service beyond the desired level of service, because we wouldn't actually propose to spend millions of dollars on a project that gets us to a level of service D. He added that from a political standpoint, he knows what some of the rules say, but he has a hard time wrapping his head around that. Haugen responded that off the top of his head he is thinking that a level of service C is the lowest one we achieve with all of the improvements that are being recommended. Discussion on Level of Service concerns ensued.

Information only.

**MATTER OF NDDOT U.S.BUS#2 PROJECT PROGRAMMED FOR 2019**

Haugen reported that the NDDOT is doing a project on their segment of the U.S.#2 business loop. He referred to the packet and pointed out that they sent out an informational brochure with some questions on it, and they are asking for the MPO to provide a response.

Haugen explained that there are two projects being discussed. He referred to the one shown in red and said that it is being proposed as a mill and overlay project on North 5<sup>th</sup> Street, or U.S.Bus#2.

Haugen stated that the second project, and the one that is more in question, is the reconstruction project. He added that they currently have programmed enough funds to do a reconstruction of the pavement in some capacity, but, again, they are questioning whether it should just be a mill and overlay.

Haugen pointed out that they identified a timeline to make a decision, and that is the end of 2018, to allow them the projects, even though they are two separate projects, to be constructed in 2019.

Haugen referred to a drawing illustrating the DeMers Avenue portion, as it exists today, including sidewalks, parking lane, driving lane, and turn lane. He stated that the parking lane and sidewalks are petty symmetrical.

Haugen commented that they talk about the differences between a mill and overlay and a reconstruction; how long each option is expected to last, how long it will take to do each option, and whether there is an ability to add new features or not.

Haugen stated that they also talk about what things might there be that could be added, such as what they term "sidewalk zones"; if curb extensions would be appropriate or not, if bike lanes would be appropriate or not, parking, and other types of roadway enhancements. He added that there is the NDDOT policy that if a project is in these band ranges, how much they set aside or add for enhancement types of activities. He said that, if he recalls correctly, the DeMers project is in the \$2.5 to \$5 million dollar range.

Erickson asked how much life is left in the pavement that is currently there. Williams responded that she thinks it was laid down about eight years ago when they did a micro-surfacing project there. Haugen added that after the 1997 flood they did another project that was a mill and



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overlay, and that is when a lot of the sidewalk features were put in. Lang commented that he is guessing that if it was done in the late 1990s, with a twenty-year surface life as it is asphalt, we are in that range of it needing to be redone, which is why this project is in discussion.

Haugen referred to the staff report and pointed out that he did identify some of the different planning studies that he is aware of, including our current bike plan which talks about adding some bike facilities to North 5<sup>th</sup> Street. He added that he also noted that in working with the Near Northside Neighborhood, options such as curb extensions and a median be installed on North 5<sup>th</sup> Street, or something easily allowable, like striping, be done with a mill and overlay.

Haugen commented that on the DeMers Avenue side, although it also applies to North 5<sup>th</sup> Street, from his perspective; they are depicting the mill and overlay as an opportunity to just do pavement work and not touch any other treatments along the corridor, and he is suggesting that he would have a different view, in that he thinks that if you are going to be on DeMers Avenue, and this is your solution for several years out, that it shouldn't preclude them from doing some of the other amenities that are eligible for federal funding, and have been requested be done, particularly that as part of the mill and overlay they will put in the truncated domes, but won't touch the rest of the sidewalk system whether they are ADA compatible or not, so he is suggesting that they should look at it as perhaps a limited opportunity, or an opportunity whether it is a mill and overlay or a reconstruction project.

Haugen stated that one of the bigger factors, from an MPO perspective, would be that when you look at a reconstruction, and how we do things in a long range transportation plan, is that if we are starting to talk about reconstructing curb-to-curb, we also have to address capacity issues and safety issues, and other things, so when you look at DeMers Avenue, we are right on the cusp of a level of service D or less with our 2040 forecast, but when the Sorlie Bridge EIS process was going on, and a Draft Traffic Operations document was prepared, they were identifying between 2044 and 2057 as a timeline, based on the 2040 model, and we are about to go into 2045 with our travel demand model, so we are right on the edge of the draft document's timeline. He explained, though, that land use will be slightly different then in the 2040 Travel Demand Model, so our 2045 Travel Demand Model will have slightly different results that could cause the timeframe to be moved up or down.

Haugen reported that the timeline that the NDDOT will be making on the DeMers project is right around October/November of 2018, and our next Long Range Transportation Plan will be going through preliminary final approval at that same time, so, he isn't suggesting that they need to wait, but would suggest that they be aware of that our 2045 Travel Demand Model will be out, and we will have other opportunities to discuss whether we should put the capacity at DeMers or if we want to maintain our historical desire to have capacity invested elsewhere.

Discussion on past plan documents' recommendations concerning parking, biking, bulb-outs, etc., ensued.

Haugen referred to the staff report and explained that it is intended to be the basis for a letter that the MPO would write to the NDDOT in response to the questionnaire, so he would appreciate any input from the Technical Advisory Committee on the letter.

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Kuharenko commented that, because we are in a northern climate, and we do have snow, when looking at on-street parking as well as bicycle facilities, we end up in the winter months with a natural narrowing of the roadway so people end up parking a little bit further out into the road. He said that he knows that when they ended up looking at bicycle accommodations on University Avenue, bike lanes and sharrows were looked at as to which would be the better option, and just because of how much the road narrowed, then ended up coming to the realization that if they added bike lanes they would end up having vehicles parking in the middle of the bike lane, which could be a ticketable offense, and effectively would remove all the parking on the street. He said, then, that he would probably suggest when looking at this is because we do have a number of larger vehicles, a lot of pickups and suvs, we try to avoid that minimum of a seven-foot parking lane, and he saw that DeMers has an eight and a half foot parking lane, but possibly, if we are looking at on-road facilities, we look at a sharrow as well as a bike lane because they would have a little more flexibility in that regard.

Haugen stated that last month we discussed that there was a desire to fix the approaches to the Sorlie Bridge on both sides; and when the MPO Executive Policy Board approved the changes to the T.I.P. programming to do the painting, they would do some temporary solution to the approaches, and that we would try to address it with a 2019 project, thus he didn't highlight it this month, but he would remind our North Dakota friends, but primarily our MnDOT friends because they might not have 2019 project to build out of.

Laesch responded that MnDOT has no intention of doing a project in 2019 on DeMers, and they did put that investment into doing that overlay to give it a temporary fix; but when they need to do a project on DeMers they will address the problem at that time, but he doesn't anticipate them doing much more than another temporary fix if it keeps settling.

Information only.

**MATTER OF NEAR SOUTHSIDE NEIGHBORHOOD STUDY UPDATE**

Haugen reported that we did an RFP for the conceptual drawings but did not get any responses, so in working with the NDDOT we went through a quote process, and received one quote from CPS. He stated that the quote was reviewed, found to be responsive to the RFQ, and was approved by the MPO Executive Policy Board so we are now waiting for the NDDOT to give us the go-ahead to proceed.

Haugen commented that another thing that came up since the last Technical Advisory Committee meeting was the strong desire of the neighborhood to have a different type of speed study done than the trailer system that was previously done. He explained that they felt that the trailer was too noticeable and impacted the driver behavior.

Haugen reported that A.T.A.C. proposed, and the board approved, for them to install some more stealth speed radar capture equipment on the corridors. He said that that collection of data was done over the last several weeks and A.T.A.C. has the data and are analyzing it now.

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Haugen stated that one other thing that came up was interest in doing what is being termed as a “walkability survey”. He explained that he did present the request to the board without adequate information and they asked that it be tabled until their next meeting after bringing through this body, so included in the packet are some survey examples, some rationale on why you do these types of surveys, etc.

Williams asked if this information would be divided into a couple of different categories; engineering, enforcement, and aesthetic issues. She stated that some of these we can’t do anything about, but they are notable, so would you do something like that with it. Haugen responded that they would. He explained that the group that has been meeting on this has enforcement people there so it has all of those components and aesthetics. He said that they are going to bring the Park District in to help with them, but the homeowners themselves might be willing to assess themselves or take the onus on themselves to do some of the aesthetic things.

Williams commented that some of these are good and some are kind of subjective; like too much traffic, and how do you judge what is too much traffic. She said that if there is information that goes along with it, as to why they felt a certain way, that would be helpful in trying to resolve something. Haugen agreed, adding that once they go out and do the survey they will come back and do a debriefing of what the survey found, so the same people who went out would be able to debrief on why they provided the responses that they did.

Haugen stated that some of these surveys are used where there are no sidewalks, and there isn’t an area in this neighborhood that doesn’t have one, in fact there is one on both sides of the street. He added, though, that they are older sidewalks so there are some condition issues. He said that in order to augment this, they have provided A.T.A.C. with our Safe Routes to School map for the two schools that are in this neighborhood.

Haugen reported that the question before the Technical Advisory Committee is whether you would recommend adding in the task of A.T.A.C. work at a cost of just over \$2,000 to do this walkability survey in the Near Southside Neighborhood.

***MOVED BY ERICKSON, SECONDED BY KUHARENKO, TO APPROVE FORWARDING A RECOMMENDATION TO THE MPO EXECUTIVE POLICY BOARD THAT THEY APPROVE THE ADDENDUM TO THE A.T.A.C. CONTRACT TO ADD A WALKABILITY ACTIVITY.***

Kuharenko commented that public input, especially in neighborhood areas, can be some of the best data you can get. He said that last evening the Bicycle and Pedestrian Advisory Committee met and they got a lot of good information from that group as to various conditions of the trails we have out there. He stated that this is something that is really good to get information from the general public.

Kuharenko said that one thing he would like to throw out there is that he wants to make sure that when we are going through and getting these surveys, that we are also managing the expectations of the people who are doing it so when you are going through and training these individuals, we don’t want them to pick the pie in the sky, and we aren’t looking for flashing beacons and

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underpasses everywhere, we do have limited resources so he wants to make sure that when something like this happens, and suggestions and recommendations go out there, that it is still within the ability for us to deal with with our limited resources, and so that down the road people aren't coming and saying that they gave us all this input and ideas and nothing has been done, he wants this to be successful.

Grasser stated that one of the things he is curious about, when we do these kinds of things, is when doing the survey, and one reads something about there being too much traffic, is there a section that follows up that tells us what would be the right amount of traffic; or what are your expectations of walkability, are they reasonable, achievable. He added that he kind of struggles with not having that in the information, because we have survey data that says "I am unhappy about something"; well, to what level would it take to fix that. Haugen responded that that is something that we will need to determine, what the survey instrument will be. Williams added that we need to know the rules ahead of time as to what we can and can't do.

***Voting Aye: Johnson, Laesch, Bergman, Audette, Kuharenko, Erickson, and Lang.***

***Voting Nay: None.***

***Abstain: None.***

***Absent: Christianson, Magnuson, Emery, Ellis, West, and Sanders.***

**MATTER OF MNDOT FREIGHT PLAN UPDATE**

Haugen reported that Minnesota is updating their Freight Plan and have asked for participation. He stated that included in the packet was a questionnaire (a copy of which he distributed for the Technical Advisory Committee members to fill out).

Haugen reminded the committee that two years ago MnDOT updated their freight plan; and FAST ACT is now causing the need for an update to that plan.

Haugen stated that some of the things that are going on are that FAST identified critical freight corridors, and right now the freight program, prior to FAST, was a program unfunded and FAST provided money to the program, and also identified that the funds would need to be spent on identified freight corridors, and the interstate system is the initial freight corridor.

Haugen commented that there is opportunity now to designate urban freight corridors and rural freight corridors. He said that they set a cap as to how many miles of those corridors can be done.

Haugen stated that as part of the updating of the Freight Plan, MnDOT is asking for input on what type of freight system, or where this new money that is set aside specifically to address freight issues, should be spent. He referred to the backside of the sheet has MnDOT's famous pie-charts, A, B, and C, and explained them briefly, and asked that everyone please fill out the survey and it will be collected at the end of today's meeting.

Haugen reported that another bit of news for the Minnesota side is that they will be soliciting soon for candidate projects to access this freight money.

**PROCEEDINGS OF THE  
TECHNICAL ADVISORY COMMITTEE  
Wednesday, May 10<sup>th</sup>, 2017**

Haugen commented that MnDOT has had discussion about where to designate these 75 miles. He said that the approach they are taking is to allow the candidate projects to sort of inform them as to where those 75 miles are, thus allowing the candidate projects to provide the input to identify what geographical area these freight corridors are at.

Laesch asked if the Freight Office ask the MPO to recommend some routes, and are there certain routes that have been identified. Haugen responded that he doesn't remember being asked anything about the critical freight corridors on the Minnesota side. He added that many months ago they asked us about NHS Connectors, which is a similar but separate issue, and we did submit a couple of roadways. Laesch asked which roadways they were. Haugen responded that they are U.S.Bus#2 and 5<sup>th</sup> Avenue N.E.

Haugen commented that on the North Dakota side they are beginning to talk about the Freight Program, and have Upper Great Plains Transportation Institute under contract now.

Information only.

**OTHER BUSINESS**

- a. 2017 Annual Work Program Project Update

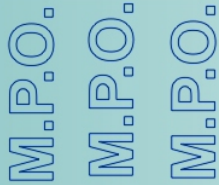
Haugen pointed out that the updated monthly progress table was included for your information.

**ADJOURNMENT**

***MOVED BY BERGMAN, SECONDED BY ERICKSON, TO ADJOURN THE MAY 10<sup>TH</sup>, 2017, TECHNICAL ADVISORY COMMITTEE MEETING AT 3:04 P.M.***

Respectfully submitted by,

Peggy McNelis,  
Office Manager



# Grand Forks - East Grand Forks Metropolitan Planning Organization

## **MPO Staff Report** **Technical Advisory Committee: June 14, 2017** **MPO Executive Board: June 21, 2017**

**RECOMMENDED ACTION: Final Adoption of the Transit Development Plan Update.**

Matter of Final Adoption of the Transit Development Plan Update.

### **Background:**

The Transit Development Plan (TDP) covers a defined five-year planning horizon, currently 2012 to 2016. It functions as a sub-element of the Long Range Transportation Plan (LRTP). The previous TDP was adopted in May 2012, with the last update in January 2014. Development and adoption of the TDP is recommended by FTA for the purposes of establishing a vision for public transportation, assessing needs, and identifying a framework for program implementation. Program implementation largely depends on funding, grants, and participation from FTA and/or other state agencies. A comprehensive TDP guides operations, maintenance, infrastructure, and capital within a fiscally constrained environment. In April 2016, the MPO is updating the TDP and have hired KLJ/Kimley-Horn as the consultant for this project.

For the past year the MPO and KLJ/Kimley-Horn has studied the current transit system and gathered input from the public and the steering committee. Looking at the existing conditions and issues of the transit system this Transit Development Plan (TDP) provides recommendations that try to provide the best possible course of action.

The plan is divided into the following sections:

- **Basic information:**
  - **Community Profile:** community statistics
  - **Existing Systems Analysis:** what makes up the transit system with a comparison to peer transit systems.
  - **Public Input:** a summation of how and when input from the public was gathered.
  - **Issues Analysis:** analysis of previously stated issues, input from the public, and observations of the system.
- **Coordinated Human Services Transportation:** This section updates a previously separate plan; it is a federal mandated document for certain FTA funding programs. This allows for there to be more connection between the TDP and the Coordinated Human Services Transportation. An evaluation of the coordination between CAT and Human Services and usage of the Dial-A-Ride CAT provides was done. Recommendations were:
  - CAT being more active in current Human service agency working/coordination groups.

- Working with Human Service Agencies for more rider coordination with CAT.
- Elimination of H-Tripper Route. This route can no longer function as originally conceived.
- **Transit Asset Management (TAM):** TAM is a new federal mandate. Most small transit systems are having their state do the reporting for the transit agency. For now CAT has not informed the MPO as to which path it will take. To support this effort an inventory of all replaceable assets was done. The condition of these assets was assessed and scenarios to answer how to handle the backlog were done. From there the assets in worst condition can be put into CAT's project list.
- **Performance Management:** Performance measures were introduced in the previous TDP update. Since then more clarification has been provided as to what the expectation is of these measures. These measures are related back to TDP goals to easily see if they are being accomplished.
- **Alternatives Analysis:** Alternatives were suggested to answer some of the issues that were analyzed previously and to meet performance measures. A route restructuring was proposed along with three funding level scenarios. The routes were restructured to:
  - Have more directness in getting to desired locations;
  - Realign current routes to be more effective;
  - Create a crosstown connection; and
  - Have night service that is more reflective of the day service and include East Grand Forks.
- **Financial:** This section provides an overview and summary of the five-year (2018-2022) financial analysis related to implementation of the recommended operational strategy for CAT. With the added funding from Minnesota, the proposed routes can be implemented and run for the next two years. By year three East Grand Forks will need to increase funding on the local side to continue some of the routes on their side of the river. If revenue for transit remains that same after the five year outlook of this plan it may be necessary to reduce Grand Forks service.

The type of service that was most desired by Grand Forks was an increase in frequency that can only be achieved by additional funding. This desired service is looked at in the cost+ level of funding. For additional funding 30 minute frequency can be added to peak hours for two additional routes and add a third bus to the night service.

Information on the TDP, including the Final Draft TDP, can be found on the website and on Facebook: <https://theforksmmpo.wordpress.com/the-forks-mpo/transit-development-plan-update/>  
<http://www.facebook.com/GrandForksEastGrandForksTransit>

***Final Draft Changes:** The final draft plan includes minor changes to the performance level growth projections so that they match the cost constrained plan (the draft one is attached and the final one is in the Highlights attachment). In the Transit Asset Management the two cities will be separated (the draft is attached and the final one is in the Highlights attachment). There are other minor changes that clarify issues that came up in the staff and public comments. The look is slightly changed to have a better flowing document.*

#### **Findings and Analysis:**

- City of East Grand Forks has already adopted the plan.
- The City of Grand Forks Planning commission will pass a resolution of adoption on June 7, 2017

- The Grand Forks City Council will pass final adoption on June 19, 2017.
- Staff recommends Final Approval

**Support Materials:**

- Highlights of the Document
- Draft Performance Level Growth Projections
- Draft Asset Condition by Category and Type



**A RESOLUTION ADOPTING THE YEAR 2045  
TRANSIT DEVELOPMENT ELEMENT of the  
LONG RANGE TRANSPORTATION PLAN  
FOR THE  
GRAND FORKS – EAST GRAND FORKS  
METROPOLITAN AREA**

**WHEREAS**, the U.S. Department of Transportation requires the development of a Long Range Transportation Plan by a Metropolitan Planning Organization for each urbanized area and area expected to have growth over a twenty year period; and

**WHEREAS**, the Grand Forks – East Grand Forks Metropolitan Planning Organization (MPO) has been designated as the policy body with responsibility for performing transportation planning in the Grand Forks – East Grand Forks Metropolitan Area; and

**WHEREAS**, the MPO is designated by the Governors of North Dakota and Minnesota as the body responsible for making transportation planning decisions in the Grand Forks – East Grand Forks Metropolitan Area; and

**WHEREAS**, the existing Long Range Transportation Plan was adopted in 2008 and, as in accordance with 23 U.S.C. 135 and 23 CFR 450.322, is being updated to remain current and maintain a twenty year horizon; and

**WHEREAS**, the Long Range Transportation Plan, in accordance with 23 CFR 450.322, is multimodal in scope and accounts for all travel modes in the four elements of the plan: Street & Highway, Transit, and Bike and Pedestrian; and

**WHEREAS**, the MPO adopted a 2040 Long Range Transportation Plan in December 2013, and the Long Range Transportation Plan being considered today is an update of the Transit sections of that plan; and

**WHEREAS**, the Long Range Transportation Plan, in accordance with 23 CFR 450.322, shall be financially constrained to demonstrate that proposed projects have existing and/or reasonably projected sources of funds; and

**WHEREAS**, the MPO followed its adopted Public Participation Plan to proactively involved the public early and often in the transportation planning process and requests the planning commissions and city councils from each community consider adoption of the Long Range Transportation Plan; and

**WHEREAS**, the By-Laws of the MPO allow the MPO Executive Board to take action upon adoption of the Long Range Transportation sixty (60) days after said plan had been submitted to the representative city and the 60 day period ended on June 19, 2017; and

**WHEREAS**, the Technical Advisory Committee of the MPO held public meetings on the proposed Long Range Transportation Plan; and

**WHEREAS**, the Planning Commission for Grand Forks, North Dakota, held a public hearing on June 7, 2017, on the proposed MPO Long Range Transportation Plan; and

**WHEREAS**, the City Council for Grand Forks, North Dakota, held a public hearing on June 19, 2013, on the proposed MPO Long Range Transportation Plan; and

**WHEREAS**, the Planning Commission for East Grand Forks, Minnesota, held a public hearing on May 25, 2017, on the proposed MPO Long Range Transportation Plan; and

**WHEREAS**, the City Council for East Grand Forks, Minnesota, held a public meeting on June 6, 2017, on the proposed MPO Long Range Transportation Plan; and

**WHEREAS**, the Executive Policy Board of the Grand Forks – East Grand Forks Metropolitan Planning Organization considered the actions taken by the above referenced local governmental agencies; and

**NOW, THEREFORE, BE IT RESOLVED**, that the Executive Policy Board of the Grand Forks – East Grand Forks Metropolitan Planning Organization hereby adopts the proposed Year 2045 Transit Development Element to the Long Range Transportation Plan as presented with the following amendments: None.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ken Vien                      Chairman

\_\_\_\_\_  
Earl Haugen                  Ex. Director

Table 67 shows how each FTA Category, Sub-Category and Element fits into the five FTA defined asset-condition categories based on how soon it will reach its useful life. For example, the CAT Maintenance Garage (Facilities, Buildings, Maintenance) is beyond its useful/functional life, thus it is classified as poor whereas the Fixed Route buses category (Vehicles, Revenue Vehicles, Bus) shows 24 percent of assets in excellent condition, 63 percent in marginal condition and 13 percent in poor condition.

*Table 67: Asset Condition by Category and Type*

Category	Sub-Category	Element	Useful Life	Replacement Value (2016 \$)	Excellent	Good	Adequate	Marginal	Poor*
Facilities	Buildings	Maintenance	30	\$8,081,000					100%
Facilities	Equipment	-	5 to 10	\$198,000	3%		5%	77%	15%
Facilities	Equipment	Maintenance	5 to 7	\$804,000		18%	3%	30%	49%
Facilities	Equipment	MIS/IT/Network Systems	3 to 7	\$839,000			21%	77%	3%
Vehicles	Revenue Vehicles	Bus	10 to 12	\$4,005,000	24%			63%	13%
Vehicles	Revenue Vehicles	Vans, Cutaways, and Autos	4 to 7	\$1,488,500	69%	22%	3%	3%	3%
Vehicles	Non-Revenue Vehicles	-	6	\$343,000	25%		14%	5%	56%
Stations	Bus Stop & Shelters	Bus Stops	20	\$1,091,000			100%		
Stations	Bus Stop & Shelters	Bus Stop Shelters	7	\$4,013,000					100%
Systems	Communications	Phone System	5	\$38,000		100%			
Systems	Communications	Radio	7	\$52,000					100%
Systems	Communications	Safety and Security	5 to 7	\$214,000		24%	15%	38%	23%
Systems	ITS	-	5 to 7	\$52,000			100%		
Systems	Revenue Collection	-	7	\$1,462,395				100%	

\*Poor condition indicates the asset has reached the end of its useful life and is not in a state of good repair

Table 57: Performance Level Growth Projections

Ridership	Base*	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	336,665	353,498	371,173	389,732	409,218	429,679	93,014	27.6%	5% annual growth in FR ridership
Demand Response	54,750	53,838	52,925	52,013	50,644	49,275	-5,475	-10.0%	5% reduction in DR ridership to Year 3 (Y3); 10% by Y5.
Population	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Service Area (2010)	56,534	58,361	58,653	58,946	59,241	59,537	3,003	0.05	Use NTD defined service area pop. (2010) with 1.2% growth per year to base; and then same % to Y5.
Revenue Hours	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Fixed Route	24,547	24,547	27,508	27,508	27,508	27,508	2,961	12.1%	To achieve Cost +, 50% implementation by Y3; the balance by Y5.
Demand Response	19,183	18,991	18,801	18,613	18,427	18,243	-940	-4.9%	1% annual decrease in DAR revenue hours
Budget	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Fixed Route	\$2,060,372	\$2,101,579	\$2,361,978	\$2,409,218	\$2,457,405	\$2,506,550	\$446,178	21.7%	Growth in base cost 2% annually (per TIP). FR adds 50% of Cost + Scenario in Y3; other 50% in Y5.
Demand Response	\$1,234,626	\$1,259,319	\$1,284,505	\$1,310,195	\$1,336,399	\$1,363,127	\$128,501	10.4%	Growth in base cost 2% annually (per TIP)
Cost/Ride	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Fixed Route	\$6.12	\$5.95	\$6.36	\$6.18	\$6.01	\$5.83	-\$0.29	-4.7%	Function of other variables.
Demand Response	\$22.55	\$23.39	\$24.27	\$25.19	\$26.39	\$27.66	\$5.11	22.7%	
Revenue Hours/Capita	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
FR (NTD pop.)	0.43	0.42	0.47	0.47	0.46	0.46	0.03	6.4%	Function of other variables.
DR (NTD pop.)	0.34	.33	.32	.32	.31	.31	-0.03	-9.7%	
Cost/Revenue Hour	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Fixed Route	\$83.94	\$85.61	\$85.87	\$87.58	\$89.33	\$91.12	\$7.18	8.6%	Function of other variables.
Demand Response	\$64.36	\$66.31	\$68.32	\$70.39	\$72.52	\$74.72	\$10.36	16.1%	
Rides/Revenue Hour	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	%	Notes
Fixed Route	13.72	14.40	13.49	14.17	14.88	15.62	1.91	13.89%	Function of other variables.
Demand Response	2.85	2.83	2.81	2.79	2.75	2.70	-0.15	-5.36%	



Kimley»Horn



# TRANSIT DEVELOPMENT PLAN

Grand Forks – East Grand Forks  
MAY, 2017



## 1) INTRODUCTION

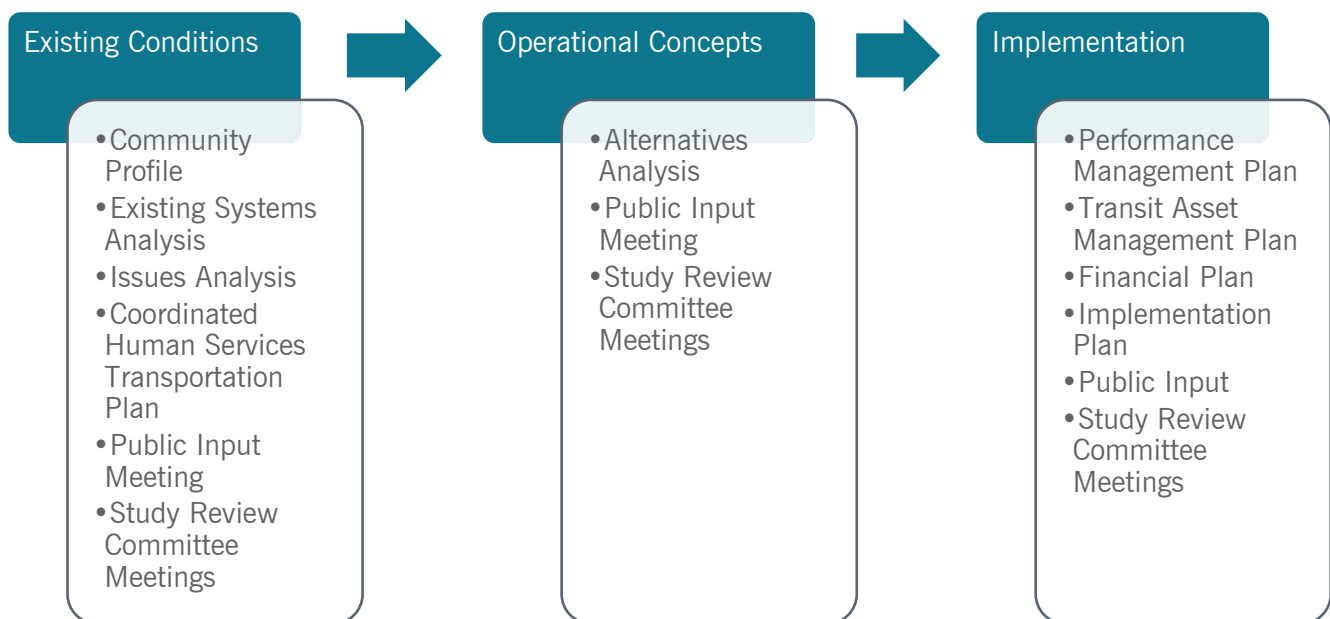
Cities Area Transit (CAT) is the public transportation provider for the Grand Forks-East Grand Forks metro. Public transit in the Grand Forks-East Grand Forks area is provided through a combination of services provided by Cities Area Transit (CAT). CAT, an agency of the City of Grand Forks, provides fixed route and dial-a-ride services throughout its two-city service area. Services provided in East Grand Forks are supported through cost sharing agreements with the City of East Grand Forks which account for the distribution of local, state and federal funds to support the overall CAT system operations in East Grand Forks.

Currently, CAT operates 13 routes serving major employment, education, shopping and entertainment centers in the metro and offers demand-response service for senior riders and those with disabilities. CAT provides a valuable community service, providing over 390,000 rides in the metro in 2015.

As part of a comprehensive multimodal transportation system plan, CAT works with the Grand Forks – East Grand Forks Metropolitan Planning Organization to complete the Transit Development Plan (TDP). Every five years, the TDP is updated to identify new transit system needs and issues, redefine goals and objectives and create a framework for implementation.

This TDP was completed through a series of three broad steps, as shown in Figure 1-1.

*Figure 1-1: Transit Development Plan Update Process*



## 5) SYSTEM NEEDS AND ISSUES

Based on the Existing Systems Analysis and the Public Input received, a variety of needs and issues were identified on the current CAT system, including both Fixed Route and Demand Response services. Some of these issues have been identified through past planning efforts and are still relevant to the current system, while others have been identified through planning efforts completed during this TDP update. All can be effectively addressed within the TDP framework.

### PREVIOUSLY IDENTIFIED SYSTEM BARRIERS

The previous TDP update and the current Coordinated Human Services Transportation Plan (CHSTP) identified several system barriers that impacts the effectiveness and desirability of the CAT system, both Fixed Route and Demand Response. The early stages of public involvement meetings validated these barriers.

#### INFORMATION GAP

The most common barrier for potential transit ridership is lack of information. When residents do not know where, when or how a system runs, how much it costs or if it is accessible, they are apprehensive to try to use it. The current CHSTP acknowledged that an information gap is a more impactful barrier for the New American population. Early public input provided significant evidence that more outreach and information is needed among existing and future potential CAT users.

#### ACCESSIBILITY TO ROUTES

Demand Response service is provided within the entire Grand Forks and East Grand Forks city limits, which exceeds the Americans with Disabilities complementary paratransit service requirements. Previous and current analysis found many Demand Response system origins and destinations are very near a regular bus route. This suggests that environmental barriers, like ice and snow buildup or lack of sidewalks, and physical ability prevent riders from using the Fixed Route system. Early public input suggested the need to evaluate the effectiveness of the current designated stop policy implemented since the 2012 TDP.

#### COVERAGE AREA

As Grand Forks and East Grand Forks have grown out from their central core, providing service in these new areas has continued to be a challenge. Specific areas in Grand Forks, like 42<sup>nd</sup> Street, Gateway Drive, the industrial park and southern residential neighborhoods have no or low service coverage. While more service area is likely justifiable, early public input suggested that new service needs to be measured against improved levels of service to known transit hot spots.

#### COST

While the fare for riding does not cover the full cost of providing the transportation, it remains a burden for some riders, especially when CAT does not fully meet their transportation needs. Early public input suggested the need to streamline current fare methods and policies.

#### HOURS OF SERVICE

CAT does not provide any service from 10 P.M. to 6:30 A.M. Monday through Friday morning and begins at 8 A.M. on Saturday. A single night route provides service in Grand Forks only from 6 P.M. to 10 P.M. with one hour headways.

Specifically, the CHSTP identified that many employers in the industrial park have shifts that start at 5 A.M. and that lack of affordable transportation during the later hours impedes workers' ability to take the overnight shift. More

consideration is needed to how evening routes are operated, and the general frequency and geographic coverage of evening service.

### FREQUENCY OF ROUTES

Most CAT routes operate with one hour headways, with the exception of Route 3, 5 and parts of the Route 4/6 and Route 10/11 service area. When a user misses their bus, due to a variety of reasons, there are very few other affordable options if a user is unwilling or unable to wait for the next bus. This makes it difficult to rely solely on the public transit system. The Existing Systems Analysis and early public input suggested the need for prioritizing future service improvements to high productivity areas to ensure on-time performance and a level of service commensurate with demand.

### INDIRECTNESS OF ROUTES

The convenience of transit is greatly reduced when routes do not follow a similar path as riders would take in a personal auto. Adding walk time and transfers to indirect routes makes the time commitment of transit too great for many users. The productivity analysis completed as part of the Existing Systems Analysis, coupled with early public input, supported a reevaluation of how routes operate and the identification of service concepts that provides efficient crosstown connections.

### SUMMARY OF PREVIOUSLY IDENTIFIED ISSUES

The breadth and depth of the barriers developed in the 2012 TDP and the current Coordinated Human Services Transportation Plan are expanded upon as part of the current TDP update process. These barriers provided the foundation of the needs analysis completed prior to the system alternatives analysis.

Each of these seven previously identified issues resonated throughout the development of the System Needs and Issues analysis for the TDP update. The most significant barrier previously identified, also continues to be, the information gap between the CAT system and existing and potential users. There is a strong sentiment among current and potential users that information about the system is lacking, most specifically information via electronic means and tools. The lack of response to the online survey used as part of the public input process exposed a clear digital gap between CAT and its most reliable customers.

Moving forward, there is a substantial need identified to develop a balanced approach to address the barriers presented through hours of operation, frequency of service and the overall CAT service area. A balanced approach must be accomplished through performance metrics, outlined by both the FAST Act and MnDOT's Greater Minnesota Transit Investment Plan, and be fiscally constrained to reasonable forecasts for future local, state and federal revenue streams.

The smaller, yet no less significant issues of cost, accessibility to routes and indirectness of routes remained an undertone of the issues which drove the update of the TDP.



## 7) ALTERNATIVES ANALYSIS

Some of the 12 current regular routes operate very effectively and efficiently, while other routes have low ridership and a high cost. New route alternatives were based on the performance of the existing route alignments and issues identified through the Existing Systems Analysis, Public Input and Issues Analysis. These alternatives have been vetted by the public, bus operators, city staff and other stakeholders and revised based on their feedback.

### PROPOSED ROUTE ALTERNATIVES

#### OPERATIONAL CONSTRUCT

Fixed Route alternatives were developed for weekday and Saturday service and weeknight and Saturday night service. Routes were also explored for an industrial park route and a Sunday service route but are not recommended at this time. Figure 7-1 shows the overview of the proposed Weekday and Saturday routes. Figure 7-2 shows the overview of the proposed Weeknight and Saturday night routes. Figure 7-3 shows route concepts for future consideration.

#### WEEKDAY AND SATURDAY ROUTES

##### Route 1

Route 1 is proposed to operate between the Grand Cities Mall and the 13<sup>th</sup> Avenue N. Hugo's via the Metro Transit Center (MTC) and Home of Economy. The proposed route shortens and consolidates the current Routes 1 and 2. The proposed Route 1 would also provide connections to other routes at the MTC and Grand Cities Mall. Two of these proposed connections include Route 1, Route 1SE and Route 1SW. To maintain 60-minute circuitry of the interlined Routes 1SE and 1SW, 30-minute service is recommended on Route 1. The Route 1 concepts are shown in Figure 7-4.

##### ROUTE 1U

Route 1U would be a part of the overall interlined systems recommended for Routes 1, 1SE and 1SW. The Route 1U portion of the route would provide service between the Downtown and the UND campus on a 60-minute headway. With the proposed interline for the Route 1 systems developed as part of the TDP, Route 1U would provide a one-seat ride between the UND campus, downtown, Grand Cities Mall and destinations on the southside depending on if it were lined with the Route 1SE or 1SW.

##### ROUTE 1SE

The proposed Route 1SE is a circulator in the southeast area of Grand Forks. The route would serve Grand Cities Mall, Altru South, Walmart and the 32<sup>nd</sup> Avenue Hugo's. The route is proposed to interline with every other trip of the Route 1, alternating with Route 1SW.

##### ROUTE 1SW

The proposed Route 1SW is a circulator in the southwest area of Grand Forks. The route would serve Grand Cities Mall, the 32<sup>nd</sup> Avenue Hugo's, Columbia Mall, Target and 32<sup>nd</sup> Avenue Walmart. The route is proposed to interline with every other trip of the Route 1, alternating with Route 1SE.

##### Route 3

Route 3 is proposed to operate between Altru and Northland Community College via Grand Cities Mall, the MTC and the East Grand Forks Hugo's. The route merges the most productive elements of the current Routes 10 and 11 with the current Route 3. The Route 3 concept is shown in Figure 7-5.

##### Route 4

Route 4 is proposed to operate between the MTC and the Gateway Drive Walmart via the University of North Dakota (UND). This route is a modification and consolidation of the current service on Routes 4 and 6. The Route 4 concept is shown in Figure 7-6.

### **Route 5**

Route 5 is proposed to operate between northland college and the Columbia Mall via the MTC. The route is a streamlined combination of the current Routes 5, 10 and 11. The Route 5 concept is shown in Figure 7-7.

### **Route 6**

Route 6 is proposed as an interlined route that includes Routes 6E and 6W and operates between Columbia Mall and UND. The Route 6E and Route 6W concepts are shown in Figure 7-8.

### **ROUTE 6E**

Route 6E is proposed to operate between Columbia Mall and UND via Altru. The route provides a direct connection between UND and the Columbia Mall along Columbia Road. Additional coordination with UND will be necessary as operations on campus are planned.

### **ROUTE 6W**

Route 6W is proposed to operate between Columbia Mall and UND via the Alerus Center. The route provides a direct connection between UND and the Columbia Mall along 42<sup>nd</sup> Street. Additional coordination with UND will be necessary as operations on campus are planned.

### **Route 8**

Route 8 is proposed to operate between northwest East Grand Forks and the East Grand Forks Senior Citizens' Center via the East Grand Forks High School and downtown East Grand Forks. The route provides service to those wishing to travel within East Grand Forks and connects to the proposed Routes 3 and 5. The Route 8 concept is shown in Figure 7-9.

## **WEEKNIGHT AND SATURDAY NIGHT ROUTES**

Stop level ridership data is currently unavailable for weeknight ridership. Therefore, the proposed weeknight routes are based on high demand weekday transit stops and reflect proposed weekday routes or portions of proposed weekday routes.

### **Route 1**

The Route 1 night route is proposed to operate between the 13<sup>th</sup> Avenue Hugo's and the 32<sup>nd</sup> Avenue Walmart via the MTC, Grand Cities Mall, Columbia Mall and Target. The proposed route is a combination of the proposed weekday Routes 1SE and 1SW.

### **Route 3**

The Route 3 night route is proposed to operate between Altru and Northland Community College via Grand Cities Mall, the MTC and the East Grand Forks Hugo's. The route merges the most productive elements of the current Routes 10 and 11 with the current Route 3.

### **Route 6**

The Route 6 night route is proposed as an interlined route that includes Routes 6E and 6W and operates between Columbia Mall and UND.

Figure 7-1: Proposed Weekday and Saturday Route Overview

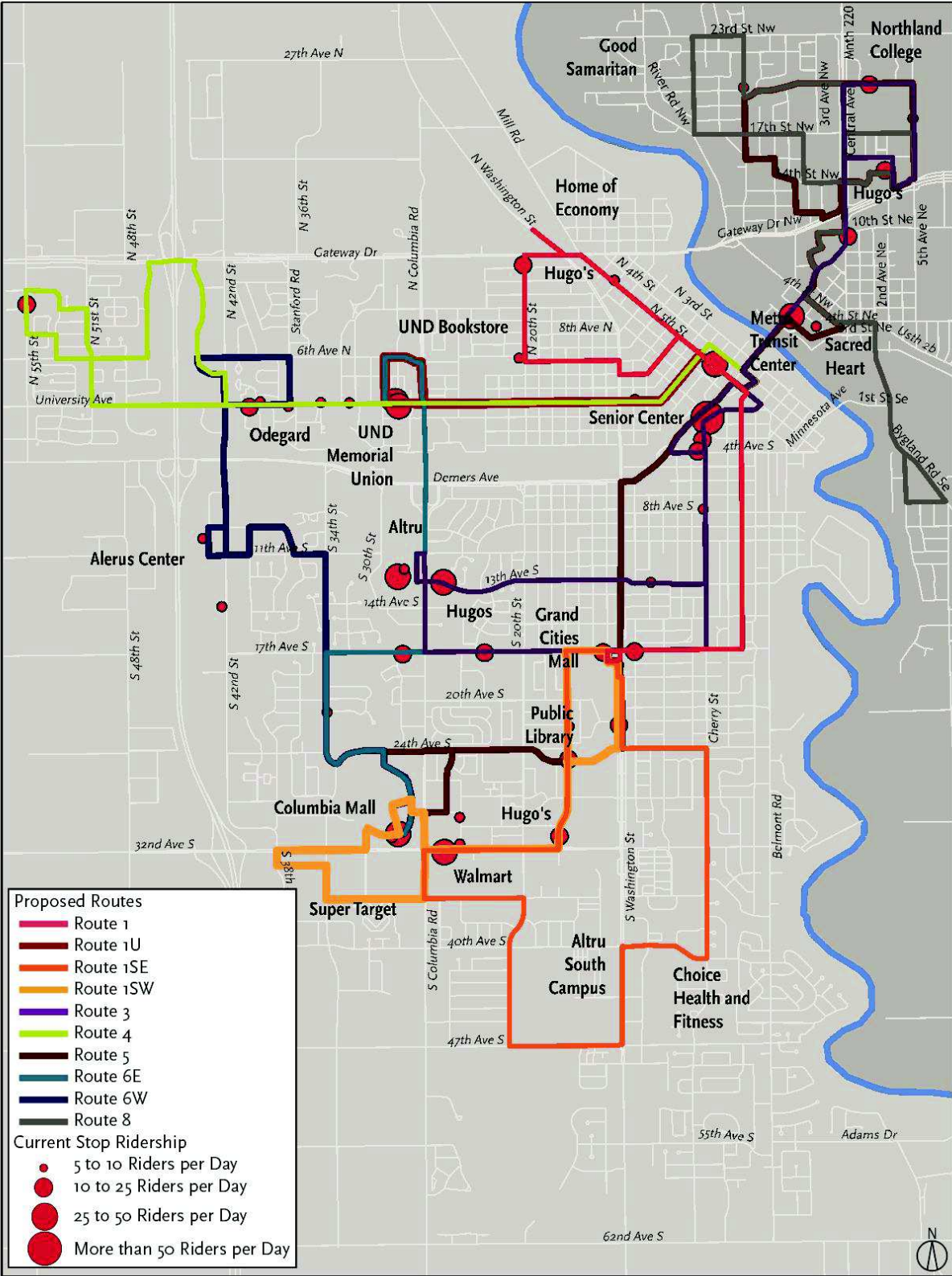
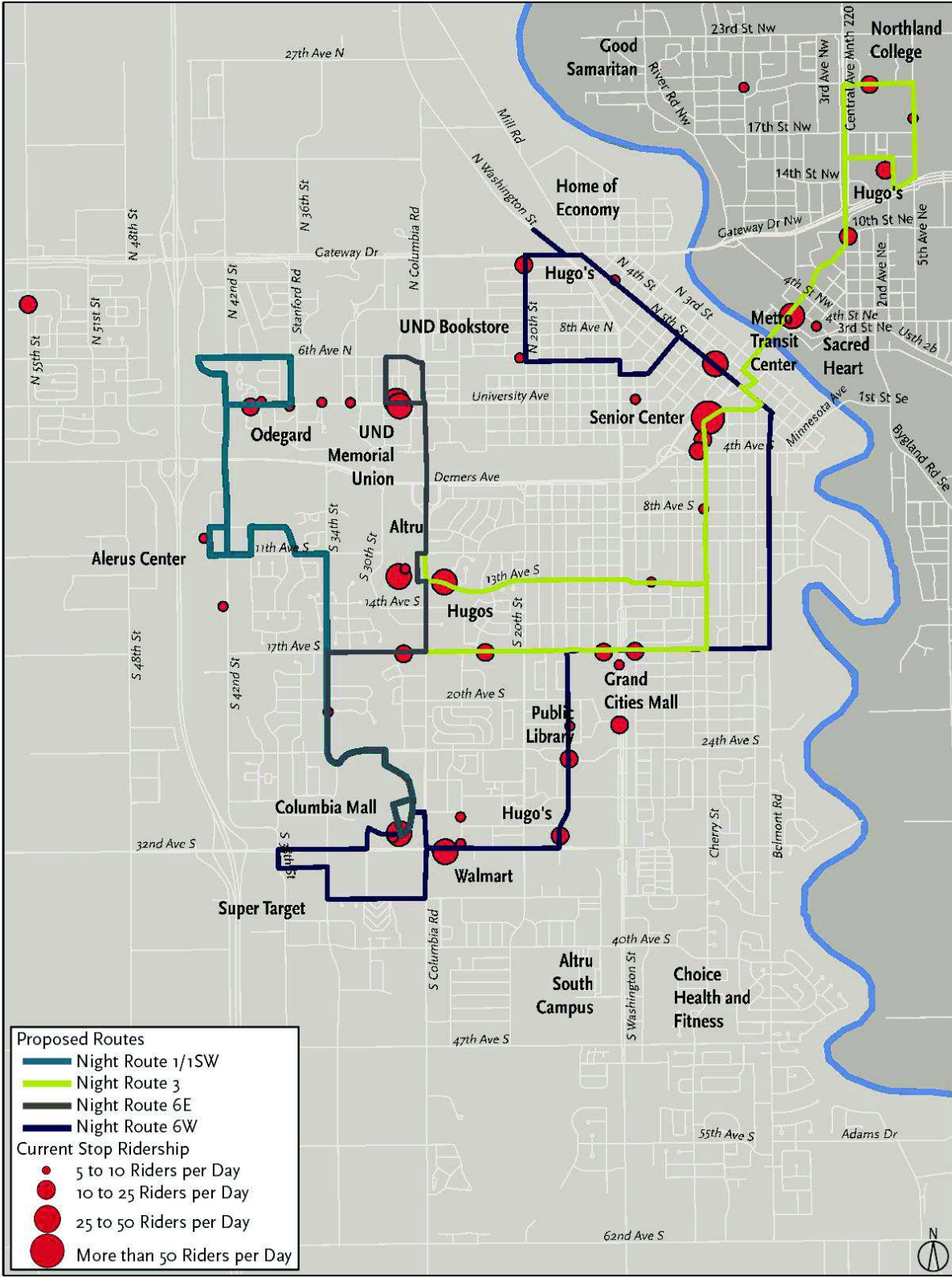


Figure 7-2: Proposed Night Routes Overview



## 8) PERFORMANCE MANAGEMENT PLAN

To meet the guidance established by Fixing America's Surface Transportation Act's (FAST Act), the TDP was developed with a performance management element. This element was driven, in large part, through close consultation with the 2016 Minnesota Department of Transportation (MnDOT) Greater Minnesota Transit Investment Plan. The 2012 North Dakota Department of Transportations (NDDOT) TransAction III Long Range Transportation Plan was consulted, but has yet to be updated to reflect the FAST Act.

Because the FAST Act requires performance based planning, the MnDOT Plan provided a very reasonable framework for identification of performance measures and targets for use by CAT.

The FAST Act establishes a set of national goals to guide the development of surface transportation investments. The FAST Act focuses on performance-based approach to transportation planning and has developed seven national performance goals.

- » Safety
- » Infrastructure condition
- » Congestion reduction
- » System reliability
- » Freight movement and economic vitality
- » Environmental sustainability
- » Reduced project delivery delays

Goals one through eight from Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) Act, the authorization bill before the FAST Act, were incorporated in the 2040 Long Range Transportation Plan (LRTP) completed by the Grand Forks-East Grand Forks MPO. The approved LRTP for the MPO area provides the background architecture for the development of goals for the development this TDP. Goals nine and ten were added later to comply with the FAST act. To ensure consistency with the LRTP, the TDP has integrated with overall goals from the LRTP.

The 10 overall goals from the LRTP integrated into the TDP are summarized as follows:

- 1) Economic vitality – economic vitality, competitiveness, access to jobs, education and markets
- 2) Security – increase security for motorized and non-motorized users
- 3) Accessibility and mobility – provide more transportation choices
- 4) Environmental/energy/quality of life – protect the environment, promote conservation, value unique qualities
- 5) Integration and connectivity – across and between modes for people and freight
- 6) Efficient system management – collaboration among stakeholders to target investments, improve accountability
- 7) System preservation – target funds towards existing infrastructure, promote urban landscapes, protect rural landscapes
- 8) Safety – increase safety for motorized and non-motorized users
- 9) Resiliency – resiliency and reliability of the system and reduce impacts of surface transportation
- 10) Tourism – enhance travel and tourism

## ISSUES IDENTIFICATION & GOAL DEVELOPMENT

Through the Existing Systems Analysis, Issues Analysis and Public Input, seven primary issues were identified for the CAT system. These issues related to the overall public transit system and primarily identified opportunity areas for improvement of the system. The issues were compared with the overall LRTP Goals to develop a responsive set of goals, and ultimately a Performance Management Plan for CAT. The system issues and their corresponding goals matrix is shown in Table 8-1.

Table 8-3: Performance Level Growth Projections

Ridership	Base*	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	336,665	353,498	371,173	389,732	409,218	429,679	93,014	27.6%	5% annual growth in FR ridership
Demand Response	54,750	53,838	52,925	52,013	50,644	49,275	-5,475	-10.0%	5% reduction in DR ridership to Year 3 (Y3); 10% by Y5.
Population	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Service Area (2010)	56,534	58,746	59,451	60,164	60,886	61,617	5,083	0.09%	Use NTD defined service area pop. (2010) with 1.2% growth per year to base; and then same % to Y5.
Revenue Hours	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	24,547	24,547	26,987	26,987	26,987	26,987	2,440	9.9%	Revenue hours for Cost Constrained Alternative implemented in Year 2.
Demand Response	19,183	18,991	18,801	18,613	18,427	18,243	-940	-4.9%	1% annual decrease in DAR revenue hours
Budget	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	\$2,060,372	\$2,101,579	\$2,410,048	\$2,458,249	\$2,507,414	\$2,557,562	\$497,190	24.1%	Growth in base cost 2% annually (per TIP). Cost Constrained Alternative implemented in Year 2.
Demand Response	\$1,234,626	\$1,259,319	\$1,284,505	\$1,310,195	\$1,336,399	\$1,363,127	\$128,501	10.4%	Growth in base cost 2% annually (per TIP)
Cost/Ride	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	\$6.12	\$5.95	\$6.49	\$6.31	\$6.13	\$5.95	-\$0.17	-2.7%	Function of other variables.
Demand Response	\$22.55	\$23.39	\$24.27	\$25.19	\$26.39	\$27.66	\$5.11	22.7%	
Revenue Hours/Capita	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
FR (NTD pop.)	0.43	0.42	0.45	0.45	0.44	0.44	0.01	0.9%	Function of other variables.
DR (NTD pop.)	0.34	0.32	0.32	0.31	0.30	0.30	-0.04	-12.7%	
Cost/Revenue Hour	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	\$83.94	\$85.61	\$89.30	\$91.09	\$92.91	\$94.77	\$10.83	12.9%	Function of other variables.
Demand Response	\$64.36	\$66.31	\$68.32	\$70.39	\$72.52	\$74.72	\$10.36	16.1%	
Rides/Revenue Hour	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	13.72	14.40	13.75	14.44	15.16	15.92	2.21	16.09%	Function of other variables.
Demand Response	2.85	2.83	2.81	2.79	2.75	2.70	-0.15	-5.36%	

*Table 8-4: CAT Performance Standards for Fixed Route System*

Performance Measures	Performance Level
1) Span of Service	18 hours a day for six days a week.
2) Service Frequency	30-minute headways AM/PM peak hour on at least 4 of 9 CAT Routes (Equal to Cost + Service Scenario).
3) Service Availability	75% of the service area population within ¼ mile of transit route.
4) Service Hours per Capita	0.44
5) Information Availability	Standard requirements: Title VI, Riders Guide, Service Schedules, trip reservation process.
6) Planning Requirements	Identified and analyzed as part of Transit Development Plan. Service expansions must be determined through alternatives analysis.
7) Number of Shelters Installed	Shelters at stops with at least 20 boardings per day, major transfer points or facilities serving disabled and or senior populations.
8) Bicycle Parking at Transit Stops	Bike parking at stops with at least 20 boardings per day or more.
9) Continuous Walking Route and Crossings	Pedestrian facilities within ¼ mile of stops with at least 20 boardings per day.
10) Public Transportation and Human Services Coordination	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.
11) Passengers per Service Hour	15.92
12) On-Time Performance	90% of schedule stops on-time (within 5 minutes).
13) Passenger Complaints	Six complaints per 100,000 boardings.
14) Road Calls	New data collection system implemented in 2017. Measure for one year and set target in cooperation with MPO.
15) Accidents	One accident per 100,000 revenue miles.
16) Fleet Maintenance	At least 75% of all regular fleet available for operations.
17) Spare Ratio	Spare vehicles to peak requirement less than 20%
18) Cost per Revenue Hour	\$94.77
19) Cost per Ride	\$5.95
20) Farebox Recovery	15%
21) Ridership	Increase ridership 5% per year.
22) Transit Auto Travel Time	Transit travel time should be no more than 3 times auto travel time.

*Table 8-5: CAT Performance Standards for Demand Response System*

Performance Measures	Performance Level
1) Span of Service	18 hours a day for six days a week.
2) Service Availability	75% of population covered by service area.
3) Service Hours per Capita	0.30
4) Information Availability	Standard requirements: Title VI, Riders Guide, Service Schedules, trip reservation process.
5) Planning Requirements	Identified and analyzed as part of Transit Development Plan. Service expansions must be determined through alternatives analysis.
6) Number of Shelters Installed	Shelters at stops with at least 20 boardings per day or major transfer points.
7) Public Transportation and Human Services Coordination	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.
8) Passengers per Service Hour	2.70
9) On-Time Performance	90% on-time within published pickup window.
10) Advance Reservation Time	Minimum two hours in advance.
11) Reservation Negotiation Window	Maximum: Up to one hour before/after requested time.
12) Trip Denials	Must follow ADA trip denial definitions and process.
13) Trip Cancellations	Bus or vanpool trips should only be canceled from lack of riders or weather.
14) Passenger Complaints	Six complaints per 100,000 boardings.
15) Road Calls	New data collection system implemented in 2017. Measure for one year and set target in cooperation with MPO
16) Accidents	Once accident per 100,000 revenue miles.
17) Fleet Maintenance	At least 75% of all regular fleet available for operations.
18) Spare Ratio	Spare vehicles to regular fleet vehicles less than 25%.
19) Cost per Revenue Hour	\$74.72
20) Cost per Ride	\$27.66
21) Farebox Recovery	15%
22) Ridership	Ridership growth commensurate with eligible rider growth.



Table 9-1 shows how each FTA Category, Sub-Category and Element fits into the five FTA defined asset-condition categories based on how soon it will reach its useful life. For example, the CAT Maintenance Garage (Facilities, Buildings, Maintenance) is beyond its useful/functional life, thus it is classified as poor whereas the Fixed Route buses category (Vehicles, Revenue Vehicles, Bus) shows 24 percent of assets in excellent condition, 63 percent in marginal condition and 13 percent in poor condition.

*Table 9-1: Asset Condition by Category and Type (Grand Forks)*

Category	Sub-Category	Element	Useful Life	Replacement Value (2016 \$)	Excellent	Good	Adequate	Marginal	Poor*
Facilities	Buildings	Maintenance	30	\$8,081,000					100%
Facilities	Equipment	-	5 to 10	\$198,000	3%		5%	77%	15%
Facilities	Equipment	Maintenance	5 to 7	\$804,000		18%	3%	30%	49%
Facilities	Equipment	MIS/IT/Network Systems	3 to 7	\$839,000			21%	77%	3%
Vehicles	Revenue Vehicles	Bus	10 to 12	\$4,005,000	24%			63%	13%
Vehicles	Revenue Vehicles	Vans, Cutaways, and Autos	4 to 7	\$1,488,500	69%	22%	3%	3%	3%
Vehicles	Non-Revenue Vehicles	-	6	\$343,000	25%		14%	5%	56%
Stations	Bus Stop & Shelters	Bus Stops	20	\$1,091,000			100%		
Stations	Bus Stop & Shelters	Bus Stop Shelters	7	\$4,013,000					100%
Systems	Communications	Phone System	5	\$38,000		100%			
Systems	Communications	Radio	7	\$52,000					100%
Systems	Communications	Safety and Security	5 to 7	\$214,000		24%	15%	38%	23%
Systems	ITS	-	5 to 7	\$52,000			100%		
Systems	Revenue Collection	-	7	\$1,462,395				100%	

\*Poor condition indicates the asset has reached the end of its useful life and is not in a state of good repair

## CURRENT ASSET CONDITION – EAST GRAND FORKS

To reflect that East Grand Forks owns a limited amount of its own capital, a smaller analysis looked exclusively at the East Grand Forks capital inventory. Currently East Grand Forks owns a total inventory of four bus shelters and two revenue vehicles. Those assets were evaluated to determine the current assets by category as well as the current State of Good Repair Backlog. Table 9-2 demonstrates the current asset condition by category and type for East Grand Forks.

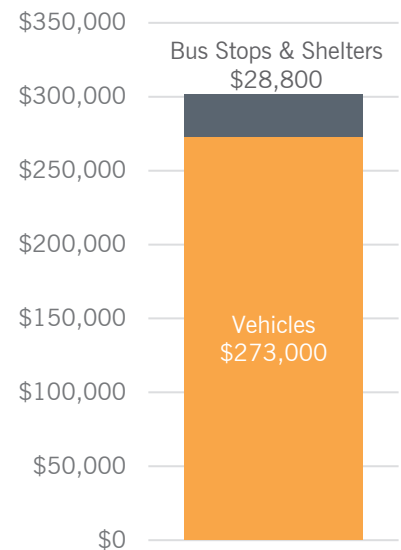
Table 9-2: Asset Condition by Category (East Grand Forks)

Category	Sub-Category	Element	Useful Life	Replacement Value (2016 \$)	Excellent	Good	Adequate	Marginal	Poor
Vehicles	Revenue Vehicles	Bus	7	\$273,000	50%	50%			
Facilities	Bus Stop & Shelters	Bus Stop Shelters	4 to 7	\$38,800			100%		

The East Grand Forks' revenue vehicles are currently in either Good or Excellent condition, and they currently have zero percent of their vehicle inventory in backlog. Given historic and projected programming through the MPO TIP and MnDOT, no replacement backlog for East Grand Forks over the planning horizon of this TDP is anticipated.

The entire current inventory of shelter assets owned by East Grand Forks is in adequate condition. Investments are needed in the long term to maintain a state of good of repair. However, East Grand Forks has no state of good repair backlog for shelters.

Figure 9-3: Value of CAT East Grand Forks Capital Assets by Category (2016 \$)

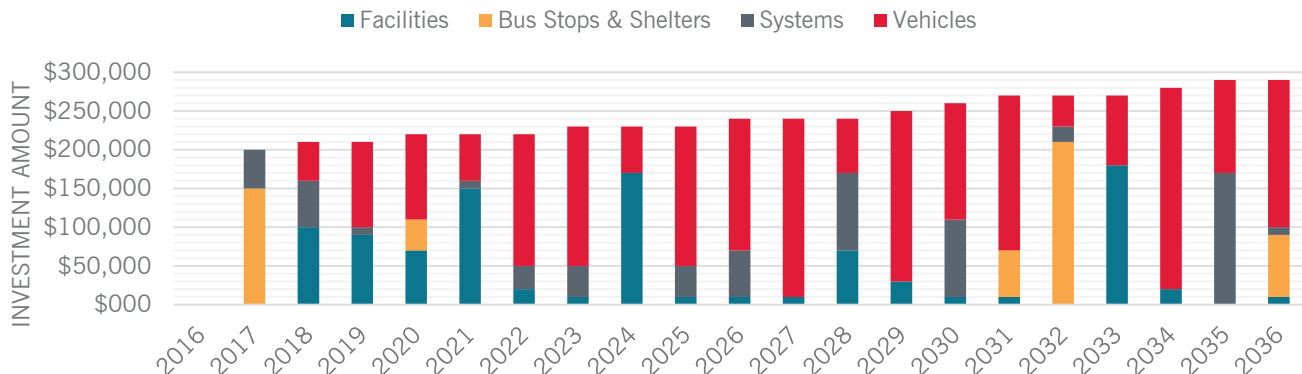


## RECOMMENDATIONS FOR GUIDING RESOURCES

### CURRENT FUNDING SCENARIO

If CAT had unlimited funding, assets would be replaced as soon as they reach the end of their useful life. However, with funding remaining constant at its current \$200,000 value for 20 years (adjusted for inflation), capital improvement decisions need to be made with limited funding. Figure 9-4 shows the investment schedule if funding stays constant. The bus garage expansion, valued at over \$8 million, is removed from this investment schedule analysis as it is assumed that this one-time renovation would come from other funding sources beyond the \$200,000 per year budget.

Figure 9-4: Proposed Investment Schedule Assuming \$200,000 Annual Capital Investment Budget



## 10) FINANCIAL PLAN

### INTRODUCTION

This section provides an overview and summary of the five-year (2018-2022) financial analysis related to implementation of the recommended operational strategy for CAT. The fiscally constrained implementation of the TDP would result in the implementation of the Cost Constrained Scenario for Grand Forks and East Grand Forks.

This plan provides guidance to move towards implementing the Cost Constrained Scenario by the 2<sup>nd</sup> Quarter of 2018. The system restructure proposed by the TDP allows for a new route structure to be implemented, with varying levels of new revenue investment by each major CAT funding partner. However, based on existing funding projected to be available, it is recommended that the Cost Constrained Scenario be implemented as outlined in Alternatives Analysis element of the TDP.

### ASSUMPTIONS

Assumptions used in the development of this element of the TDP are as follows.

- » Implementation of the TDP starts April 1, 2018, and therefore cost for calendar year 2018 are assumed at  $\frac{3}{4}$  of those shown in the Operational Analysis in the Alternatives Analysis chapter above. Operations costs were initially inflated in the Operational Analysis, so for this element of the TDP, they again grown four percent annually from 2019 on. Revenue projections match those discussed below.
- » The selection of April 1, 2018 as the implementation window was developed to match recent funding provided by MnDOT to support CAT service improvements in East Grand Forks.
- » Revenue assumptions were based on the current approved 2017-2020 Grand Forks – East Grand Forks Transportation Improvement Program (TIP). These revenue assumptions were augmented to account for recent 100 percent State funding provided to the East Grand Forks by MnDOT. Revenue projections for East Grand Forks also assume slightly elevated annual revenue as reported by MnDOT for the years 2020 and 2021 (and extrapolated to 2022) to support with TIP and STIP development.
- » The tripper service should be discontinued and reevaluated in coordination with area agencies and human service stakeholders.

### OPERATIONS

Operational costs are broken out by system. Based on MnDOT funding provided to East Grand Forks, the Cost Constrained Scenario is fully fundable through the year 2019 in East Grand Forks. Implementation of the Cost Constrained Scenario for Grand Forks is essentially cost neutral through the five-year planning horizon.

### Grand Forks

Table 10-1 shows the overall operation analysis for the Grand Forks portion of the TDP for the years 2017 to 2022. No new funds are needed for the Grand Forks portion of the CAT system to implement the Cost Constrained Scenario over the life of the TDP. If Grand Forks were wishing to reach the Cost + Scenario, total new Grand Forks revenue to support implementation of the Cost + Scenario is projected to be between \$225,000 and \$330,00 annually over the five-year life of the TDP. Not moving forward with the Cost + Evening Service implementation would reduce this by between \$97,000 and \$150,000 annually over the life of the TDP.

*Table 10-1: Grand Forks Financial Analysis*

	2017	2018	2019	2020	2021	2022
Other	\$338.4	\$345.20	\$352.10	\$359.14	\$366.33	\$373.65
Local	\$1,765.1	\$1,800.37	\$1,836.38	\$1,873.11	\$1,910.57	\$1,948.78
State	\$253.1	\$258.18	\$263.35	\$268.61	\$273.99	\$279.46
Federal	\$1,112.0	\$1,134.21	\$1,156.89	\$1,180.03	\$1,203.63	\$1,227.70
<b>Total Revenue</b>	<b>\$3,468.6</b>	<b>\$3,538.0</b>	<b>\$3,608.7</b>	<b>\$3,680.9</b>	<b>\$3,754.5</b>	<b>\$3,829.6</b>
<b>Existing Service</b>						
Existing Cost	\$3,468.6	\$3,538.0	\$3,608.7	\$3,680.9	\$3,754.5	\$3,829.6
<b>New Service</b>						
Cost Constrained (Day)	\$0.0	-\$18.0	-\$24.0	-\$25.0	-\$26.0	-\$27.0
Cost Constrained (Night)	\$0.0	\$9.0	\$12.0	\$12.5	\$13.0	\$13.5
<b>Total Cost</b>	<b>\$3,468.6</b>	<b>\$3,529.0</b>	<b>\$3,596.7</b>	<b>\$3,668.4</b>	<b>\$3,741.5</b>	<b>\$3,816.1</b>
<b>Total Shortfall/Surplus</b>	<b>\$0.0</b>	<b>\$9.0</b>	<b>\$12.0</b>	<b>\$12.5</b>	<b>\$13.0</b>	<b>\$13.5</b>

## East Grand Forks

Table 10-2 shows the overall operational analysis for the East Grand Forks portion of the TDP for the years 2017 to 2022. For years 2018 and 2019, East Grand Forks can meet anticipated revenue needs to support the Cost Constrained Scenario. Even with the assumption in increased revenues from MnDOT over life the planning horizon, East Grand Forks will run between \$135,000 and \$150,000 deficit following loss of the one-time MnDOT money. Therefore, Table 10-2 shows the investment in new services ending at the end of 2019. New funds would be needed to operate the Cost Constrained Scenario following the end of the two year MnDOT funding.

*Table 10-2: East Grand Forks Financial Analysis*

	2017	2018	2019	2020	2021	2022
Local	\$99.3	\$101.3	\$103.3	\$98.5	\$106.0	\$108.1
State	\$226.5	\$288.0	\$523.8	\$234.8	\$263.0	\$268.3
Federal	\$80.6	\$82.2	\$83.9	\$186.7	\$191.0	\$194.8
<b>Total Revenue</b>	<b>\$406.4</b>	<b>\$471.6</b>	<b>\$711.0</b>	<b>\$520.0</b>	<b>\$560.0</b>	<b>\$571.2</b>
<b>Existing Service</b>						
Existing Cost	\$406.4	\$414.6	\$422.8	\$431.0	\$439.7	\$448.4
<b>New Service</b>						
Cost Constrained (Day)	\$0.0	\$28.5	\$114.0	\$0.0	\$0.0	\$0.0
Cost Constrained (Night)	\$0	\$28.5	\$116.0	\$0.0	\$0.0	\$0.0
<b>Total Cost</b>	<b>\$406.4</b>	<b>\$471.6</b>	<b>\$652.8</b>	<b>\$431.0</b>	<b>\$439.7</b>	<b>\$448.4</b>
<b>Total Shortfall/Surplus</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$58.2</b>	<b>\$89.0</b>	<b>\$120.3</b>	<b>\$122.8</b>

## CAPITAL

### Grand Forks

Table 10-3 shows the current projected capital expenditures needed to support the Grand Forks side of the CAT System over the life of this TDP through year 2022.

### SHORT-TERM NEEDS

Over the life of the TDP Grand Forks will face an estimated need for \$4.0 million in capital funding to meet short-term capital needs. Nearly \$1.4 million of these funds are currently programmed, with another \$700,000 currently submitted for 2018 Federal funding through NDDOT. The largest chunk of this unfunded need will be four large vehicle replacements in 2022.

## LONG-TERM NEEDS

The Grand Forks capital analysis is not inclusive of needed ongoing upgrades and expansion to the CAT Bus Garage. The full expansion and upgrade of the CAT Bus Garage is estimated at \$8.0 million. A multi-year funding strategy for this facility is needed, and should consider the potential for a MnDOT share in the eligible portions of the facility.

Based on the Asset Management analysis developed as part of the TDP, it is suggested that an additional \$1.25 million in new capital revenues are needed per year to maintain a backlog of roughly 50 percent for the next 15 years. Some of this backlog may already be addressed through capital replacements included in Table 10-3. Given the current split in overall service and revenue miles of the CAT System, approximately 85 percent of this backlog, or \$1.062 million would be Grand Forks' burden.

*Table 10-3: Grand Forks Capital Investment Schedule*

Grand Forks							
Item	Status	2017	2018	2019	2020	2021	2022
Replace Fixed Route (976)	Programmed	\$368.0					
Replace 2 Fixed Route (Replace 31 & 91)	Programmed	\$416.0					
Replace 2 DAR Vehicles (Replace 109 & 121)	Candidate - 5310		\$107.0				
Replace 3 DAR Vehicles (153-154)	Illustrative				\$120.0		
Replace Fixed Route (Replace 42 & 112)	Programmed		\$480.0				
Replace 1 Fixed Route (161)	Illustrative					\$68.0	
Replace 4 Fixed Route (103-106)	Illustrative						\$1,600.0
Misc. Capital + Safety	Programmed -5307	\$35.0	\$15.0	\$15.0	\$15.0	\$15.0	
Fixed Route Video System	Candidate - 5339		\$60.0				
GFI Ticket Vending Machines	Candidate 5339		\$38.0				
Shop Maintenance Software	Candidate - 5339		\$100.0				
Ticket Vending Machine	Illustrative			\$98.0			
Transit Garage Upgrades	Candidate 5339		\$387.0				
Replace Shop Vehicles (2)	Illustrative			\$64.7			
Grand Cities Mall Shelter Improvements	Illustrative			\$100.0			
Programmed		\$819.0	\$495.0	\$15.0	\$15.0	\$15.0	\$0.0
Illustrative/Candidate		\$0.0	\$692.0	\$262.7	\$120.0	\$68.0	\$1,600.0
<b>Total - Grand Forks</b>		<b>\$819.0</b>	<b>\$1,187.0</b>	<b>\$277.7</b>	<b>\$135.0</b>	<b>\$83.0</b>	<b>\$1,600.0</b>

## East Grand Forks

Table 10-4 shows the current projected capital expenditures needed to support the East Grand Forks side of the CAT System over the life of this TDP through year 2022.

## SHORT-TERM NEEDS

Over the life of the current TDP, East Grand Forks has a total capital need of \$1.23 million. Of this amount, \$610,000 is currently programmed. The unfunded elements of the East Grand Forks capital analysis relate to vehicle needs in 2021 for replacement of vehicles 142 and 162.

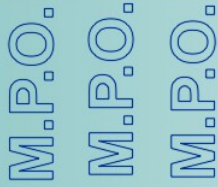
## LONG TERM NEEDS

The East Grand Forks capital analysis is not inclusive of needed ongoing upgrades and expansion to the CAT Bus Garage. Based on current services provided by CAT, MnDOT may potentially consider funding some portion of this facility. These discussions should be included in future investment planning for upgrade and expansion of the CAT Bus Garage.

The East Grand Forks capital analysis is not reflective of the needed additional investments to maintain a state of good repair. Based on the earlier discussion of the Asset Management analysis for CAT, an additional \$187,000 in revenue is needed from East Grand Forks to maintain their proportional share (based on percent of system revenue miles) of the current CAT capital infrastructure.

*Table 10-4: East Grand Forks Capital Investment Schedule*

East Grand Forks							
Item	Status	2017	2018	2019	2020	2021	2022
Replace DAR Vehicle (Replace 141 w/cutaway)	Programmed		\$150.0				
Replace DAR Vehicle (142)	Illustrative					\$220.0	
Replace 1 Fixed Route (162)	Illustrative					\$400.0	
Expansion Fixed Route (MnDOT 100% \$)	Programmed		\$460.0				
Programmed		\$0.0	\$610.0	\$0.0	\$0.0	\$0.0	\$0.0
Illustrative/Candidate		\$0.0	\$0.0	\$0.0	\$0.0	\$620.0	\$0.0
Subtotal - East Grand Forks		\$0.0	\$610.0	\$0.0	\$0.0	\$620.0	\$0.0



## Grand Forks - East Grand Forks Metropolitan Planning Organization

### **MPO Staff Report** **MPO Technical Advisory Committee: June 14, 2017** **MPO Executive Board: June 21, 2017**

**RECOMMENDED ACTION: Approve the I-29 Traffic Operations Study.**

Matter of Approval the I-29 Traffic Operations Study.

**Background:** KLJ was retained for I-29 Traffic Operations Study. A draft Implementation Plan document has been provided to the Steering Committee. A draft document reviewed and commented upon by the Steering Committee. Additionally, a presentation was done on May 23<sup>rd</sup> before the NDDOT Upper Management Team of the Study.

An updated draft report has been released and is available on the study website: [www.drivei29.com](http://www.drivei29.com) Presentations are scheduled to present this draft report to the Grand Forks County Commission on June 6<sup>th</sup> and the Grand Forks City Council Committee of the Whole on June 12<sup>th</sup>. A public input meeting has been scheduled for June 15<sup>th</sup> at the Alerus Center, going from 5:30 until 7:30 pm.

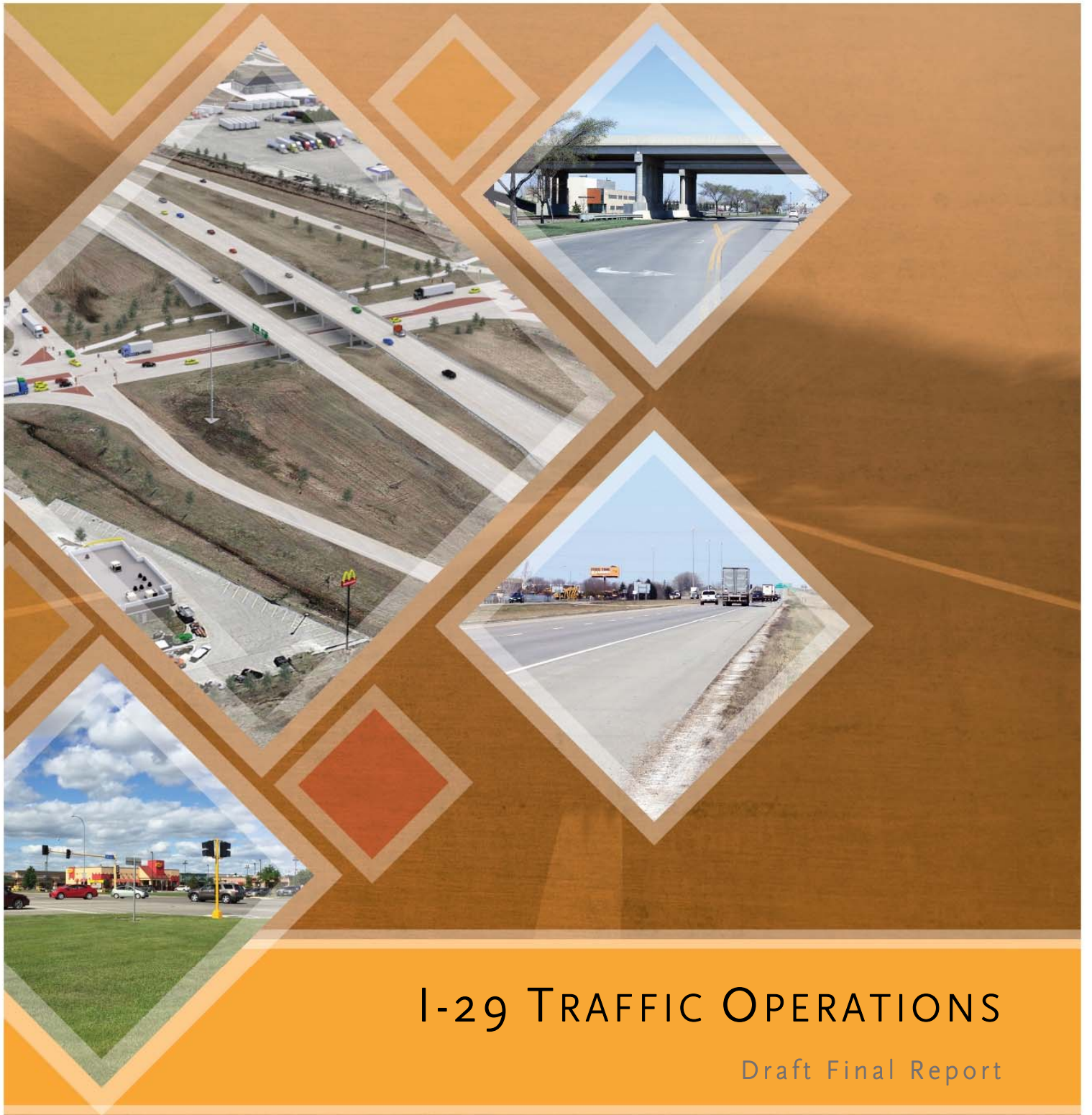
The draft report Executive Summary is attached.

#### **Findings and Analysis:**

- UPWP identified an activity to conduct an I-29 Traffic Operations Study
- Comments received from the Steering Committee have been incorporated into the draft Report.
- The full draft report is available on [www.drivei29.com](http://www.drivei29.com) and a public input meeting has been scheduled for June 15<sup>th</sup>.

#### **Support Materials:**

- Draft Executive Summary
- Additional information at: [www.drivei29.com](http://www.drivei29.com)



# I-29 TRAFFIC OPERATIONS

Draft Final Report

APRIL 2017







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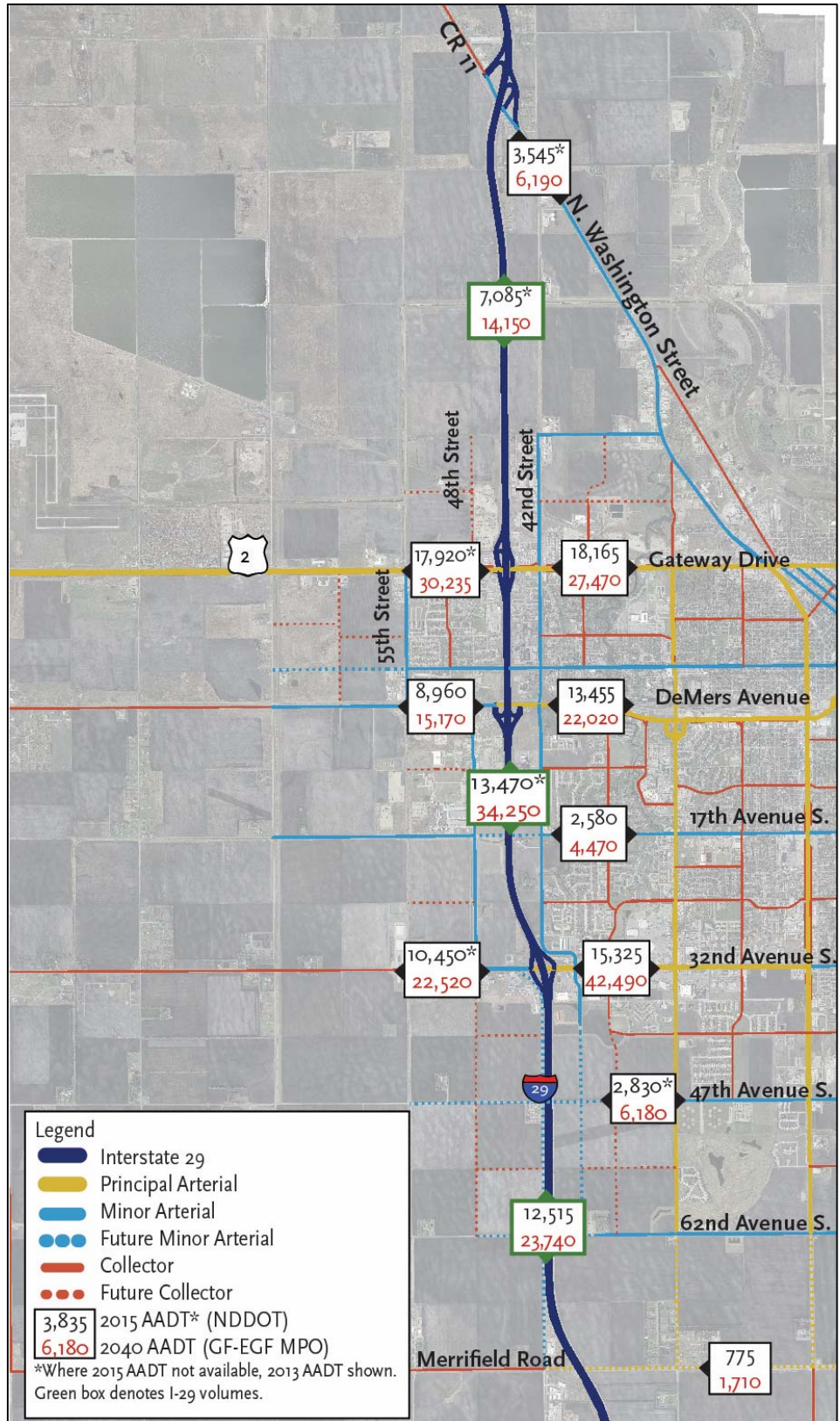
APPENDIX G: REPORT COMMENTS AND RESPONSES

# 1. EXECUTIVE SUMMARY

Interstate 29 (I-29) is one of the most widely traveled corridors in the area and is critical to the region's economic vitality. This corridor serves many purposes: moving freight, providing regional access to the University of North Dakota (UND) campus, special event travel (Alerus Center), out-of-town shoppers and daily commuters. While intended to provide regional accessibility and mobility, this corridor provides local accessibility and mobility as well.

I-29 runs through the City of Grand Forks on a north-south alignment near the city's western border. Three interchanges and one overpass are located along I-29 in Grand Forks at Gateway Drive/ US Highway 2, University Avenue (overpass), DeMers Avenue/ North Dakota Highway 297 and 32<sup>nd</sup> Avenue South/ US Highway 81B. Just north of Grand Forks, an interchange is located at North Washington Street/ Grand Forks County Road 11/ US Highway 81. Just south of Grand Forks, an overpass is located at Merrifield Road/ Grand Forks County Road 6. These interchanges, overpasses and the areas of I-29 in between comprise the 10-mile study area, as shown in Figure 1-1.

Figure 1-1: Study Area



## STUDY APPROACH

The study approach for this project was based on three phases, which began with issues identification, moved to developing an improvement plan and ended with plan approval. Each phase contained intermediate memos, review from the Steering Committee and public input opportunities. The phases are summarized below, with the intermediate memos and public input summary in the appendices.

Figure 1-2: Study Process



## PUBLIC INPUT

Each phase included stakeholder and public engagement with Steering Committee meetings, public input meetings and updates to the MPO's Technical Advisory Committee. A summary of the engagement efforts can be found in Appendix F.

## STEERING COMMITTEE

The Steering Committee was a diverse group of stakeholders with varying interests along the corridor. Members of the Steering Committee included:

- FHWA North Dakota
- NDDOT Grand Forks District
- NDDOT Local Government
- NDDOT Traffic Operations
- Grand Forks – East Grand Forks Metropolitan Planning Organization
- Grand Forks County Engineering
- Grand Forks County Planning and Zoning
- City of Grand Forks Engineering
- City of Grand Forks Planning and Community Development

## MPO TECHNICAL ADVISORY COMMITTEE

The Grand Forks – East Grand Forks Metropolitan Planning Organization has a standing committee, the Technical Advisory Committee (TAC) that advises their governing body, the Policy Board on technical matters. Members on the TAC represent Grand Forks, East Grand Forks, Cities Area Transit, Airport Authority, NDDOT and MnDOT.

## ISSUES IDENTIFICATION

The purpose of this phase was to establish the current and future needs and opportunities for the corridor.

### INTERMEDIATE MEMOS

The issues identification phase was comprised of four intermediate memos which established the existing and future conditions of the study area, operations during special events and the environmental constraints.

- The Existing Conditions analysis identified existing conditions along the study corridor, including land use, traffic operations, safety, multimodal facilities, infrastructure conditions, lighting and access management.
- The Future Conditions analysis identified future conditions along the study corridor through refined traffic forecasts based on a variety of scenarios. It developed 2025 and 2040 traffic projections and operations.
- Alerus Center Events analysis evaluated the impacts a major event at the Alerus Center, located west of I-29 between Gateway Drive/US 2 and DeMers Avenue/ND 297, has on current and future operations of the interstate.
- The Environmental Constraints analysis identified the affected environment and established the purpose and need for the project, which was used later to evaluate alternatives.

### MPO TECHNICAL ADVISORY COMMITTEE UPDATES

Throughout this stage there were two updates to the TAC, which included a brief summary of the analysis completed for the existing conditions analysis, future conditions analysis, environmental constraints and the events conditions analysis.

### STEERING COMMITTEE MEETINGS

There were two Steering Committee meetings during this phase; the first reviewed the existing conditions and the second reviewed the future conditions, environmental constraints and the events analysis. Each of the Steering Committee Meetings included a technical presentation and discussion where the Steering Committee was given the opportunity to identify additional issues and provide feedback. Comments received from these meetings have been incorporated into the report.

### PUBLIC ENGAGEMENT

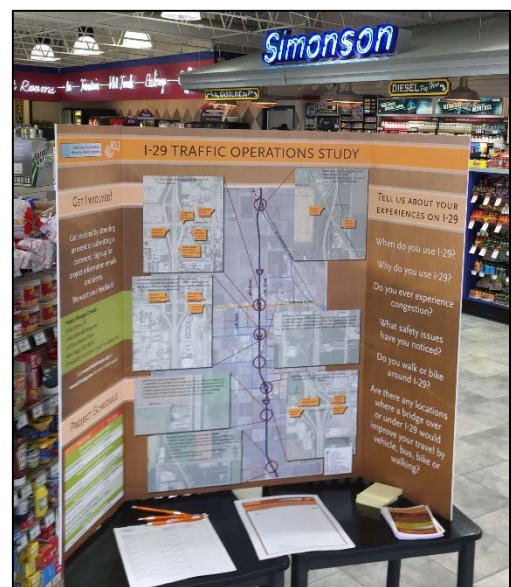
#### Public Input Meeting #1

The first public input series was held on April 14<sup>th</sup>, 2016, with the intent to gather feedback on existing and future issues within the I-29 corridor study area. The series consisted of three meetings held throughout the day at various locations along the study corridor, including

- Columbia Mall on South Columbia Road from 12:30 to 2:30 P.M.
- Simonson Station Store on 4720 Gateway Drive from 2:45 to 4:45 P.M.
- Alerus Center at 1200 South 42<sup>nd</sup> Street from 5 to 7 P.M.

The Columbia Mall and Simonson Station Store meetings were informal discussions including a display board and members of the study team on-hand to answer questions. The Alerus Center meeting was an open house format with a formal presentation.

Figure 1-3: Pop-Up Meeting at Simonson Station Store



A variety of techniques were used to inform the public about their opportunity to comment on the project.

- A press release and box ad were published 10 days before the meeting.
- Information was posted on [www.drivei29.com](http://www.drivei29.com).
- Fliers were distributed to the Steering Committee, the Grand Forks Region Economic Development Council, Grand Forks City Commission and the Grand Forks County Commission.
- Advertisement on the Dynamic Message Signs north and south of Grand Forks on I-29.

Fifteen people attended one of the three meetings held throughout the day. Including four at the Columbia Mall, three at the Simonson Station Store and eight at the Alerus Center.

## ***IMPROVEMENT PLAN DEVELOPMENT***

The improvement plan phase evaluated high level infrastructure scenarios, specific improvement opportunities and a plan for implementation.

## **INTERMEDIATE REPORTS**

The improvement plan development phase was comprised of three intermediate memos:

- The Macro-Level Alternatives analysis used the project purpose and need statement, cost-benefit analysis and cost-effectiveness analysis to evaluate a variety of grade separations, interchanges and red river crossings that altered regional traffic patterns to reduce network wide delay and miles travelled and should be included in future infrastructure scenarios.
- The Micro-Level Alternatives analysis evaluated each of the four existing interchanges and two future interchange opportunity locations to identify necessary improvements such as loops, lane configurations, traffic control, turn lanes and other improvements.
- The Implementation Plan created a project development and programming framework for infrastructure needs throughout the study area.

## **MPO TECHNICAL ADVISORY COMMITTEE UPDATES**

Throughout this stage there were two updates to the TAC. The first occurred after the Macro Level Analysis was completed, which presented the infrastructure scenarios to be carried forward for further analysis. The second occurred after the Micro Level Analysis which presented alternatives based on the analysis and Value Planning workshop.

## **STEERING COMMITTEE MEETINGS**

There were four Steering Committee meetings during this phase; two occurred during the development of the Macro-Level Alternatives memo, one during the Micro-Level alternatives and one during the Implementation Plan. Comments received from these meetings have been incorporated into the final report.

*Figure 1-4: Public Input Meeting Advertisement on DMS along I-29*



## PUBLIC ENGAGEMENT

The second public input meeting was held on February 16<sup>th</sup>, 2017, with the intent to gather feedback on the alternatives and the implementation plan. The meeting was held at the Alerus Center at 1200 South 42<sup>nd</sup> Street from 5:30 to 7:30 P.M. This meeting included an open house and formal presentation. After the presentation, attendees were given ballots to indicate their preference on the alternatives presented and implementation strategies.

A variety of techniques were used to inform the public about their opportunity to comment on the project.

- A press release and box ad were published 10 days before the meeting.
- Information was posted on the project website.
- Fliers were distributed to the Steering Committee, the Grand Forks Region Economic Development Council, Grand Forks City Commission and the Grand Forks County Commission.

Eleven people attended the meeting.

## PLAN APPROVAL

The plan approval phase was comprised of project wrap-up activities, including developing the final report and appendices, presenting to guiding committees and agencies, including City, County and State stakeholders and the last public input meeting.

## KEY APPENDICES

A variety of supporting information has been included in the appendices to the final report, including the following key items:

- **Interstate Access Justification Report for 47<sup>th</sup> Avenue** which evaluates the 47<sup>th</sup> Avenue interchange using FHWA's Eight Policy Points to substantiate the need for an interchange at the 47<sup>th</sup> Avenue location.
- **Interstate Access Justification Report for Merrifield Road/CR 6** which evaluates the Merrifield road/CR 6 interchange using FHWA's Eight Policy Points to substantiate the need for an interchange at the Merrifield Road/CR 6 location.
- **Public Involvement Summary** includes the meeting materials used to advertise the public input meetings, the materials presented and all comments received.

## PRESENTATIONS

This section to be updated when complete.

### **NDDOT Management Presentation**

At the NDDOT Management Meeting, existing and future conditions, as well as all technically feasible alternatives for the study area were presented to NDDOT for comment.

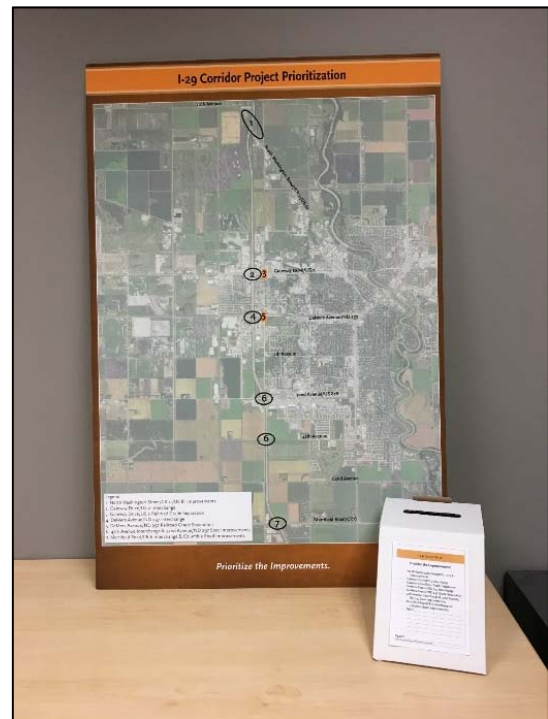
### **City Council of the Whole**

The final report was presented to the Grand Forks City Council of the Whole...

### **MPO Technical Advisory Committee**

The final report was presented to the TAC for comment. ..

*Figure 1-5: Voting Ballot Boxes*



**MPO Policy Board**

The final report was presented to the Policy Board for comment...

**Public Engagement**

The final public input meeting...



## SUMMARY OF KEY ISSUES, IMPROVEMENT AND IMPLEMENTATION PLANS

This section presents the key issues identified from the analysis completed in each phase of the report, as detailed above. Each location includes key existing and future issues and opportunities, the prioritized improvements and the implementation plan. The improvements were prioritized based on technical scoring, Steering Committee weighting and ranking and public input. The technical scoring is based on the following criteria:

- Local operations – average delay for the combined intersection operations in seconds per vehicle, estimated using traffic simulation software.
- Mainline operations – average density for the 500-foot upstream section of off-ramps and 500-foot downstream section of on-ramps, estimated using traffic simulation software.
- Environmental impacts – permanent ecological, socioeconomic, business, cultural and recreational impacts.
- Safety – estimated crash potential for rear-end, sideswipe and crossing conflict, estimated using Vissim outputs in FHWA's Supplementary Safety Assessment Model.
- Cost – estimated project cost and construction impacts.

### *NORTH WASHINGTON STREET/CR 11/US 81*

The North Washington Street/CR11/US 81 interchange experiences the least traffic in the study area, carrying fewer than 4,000 vehicles per day. By 2040, this number increases to more than 8,000 vehicles per day. Most traffic through this interchange functional area is coming-from or going-to the city. With interstate access for several large industrial properties this interchange experiences around 33 percent heavy truck traffic. These volumes are unlikely to require major capacity enhancements.

The presence of the Glasston Subdivision on the southwest side of North Washington Street/CR 11/US 81 and skew of the I-29 creates complicated intersection configurations, specifically tight turning radii, leading to truck off-tracking. Additionally, there are no turn lanes along North Washington Street/CR 11/US 81.

In 1.25 miles, there are eight access points. The high posted speeds (55 miles per hour or more), proximity to the interchange functional area and the industrial uses generating relatively high truck traffic makes access management an important element of improving current and future safety.

### IMPROVEMENT PLAN

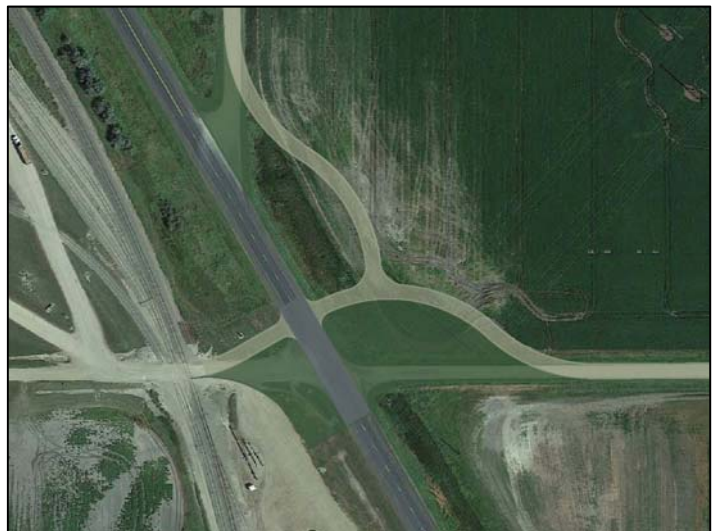
#### Highest Ranked Alternative

The prioritized improvement plan for the North Washington Street/CR 11/US 81 includes the following:

- Left-turn and right-turn lanes at the ramp intersections.
- Access consolidation at the Sproule Farms and Simplot Grower Solutions.
- Consolidating and realigning the northbound on- and off-ramps and the southbound on-ramp at the interchange.
- Access consolidation at 42<sup>nd</sup> Street and 54<sup>th</sup> Avenue. This improvement is optional and should only be pursued if deemed necessary in the future.

The combined set of improvements would prevent future operational and safety issues from developing by reducing crash potential at unsignalized intersections with additional turn lanes and reducing access risk by consolidating accesses. With no current

*Figure 1-6: Access Consolidation at 42<sup>nd</sup> Street and 54<sup>th</sup> Avenue*



or future operational or safety deficiencies identified, many of the alternatives presented here are low impact and low priority.

## Other Improvements

The other improvement studied was to realign the northbound on-ramp with the private driveway on the west side of North Washington Street/CR 11/US 81. This realignment would help prevent off-tracking of southeast to northbound trucks and limit driver expectancy issues.

## IMPLEMENTATION PLAN

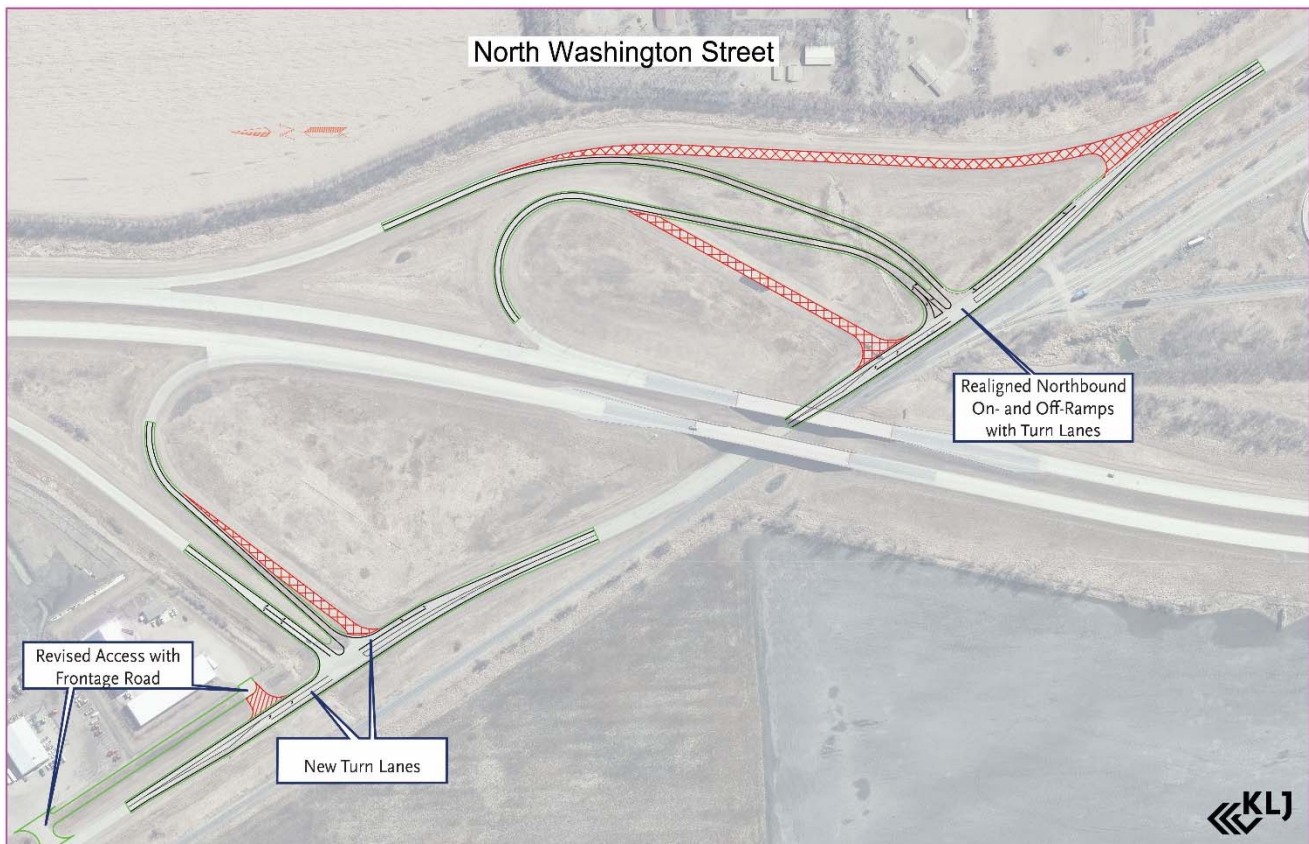
With no identified capacity or safety needs, the improvements prioritized for the North Washington Street/CR 11/US 81 are not urgent. There is the potential to reevaluate potential access management changes and ramp modifications during the scoping process for the 2030 I-29 CPR & Grind project. If improvements are not made during the 2030 project, needs should be reevaluated in the long term.

## Cost

The estimated cost in 2017 dollars is \$5.98 million (\$12.5 million in 2035 dollars). This includes:

- \$55,000 for access consolidation at the Sproule Farms and Simplot Grower Solutions
- \$375,000 for the optional access consolidation at 42<sup>nd</sup> Street and 54<sup>th</sup> Avenue
- \$300,000 for turn lanes
- \$5.25 million for the East Ramp realignment

*Figure 1-7: North Washington Street/CR 6/US 81 Improvement Plan*



## GATEWAY DRIVE/US 2

Gateway Drive/US 2 is a major local, state and national corridor: it connects the west coast as far east as Michigan; designated on the National Network by the Federal Highway Administration; and helps carry more than half of North Dakota's Freight. With two truck stops, access to an industrial corridor, a National Highway System route, Strategic Highway Network and "Super-Haul Expanded Envelope Corridor", Gateway Drive/US 2 produces heavy truck traffic, greater than 12 percent, which is 10 percentage points higher than typical urban corridors. This corridor is the most widely traveled corridor in the study area, carrying more than 16,000 vehicles under current conditions. While not yet deficient, current peak hour operations create a crash trend, likely associated with congestion and queueing onto across closely spaced adjacent intersections.

Dense access spacing introduces conflicts into the traffic flow as vehicles enter and exit the mainline. In less than a half mile, there are five access points, including four signalized intersections. The one unsignalized intersection, 43<sup>rd</sup> Street, sees angle crashes caused by drivers on the minor approach trying to find an acceptable gap. Long queues and heavy traffic may reduce acceptable gaps and obstruct vision of conflicting traffic.

Access spacing, combined with heavy traffic, including heavy truck traffic creates poor traffic flow and operations. By 2040, traffic operations at many of the study intersections in the interchange functional area fall to poor or deficient levels and queues reach the interstate.

This interchange functional area also sees challenges due to the at-grade railroad crossing of the Glasston Subdivision east of 42<sup>nd</sup> Street. While the Glasston Subdivision only sees an average of six trains per day currently, local and regional developments and the potential rerouting of the Mill Spur are expected to increase that number up to twelve trains per day. On average, each train causes more than five minutes of delay, which creates major delays and increased crash potential on the interstate by introducing stopped vehicles onto the highway. As a result of the Glasston Subdivision Railroad Crossings Mitigation Study, a grade separation was recommended.

## IMPROVEMENT PLAN

### Interchange Improvements

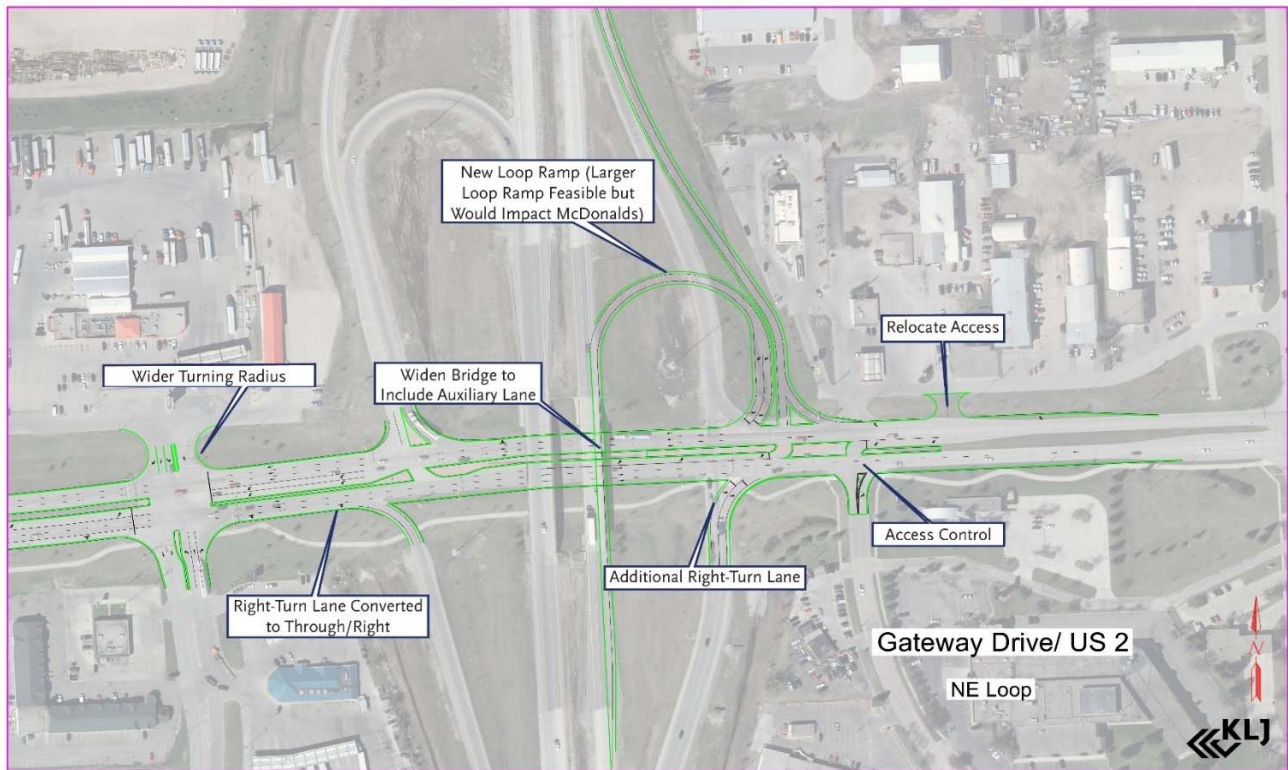
#### *Highest Ranked Alternative*

Analysis completed for this study confirmed the analysis and recommendations of the US 2 Corridor Study which prioritized the Northeast Loop Alternative. The Northeast Loop alternative would

- Widen the east I-29 bridge to include a new auxiliary lane for the northeast loop.
- Provide an additional northbound right-turn lane at the I-29 East Ramp for improved operations.
- Convert the eastbound right-turn lane at 47<sup>th</sup> Street to a shared through/right-turn lane to improve flow onto the I-29 southbound on-ramp.
- Relocate the north approach of 43<sup>rd</sup> Street 175 feet east and convert to right-in/right-out. Restrict left-out of the south access of 43<sup>rd</sup> Street.
- Retaining wall to separate the I-29 northbound on-ramp from the existing McDonald's parking lot. A larger northeast loop ramp has also been considered to mitigate queueing onto the interstate, which would require buying out McDonalds but would mitigate the need for a retaining wall.
- Wider turning radius for westbound right-turns at 47<sup>th</sup> Street to better accommodate truck traffic entering the Simonson Travel Center and help eliminate trucks broaching the curb or hitting the traffic signal pole.
- Incorporate queue flushing on the off-ramps and new loop ramp that includes queue detection which overrides the traffic control signal to give green time to the off-ramp to prevent queues from extending back or onto I-29.
- Pedestrian crossing improvements at the ramp intersections that would include pedestrian actuation and prevent right-turns on red when a pedestrian is present.

This alternative improves local and mainline operations to LOS "B" through 2040 and is expected to reduce crash potential by 48.6 percent.

Figure 1-8: Gateway Drive/US 2 Improvement Plan



### Other Improvements

Two other alternatives analyzed provide acceptable local and mainline operations and reduce crash potential, but come at a much higher cost for implementation. They will be carried forward into environmental documentation and can be found in Chapter 7:

- The Diverging Diamond Interchange improves operations but results in access impacts west of I-29 with the needs of a backage road.
- Modified Single Point Urban Interchange improves operations but results in business impacts to the McDonalds in the northeast quadrant of the interchange.

There were other alternatives analyzed in the US 2 Corridor Study but were not carried forward for analysis in this study because they did not meet the project purpose and need.

- Single Point Urban Interchange
- Roundabouts with Northeast Loop

### Grade Separation Improvements

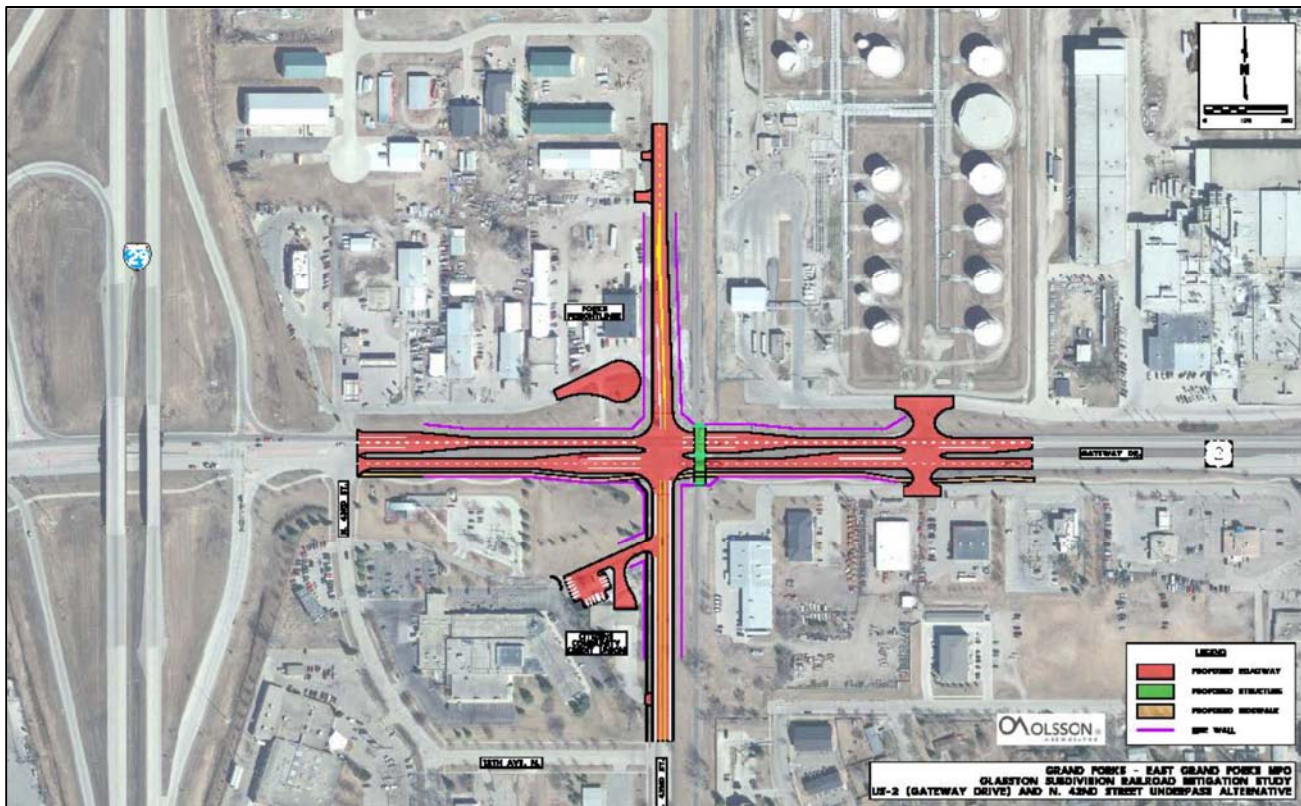
#### Highest Ranked Alternative

The Glasston Subdivision Railroad Crossings Mitigation Study prioritized an underpass alternative if the Mill Spur line is to be closed. That study only evaluated one configuration, but more may be required as part of any environmental documentation and is outside the scope of this study. Based on the planning level designs, it would require closing the frontage road access to 42<sup>nd</sup> Street, north of Gateway Drive/US 2. The compatibility between the access management plan included in the interchange improvement plan and this grade separation alternative would need to be evaluated during project development.

### Other Improvements

The Glasston Subdivision Railroad Crossings Mitigation Study did not provide any additional grade separation build alternatives. It is likely that additional alternatives design efforts will be completed before project development will occur.

Figure 1-9: Glasston Subdivision Railroad Grade Separation Alternative



## IMPLEMENTATION PLAN

### Interchange Improvements

The interchange improvements are needed before 2040, when traffic operations degrade to LOS “F”. This means that efforts to implement the most significant needs of the improvement plan (Northeast Loop, access management) do not need to begin until approximately 2031 (beginning of the mid-term phase), when preliminary engineering and advanced project development will begin and the project should be programmed into the TIP.

The Northeast Loop Alternative has an estimated cost of \$6.6 million in 2017 dollars (\$14.5 million in 2035 dollars).

### Interim Improvements

The queue flushing improvements (\$20,000 in 2017 dollars per ramp) and pedestrian crossing enhancements (\$30,000 in 2017 dollars per ramp) are relatively low cost and should be implemented as soon as feasible, possibly in the next TIP.

### Grade Separation Improvements

While train events that occur during peak hour traffic result in queueing onto the interstate during current events, the grade separation is not warranted without the closure of the Mill Spur, according to Benefit-Cost analysis completed in the Glasston Subdivision Railroad Crossings Mitigation Study, and future train growth associated with local and regional developments. In the short term, this project should be evaluated against with the 2045 LRTP update to determine its

regional significance and priority. Based on this evaluation, additional planning, scoping and project development activities should occur as reasonable.

### *Interim Improvements*

In the interim, advanced notification of train events can be used on the existing DMS to encourage drivers to choose a more appropriate route. This will help reduce potential for queuing to and onto the interstate.

## *DEMERS AVENUE/ND 297*

DeMers Avenue/ND 297 serves major traffic generators like the University of North Dakota campus, Alerus Center and the industrial park. Traffic to these and other major generators are often blocked or impacted by frequent train events at the 42<sup>nd</sup> Street at-grade railroad crossing north of DeMers Avenue/ND 297. Based on the 42<sup>nd</sup> Street Grade Separation Technical Needs Assessment, completed in 2014, train delays average more than five minutes and frequently approach 20 minutes. This produces 60 hours of total delay experienced each day, which is 50 percent greater than the highest threshold set by the Federal Highway Administration to justify a grade separation.

By 2025, recurring congestion, like peak hour traffic, and nonrecurring congestion, like train events on the Grand Forks Subdivision, will overburden this interchange functional area, which has just one through lane in each direction. By 2040, nearly every intersection in this functional area operates deficiently during the A.M. peak and travel time through the interchange functional area increases eight minutes, taking nearly four times longer to get through the interchange than during free flow conditions. Furthermore, train blockages at 42<sup>nd</sup> Street just north of DeMers Avenue/ND 297 create queuing that extends to the interchange and is forecasted to reroute several thousand vehicles onto the interstate by 2040.

In the last five years, there were more than 100 crashes in the DeMers Avenue/ND 297 functional area, with 65.4 percent occurring at the 42<sup>nd</sup> Street intersection. Of these crashes at 42<sup>nd</sup> Street, 28 (40 percent of all 42<sup>nd</sup> Street crashes) were left-turn crashes. With increasing recurring and nonrecurring congestion, driver frustration may be fueling riskier behavior, including running yellow and red lights. There was also a rear-end crash trend at the East Ramp, including five (35.7 percent of crashes at this intersection) northbound rear-end crashes. This could be associated with long queues at the yield controlled right-turn when motorists look upstream for gaps in traffic and not forward, and then collide with vehicles ahead.

## IMPROVEMENT PLAN

### **Interchange Improvements**

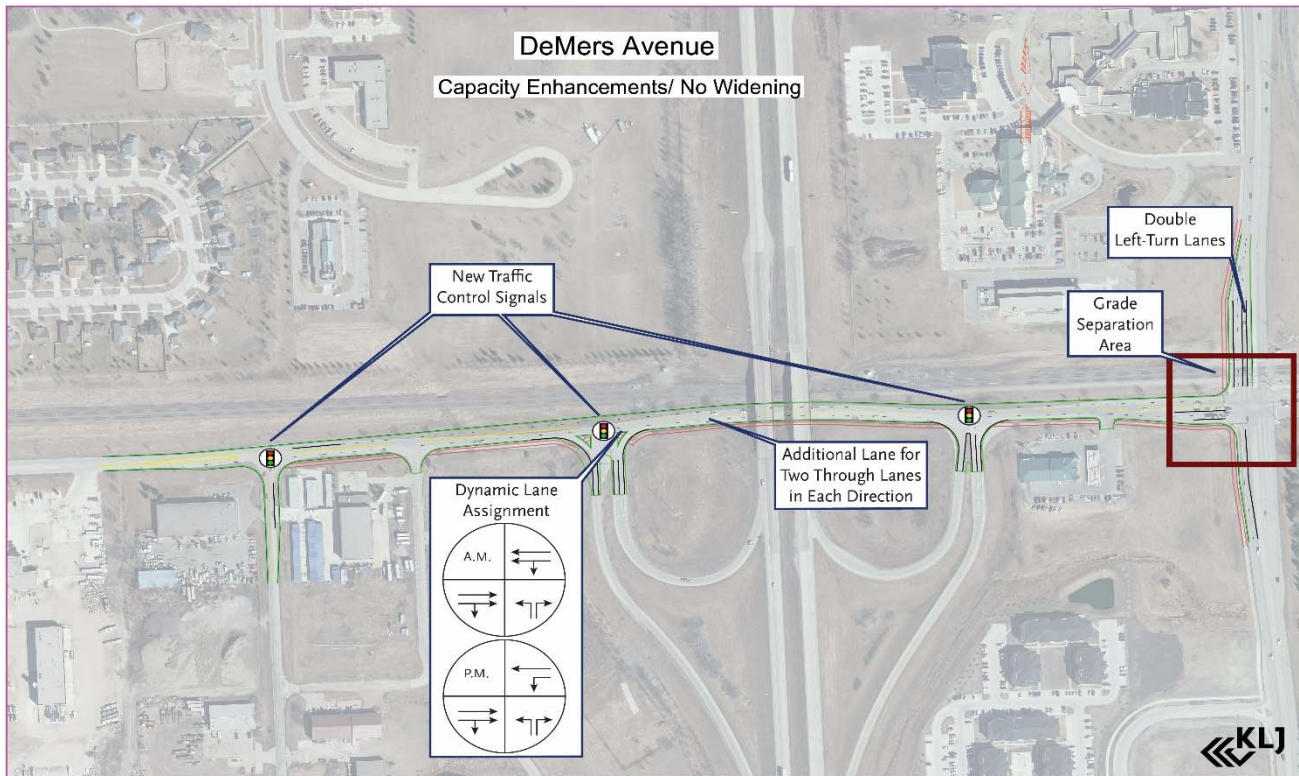
#### *Highest Ranked Alternative*

The Capacity Enhancements with No Bridge Widening alternative was the prioritized alternative for DeMers Avenue/ND 297. This alternative would:

- Add one lane of traffic, without impacting the existing bridge.
- Use dynamic lane assignment; during the A.M. peak period, the westbound lanes would operate as two through lanes with a shared left turn lane but during the P.M. peak period, the westbound lanes would operate as one through lane and one left turn lane.
- Incorporate traffic control signals at the 48<sup>th</sup> Street, West Ramp and East Ramp intersections.
- Install queue flushing included on the West Ramp and East Ramp intersections.

This alternative is the lowest cost alternative with acceptable levels of service under 2040 conditions at \$7.40 million and would have a positive impact on operations, expected to be at LOS “C” during both A.M. and P.M. peak hours, and reduce crash potential by 5.4 percent. The improvements are expected to prevent queuing onto the interstate, mitigate crash trends and improve traffic flow and levels of service.

Figure 1-10: DeMers Avenue/ND 297 Improvement Plan



### Other Improvements

Three other build alternatives were evaluated but did not provide similar benefits. The Capacity Enhancements with Bridge Widening is feasible and should be carried forward to the environmental document.

- Capacity Enhancements with Bridge Widening is the highest cost alternative. It did not drastically improve local and mainline operations or safety compared to the prioritized alternative that did not include widening. This alternative provides a 2.9 percent improvement in operations for the peak hours over the Capacity Enhancements with No Bridge Widening but with a cost 154.1 percent higher.

The Roundabouts with Ramp Metering, Multilane Roundabouts and Spot Improvements alternatives have deficient operations under higher growth scenarios so do not meet the Purpose and Need established for this project and should be discarded.

- Roundabouts with Ramp Metering, the Multilane Roundabouts and Spot Improvements alternatives provide acceptable local and mainline operations as the prioritized improvement under the 2040 Existing Interstate Access Scenario. However, under higher growth scenarios, like the 47<sup>th</sup> Avenue Interchange Scenario (increases traffic on DeMers Avenue/ND 297 by 7.0 percent) or the 47<sup>th</sup> Avenue and Merrifield Road/CR 6 interchange scenario (increases traffic on DeMers Avenue/ND 297 by 10.1 percent), operations began to deteriorate to unacceptable levels under higher growth scenarios.

### Grade Separation Improvements

#### Highest Ranked Alternative

Interchange improvements cannot resolve the queueing and delay issues that occur during train events. However, the interchange improvements do not impact or preclude any of the grade separation alternatives analyzed in the 2014

Documented Categorical Exclusions (CatEx) report. With no signed environmental document, no preferred alternative has been officially developed, but the need has been established and Alternative “B” was prioritized:

- Alternative “B”: Lower 42<sup>nd</sup> Street Roadway Below Railroad and DeMers Avenue, Shift Alignment West of Existing
  - » \$40.0 million in 2017 dollars.
  - » This would create an underpass and shift 42<sup>nd</sup> Street to form a jug handle.
  - » This alternative would limit access to right-in/right-out at the gas station in the southwest corner of the DeMers Avenue/ND 297 and 42<sup>nd</sup> Street.

The build alternatives included in the CatEx would mitigate nonrecurring congestion associated with train events on the Grand Forks subdivision and improve multimodal crossing safety. They would provide more than \$9.2 million worth of safety and delay benefits between 2017 and 2040.

Alternately, building an interchange that could handle the storage of blocked vehicles during a train event would be cost prohibitive and unnecessary for most times of the day. Planning level cost estimates suggest \$31 million would be needed to build up the interstate and related infrastructure to carry the rerouted traffic. A railroad grade separation would mitigate nonrecurring congestion associated with train events, and when combined with the interchange improvements, would ensure acceptable day-to-day local and mainline operations.

### Other Improvements

The other build alternative that was included in the CatEx included Alternative “C”, which would

- Lower the DeMers Avenue and 42<sup>nd</sup> Street intersection below the railroad on its existing alignment
- This alternative would construct an underpass on the existing alignment.
- This alternative would relocate the access to the gas station in the southwest corner of the DeMers Avenue/ND 297 and 42<sup>nd</sup> Street.

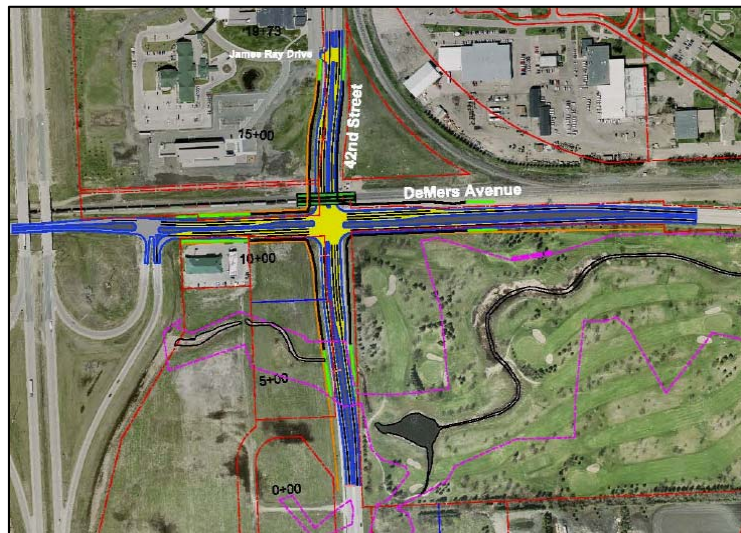
### IMPLEMENTATION PLAN

With deficient operations expected by 2025, the interchange improvements and railroad grade separation at the DeMers Avenue/ND 297 interchange functional area were identified as high priority needs.

Figure 1-11: Railroad Grade Separation Alternative B for 42nd Street



Figure 1-12: Railroad Grade Separation Alternative C for 42nd Street





### Interchange Improvements

Given the needs identified by 2025, preliminary engineering and advanced project development should occur in the short term (2017-2025). The Capacity Enhancements with No Bridge Widening Alternative has an estimated cost of \$7.4 million in 2017 dollars (\$9.0 million in 2021 dollars).

### Interim Improvements

The queue flushing improvements (\$20,000 in 2017 dollars per ramp) are relatively low cost and should be implemented as soon as feasible, possibly in the next TIP.

### Grade Separation Improvements

A grade separation at the Grand Forks Subdivision at-grade crossing will require a finalized NEPA document. Environmental documentation, preliminary engineering and project programming should be completed in the short term, 2017-2025. In the mid-term, it is expected that advanced project development, including construction could occur. The grade separation has an estimated cost of \$40 million in 2017 dollars (\$61.6 million in 2028 dollars).

### Interim Improvements

More immediately, advanced notification of train events can be used on the existing DMS to encourage drivers to choose a more appropriate route. This will help reduce potential for queueing to and onto the interstate until the grade separation can permanently resolve the problem.

## 32<sup>ND</sup> AVENUE/US 81B AND 47<sup>TH</sup> AVENUE S

### KEY ISSUES

32<sup>nd</sup> Avenue/US 81B serves as a major existing commercial corridor in Grand Forks; 47<sup>th</sup> Avenue is a major east-west arterial supporting the growth occurring on the south side of Grand Forks. The areas surrounding the existing 32<sup>nd</sup> Avenue/US 81B interchange and heading south to 47<sup>th</sup> Avenue are forecasted to be the largest population and employment growth centers in the city through 2040. Specifically, 58 percent of new employment opportunities and 46 percent of new housing opportunities are expected to occur within one mile of either the 32<sup>nd</sup> Avenue/US 81B interchange or the proposed interchange location at 47<sup>th</sup> Avenue.

By 2040, volumes on 32<sup>nd</sup> Avenue/US 81B are expected to exceed 43,500 vehicles each day east of I-29. Furthermore, the commercial nature of the corridor results in a P.M. peak hour that is more than 60 percent higher than the A.M. peak hour. This peaking, combined with growth projections discussed above, results in deficient operations on 32<sup>nd</sup> Avenue/US 81B by 2025 including queueing onto the interstate during the P.M. peak hour. By 2040, deficiencies begin to occur during the A.M. peak as well. These deficiencies could not be mitigated with improvement scenarios that include widening 32<sup>nd</sup> Avenue/US 81B to eight lanes.

A major factor in the capacity issues is the bottleneck at 38<sup>th</sup> Street. 38<sup>th</sup> Street is a minor north-south arterial which serves destinations to the north like the Alerus Center, and dense existing and future commercial and residential developments to the south. Without a 47<sup>th</sup> Avenue interchange ADT on 38<sup>th</sup> Street south of 32<sup>nd</sup> Avenue/US 81B will exceed 20,600 vehicles per day, while 38<sup>th</sup> Street north of 32<sup>nd</sup> Avenue/US 81B will approach 15,000 vehicles per day by 2040.

The expected future growth will have significant impacts to 32<sup>nd</sup> Avenue/US 81B; 47<sup>th</sup> Avenue has been identified as a parallel corridor to help relieve that demand.

Additional issues identified at this location include:

- Crash trends at this interchange location were primarily due to negative offset turn lanes, congestion, long queues and poor traffic flow. The negative offset turn lanes at the 32<sup>nd</sup> Avenue/US 81B and 38<sup>th</sup> Street intersection will be improved as part of a safety project on the corridor.
- Access spacing between the 42<sup>nd</sup> Street west frontage road and the West Ramp becomes challenging as that intersection becomes important for the future growth area.

- While currently rated as “Good”, pavement from the East Ramp to Columbia Road is expected to be degraded and require reconstruction between 2030 and 2040.

## IMPROVEMENT PLAN

### 47<sup>th</sup> Avenue

#### *Highest Ranked Alternative*

Analysis completed for this study found a 47<sup>th</sup> Avenue interchange to have a positive cost-benefit and a high cost-effectiveness. It was also the most effective solution for mitigating deficient operations on 32<sup>nd</sup> Avenue/US 81B, providing more efficient circulation to the large growth areas, both east and west of I-29 and south of 32<sup>nd</sup> Avenue/US 81B. The following set of improvements have been prioritized:

- Diamond interchange with south loops and mixing lanes on the current 47<sup>th</sup> Avenue alignment. This would include traffic control signals at the ramp and a shared-use path.
- Improved five-lane urban section that extends from the west adjacent intersection (48<sup>th</sup> Street) to Columbia Road. Traffic control signal would be installed at the east adjacent intersection (34<sup>th</sup> Street).

An interchange at 47<sup>th</sup> Avenue would have many benefits to the Grand Forks regional transportation network:

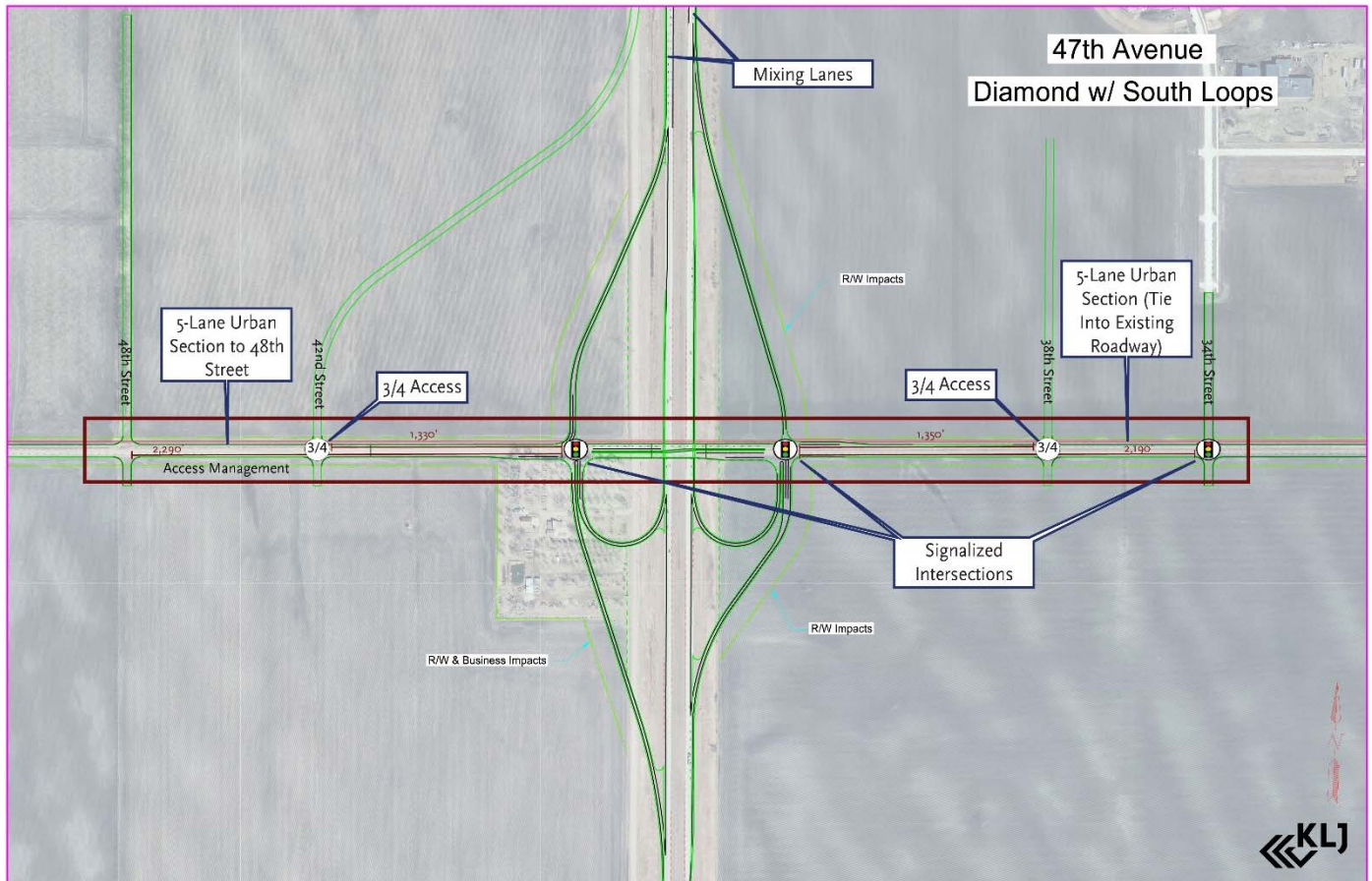
- Reduce 13,500 vehicle miles traveled each day.
- Reduce 1,100 vehicle hours traveled each day.
- Reduces need for significant investment on 32<sup>nd</sup> Avenue corridor for additional capacity by reducing traffic by 40.3 percent. This allows 32<sup>nd</sup> Avenue/US 81B to operate at LOS “D” with the Spot Improvements Alternative, which includes double left-turn lanes on the eastbound, westbound and southbound approaches and an extended right-turn lane on the eastbound approach at the 38<sup>th</sup> Street intersection and a double right-turn lane on the northbound off-ramp.
- While this interchange is expected to increase traffic on I-29 by 21.2 percent, there is adequate capacity on I-29 without degrading operations to a deficient level.
- Net decrease in crash potential on I-29 of 10.2 percent to 28.6 percent, depending on the configuration. Even with a 21.2 percent increase in traffic on I-29, the lack of queueing onto the interstate from 32<sup>nd</sup> Avenue/US 81B provides a net safety benefit.

#### *Other Improvements*

Three other alternatives were analyzed and will be carried forward into environmental analysis:

- Traditional Diamond Interchange is a standard diamond interchange with signals at the West Ramp, East Ramp and first adjacent intersection east of the interchange. This alternative provides challenges between the 32<sup>nd</sup> Avenue/US 81B southbound on-ramp and the 47<sup>th</sup> Avenue southbound off-ramp, which results in some lane densities that fall to LOS “D” during the 2040 P.M. peak. This alternative has the worst mainline operations of all alternatives studied. The deficiencies do not occur consistently across the full hour of analysis so do not change mainline levels of service but are concerning to providing high-speed and safe operations of I-29.
- Shifted Diamond with South Loops Interchange is a standard diamond interchange, including a southwest and southeast loop ramp shifted 0.25 miles south. This alternative provides acceptable operations, but during the 2040 P.M. peak hour, some lane densities fall to LOS “D” and has a higher estimated crash potential.
- Shifted Diamond with No Business Impacts is a diamond interchange with a southwest loop ramp for the on and off movements for the southbound movements. It is the lowest cost alternative and requires the least amount of ROW, but does result in densities at LOS “D” during the 2040 P.M. peak hour. Momentary queueing on the off-ramp reaches back to the interstate, but given its brevity it does not change the mainline level of service across the full hour of analysis, but are concerning to providing high-speed and safe operations of I-29. This alternative is the only one that does not require a buyout of the campground in the southwest quadrant of the interchange. While impacts to businesses are never taken lightly when evaluating infrastructure projects, it is unlikely the campground would be compatible with the dense urban environment planned for the area.

Figure 1-13: Diamond with South Loops and Mixing Lanes



## 32<sup>nd</sup> Avenue/US 81B

### Highest Ranked Alternative

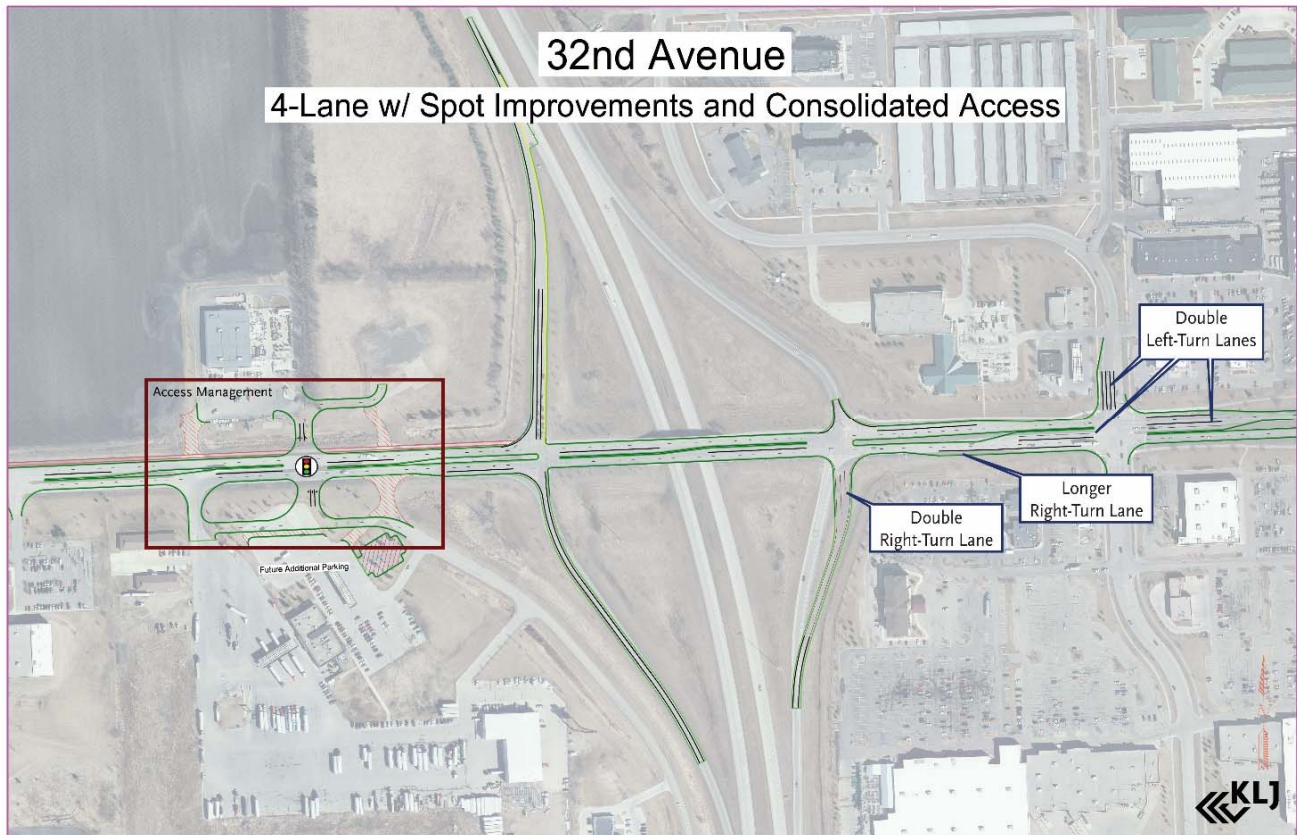
The Spot Improvements Alternative was the prioritized alternative for 32<sup>nd</sup> Avenue/US 81B. This alternative would:

- At 38<sup>th</sup> Street, extend the eastbound right-turn lane (435 feet, full width) and install double left-turn lanes on the eastbound, westbound and southbound approaches. Operate the southbound double left-turn lane as a flashing yellow arrow.
- At the East Ramp, a double right-turn lane on the northbound off-ramp.
- Traffic control signal and access modification at the 42<sup>nd</sup> Street west frontage road intersection.
- Queue flushing on the off-ramps
- Pedestrian crossing enhancements at the ramp intersections include pedestrian actuation and prohibit right-turns.
- Reconstruct or major rehabilitation of pavement from the East Ramp to Columbia Road.

Combined with the construction of the 47<sup>th</sup> Avenue interchange, the spot improvements would result in all study intersections operating at LOS “D” or better during both peak hours through 2040. This alternative would minimize queuing onto the interstate and improve traffic flow, which should mitigate some of the most prevalent crash trends. The signal at the 42<sup>nd</sup> Street west frontage road and improvements to the existing signal timing should improve pedestrian crossing safety.

These improvements would not be enough to keep operations at LOS “D” or better through 2040 without a 47<sup>th</sup> Avenue interchange. As growth accelerates west of I-29 and south of 32<sup>nd</sup> Avenue/US 81B the traffic patterns change resulting in more turning movements competing with through movements.

Figure 1-14: 32<sup>nd</sup> Avenue/US 81B Prioritized Improvements



#### INTERIM IMPROVEMENTS

The queue flushing improvements (\$20,000 in 2017 dollars per ramp) and pedestrian crossing enhancements (\$30,000 in 2017 dollars per ramp) are relatively low cost and should be implemented as soon as feasible, possibly in the next TIP.

#### Other Improvements

Other interchange alternatives were studied for this interchange, assuming a 47<sup>th</sup> Avenue interchange and no widening needed: Consolidated East Ramp, Northwest Loop Ramp, Southwest Loop Ramp and Diverging Diamond Interchange. These alternatives do provide some benefits to local and mainline operations and safety, but come with much more significant costs, ranging from \$13.6 million to \$21.5 million.

Ultimately, the Steering Committee recommended to discard these alternatives. Only the Spot Improvements and Do Nothing alternatives will move forward to the environmental document. This conforms to 23 CFR 450 Appendix A.

#### IMPLEMENTATION PLAN

The improvement plan for 32<sup>nd</sup> Avenue/US 81B assumes the construction of a 47<sup>th</sup> Avenue interchange. The low-cost improvements, queue flushing and pedestrian crossing enhancements, should be considered for inclusion in the next Transportation Improvement Plan. In the short term, 2017-2025, remaining spot improvements should be evaluated with the 2045 LRTP update and capacity needs should be monitored and analyzed against the progress of the 47<sup>th</sup> Avenue interchange project. In the mid-term, advanced project development should proceed to perform reconstruction or major rehabilitation from the East Ramp intersection to Columbia Road. The spot improvements, including turn lanes, should be coordinated with these efforts, if not before.

With 32<sup>nd</sup> Avenue/US 81B likely to be over capacity as soon as 2025, a new interchange at 47<sup>th</sup> Avenue is a high priority for the Grand Forks transportation network. An updated Interstate Justification Report should be initiated and the NEPA document completed by 2025. By 2030, advanced project development should occur with project funding secured.

The Spot Improvement Alternative for 32<sup>nd</sup> Avenue/US 81B will likely keep operations acceptable through 2025 but will not keep operations acceptable to 2040. Growth anticipated by 2040 will overburden 32<sup>nd</sup> Avenue/US 81B, even as an eight-lane section.

## ***MERRIFIELD ROAD/CR 6***

### KEY ISSUES

For several decades, efforts have been made to identify an alternative bypass/reliever route around the metro area, primarily for truck traffic and the Merrifield Road/CR 6 corridor has been the center of this plan. Currently, without a Red River crossing and bypass, trucks are routed through dense urban areas on Gateway Drive/US 2 or DeMers Avenue/ND 297. During beet harvest, high volumes of trucks use DeMers Avenue/ND 297, creating conflicts with local traffic, pedestrians, bicycles and school activity. This study excluded a Red River crossing from further analysis after it was screened out for not meeting the project purpose and need, which required benefits to traffic conditions within the I-29 study area, nor offering a cost-effective solution to build the interchange and river crossing. The analysis found an interchange at this location has many benefits to the overall transportation network, including reducing traffic on I-29 and the adjacent interchanges nearly five percent and reducing network vehicle miles traveled (VMT) by nearly 75 million miles from 2025 to 2040.

The Merrifield Road/CR 6 is the southern edge of flood protection for the City of Grand Forks and will likely be the furthest south any development stretches. This corridor will likely grow in importance as development occurs to move south. Even still, the corridor provides sufficient capacity for existing and future traffic projections without any deficient operations. However, with pavement conditions in “Poor” or “Satisfactory” some pavement management activities will be necessary, with one programmed to occur in 2018.

### IMPROVEMENT PLAN

#### **Highest Ranked Alternative**

The prioritized interchange ramp design is a traditional diamond interchange with ramps that could, in the future, incorporate a northwest and southeast loop ramps for additional capacity. Turn lanes and bridge widening were incorporated. Constructing an interchange at this location would not require any additional traffic control at the ramp intersections, through 2040.

An interchange at this location would attract between 4,800 to 6,000 vehicles per day east of I-29, depending on whether the 47<sup>th</sup> Avenue interchange is built. There are few changes west of I-29. These are not new trips on the network, but those that have been rerouted from other county roadways. This increase in traffic could necessitate improved traffic control, either a traffic control signal or roundabout, and turn lanes at the Merrifield Road/CR 6 and Columbia Road intersection to mitigate deficient peak hour operations. Based on model results, vehicles are attracted to the Columbia Road and Washington Street corridors as parallel routes into the city.

Converting the overpass to a full interchange, plus traffic control at the Merrifield Road/CR 6 and Columbia Road intersection has costs that range between \$16.5 million to \$18.1 million in 2017 dollars. This does not include the costs for the mill and overlay between 16<sup>th</sup> Street NE and Columbia Road.

An interchange at Merrifield Road/CR 6 would have many benefits to the Grand Forks regional transportation network and I-29 specifically:

- Reduce 18,000 vehicle miles traveled each day by 2040
- Reduce 647 vehicle hours traveled each day by 2040
- Reduce traffic on mainline I-29 by 4.1 percent by 2040
- Even though there are new merge and diverge conflict points, no safety impacts are expected because of the reduction of traffic on mainline I-29.

Figure 1-15: Prioritized Merrifield Road/CR 6 Improvements



### Other Improvements

No other interchange configurations were evaluated in this study because of the previous efforts given to this interchange and the adequate capacity. However, stakeholders have identified other potential designs to be considered in a final environmental document:

- Increasing the space between the ramp intersections so turn lanes can be accommodated outside the bridge and mitigate the need for bridge widening.
- Roundabouts at the ramp intersections to remove the need for turn lanes and mitigate the need for bridge widening.
- Widen the bridge to accommodate the turn lanes and improve pedestrian/bicycle facilities and crossing width for oversized agricultural equipment.

### IMPLEMENTATION PLAN

The Merrifield Road/CR 6 interchange has no immediate operational or safety needs but does provide network-wide VMT benefits. Planning and scoping activities will likely occur in the mid-term, between 2026 and 2030, with advanced project development to occur between 2030 and 2040. There are opportunities to coordinate the development of the interchange and related improvements with planned I-29 and Merrifield Road/CR 6 pavement management projects in 2030.

The interchange has an estimated cost of \$16.5 million 2017 dollars (\$36.1 million in 2035 dollars).

## SUMMARY OF NEEDS

Figure 1-16 shows the prioritized improvements for the I-29 Traffic Operations study corridor, summarized below.

- **North Washington Street/CR 11/US 81.** Realign the northbound ramps, construct turn lanes and consolidate access.
- **Gateway Drive/US 2.** Install a northeast loop ramp for northbound to westbound movements and access and turn lane modifications. Construction of a grade separation would benefit the local and regional transportation network.
  - » Small scale improvements including queue flushing on the off-ramps, pedestrian crossing improvements and train event advanced notification using the dynamic message signs should be considered for programming before 2025.
- **DeMers Avenue/ND 297.** Add capacity to four-lanes through the interchange functional area and install traffic control signals at the 48<sup>th</sup> Street, West Ramp and East Ramp intersections. Construction of a grade separation would benefit the local and regional transportation network.
  - » Small scale improvements including queue flushing on the off-ramps and train event advanced notification using the dynamic message signs should be considered for programming before 2025.
- **32<sup>nd</sup> Avenue/US 81B.** Implement spot improvements including dual left-turn lanes on the southbound, eastbound and westbound approaches and a longer eastbound right-turn lane at the 38<sup>th</sup> Street intersection, dual right-turn lane at the northbound off-ramp and access management at the 42<sup>nd</sup> Street west frontage road intersection. The 42<sup>nd</sup> Street west frontage road intersection will need a traffic control signal between 2025 and 2040.
  - » Before 2025, the dual left-turn lanes and right-turn lane at 38<sup>th</sup> Street and dual right-turn lane at the northbound off-ramp will be necessary for operations.
  - » Small scale improvements including queue flushing on the off-ramps, pedestrian improvements at the ramp crossings should be considered for programming before 2025.
- **47<sup>th</sup> Avenue.** Construct a diamond interchange with southeast and southwest loop ramps, mixing lanes including a five-lane urban section from 48<sup>th</sup> Street west of I-29 to 34<sup>th</sup> Street east of I-29 and traffic control signals at the West Ramp, East Ramp and 34<sup>th</sup> Street intersections.
- **Merrifield Road/CR 6.** Construct interchange ramps and install traffic control at the Columbia Road intersection.

Table 1-1: Summary of Prioritized Improvements

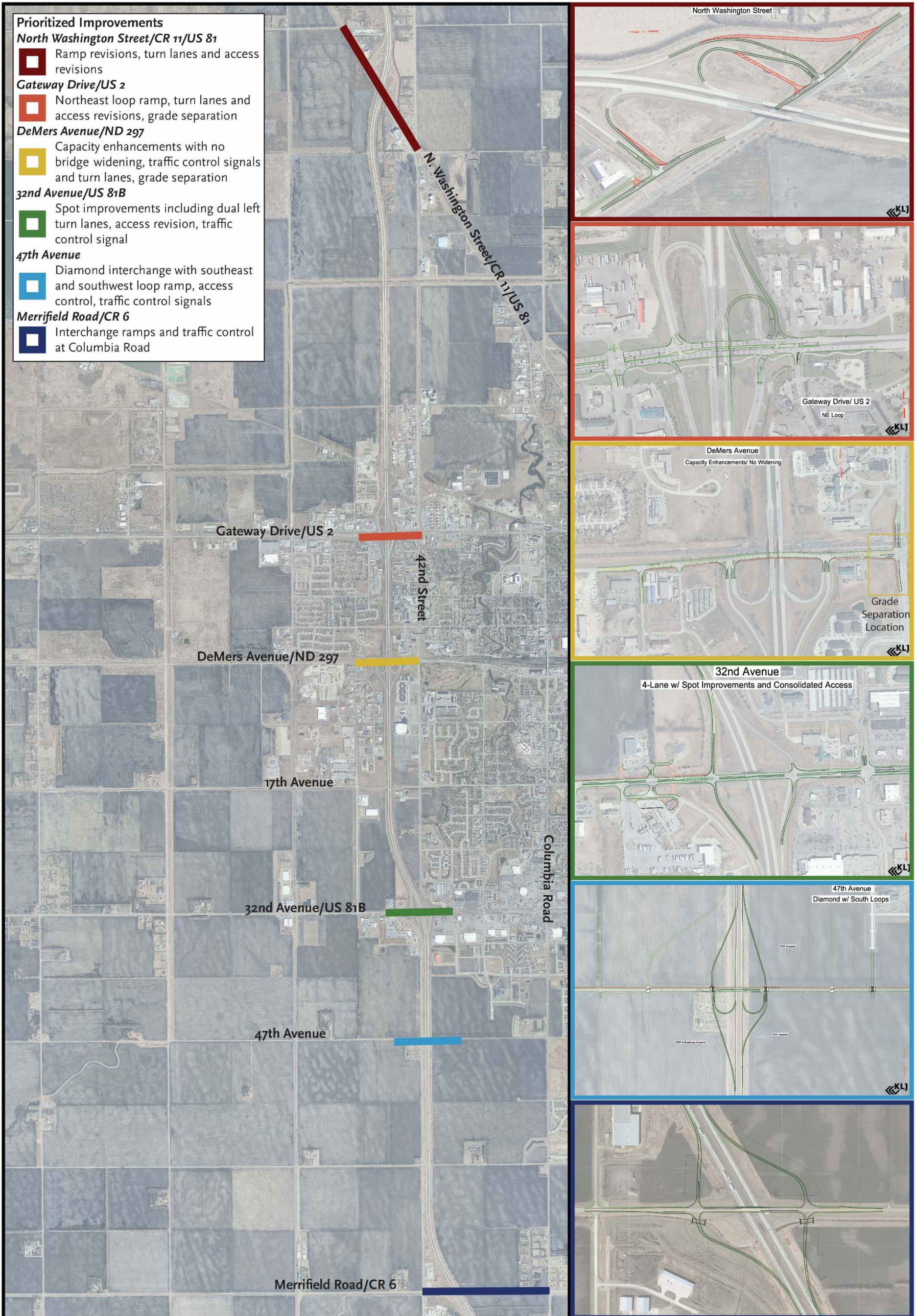
Location	Key Issues	Highest Ranked Alternative*	Interim Solutions	Cost**	Year of Implementation
North Washington Street/CR11/US 81	<ul style="list-style-type: none"> <li>Challenging geometric conditions, with tight turning radii.</li> <li>Dense access spacing.</li> <li>No turn lanes.</li> </ul>	<ul style="list-style-type: none"> <li>Access consolidation at the Sproule Farms and Simplot Grower Solutions.</li> <li>Left-turn and right-turn lanes at the ramp intersections.</li> <li>Consolidating and realigning the northbound on- and off-ramps and the southbound on-ramp at the interchange.</li> <li>Optional: Access consolidation at 42<sup>nd</sup> Street and 54<sup>th</sup> Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>\$5.98 Million                             <ul style="list-style-type: none"> <li>\$430,000 for access consolidations</li> <li>\$300,000 for turn lanes</li> <li>\$5.25 million for East Ramp realignment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>2030 CPR project could incorporate these improvements.</li> </ul>
Gateway Drive/US 2	<ul style="list-style-type: none"> <li>Heavy truck traffic.</li> <li>Dense access and signal spacing leads to poor traffic flow.</li> <li>Deficient operations by 2040 with queueing onto the interstate.</li> <li>Impacted by train events that block Gateway Drive/US 2 resulting in queueing onto the interstate.</li> </ul>	<ul style="list-style-type: none"> <li>Northeast Loop Alternative                             <ul style="list-style-type: none"> <li>Double right-turn lane at northbound off-ramp</li> <li>Access restrictions at 43rd Street</li> </ul> </li> <li>Railroad grade separation on Gateway Drive/US 2 east of 42<sup>nd</sup> Street</li> </ul>	<ul style="list-style-type: none"> <li>Queue flushing on off-ramps</li> <li>Pedestrian crossing enhancements</li> <li>Advanced train event notification with existing DMS</li> </ul>	<ul style="list-style-type: none"> <li>\$6.62 Million for Northeast Loop Ramp Alternative</li> <li>\$28.3 Million for Railroad Grade Separation</li> </ul>	<ul style="list-style-type: none"> <li>Interim solutions as soon as feasible.</li> <li>Northeast Loop Alternative considered in Long-Term (2031-2040+).</li> <li>Railroad grade separation to undergo additional planning/scoping beginning in Mid-Term (2026-2030).</li> </ul>
DeMers Avenue/ND 297	<ul style="list-style-type: none"> <li>Interchange impacted by train events that block 42<sup>nd</sup> Street. Under current conditions, traffic is rerouted onto interstate and queues extend to interstate.</li> <li>Limited capacity with three-lane section and no traffic control results in poor operations by 2025.</li> <li>Left-turn angle crash trends and rear-end crash trends that could be mitigated with improved traffic flow.</li> </ul>	<ul style="list-style-type: none"> <li>Capacity Enhancements with No Bridge Widening Alternative                             <ul style="list-style-type: none"> <li>Additional through lane</li> <li>Dynamic lane assignment at West Ramp Intersection</li> <li>Traffic control signals</li> </ul> </li> <li>Railroad grade separation at 42<sup>nd</sup> Street north of DeMers Avenue/ND 297</li> </ul>	<ul style="list-style-type: none"> <li>Queue flushing on off-ramps</li> <li>Advanced train event notification with existing DMS</li> </ul>	<ul style="list-style-type: none"> <li>\$7.40 Million for Capacity Enhancements with No Bridge Widening Alternative</li> <li>\$40.0 Million for Railroad Grade Separation</li> </ul>	<ul style="list-style-type: none"> <li>Interim solutions as soon as feasible.</li> <li>Interchange improvements should undergo preliminary engineering, environmental documentation and advanced project development before 2025.</li> <li>Railroad grade separation should begin preliminary engineering and environmental documentation by 2025. Advanced project development expected by 2030.</li> </ul>
32 <sup>nd</sup> Avenue/US 81B & 47 <sup>th</sup> Avenue	<ul style="list-style-type: none"> <li>Major growth areas around 32<sup>nd</sup> Avenue/US 81B and 47<sup>th</sup> Avenue result in the 32<sup>nd</sup> Avenue/US 81B corridor over capacity by 2025 without interim improvements. Queues extend onto the interstate.</li> <li>Access spacing between 42<sup>nd</sup> Street west frontage road and West Ramp intersection leads to challenging operations as growth to the south continues.</li> <li>Degraded pavement expected by 2030.</li> </ul>	<ul style="list-style-type: none"> <li>Interchange at 47<sup>th</sup> Avenue                             <ul style="list-style-type: none"> <li>Prioritized the Diamond with South Loops and Mixing Lanes Alternative</li> </ul> </li> <li>Spot Improvement Plan at 32<sup>nd</sup> Avenue/US 81B                             <ul style="list-style-type: none"> <li>Double left-turn lanes on 38<sup>th</sup> Street intersection on eastbound, westbound and southbound approaches</li> <li>Longer eastbound right-turn lane at 38<sup>th</sup> Street intersection</li> <li>Double right-turn lane on northbound off-ramp</li> <li>Access management at 42<sup>nd</sup> Street</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>32<sup>nd</sup> Avenue/US 81B                             <ul style="list-style-type: none"> <li>Queue flushing on off-ramps</li> <li>Pedestrian crossing enhancements</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>\$915,000 for Spot Improvement Plan at 32<sup>nd</sup> Avenue/US 81B</li> <li>\$28.5 Million for 47<sup>th</sup> Avenue Interchange</li> </ul>	<ul style="list-style-type: none"> <li>Interim solutions as soon as feasible.</li> <li>32<sup>nd</sup> Avenue/US 81B interchange improvements necessary by 2025 and should undergo preliminary engineering in the Short-Term (2017-2025).</li> <li>Interstate Access Report initiated and environmental documentation completed in the short-term for 47<sup>th</sup> Avenue interchange. Advanced project development to occur in Mid-Term.</li> </ul>
Merrifield Road/CR 6	<ul style="list-style-type: none"> <li>No specific issues on Merrifield Road/CR 6</li> <li>Interchange at Merrifield Road/CR 6 would reduce traffic on I-29 by nearly five percent and reduce network vehicle miles traveled by nearly 75 million miles from 2025 to 2040.</li> </ul>	<ul style="list-style-type: none"> <li>Construct Interchange Ramps                             <ul style="list-style-type: none"> <li>Widen bridge to incorporate left-turn lanes and improved operations for bicycles and pedestrians and oversized agricultural equipment.</li> <li>Traffic control at the Columbia Road intersection.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>\$16.8 - \$18.1 Million                             <ul style="list-style-type: none"> <li>\$16.5 Million to construct interchange ramps with turn lanes and widening bridge</li> <li>\$300,000 to \$1.6 Million for traffic control at Columbia Road intersection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The Interstate Access Report should be updated and scoping should occur in the Mid-Term. Advanced project development to occur in the Long-Term.</li> </ul>

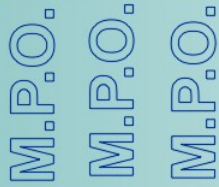
\*Construction and Right-of-Way Costs only. Reported in 2017 dollars.

\*\*Additional alternatives included in body of report will need to be included in any relevant environmental document. Highest ranked based on technical analysis, Steering Committee weighting and public input.



Figure 1-16: Summary of Highest Ranked Alternatives





## Grand Forks - East Grand Forks Metropolitan Planning Organization

### **MPO Staff Report** **Technical Advisory Committee: June 12, 2017** **MPO Executive Board: June 21, 2017**

**RECOMMENDED ACTION: Approval of the US 2/US Bus 2 Study.**

Matter of Approval of the US 2/Bus 2 Traffic Study.

**Background:** The UPWP was amended to include the activity of conducting a traffic study of a stretch of US 2 on the eastside of East Grand Forks. The intent of the study is to assist in developing potential safety projects that could be incorporated into a future proposed resurfacing project along this stretch of US 2. Some recommendations could also be stand-alone safety projects funded outside the resurfacing project.

A draft Report has been released and is available on the MPO website. The draft reflects the comments received after the various committee, council and public presentations.

Three alternatives are recommended for advancing into the NEPA document. All three should have sufficient funds available to implement one of them with the programmed 2021 pavement surfacing project.

#### **Findings and Analysis:**

- This activity was added to the UPWP.
- Safety issues have arisen on this stretch of US 2.
- MnDOT has a potential resurfacing project and are considering adding safety improvements to the project.
- MnDOT has agreed to provide the local match to the Study.
- SRF has been retained to assist with the Study.
- A Steering Committee was engaged throughout the Study process.
- Several public input opportunities were provided throughout the Study process.
- A draft report has been released.

#### **Support Materials:**

- Alternatives advancing to NEPA
- Full Draft Report available on MPO Website

## Alternative 1 – No Build

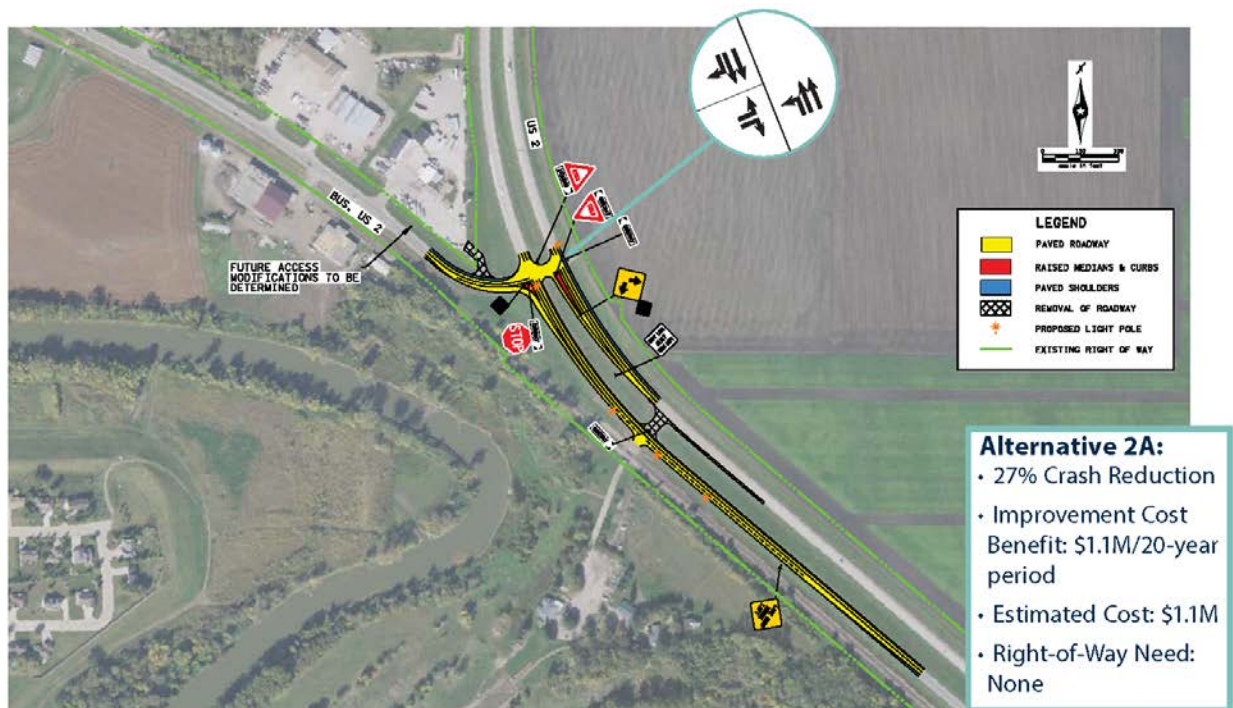
Alternative 1 includes no proposed improvements to the intersection of US 2 and US Bus 2. The intersection would remain within the current geometry and roadway profiles. The current side-street stop control would remain in place with no improvements to intersection lighting or signage. Additionally, no improvements would be made to the turn lane storage length or US 2 median stacking space.

## Alternative 2A – Turn Lane Improvements

Alternative 2A provides turn lane improvements to the US 2 westbound left-turn movement and an acceleration lane for eastbound US Bus 2 right-turn movements onto US 2. The existing US 2 median would be re-graded under this alternative to alleviate the uneven roadway profile. All existing intersection movements would be maintained with this alternative. The proposed improvements include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Construct an eastbound acceleration lane for US Bus 2 to US 2
- Close US 2 median at the Stable Days access
- Access modifications at Todd's Trailer Sales

Figure 12. Alternative 2A

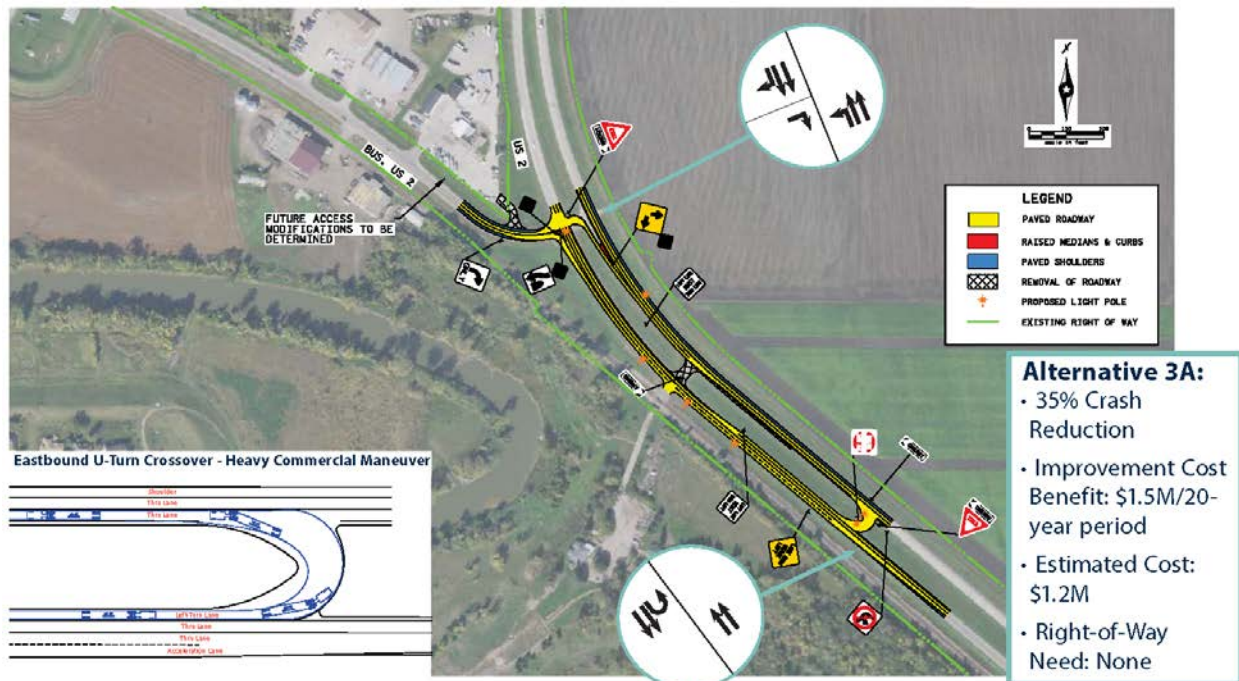


## Alternative 3A – Modified RCUT and Acceleration Lane

Alternative 3A was developed to reduce conflicts within the US 2/US Bus 2 median by restricting the lowest volume turning movement (US Bus 2 eastbound left-turn). Under this alternative, the westbound US 2 left-turn lane would be realigned to smooth the left turn movement, while restricting the US Bus 2 eastbound left-turn movement. Though the left-turn movement would be restricted in the traditional sense, the general movement would still be allowed by utilizing the modified RCUT included with this alternative. Under this alternative, US Bus 2 traffic would turn right onto eastbound US 2 and would utilize a U-turn maneuver to access westbound US 2. The U-turn location is placed in a location that allows for the acceleration lane to be maintained. This alternative maintains all but one of the current intersection movements. The proposed improvements for Alternative 3A include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Close the US Bus 2 eastbound left-turn lane
- Construct an eastbound US 2 crossover to facilitate the US Bus 2 left-turn movement to US 2
- Construct an eastbound acceleration lane from US Bus 2 to US 2
- Close US 2 median at the Stable Days access
- Access modifications at Todd's Trailer Sales

Figure 14. Alternative 3A

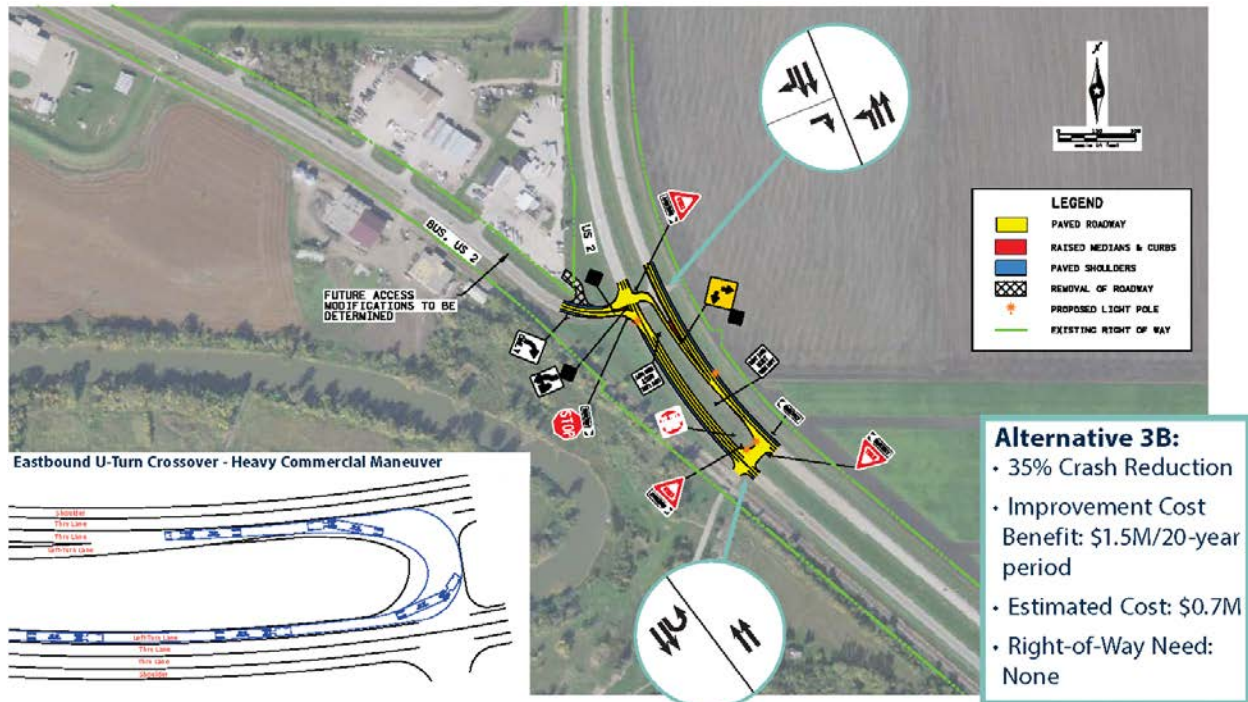


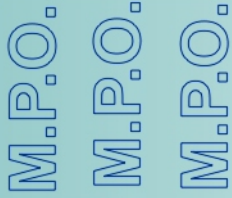
## Alternative 3B – Modified RCUT

Alternative 3B proposes similar improvements to Alternative 3A, with slight modifications to reduce impacts to travel time. The westbound US 2 left-turn lane would be treated in the same manner and the US Bus 2 eastbound left-turn movement would be restricted. A median crossover would be constructed using the existing Stable Days median to facilitate U-turn maneuvers. This alternative reduces the distance a driver must travel to make the U-turn maneuver; however, the proposed location creates a situation that does not allow for an acceleration lane. This alternative maintains all but one of the current intersection movements. The proposed improvements for Alternative 3B include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Close the US Bus 2 eastbound left-turn lane
- Construct an eastbound US 2 crossover to facilitate the US Bus 2 left-turn movement to US 2
- Access modifications at Todd's Trailer Sales

Figure 15. Alternative 3B





# Grand Forks - East Grand Forks Metropolitan Planning Organization

## **MPO Staff Report** **Technical Advisory Committee: June 14, 2017** **MPO Executive Board: June 21, 2017**

**RECOMMENDED ACTION: Final Adoption of the Amendment to 2040 Street/Highway Plan Element.**

### **Background:**

MnDOT is proposing two projects to be amended into the MPO Transportation Plan:

1. Concrete resurfacing of the westbound lane of US 2 from Fisher to 5<sup>th</sup> Ave NE; planned to be done in 2021
2. Replace the bridge structure of US 2 over River Road/4<sup>th</sup> Str NW. in 2025.

As you know, the MPO Long Range Transportation Plan identifies all the projects that are projected to be done by 2040. This is a fiscally constrained document, meaning that for every project listed in the Plan, a revenue source must be identified to show that the project can be done. This is done to ensure that the Plan is not simply a wish list but is the prioritized list of what will be done.

Our current Plan was adopted at the end of 2013. At that time, MnDOT worked cooperatively with us and together we identified that there were no needs (i.e., projects) for MnDOT facilities. A difference exists between our Plan horizon and MnDOTs. While our Plan has to go out over 20 years in identifying projects, MnDOT only goes 10 years and annually updates the document. As MnDOT has been monitoring its facilities within our MPO area, it has determined that two projects need to be done.

The projects are preservation projects in the sense that the work is intended to make what currently exists have work that extends the usefulness of the facility. Since these projects are not listed in the MPO Plan, we will have to go through the process of amending the MPO Plan.

### **Project 1 – Westbound lane of US 2**

One year ago, this project was first discussed in some detail with the City. At that time, it was agreed that further study would be needed to address how safety issues should be resolved. The MPO and MnDOT retained the consulting firm of SRF to assist in the study. The study process included a steering committee comprised of local stakeholders providing guidance to the process; several public input meetings were conducted at key decision points of the study process; and presentations and materials were provided to the City Council.

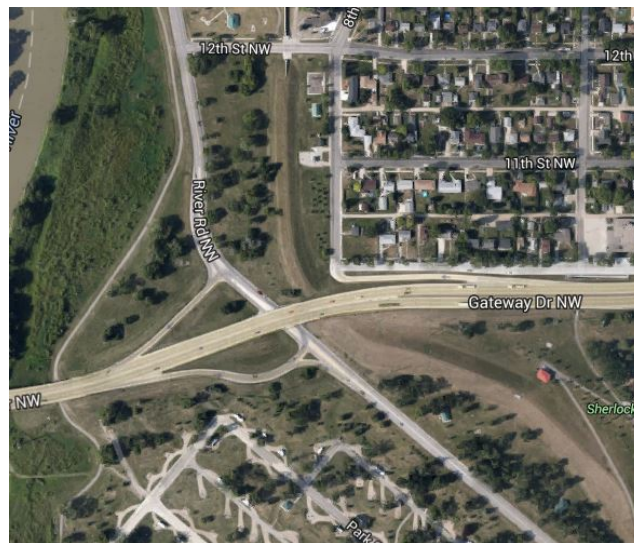
The Study has concluded that they are opportunities to make safety improvements during the pavement resurfacing project. At the key intersection of US 2 and US Bus 2, three alternative improvements concepts are being forwarded in to project development. MnDOT has committed

to make one of these improvement with the project and have further committed to keep the community engagement as they make the final design decisions.



**PROJECT 2 – Replace Bridge Structure over River Road/4<sup>th</sup> St NW.**

This is primarily a bridge replacement project on Hwy 2 programmed for 2025. The superstructure is in poor shape and warrants replacement. It has not been determined whether the abutments will need to be replaced or not. MnDOT's intent for this project is to provide a safe and reliable bridge crossing.



**AMENDMENT PROCESS:**

In May, the MPO gave preliminary approval of this amendment request. MnDOT is committing new revenue to fund these two projects; so our fiscal constraint is maintained and no projects are being removed to make funds available. The action was forward to the city of East Grand Forks for consideration. The East Grand Forks Planning Commission adopted the amendment at its May 25<sup>th</sup> meeting and are forwarding a recommendation that the Council do the same.

The East Grand Forks City Council will consider the amendment at its June 13<sup>th</sup> Working Session and its June 20<sup>th</sup> meetings.

**Findings and Analysis:**

- MnDOT proposes to amend the 2040 Street/Highway Plan Element to add in two “state of good repair” projects.
- MnDOT and the MPO studied the potential for safety improvements to be incorporated into the US 2 westbound project.
- The Study is concluding three alternative concepts to improve safety should be forwarded into project development.
- East Grand Forks has considered the amendment and is expected to adopt them into their City Comprehensive Plan.
- MnDOT is bringing new revenue to maintain fiscal constraint.
- Staff recommends adopting the amendment.

**Support Materials:**

- Draft Resolution
- Three Concepts for US 2 and US Bus 2 Intersection
- MnDOT District 2 CHIP pages



**A RESOLUTION AMENDING THE YEAR 2040  
STREET/HIGHWAY ELEMENT of the  
LONG RANGE TRANSPORTATION PLAN  
FOR THE  
GRAND FORKS – EAST GRAND FORKS  
METROPOLITAN AREA**

**WHEREAS**, the U.S. Department of Transportation requires the development of a Long Range Transportation Plan by a Metropolitan Planning Organization for each urbanized area and area expected to have growth over a twenty year period; and

**WHEREAS**, the Grand Forks – East Grand Forks Metropolitan Planning Organization (MPO) has been designated as the policy body with responsibility for performing transportation planning in the Grand Forks – East Grand Forks Metropolitan Area; and

**WHEREAS**, the MPO is designated by the Governors of North Dakota and Minnesota as the body responsible for making transportation planning decisions in the Grand Forks – East Grand Forks Metropolitan Area; and

**WHEREAS**, the existing Long Range Transportation Plan was adopted in 2008 and, as in accordance with 23 U.S.C. 135 and 23 CFR 450.322, is being updated to remain current and maintain a twenty year horizon; and

**WHEREAS**, the Long Range Transportation Plan, in accordance with 23 CFR 450.322, is multimodal in scope and accounts for all travel modes in the four elements of the plan: Street & Highway, Transit, and Bike and Pedestrian; and

**WHEREAS**, the MPO adopted a 2040 Long Range Transportation Plan in December 2013, and the proposed amendment to the Long Range Transportation Plan being considered today is an update of the Street/Highway Element of that plan; and

**WHEREAS**, the Long Range Transportation Plan, in accordance with 23 CFR 450.322, shall be financially constrained to demonstrate that proposed projects have existing and/or reasonably projected sources of funds; and

**WHEREAS**, the MPO followed its adopted Public Participation Plan to proactively involved the public early and often in the transportation planning process and requests the planning commissions and city councils from each community consider adoption of the proposed amendment to the Long Range Transportation Plan; and

**WHEREAS**, the By-Laws of the MPO allow the MPO Executive Board to take action upon adoption of the proposed amendment to the Long Range Transportation sixty (60) days after said plan had been submitted to the representative city; and

**WHEREAS**, the Technical Advisory Committee of the MPO held public meetings on the proposed amendment to the Long Range Transportation Plan; and

**WHEREAS**, the Planning and Community Development Department for Grand Forks, North Dakota, indicated no need for consideration since it is only a East Grand Forks issue on the proposed amendment to the MPO Long Range Transportation Plan; and

**WHEREAS**, the Planning Commission for East Grand Forks, Minnesota, held a public hearing on May 25, 2017, on the proposed amendment to the MPO Long Range Transportation Plan; and

**WHEREAS**, the City Council for East Grand Forks, Minnesota, held a public meeting on June 19, 2017, on the proposed amendment to the MPO Long Range Transportation Plan; and

**WHEREAS**, the Executive Policy Board of the Grand Forks – East Grand Forks Metropolitan Planning Organization considered the actions taken by the above referenced local governmental agencies; and

**NOW, THEREFORE, BE IT RESOLVED**, that the Executive Policy Board of the Grand Forks – East Grand Forks Metropolitan Planning Organization hereby adopts the proposed amendment to the Year 2040 Street/Highway Element to the Long Range Transportation Plan as presented with the following amendments: None.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ken Vien      Chairman

\_\_\_\_\_  
Earl Haugen      Ex. Director

## Alternative 1 – No Build

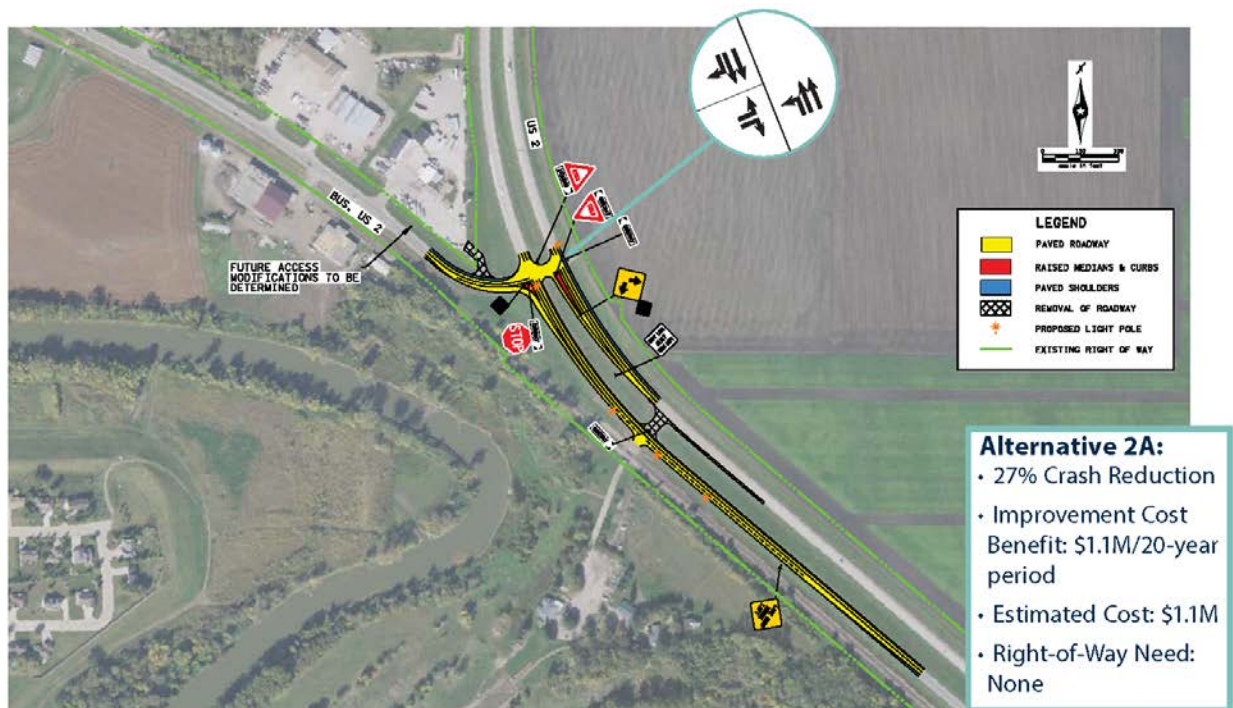
Alternative 1 includes no proposed improvements to the intersection of US 2 and US Bus 2. The intersection would remain within the current geometry and roadway profiles. The current side-street stop control would remain in place with no improvements to intersection lighting or signage. Additionally, no improvements would be made to the turn lane storage length or US 2 median stacking space.

## Alternative 2A – Turn Lane Improvements

Alternative 2A provides turn lane improvements to the US 2 westbound left-turn movement and an acceleration lane for eastbound US Bus 2 right-turn movements onto US 2. The existing US 2 median would be re-graded under this alternative to alleviate the uneven roadway profile. All existing intersection movements would be maintained with this alternative. The proposed improvements include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Construct an eastbound acceleration lane for US Bus 2 to US 2
- Close US 2 median at the Stable Days access
- Access modifications at Todd's Trailer Sales

Figure 12. Alternative 2A

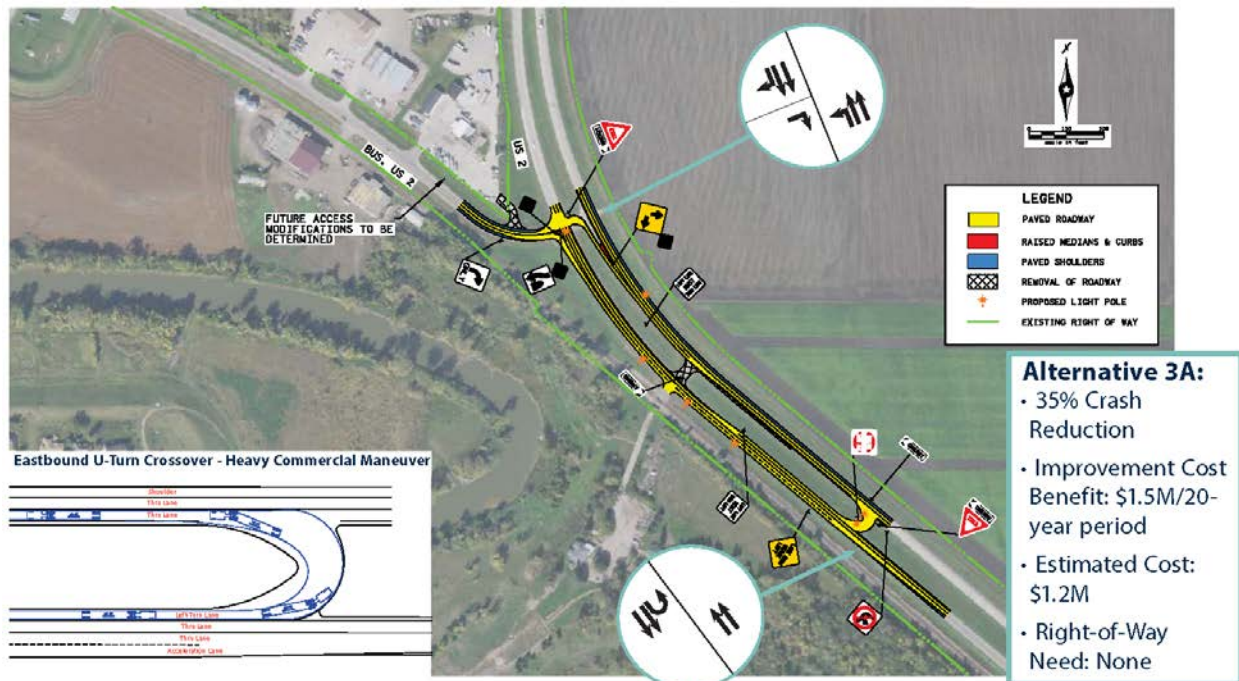


## Alternative 3A – Modified RCUT and Acceleration Lane

Alternative 3A was developed to reduce conflicts within the US 2/US Bus 2 median by restricting the lowest volume turning movement (US Bus 2 eastbound left-turn). Under this alternative, the westbound US 2 left-turn lane would be realigned to smooth the left turn movement, while restricting the US Bus 2 eastbound left-turn movement. Though the left-turn movement would be restricted in the traditional sense, the general movement would still be allowed by utilizing the modified RCUT included with this alternative. Under this alternative, US Bus 2 traffic would turn right onto eastbound US 2 and would utilize a U-turn maneuver to access westbound US 2. The U-turn location is placed in a location that allows for the acceleration lane to be maintained. This alternative maintains all but one of the current intersection movements. The proposed improvements for Alternative 3A include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Close the US Bus 2 eastbound left-turn lane
- Construct an eastbound US 2 crossover to facilitate the US Bus 2 left-turn movement to US 2
- Construct an eastbound acceleration lane from US Bus 2 to US 2
- Close US 2 median at the Stable Days access
- Access modifications at Todd's Trailer Sales

Figure 14. Alternative 3A

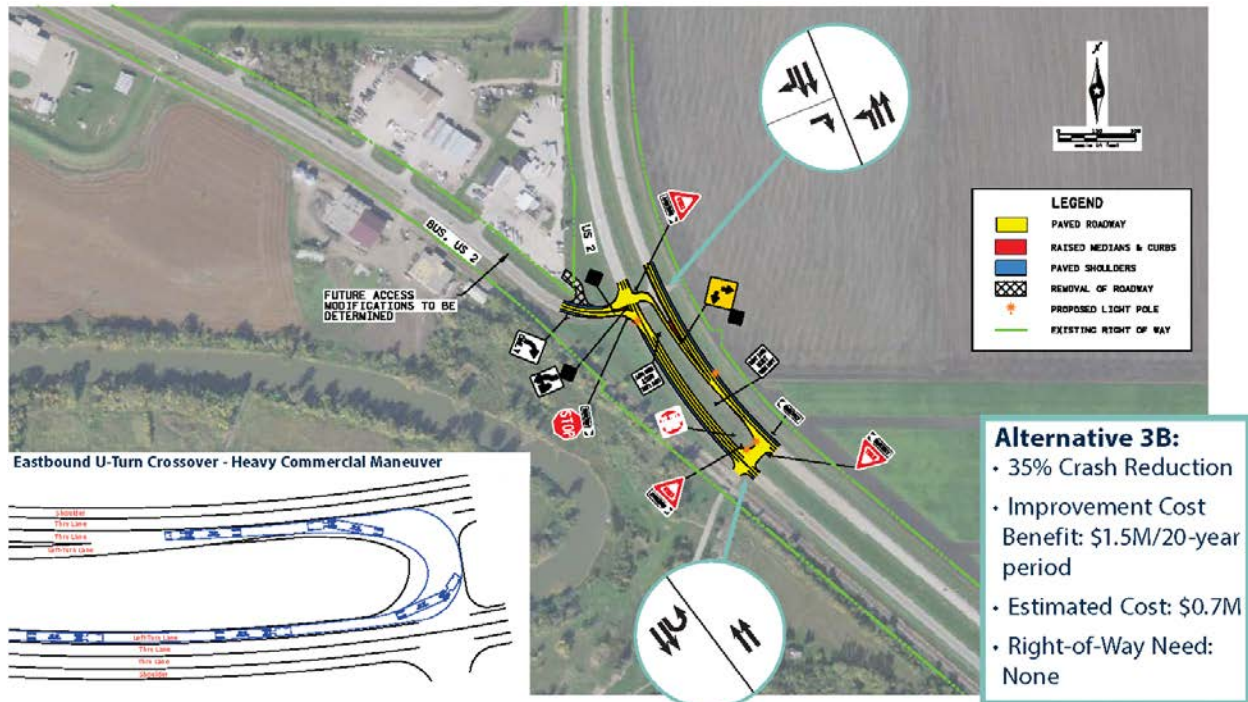


## Alternative 3B – Modified RCUT

Alternative 3B proposes similar improvements to Alternative 3A, with slight modifications to reduce impacts to travel time. The westbound US 2 left-turn lane would be treated in the same manner and the US Bus 2 eastbound left-turn movement would be restricted. A median crossover would be constructed using the existing Stable Days median to facilitate U-turn maneuvers. This alternative reduces the distance a driver must travel to make the U-turn maneuver; however, the proposed location creates a situation that does not allow for an acceleration lane. This alternative maintains all but one of the current intersection movements. The proposed improvements for Alternative 3B include:

- Reconstruct an offset westbound US 2 left-turn lane with raised median
- Regrade US 2/US Bus 2 median
- Close the US Bus 2 eastbound left-turn lane
- Construct an eastbound US 2 crossover to facilitate the US Bus 2 left-turn movement to US 2
- Access modifications at Todd's Trailer Sales

Figure 15. Alternative 3B





# District 2 10-Year Capital Highway Investment Plan

(2016-2025)



**DECEMBER 2015**

Prepared by  
Office of Transportation System Management

## DISTRICT 2 10-YEAR CHIP

District 2's 10-Year Capital Highway Investment Plan (CHIP) communicates the next 10-years of planned projects in the district. The planned projects align with the goals and objectives set in the Minnesota 20-Year State Highway Investment Plan (MnSHIP). This CHIP, along with those of the seven other districts in the state, will meet the investment targets outlined in the 2013 MnSHIP for the next ten years.

The 10-Year CHIP includes:

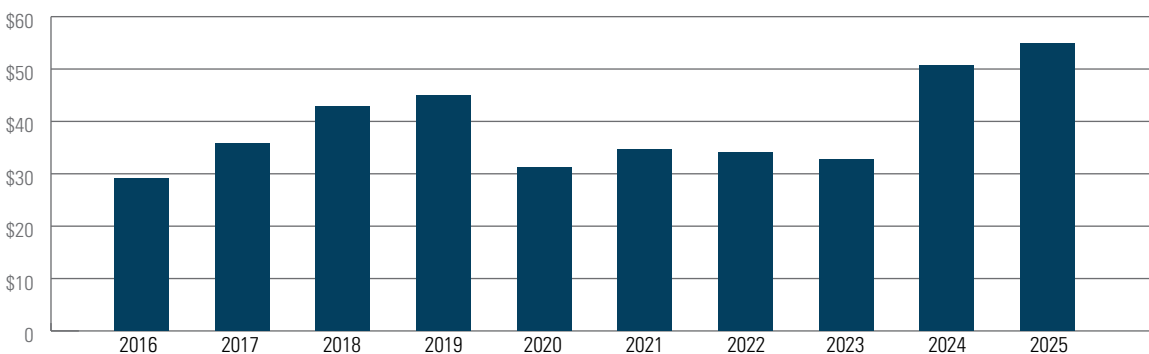
- An overview of the district, including a map of highway network type. (2-3)
- A summary of planned investments split into two planning periods: Years 1-4, which are a part of the state's Statewide Transportation Improvement Program (STIP) and Years 5-10 which constitute the remainder of the CHIP. MnDOT views projects in the STIP as commitments while projects in years 5-10 have more uncertainty but are planned to be delivered. (2-3)
- Historic and projected performance in the district, to give context to the impact of the planned investment program. (2-4)
- A description of program highlights, changes from the last CHIP, and remaining risks at the district level assuming the 10 years of projects are implemented. (2-4)
- Investment strategies for the major investment categories, detailing how each MnDOT district plans to most efficiently deliver projects. (2-5)
- A list of projects for the next ten years, broken into investment categories, and mapped by year. Only projects with a construction cost of \$1 million and more are listed here; there are additional smaller investments which are not represented in the list. Projects listed in years 5-10 are not formal commitments of the agency and are likely to change in scope, projected cost, or projected year.



This CHIP is updated annually and reflects MnDOT's plans at a snapshot in time. By comparing these plans year-to-year, changes in the planned program are apparent. Updating this on an annual basis allows a greater degree of transparency with stakeholders, and aligns with MnDOT's annual Major Highway Projects Report. The 2013 MnSHIP guides the overall direction of the 10-Year CHIP until the next MnSHIP is due in January 2017.

To obtain more information or become more involved, contact District 2 Transportation Planning Director, Darren Laesch, at [Darren.Laesch@state.mn.us](mailto:Darren.Laesch@state.mn.us) or 218-755-6554.

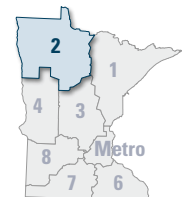
District 2 10-Year CHIP, Total Investment Per Year (millions of dollars)



District 2 shares the northern portion of Minnesota with District 1. It has three regional offices located in Bemidji, Crookston, and Thief River Falls. Bemidji is also a major regional trade center. District 2 offices are staffed by 224 full-time employees. Major industries in the District include health care & social assistance, retail trade, agriculture, timber, manufacturing, and accomodation and food services. There are 17 truck stations located in District 2, three of which are at regional offices. The district has 352 bridges that are ten feet or greater in length and 581 miles of rail.

<b>Counties*</b>	Beltrami, Clearwater, Hubbard, Kittson, Lake of the Woods, Marshall, Norman, Pennington, Polk, Red Lake, Roseau; D2 also serves the northern portion of Cass, and the western portions of Itasca & Koochiching.
<b>Centerline Miles</b>	1,806
<b>Lane Miles</b>	3,914
<b>High Mast Lights</b>	0
<b>Culverts</b>	3,569
<b>Noise Walls</b>	0
<b>Overhead Signs</b>	11
<b>Population 2013*</b>	164,123
<b>Annual VMT**</b>	1,238,889,138
<b>VMT/Capita</b>	7,534

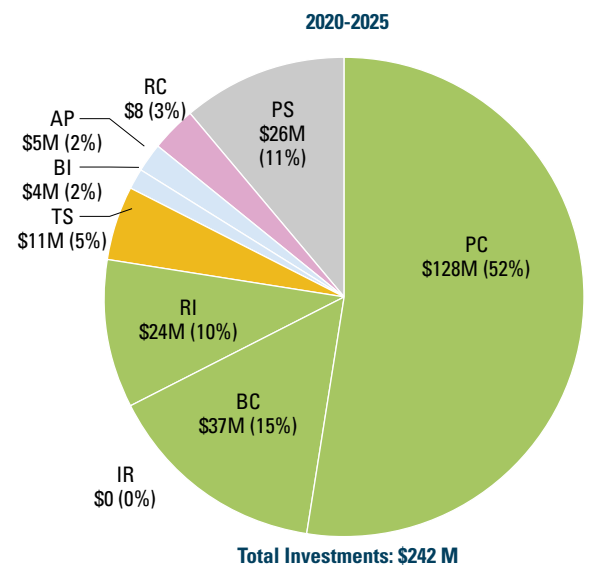
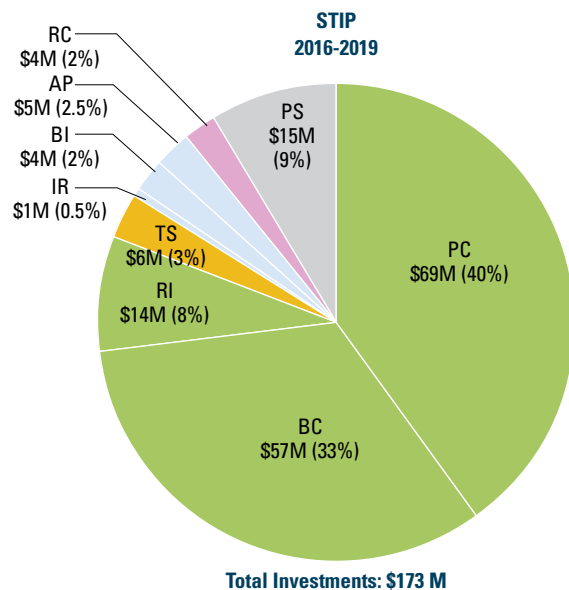
District 2 Boundaries



\*Based on ATP boundaries  
 \*\*VMT=Vehicle Miles Traveled on State Highways

- Interstate (0 miles)
- National Highway System - Non-Interstate (477 miles)
- Non-National Highway System - (1,329 miles)

Planned Investments for STIP (2016-2019) and Years 5-10 (2020-2025)



- |                         |    |                         |                             |    |                                      |    |  |
|-------------------------|----|-------------------------|-----------------------------|----|--------------------------------------|----|--|
| <b>Asset Management</b> | PC | Pavement Condition      | <b>Critical Connections</b> | IR | Interregional Corridor Mobility      | TS | Traveler Safety                            |
|                         | BC | Bridge Condition        |                             | BI | Bicycle Infrastructure               | RC | Regional + Community Investment Priorities |
|                         | RI | Roadside Infrastructure |                             | AP | Accessible Pedestrian Infrastructure | PS | Project Support                            |



## Program Highlights

Following investment guidance identified in MnSHIP, the district has identified 470 miles of state highway to be resurfaced or rehabilitated over the next 10 years. By 2025 an additional 500 miles of pavement will drop out of good condition and an additional 150 miles will be in poor condition. Driving conditions will significantly decline on these routes and annual maintenance costs are expected to double. District 2 maintains 352 bridges on the state highway system. Over the next 10 years, the district has identified 72 bridges to be improved. The 10-Year CHIP includes improving several major bridge connections within the district that contain fracture critical trusses. These include the International bridge over the Rainy River in Baudette, the Oslo bridge over the Red River and the Kennedy bridge in East Grand Forks. District 2 is committed to improving state highway infrastructure within local communities by proposing infrastructure improvements in 28 different communities within the district. Often, the state highway is the main street and a major key to economic development. State highway improvements within these communities will place additional emphasis on multimodal opportunities for pedestrians and bicycles, as well as improving accessibility and addressing needs identified by local stakeholders.

## Notable Changes from Previous CHIP

Due to the high cost to rehabilitate the Oslo Bridge, the project has been delayed to 2018 and replacement opportunities are being re-examined.

## Remaining Risks

### High

- There are still over 300 centerline culverts in the District that are in poor condition. Hidden voids under the pavement can form around these culverts, which can result in unexpected and potentially hazardous road failures.
- Over the next 10 years the district will be improving pavement on approximately a quarter of the system. At that rate, pavements will be improved once every 40 years, which is nearly double the life expectancy of a typical highway in northern Minnesota. This level of investment is unsustainable.

### Medium

- A significant portion of sidewalks within the District do not have ADA compliant ramps.
- The bridge and road construction (BARC) setaside may not be adequate to react to unexpected failures.
- Current staffing levels are not adequate to deliver program without outsourcing. The project support setaside may not be adequate.
- Over 300 miles of the state highway system lack usable shoulder widths under current design standards. Narrow shoulders can result in an increase in run-off-the-road crashes and are a barrier to pedestrians and cyclists.

### Low

- Urban resurfacings with ADA improvements require a higher project support cost due to right of way needs and the level of design detail.

	Measure	Meets or exceeds targets	Moderately below target	Significantly below target
Bridge Preservation*	NHS - % Poor	●	▲	●
	Non-NHS - % Poor	●	▲	●
Pavement Preservation	Interstate, % of miles poor	●	▲	●
	Non-Interstate NHS, % of miles poor	●	▲	●
	Non-NHS, % of miles poor	●	▲	●

## District 2 Historic Performance

Statewide Plan Policy	Measure	Target	2009	2010	2011	2012	2013	2014
<b>Safety</b>	Fatalities	0	32	20	32	31	30	28
<b>Bridge Preservation*</b>	Condition: NHS - % Poor	<2%	0% ●	6.3% ●	5.3% ●	1.3% ●	0.8% ●	6.7% ●
	Condition: Non-NHS - % Poor	<8%	15.9% ●	3.3% ●	3.2% ●	3.7% ●	4.1% ●	3.3% ●
<b>Pavement Preservation</b>	Ride Quality Poor - Interstate, % of miles	<2%	No interstate miles in District 2					
	Ride Quality Poor - Non-Interstate NHS, % of miles	<4%	1.3% ●	1.0% ●	0.6% ●	0.7% ●	0.6% ●	0.6% ●
	Ride Quality Poor - Non-NHS, % of miles	<10%	3.9% ●	1.3% ●	1.0% ●	0.4% ●	0.6% ●	0.5% ●
<b>Mobility</b>	Average travel speed US 59	> 55 MPH		●		●		N/A
	Average travel speed US 2	> 55 MPH		●		●		N/A

\*Data for NHS/nonNHS are from arterial/Non Arterial

● Meets or exceeds target      ▲ Moderately below target      ● Significantly below target

## District 2 Highway Investment Strategies

### Asset Management

- Low cost preventive maintenance strategies such as crack sealing, chip seals and micro surfacing will be utilized to prolong the pavement life, however as pavement conditions continue to deteriorate additional resources will be directed to reactive maintenance.
- District-wide storm sewer and culvert lining projects have been programmed to upgrade underground drainage infrastructure without costly impacts to the road surface.
- ADA improvements are programmed for approximately 30 communities within the district.

### Traveler Safety

- The sustained crash location at the intersection of US 59/MN 1 in Thief River Falls will be improved.
- The districtwide safety plan is being updated to prioritize safety needs within the district. The District has set aside funding to address the top priorities identified in the safety plan.
- The District will continue to place an emphasis on low cost highway safety improvements such as rumble strips and safety edges that have been proven to reduce the amount of run-off-the-road crashes.

### Critical Connections

- A corridor assessment on MN 11 is in progress to identify needed safety and mobility improvements that could be coupled with the upcoming pavement rehabilitation.

### Regional and Community Investment Priorities

- State highways within the communities of Hendrum and Halstad will be reconstructed with a grade raise to provide additional flood protection for the communities.
- The reconstruction of MN 92 in Bagley will place an emphasis on constructing a multimodal connection to the Bagley High School.
- The reconstruction of MN 1 in Thief River Falls will place an emphasis on constructing a multimodal connection to the Northland Community Technical College and Multi-Events Center.
- The reconstruction of MN 72 in Kelliher will be accelerated to leverage funds from a local utility improvement project.
- The stop controlled intersection at US 71/CSAH 15 will be improved to alleviate delays and congestion identified by the Park Rapids community.

### Project Support

- None.

## District 2 Projected Performance

Statewide Plan Policy	Measure	Target	2014 Actual	2019 Projected	2025 Projected	Analysis
<b>Safety</b>	Fatalities	0	28	N/A	N/A	
<b>Bridge Preservation*</b>	Condition: NHS - % Poor	<2%	6.7%	0.0%	0.0%	Bridge condition is projected to improve on the NHS and remain below target. Non-NHS bridge condition is expected to decline through 2025.
	Condition: Non-NHS - % Poor	<8%	3.3%	0.8%	4.3%	
<b>Pavement Preservation</b>	Ride Quality Poor - Interstate, % of miles	<2%	No Interstate Miles in District 2			A slight deterioration of the ride quality will be observable between 2015 and 2019. Pavement will continue declining at a faster rate through 2025.
	Ride Quality Poor - Non-Interstate NHS, % of miles	<4%	0.6%	2.3%	9.3%	
	Ride Quality Poor - Non-NHS, % of miles	<10%	0.5%	2.7%	11.2%	
<b>Mobility</b>	Average travel speed US 2	> 55 MPH				The average travel speed on US 2 will remain similar to 2014. (IRC Model, 2011 run)

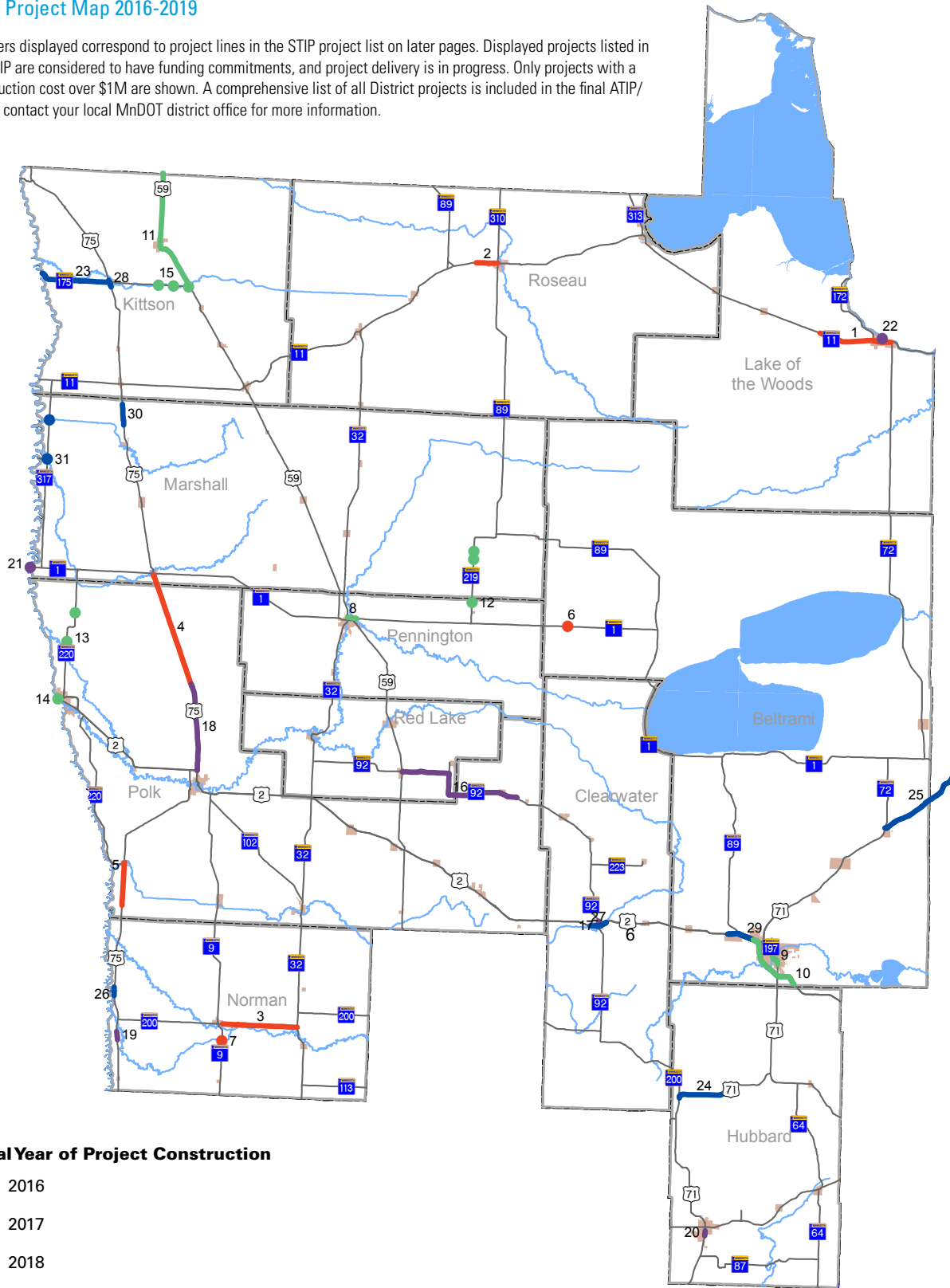
\*Data for NHS/nonNHS are from arterial/Non Arterial

Meets or exceeds target Moderately below target Significantly below target

# DISTRICT 2 PROJECTS

## STIP Project Map 2016-2019

Numbers displayed correspond to project lines in the STIP project list on later pages. Displayed projects listed in the STIP are considered to have funding commitments, and project delivery is in progress. Only projects with a construction cost over \$1M are shown. A comprehensive list of all District projects is included in the final ATIP/STIP – contact your local MnDOT district office for more information.



## Glossary of Description Terms

ADA: Americans with Disabilities Act

BR: Bridge

BRS: Bridges

CSAH: County State Aid Highway

EB: Eastbound Lanes

INCL: Including

JCT: Junction

MED: Medium

NHS: National Highway System

PED: Pedestrian

TMS: Traffic Management System

WB: Westbound Lanes

District 2 Projects for Years 2016-2019 (STIP) of the 10-Year CHIP

Number	Route	County	Description	Length (mi)	Total Construction Cost
<b>2016</b>					
1	MN11	Lake Of The Woods	MN 11, FROM 7.6 MI W OF MN 172, (W OF BAUDETTE), TO E MN 72 IN BAUDETTE, BITUMINOUS MILL AND OVERLAY & RESURFACE BR 39007 IN BAUDETTE	10.2	\$5.76M
2	MN11	Roseau	MN 11, FROM ROSEAU CSAH 15 TO E MN 89 IN ROSEAU, BITUMINOUS RECLAIM AND OVERLAY & EXTEND ONE END OF BR 68X06	3.0	\$4.06M
3	MN200	Norman	MN 200, FROM CSAH 35, E OF ADA, TO S JCT MN 32, MILL & OVERLAY	10.4	\$1.70M
4	US75	Polk	US 75, FROM 12.2 MI N OF US 2 (EUCLID) TO 0.2 MI S OF MN 1 IN WARREN, BITUMINOUS RESURFACING & REPLACE 5 BRIDGES	19.8	\$6.10M
5	US75	Polk	US 75, IN NIELSVILLE & IN CLIMAX, RECONSTRUCT URBAN STREET	1.0	\$3.80M
6	MN1	Beltrami	MN 1, 12.5 MI W OF TH 89, OVER OVERFLOW CHANNEL, REPL BR #04001 WITH BR #04029 & APPROACHES	0.0	\$2.00M
7	MN9	Norman	MN 9, SOUTH OF ADA, RAISE HIGHWAY GRADE & REPLACE OLD BR 54001 ( NEW BR #54012) OVER THE WILD RICE RIVER & APPROACHES (\$1.7M CHAP 152)	0.0	\$1.70M
<b>2017</b>					
8	MN1	Pennington	MN 1, FROM N JCT MN 32 TO CSAH 18/150 AVE NE & ON US 59, FROM 1ST ST TO ATLANTIC AVE IN THIEF RIVER FALLS, RECONSTRUCT URBAN STREET	2.3	\$3.52M
9	MN197	Beltrami	MN 197, IN BEMIDJI, NB & SB FROM 7TH ST SW TO 3RD ST NW, MILL AND OVERLAY & PED RAMPS	1.5	\$1.80M
10	US2	Beltrami	US 2, EB & WB FROM 0.1 MI W CSAH 11 TO 0.6 MI W OF BELT/HUB CO LINE, MILL & OVERLAY & REHAB 6 BRIDGES & ON US 71, NB, FROM US 2 TO MN 197 & ON MN 197, EB & WB FROM US 71 TO W JCT US 2, MILL & OVERLAY	20.4	\$6.80M
11	US59	Kittson	US 59, FROM MN 175 TO CANADIAN BORDER, BITUMINOUS MILL AND OVERLAY	17.4	\$4.50M

Note: The projects listed are considered to be commitments of MnDOT. Projects may not be delivered exactly as identified or scheduled; some changes should be expected. The STIP is updated annually and reflects the current program of projects. Projects are listed only if anticipated construction costs exceed \$1 million.

Pavement Condition	Bridge Condition	Roadside Infrastructure Condition	Traveler Safety	IRC Mobility	Bicycle Infrastructure	Accessible Pedestrian Infrastructure	Regional + Community Investment Priorities	Project Support
<b>2016</b>								
82%	0%	12%	3%	0%	2%	1%	0%	0%
82%	1%	11%	3%	0%	2%	1%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%
55%	30%	9%	3%	0%	2%	1%	0%	0%
82%	0%	12%	3%	0%	2%	1%	0%	0%
0%	93%	0%	0%	0%	4%	3%	0%	0%
40%	44%	10%	3%	0%	1%	1%	0%	0%
<b>2017</b>								
82%	0%	12%	3%	0%	2%	1%	0%	0%
82%	0%	12%	3%	0%	2%	1%	0%	0%
0%	93%	0%	0%	0%	4%	4%	0%	0%
82%	0%	12%	3%	0%	2%	1%	0%	0%

District 2 Projects for Years 2016-2019 (STIP) of the 10-Year CHIP

Number	Route	County	Description	Length (mi)	Total Construction Cost
12	MN219	Marshall	MN 219, N OF GOODRIDGE AT VARIOUS LOCATIONS, REPLACE THE FOLLOWING, OLD BR 6910 OVER JUDICIAL DITCH #13, OLD BR 6911 OVER JUDICIAL DITCH #20, OLD BR 6912 & OLD BR 6913 BOTH OVER JUDICIAL DITCH #11 & APPROACHES	0.2	\$1.90M
13	MN220	Polk	MN 220, 8.4 MI N OF EAST GRAND FORKS & 5.6 MI S OF ALVARADO, REPLACE OLD BR 6970 OVER CO DITCH #2 & OLD BR 6915 OVER JUDICIAL DITCH #75 & APPROACHES	0.2	\$2.10M
14	US2	Polk	US 2, IN EAST GRAND FORKS, REDECK BR 9090, KENNEDY BR, OVER THE RED RIVER OF THE NORTH, (MN LEAD) (TOTAL \$18.0M, MN SHARE \$9.0M, ND SHARE \$9.0M) (AC PROJECT, PAYBACK IN FY 2018)	0.0	\$1.80M
<b>2018</b>					
16	MN92	Red Lake	FROM US 59 TO 1.7 MI E OF POLK CSAH 28, BIT MILL & OVERLAY, & ON MN 222, FROM MN92 TO CSAH 53 IN OKLEE	20.8	\$4.40M
17	MN92	Clearwater	MN 92, FROM 0.2 MI N OF CLEARWATER CSAH 24 TO JUST SOUTH OF THE BNSF RR CROSSING IN BAGLEY, URBAN RECONSTRUCT	0.8	\$3.30M
18	US75	Polk	US 75, FROM US 2 TO POLK CSAH 19, MILL & OVERLAY AND PED RAMPS & REPLACE 2 BRIDGES & APPROACHES	12.2	\$5.60M
19	US75	Norman	US 75, IN HENDRUM, FROM S CITY LIMITS TO N CITY LIMITS, RECONSTRUCT URBAN STREET & GRADE RAISE	1.1	\$3.10M
20	US71	Hubbard	US 71, FROM S OF HUBBARD CSAH 15 TO 8TH ST IN PARK RAPIDS & ON HUBBARD CSAH 15 FROM 500' W TO 500' E OF US 71, S OF PARK RAPIDS, INTERSECTION RECONSTRUCTION	0.9	\$1.60M
21	MN1	Marshall	MN 1, REPLACE BR 9100 WITH BR 45007 AT OSLO AND MILL & OVERLAY FROM E END BR 9100 TO E LIMITS OF OSLO, (MN LEAD AGENCY) (CH 152) (TOTAL COST \$15,000,000; ND SHARE \$7,500,000, FED \$)	0.9	\$7.50M
22	MN72	Lake of the Woods	MN 72, IN BAUDETTE, REPLACE OLD BR 9412 OVER THE RAINY RIVER AND APPROACHES (AC PROJECT, PAYBACK IN FY 2019)	0.0	\$6.10M
<b>2019</b>					
23	MN175	Kittson	MN 175, FROM E END BR 35005 (ND/MN BORDER) TO 0.2 MI W OF US 75, MILL & OVERLAY (TIED TO STIP PROJECT #28)	9.6	\$4.60M
24	US71	Hubbard	US 71, 0.3 MI S OF THE W JCT MN 200 (ITASCA STATE PARK) TO S LIMITS OF LAKE GEORGE, BITUMINOUS RECLAIM	7.5	\$4.20M
25	US71	Beltrami	US 71, FROM MN 72 IN BLACKDUCK TO ITASCA/KOOCHICHING CO LINE, BITUMINOUS MILL & OVERLAY, (DESIGNED BY DIST 2, FUNDED BY ATP 2 \$3.5M & ATP 1 UNDER SP 3114-55M \$2.4M NHP/SM)	12.8	\$3.50M

Note: The projects listed are considered to be commitments of MnDOT. Projects may not be delivered exactly as identified or scheduled; some changes should be expected. The STIP is updated annually and reflects the current program of projects. Projects are listed only if anticipated construction costs exceed \$1 million.

Pavement Condition	Bridge Condition	Roadside Infrastructure Condition	Traveler Safety	IRC Mobility	Bicycle Infrastructure	Accessible Pedestrian Infrastructure	Regional + Community Investment Priorities	Project Support
0%	93%	0%	0%	0%	4%	4%	0%	0%
0%	93%	0%	0%	0%	4%	4%	0%	0%
0%	93%	0%	0%	0%	4%	4%	0%	0%
<b>2018</b>								
73%	0%	22%	4%	0%	0%	0%	10%	0%
53%	0%	11%	6%	0%	4%	14%	12%	0%
56%	10%	32%	2%	0%	0%	1%	0%	0%
82%	0%	12%	3%	0%	2%	1%	0%	0%
0%	0%	0%	0%	0%	0%	0%	100%	0%
0%	93%	0%	0%	0%	4%	3%	0%	0%
9%	83%	0%	0%	0%	4%	4%	0%	0%
<b>2019</b>								
93%	0%	7%	0%	0%	0%	0%	0%	0%
96%	0%	0%	4%	0%	0%	0%	0%	0%
83%	0%	2%	8%	0%	7%	0%	0%	0%

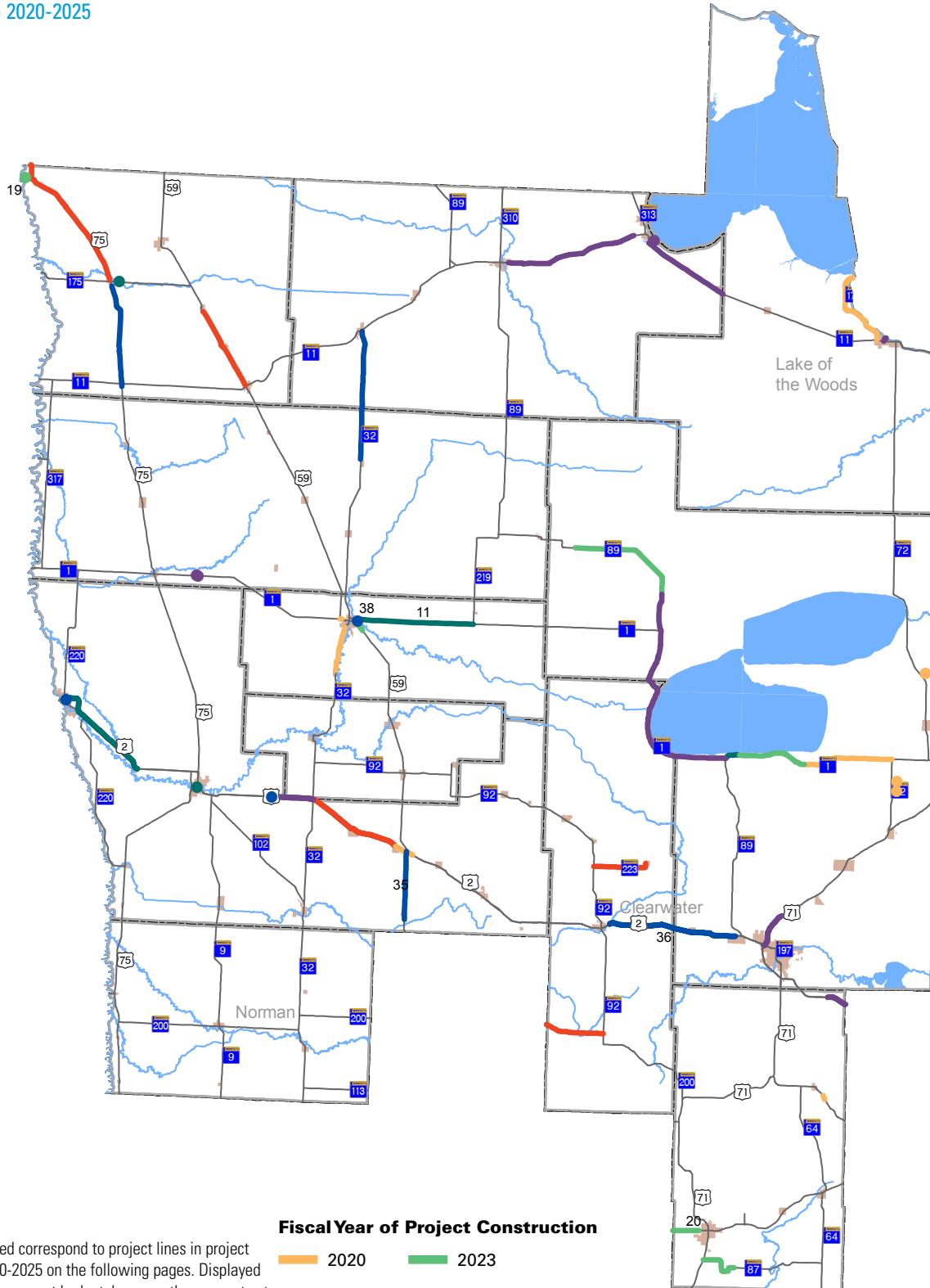


Number	Route	County	Description	Length (mi)	Total Construction Cost
26	US75	Norman	US 75, IN HALSTAD, FROM 0.6 MI S OF MN 200 TO 0.4 MI N OF MN 200, URBAN RECONSTRUCT	1.2	\$3.50M
27	US2	Clearwater	US 2, EB, FROM CSAH 25 TO 1.2 MI E OF MN 92 AND WB FROM CSAH 25 TO 0.2 MI E OF MN 92, MILL & OVERLAY	3.7	\$1.60M
28	US75	Kittson	IN HALLOCK, ON US 75 & ON MN 175, MILL & OVERLAY & PED RAMPS (TIED TO STIP PROJECT #23)	1.6	\$1.20M
29	US2	Beltrami	ON US 2 FROM CR 515 TO MN 197 & ON MN 197 FROM N JCT US 71 TO W JCT US 2 - WB & EB, CORRIDOR IMPROVEMENTS	4.9	\$1.00M
30	US75	Marshall	US 75, FROM 3.1 MI S OF DONALDSON TO 5.5 MI S OF DONALDSON, REPLACE 3 BRIDGES AND APPROACHES	0.4	\$1.50M
31	MN220	Marshall	MN 220, 0.04 MI N OF MN 317, REPLACE OLD BR 9625 & 5.4 MI N OF MN 317, REPLACE OLD BR 9627 & APPROACHES	0.0	\$3.50M

Pavement Condition	Bridge Condition	Roadside Infrastructure Condition	Traveler Safety	IRC Mobility	Bicycle Infrastructure	Accessible Pedestrian Infrastructure	Regional + Community Investment Priorities	Project Support
67%	0%	7%	3%	0%	0%	2%	21%	0%
66%	0%	0%	0%	0%	16%	18%	0%	0%
44%	0%	13%	0%	0%	0%	44%	0%	0%
0%	0%	0%	0%	100%	0%	0%	0%	0%
0%	100%	0%	0%	0%	0%	0%	0%	0%
0%	96%	4%	0%	0%	0%	0%	0%	0%

# DISTRICT 2 PROJECTS

Project Map 2020-2025



### Fiscal Year of Project Construction

Numbers displayed correspond to project lines in project list for years 2020-2025 on the following pages. Displayed projects are in the current budget, however they are not yet commitments. Some changes in scope and timing should be anticipated.

- |  |  |
|--|--|
| <span style="color: orange;">—</span> 2020 | <span style="color: green;">—</span> 2023  |
| <span style="color: red;">—</span> 2021    | <span style="color: purple;">—</span> 2024 |
| <span style="color: blue;">—</span> 2022   | <span style="color: blue;">—</span> 2025   |

## Glossary of Description Terms

ADA: Americans with Disabilities Act

BR: Bridge

BRS: Bridges

CSAH: County State Aid Highway

EB: Eastbound Lanes

INCL: Including

JCT: Junction

MED: Medium

NHS: National Highway System

PED: Pedestrian

TMS: Traffic Management System

WB: Westbound Lanes

District 2 Projects for Years 2020-2025 of the 10-Year CHIP

Number	Route	County	Description	Length (mi)	Total Construction Cost
<b>2020</b>					
1	MN200	Hubbard	MN 200, FROM 0.5 MI E OF CSAH 45 TO 0.6 MI W OF CSAH 31, RECONSTRUCTION	1	\$1.20 M
2	MN1	Pennington	MN 1 AND W. JCT. OF US 59, W OF THIEF RIVER FALLS, INTERSECTION RECONSTRUCTION	0.2	\$1.5 M
3	MN32	Pennington	MN 32 FROM 0.1 MI S OF CSAH 3 TO 0.2 MI S OF GREENWOOD STREET, BITUMINOUS MILL & OVERLAY	6	\$1.50 M
4	MN172	Lake of the Woods	MN 172 FROM MN 11 TO WHEELERS POINT RESORT, BITUMINOUS MILL & OVERLAY	12	\$2.30 M
5	MN72	Beltrami	MN 72, 5.2 MI N. OF US 71, 6.9 MI N. US 71 AND 13 MI N. OF MN 1, REPLACE BRIDGES 91110, 8339 AND 88115		\$2.30 M
6	MN1	Beltrami	MN 1 FROM RED LAKE RESERVATION BORDER TO TH 72, BITUMINOUS MILL & OVERLAY	12	\$4.00 M
7	US2	Polk	US 2 EB FROM W OF ERSKINE TO 0.5 MI E OF US 59 AND US 2 WB FROM 0.7 MI W OF ERSKINE TO 0.7 MI E OF US 59, RECONSTRUCTION	6	\$4.20 M
<b>2021</b>					
8	US75	Polk	US 75, 2.2 MI S. OF TH 2, IN CROOKSTON, REHAB BRIDGE 60523		\$1.00 M
9	MN175	Kittson	MN 175, 0.5 MI E OF TH 75, IN HALLOCK, REHAB BRIDGE 35006		\$1.90 M
10	MN1	Beltrami	MN 1, FROM 0.5 MI E MN 89 TO 2.2 MI E MN 89, IN RED LAKE, URBAN RECONSTRUCTION	2	\$5.10 M
11	MN1	Pennington	MN 1 FROM CSAH 18 TO TH 219, BITUMINOUS RECLAIM	16	\$7.20 M
12	US2	Polk	US 2WB FROM TH 220 TO 0.3 MI E. CSAH 15, CONCRETE REHABILITATION/RECONSTRUCT	15.0	\$9.5 M
<b>2022</b>					
13	MN223	Clearwater	MN 223 FROM TH 92 TO CSAH 14, IN LEONARD, BITUMINOUS MILL AND OVERLAY	8	\$2.00 M
14	US59	Kittson	US 59 FROM 0.3 MI N OF TH 11 TO 0.3 MI S OF 1.3 MI S OF CSAH 15, BITUMINOUS MILL & OVERLAY	12	\$3.50 M
15	MN200	Clearwater	MN 200 FROM MAHNOMEN/CLEARWATER CO. LINE TO TH 92, BITUMINOUS RECLAIM	8	\$4.80 M
16	US2	Polk	US 2 EB FROM 0.8 MI W. OF TH 32 TO W. ERSKINE LIMITS BITUMINOUS MILL & OVERLAY	14	\$6.40 M
17	US75	Kittson	US 75 FROM N. LIMITS OF HALLOCK TO CANADIAN BORDER, BITUMINOUS MILL & OVERLAY, REPLACE BRIDGES 1208 AND 1707	20	\$7.60 M
<b>2023</b>					

Note: The projects listed are planned projects given the anticipated budget. Projects may not be delivered as identified or scheduled; changes should be expected. These projects are updated annually and reflect the current planned investments. Projects are listed only if anticipated construction costs exceed \$1 million.

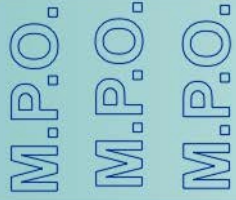
Pavement Condition	Bridge Condition	Roadside Infrastructure Condition	Traveler Safety	IRC Mobility	Bicycle Infrastructure	Accessible Pedestrian Infrastructure	Regional + Community Investment Priorities	Project Support
<b>2020</b>								
50%	0%	50%	0%	0%	0%	0%	0%	0%
0%	0%	0%	50%	0%	0%	10%	40%	0%
79%	0%	5%	0%	0%	0%	0%	16%	0%
92%	0%	5%	3%	0%	0%	0%	0%	0%
0%	80%	0%	0%	0%	0%	0%	20%	0%
55%	2%	25%	11%	0%	0%	0%	7%	0%
90%	0%	10%	0%	0%	0%	0%	0%	0%
<b>2021</b>								
0%	100%	0%	0%	0%	0%	0%	0%	0%
0%	95%	0%	0%	0%	0%	5%	0%	0%
20%	0%	30%	10%	0%	10%	10%	20%	0%
90%	0%	2%	3%	0%	0%	0%	5%	0%
82%	0%	12%	3%	0%	0%	0%	3%	0%
<b>2022</b>								
93%	0%	400%	0%	0%	0%	3%	0%	0%
81%	0%	13%	3%	0%	0%	0%	3%	0%
81%	0%	13%	3%	0%	0%	0%	3%	0%
82%	0%	13%	0%	0%	0%	0%	5%	0%
66%	14%	18%	1%	0%	0%	0%	1%	0%
<b>2023</b>								

District 2 Projects for Years 2019-2024 of the 10-Year CHIP

Number	Route	County	Description	Length (mi)	Total Construction Cost
18	US59	Pennington	US 59 FROM 0.4 MI S. CR62 TO 1ST ST E., IN TRF, BITUMINOUS RECLAIM	1	\$2.00 M
19	MN171	Kittson	MN 171, AT ND STATE LINE, IN ST. VINCENT, REHAB BRIDGE 35007, \$2.6M ND RESPONSIBILITY		\$2.60 M
20	MN34	Hubbard	MN 34 FROM BECKER/HUBBARD CO LINE TO 0.3 MI W OF PARK RAPIDS, BITUMINOUS MILL & OVERLAY/WIDENING	4	\$2.90 M
21	MN89	Beltrami	MN 89 FROM N RESERVATION LINE OF CSAH 54, BITUMINOUS MILL & OVERLAY	16	\$4.80 M
22	MN1	Beltrami	MN 1, FROM S JCT MN 89 TO E RED LAKE RES LINE, BITUMINOUS MILL & OVERLAY	10	\$4.80 M
23	MN87	Hubbard	MN 87 FROM TH 71 TO 1.2 MI W OF CSAH 11, RECONSTRUCTION/ REHABILITATE	6	\$6.20 M
<b>2024</b>					
24	MN11	Roseau	MN 11, IN WARROAD, REHAB BRIDGE 9059		\$1.10 M
25	MN1	Marshall	MN 1, 5.3 MI E OF JCT US 75, REPLACE BRIDGES 6007 AND 6008		\$1.20 M
26	MN89	Beltrami	MN 89 FROM N JCT MN 1 TO THE N RESERVATION LINE	5	\$1.50 M
27	US2	Hubbard	US 2 EB & WB, 4.3 MI E BELTRAMI/HUBBARD CO LINE TO BELTRAMI/HUBBARD CO LINE, BITUMINOUS MILL & OVERLAY (TIED TO ATP-3 PROJECT)	3	\$1.60 M
28	MN72	Lake of the Woods	MN 72, FROM MN 11 TO CANADIAN BORDER, IN BAUDETTE, RECONSTRUCTION	0	\$1.60 M
29	US2	Polk	US 2 WB FROM 0.8 MI E OF CSAH 44 TO MN 32, BITUMINOUS MILL & OVERLAY	5	\$2.70 M
31	MN11	Lake of the Woods	MN 11 FROM CSAH 5 TO ROSEAU/LAKE OF THE WOODS CO LINE, BITUMINOUS MILL & OVERLAY/WIDENING	12	\$6.40 M
32	MN1	Beltrami	MN 1 FROM S JCT OF MN 89 TO N JCT OF MN 89, BITUMINOUS MILL & OVERLAY	28	\$8.20 M
33	MN11	Roseau	MN 11 FROM E CITY LIMITS OF ROSEAU TO 1.5 MILES W OF TH 313, BITUMINOUS MILL & OVERLAY (TIE TO REPLACE BRIDGE 8580)	18	\$9.80 M
<b>2025</b>					
34	US2	60	US 2, 11.0 MI E OF CROOKSTON, REPLACE BRIDGE 3932		\$1.30 M
35	US59	Polk	US 59 FROM 1.0 MI N SAND HILL RIVER BR TO N RAMPS US 2, BITUMINOUS MILL & OVERLAY (TIE TO REHAB BRIDGE 60007)	10	\$2.80 M
36	US2	Beltrami	US 2 EB, FROM 1.2 MILES E OF MN 92 TO CO RD 515, MILL & OVERLAY/ADA	18	\$5.10 M
37	US2	60	US 2, IN EAST GRAND FORKS, REPLACE BRIDGE 60001		\$5.80 M
38	US59	57	US 59, IN THIEF RIVER FALLS, REPLACE BRIDGE 5327		\$7.50 M

Pavement Condition	Bridge Condition	Roadside Infrastructure Condition	Traveler Safety	IRC Mobility	Bicycle Infrastructure	Accessible Pedestrian Infrastructure	Regional + Community Investment Priorities	Project Support
54%	0%	20%	10%	0%	8%	8%	0%	0%
0%	95%	0%	0%	0%	3%	3%	0%	0%
62%	0%	5%	8%	0%	8%	0%	17%	0%
83%	0%	17%	0%	0%	0%	0%	0%	0%
51%	0%	33%	0%	0%	3%	3%	10%	0%
44%	0%	30%	10%	0%	3%	3%	10%	0%
<b>2024</b>								
0%	90%	0%	0%	0%	0%	10%	0%	0%
0%	100%	0%	0%	0%	0%	0%	0%	0%
88%	0%	12%	0%	0%	0%	0%	0%	0%
90%	0%	10%	0%	0%	0%	0%	0%	0%
50%	0%	34%	0%	0%	8%	8%	0%	0%
100%	0%	0%	0%	0%	0%	0%	0%	0%
78%	0%	7%	5%	0%	0%	5%	5%	0%
88%	0%	9%	0%	0%	3%	0%	0%	0%
82%	0%	13%	0%	0%	0%	0%	5%	0%
<b>2025</b>								
0%	100%	0%	0%	0%	0%	0%	0%	0%
93%	0%	7%	0%	0%	0%	0%	0%	0%
92%	0%	5%	0%	0%	0%	3%	0%	0%
0%	88%	0%	0%	0%	6%	6%	0%	0%
0%	80%	0%	0%	0%	10%	10%	0%	0%





# Grand Forks - East Grand Forks Metropolitan Planning Organization

## **MPO Staff Report** **Technical Advisory Committee: June 14, 2017** **MPO Executive Board: June 21, 2017**

### **RECOMMENDED ACTION: Update of draft FY2018-2021 ND Side STIP**

Matter of Update on Draft FY2018-2021 ND side STIP.

**Background:** Annually, the MPO, working in cooperation with the state dots and transit operators, develop a Transportation Improvement Program (TIP), which also serves as the transit operators' Program of Projects (POP). The TIP covers a four period and identifies all transportation projects scheduled to have federal transportation funding during the four year period. The process runs over an eleven month period with several public meetings ranging from solicitation of projects for specific programs and comments on listed projects. This point in the process is the documenting of the draft TIP.

The Minnesota side was adopted in April.

Normally, the MPO would adopt a draft TIP which would be incorporated by reference into the draft STIP. This year, on the North Dakota side, the NDDOT released a draft STIP prior to providing the MPO time to process a draft TIP. Therefore, the MPO will not be developing a draft document; instead, we will work with NDDOT to ensure our final TIP and their final STIP are developed cooperatively at the same time. NDDOT took this action in part due to the legislative session causing delay, the announcement of its Director retiring, and some uncertainty in federal infrastructure investments.

Nonetheless, although the draft STIP does not cover all programs that candidate projects are being considered, it does provide some information to note. First, NDDOT has not included an Urban Program for FY2021. This means NDDOT has not decided or made public what projects from the urban areas of North Dakota that will receive their requested funding. Two main projects from our area are the reconstruction of the Washington Street Underpass and the reconstruction of Columbia Road between the overpass and University Ave.

Second, the NDDOT is programming the requested HSIP (Safety) project for 32<sup>nd</sup> Ave S. in FY2019. The amount being programmed is to fund both Phase I and Phase II, as requested.

Although not listed in the draft STIP, NDDOT has awarded the top prioritized TAP project – the multi-use trail along 6<sup>th</sup> Avenue North.

### **Findings and Analysis:**

- None

**Support Materials:**

- Copy of draft 2018-2021 ND side STIP GF District Submitted to Public Comment
- Copy of TAP Award Letter



**STATEWIDE  
TRANSPORTATION  
IMPROVEMENT  
PROGRAM**

**2018 – 2021**  
***Draft Document***

Prepared by

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**  
**BISMARCK, NORTH DAKOTA**

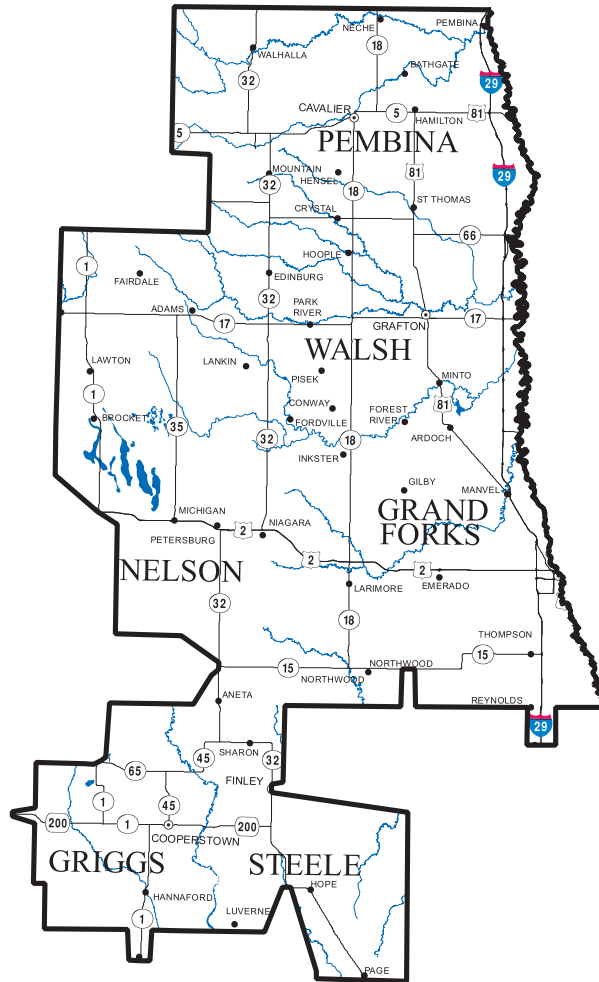
[www.dot.nd.gov](http://www.dot.nd.gov)

**DIRECTOR**  
Grant Levi, P.E.

May 2017

# Grand Forks District

## District 6



Les Noehre, District Engineer  
North Dakota Department of Transportation  
1951 North Washington  
Grand Forks, ND 58208-3077  
Phone: (701) 787-6500  
Fax: (701) 787-6515

**North Dakota Department of Transportation  
District 6 - Grand Forks**

(In Thousands)

PCN	Map Key	Fund Sourc	Pend	Hwy CMC	Dir	Location	Length	Work Type	Total Cost	Fed Fund	State Fund	Local Fund	Other Fund
<b>Fiscal Year: 2018</b>													
<b>Rural</b>													
21341	6001	NH		2	E	DISTRICT BOUNDARY TO RP 295.95	0.5	Concrete Over	722	584	138	0	0
21346	6002	NH		2	E	.5 MILES E LAKOTA TO MAPES X-OVER	5.0	CPR, Grinding	900	728	172	0	0
21341	6003	NH		2	E	5.7 MI E ND 1 TO 0.8 MI W ND 35	3.9	Concrete Over	5129	4151	978	0	0
21887	6004	SS		17	E	JCT 1 E TO ADAMS	14.8	Mill/OI 2" Max	2667	2158	509	0	0
21663	6005	IM		29	N	N OF N GR INTR N TO JCT ND 54	14.5	CPR, Grinding	1801	1621	180	0	0
20330	6006	IM		29	N	PEMBINA BORDER CROSSING	1.5	Aggr Base, Bikeway/Walkway, ITS, PCC Pave	8999	8099	900	0	0
21885	6007	SS		32	N	US 2 N TO 0.5 MI N JCT 17	27.3	Mill/OI 2" Max	4909	3973	936	0	0
<b>Subtotal</b>									<b>25127</b>	<b>21314</b>	<b>3813</b>	<b>0</b>	<b>0</b>
<b>Urban</b>													
21590	6008	SU		986	N	N 42ND ST (UNIVERSITY AVE - US 2)	0.0	Reconstruction	7205	4880	0	2325	0
<b>Subtotal</b>									<b>7205</b>	<b>4880</b>	<b>0</b>	<b>2325</b>	<b>0</b>
<b>Bridge</b>													
	6009	IM		29	S	8 SOUTH OF ND 5	0.0	Deck Overlay	281	253	28	0	0
	6010	SS		45	N	4 EAST OF ND 65	0.0	Deck Overlay	450	364	86	0	0
<b>Subtotal</b>									<b>731</b>	<b>617</b>	<b>114</b>	<b>0</b>	<b>0</b>
<b>Safety</b>													
21774	6011	HESHLS				GRAND FORKS DISTRICT SRSP	0.0	Lighting, Signing, Pave Mark	1014	913	101	0	0
21322	6012	HLC				GRIGGS COUNTY ROAD PROJECTS	0.0	Signing, Pave Mark	79	71	0	8	0
21883	6013	HEU				GRAND FORKS SCHOOL SIGN REPLACEMENT	0.0	Signing	46	41	0	5	0
21320	6014	HLC				WALSH COUNTY ROAD PROJECTS	0.0	Pave Mark, Signing	259	233	0	26	0
<b>Subtotal</b>									<b>1398</b>	<b>1258</b>	<b>101</b>	<b>39</b>	<b>0</b>
<b>Transit</b>													
	6015	TURB				GRAND FORKS-CITYWIDE-5307	0.0	TR Cap Purchase	15	12	0	3	0
	6016	TURB				GRAND FORKS-CITYWIDE-5307	0.0	TR Op Assist	3365	1051	206	1759	349
<b>Subtotal</b>									<b>3380</b>	<b>1063</b>	<b>206</b>	<b>1762</b>	<b>349</b>
<b>Total</b>									<b>37841</b>	<b>29132</b>	<b>4234</b>	<b>4126</b>	<b>349</b>

**North Dakota Department of Transportation  
District 6 - Grand Forks**

(In Thousands)

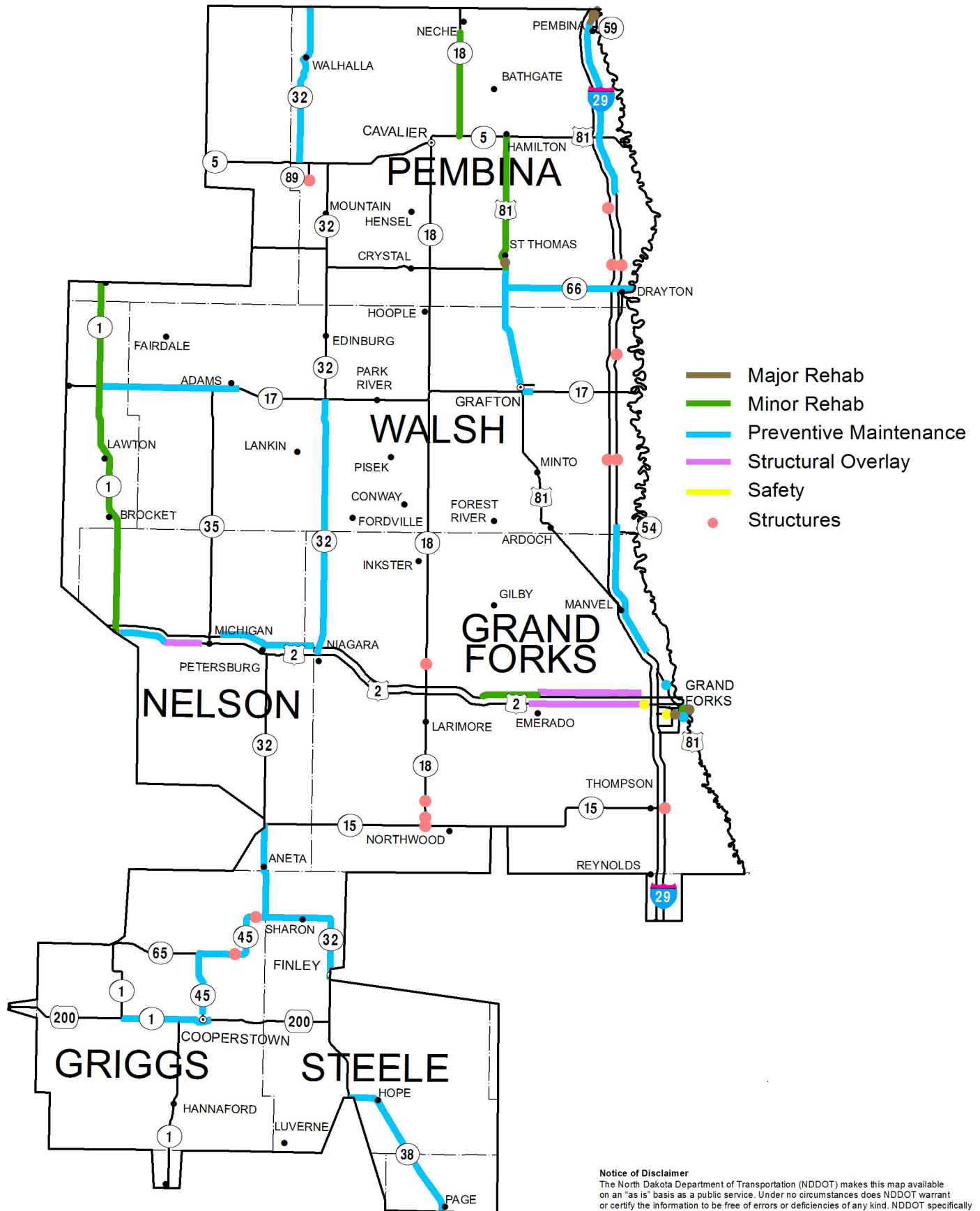
PCN	Map Key	Fund Sourc	Pend	Hwy Dir CMC	Location	Length	Work Type	Total Cost	Fed Fund	State Fund	Local Fund	Other Fund
<b>Fiscal Year: 2019-2021</b>												
<b>Rural</b>												
	6101	NH		1	N	E JCT 200 TO W JCT 200	6.1 Mill/OI 2" Max	1143	925	218	0	0
	6102	SS		1	N	JCT 2-LAKOTA-N TO JCT CO RD 8 & 15	18.8 Culvert Rehab, Pipe Replacem, Pipe Repair	2600	2104	496	0	0
	6103	SS		1	N	JCT CO RD 8 & 15 N TO NEKOMA SPUR	19.0 Culvert Rehab, Pipe Replacem, Pipe Repair	2600	2104	496	0	0
	6104	NH		2	W	MICHIGAN BYPASS E TO CO LN	10.2 Mill/OI 2" Max	1908	1544	364	0	0
	6105	NH	P	2	W	NEAR ARVILLA TO W OF GF AFB	5.5 Mill/OI>2<Or=3"	2631	2129	502	0	0
	6106	NH	P	2	W	W OF GF AFB TO 69TH ST	11.0 Milling, Structural OI>3, Struct Replace	9069	7340	1729	0	0
	6107	NH		17	E	GRAFTON MUNICIPAL STA 0 TO 61+00	1.2 CPR, Microsurfacing	392	317	36	39	0
21810	6108	SS		18	N	E JCT 5 N TO PEMBINA CO 55	11.0 Mill/OI>2<Or=3", Selectiv Subcut, Sliver Grading, Struct/Incid	6466	5233	1233	0	0
	6109	SS		38	N	PAGE N TO JCT 32-HOPE	16.8 Mill/OI 2" Max	3148	2548	600	0	0
	6110	NH		200	E	EAST JCT 1 THRU COOPERSTOWN	3.5 Mill/OI 2" Max	659	533	126	0	0
	6201	SS		45	N	COOPERSTOWN N TO JCT 32	17.2 Milling, Thin Overlay	3172	2567	592	13	0
	6202	SS		66	E	S JCT 81 ST THOMAS E TO RED RIVER	13.8 Mill/OI 2" Max	2679	2168	511	0	0
	6203	NH		81	N	N JCT 66 N TO W JCT 5 AT HAMILTON	14.1 Mill/OI>2<Or=3"	4493	3636	857	0	0
	6204	NH		81B	N	S OF 40TH AVE N TO N OF 40TH AVE N	0.3 CPR, Grinding	100	81	19	0	0
	6301	NH		2	E	1 MI W OF GF AFB TO 69TH ST	12.0 Milling, Structural OI>3	7107	5752	1355	0	0
	6302	IM	P	29	N	N BOWESMONT TO CANADIAN LINE	20.4 CPR, Mill/OI 2" Max	8243	7419	824	0	0
	6303	SS		32	N	FINLEY MUNICIPAL TO JCT 45-W SHARON	13.4 Milling, Thin Overlay	2558	2070	488	0	0
	6304	SS		32	N	JCT ND 45 N TO JCT ND 15	10.0 Milling, Thin Overlay	1908	1544	364	0	0
	6305	SS		32	N	W JCT 5 CONCRETE N TO STATE LINE	17.1 Mill/OI 2" Max	3456	2797	659	0	0
	6306	NH		81	N	GRAFTON-BRIDGE TO N URBAN LIMITS	0.6 Thin Overlay	130	105	25	0	0
	6307	NH		81	N	N. URBAN LIMITS GRAFTON TO N JCT 66	12.0 Thin Overlay	2751	2226	525	0	0
<b>Subtotal</b>								<b>67213</b>	<b>55142</b>	<b>12019</b>	<b>52</b>	<b>0</b>
<b>Urban</b>												
	21842	6111	SU		2B	E 5TH ST (US 2 TO DEMERS AVE)	0.9 Mill/OI>2<Or=3"	1110	888	111	111	0
	21841	6112	NHU		2B	E DEMERS AVE (RED RIVER TO 5TH ST)	0.2 Reconstruction	3290	2480	310	500	0
	6113	NHU		297	E	DEMERS AV AT 30TH ST/COLUMBIA W RAMP	0.2 Signals, Turn Lanes	600	480	60	60	0
	21843	6114	NHU		297	E DEMERS AVE (6TH ST TO 5TH ST)	0.1 Reconstruction	1000	800	100	100	0
	6205	NHU		2	E	US 2 & 55TH ST INTERSECTION	0.1 Signals, Turn Lanes	600	480	120	0	0
	6206	NHUSU		81B	N	US 81(S OF 8TH AV N-0.4 MI N OF US2)	1.0 CPR, Grinding, Dowel Retrofit	1324	1058	133	133	0
	6207	SU		986	E	UNIVERSITY AV (STATE ST-N 3RD ST)	0.0 Mill/OI>2<Or=3", ADA Ramp Rev	3073	2459	0	614	0
<b>Subtotal</b>								<b>10997</b>	<b>8645</b>	<b>834</b>	<b>1518</b>	<b>0</b>
<b>Bridge</b>												
	6115	SS		15	E	2 WEST OF NORTHWOOD	0.0 Deck Overlay	175	142	33	0	0
	6116	SS		18	N	JUST NORTH OF ND 15	0.0 Deck Overlay	158	128	30	0	0
	6117	SS		18	N	3 NORTH OF ND 15	0.0 Deck Overlay	158	128	30	0	0
	6118	SS		45	N	2 WEST OF ND 32	0.0 Struct Replace	191	155	36	0	0
21286	6119	SS		89	E	2 SOUTH OF JCT ND 5	0.0 Deck Replacment	507	410	97	0	0
	6208	SS		18	N	3 NORTH OF US 2	0.0 Struct Replace	1125	910	215	0	0
	6209	IM		29	N	7 SOUTH ND 17	0.0 Deck Overlay	509	458	51	0	0
	6210	IM		29	N	4 NORTH ND 17	0.0 Deck Overlay	314	283	31	0	0

**North Dakota Department of Transportation  
District 6 - Grand Forks**

(In Thousands)

PCN	Map Key	Fund Sourc	Pend	Hwy Dir CMC	Location	Length	Work Type	Total Cost	Fed Fund	State Fund	Local Fund	Other Fund
<b>Bridge</b>												
	6211	IM		29 S	7 SOUTH ND 17	0.0	Deck Overlay	509	458	51	0	0
	6308	IM		29 N	JUNCTION ND 15	0.0	Deck Overlay, Struct/Incid	539	485	54	0	0
	6309	IM		29 N	3 NORTH N.D. 66	0.0	Deck Overlay	190	171	19	0	0
	6310	IM		29 S	3 NORTH ND 66	0.0	Struct Replace	1592	1433	159	0	0
<b>Subtotal</b>								<b>5967</b>	<b>5161</b>	<b>806</b>	<b>0</b>	<b>0</b>
<b>ND Street</b>												
21209	6120	SS		91B N	ST THOMAS - MAIN ST (1ST TO 7TH AVE)	0.6	Bikeway/Walkway	417	337	38	42	0
<b>Subtotal</b>								<b>417</b>	<b>337</b>	<b>38</b>	<b>42</b>	<b>0</b>
<b>Safety</b>												
21677	6121	HLC			STEELE COUNTY ROAD PROJECTS	0.0	Rumble Stripes, Signing, Marking	96	86	0	10	0
21884	6122	HEU			GF 32ND AVENUE SOUTH	0.0	Turn Lanes	7373	6635	369	369	0
	6123	HLUHLS			GRAND FORKS-STATE, URBAN & CITY RDS	0.0	Signal Revision	123	111	1	11	0
21319	6124	HLC			PEMBINA COUNTY ROADS	0.0	Signing, Pave Mark, Lighting	131	118	0	13	0
<b>Subtotal</b>								<b>7723</b>	<b>6950</b>	<b>370</b>	<b>403</b>	<b>0</b>
<b>Transit</b>												
	6125	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Op Assist	3465	1072	212	1822	359
	6126	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Cap Purchase	15	12	0	3	0
	6212	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Cap Purchase	15	12	0	3	0
	6213	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Op Assist	3569	1094	218	1887	370
	6311	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Cap Purchase	15	12	0	3	0
	6312	TURB			GRAND FORKS-CITYWIDE-5307	0.0	TR Op Assist	3676	1116	225	1954	381
<b>Subtotal</b>								<b>10755</b>	<b>3318</b>	<b>655</b>	<b>5672</b>	<b>1110</b>
<b>Total</b>								<b>103072</b>	<b>79553</b>	<b>14722</b>	<b>7687</b>	<b>1110</b>
<b>Grand Total</b>								<b>140913</b>	<b>108685</b>	<b>18956</b>	<b>11813</b>	<b>1459</b>

# 2018-2021 Construction Program - Grand Forks District



- Major Rehab
- Minor Rehab
- Preventive Maintenance
- Structural Overlay
- Safety
- Structures

**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.





# North Dakota Department of Transportation

Grant Levi, P.E.  
*Director*

Doug Burgum  
*Governor*

May 30, 2017

The Honorable Michael R. Brown  
Mayor of Grand Forks  
255 N 4th St.  
PO Box 5200  
Grand Forks, ND 58206

## GRAND FORKS 6<sup>th</sup> AVE N SHARED USE PATH PROJECT

Congratulations on the recent award of Transportation Alternatives (TA) funds for your 6<sup>th</sup> Ave N Shared Use Path Project.

The federal aid project will be funded with 80.93% federal TA funds up to a maximum of \$180,395. These funds are for construction costs only.

Because of the high demand for TA funded projects, please notify us by July 14, 2017, that the local finances needed to plan and design this project are available.

It is presently planned that this project be developed, bids taken, and constructed by the end of the 2018 construction season. To meet this date, we encourage you to start project development and work towards a plan completion date between December 1, 2017, and March 15, 2018. The TA funds are for federal FY 2018 and these funds must be authorized by FHWA before the end of the fiscal year. The latest date that a completed set of plans can be submitted to the NDDOT is August 15, 2018. If you do not meet this date, your award of funds will be rescinded.

The process for the development of DOT projects shall be used and I will be able to assist you in the development of your project.

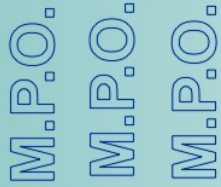
Once again, please notify us by July 14, 2017, what the wishes of the city of Grand Forks are in regards to this project. You can contact me at 701-328-4787 if you have any questions.

*Pam Wenger*

PAM WENGER, TA MANAGER, LOCAL GOVERNMENT DIVISION

38/sbh

C: Allen R. Grasser, P.E., City of Grand Forks  
Earl T. Haugen, Executive Director, Grand Forks-East Grand Forks MPO



# Grand Forks - East Grand Forks Metropolitan Planning Organization

## **MPO Staff Report** **Technical Advisory Committee: June 14, 2017** **MPO Executive Board: June 21, 2017**

**RECOMMENDED ACTION: Kick-off with Kimley-Horn/WSB in Updating the Street/Highway Element of 2045 Metropolitan Transportation Plan.**

Matter of Kick-off for 2045 Street/Highway Element.

**Background:** The UPWP identifies that the major undertaking of the MPO for the next two years is to update the Street/Highway Element of our Metropolitan Transportation Plan to the horizon year of 2045.

Kimley-Horn, with WSB as subconsultant, were retained to assist us in this update. The final contracts were signed during the first week of May. The consultant team will be present at the June TAC and Board meetings to kick-off the effort. The presentation is attached.

### **Findings and Analysis:**

- This activity is identified in UPWP.
- The regular 5 year update cycle ends December 2018
- This update is required to be FAST compliant
- This update will need to incorporate require performance measures and targets.
- The consulting team of Kimley-Horn and WSB are under contract and working.
- One of the first activities is to hold kick-off meetings with the TAC and Board.

### **Support Materials:**

- Presentation.



Streets + Highways Plan Update  
*TAC Kick-off  
Meeting*

June 14, 2017

GRAND FORKS-EAST GRAND FORKS MPO

STREET/HIGHWAY PLAN UPDATE

2045 METROPOLITAN TRANSPORTATION PLAN



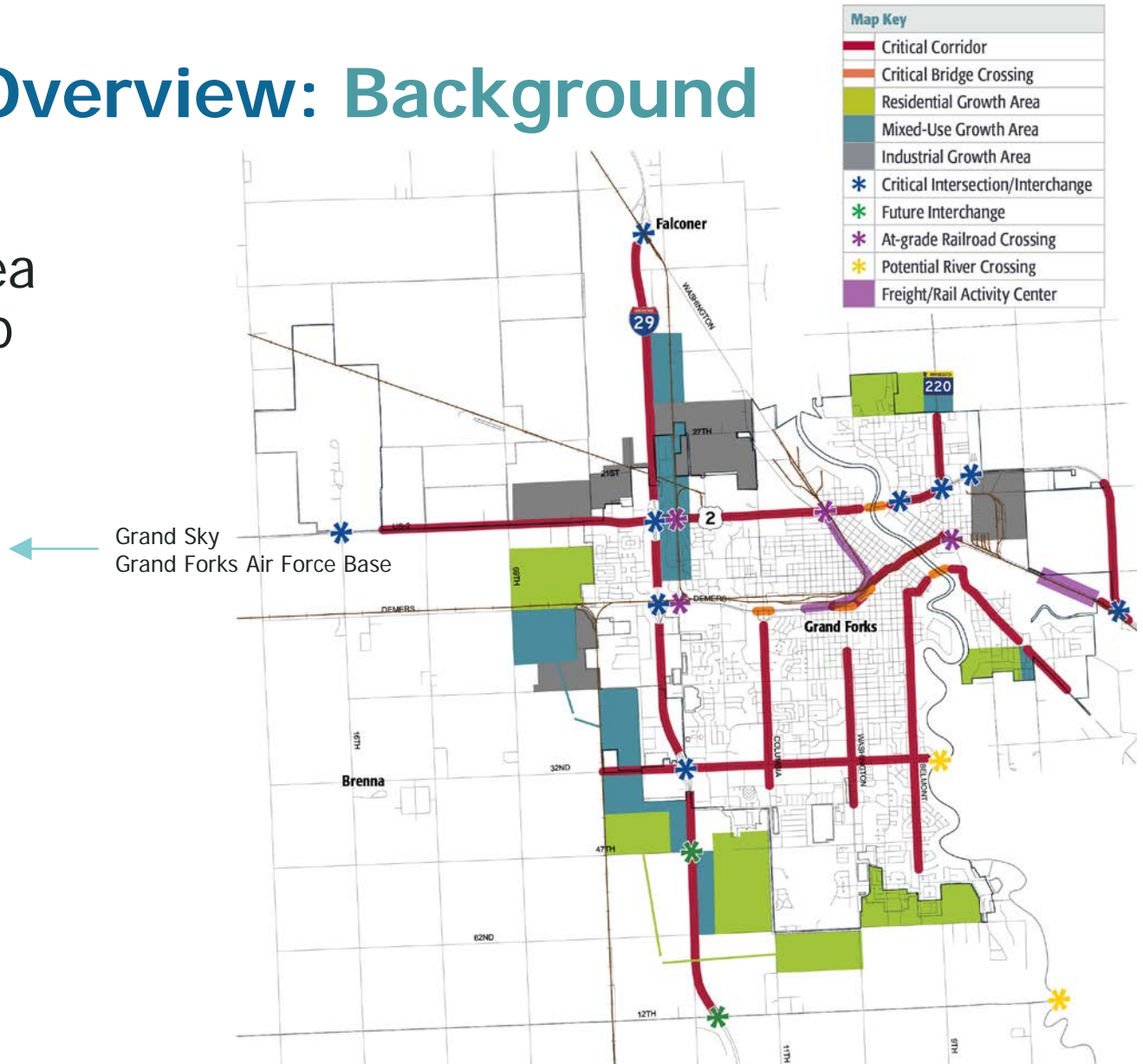
# Agenda

- Project Overview
  - Background
  - Purpose
  - Personnel
  - Schedule
- Technical Process
- Wrap-Up
  - Next Steps
  - Questions

# Project Overview

# Project Overview: Background

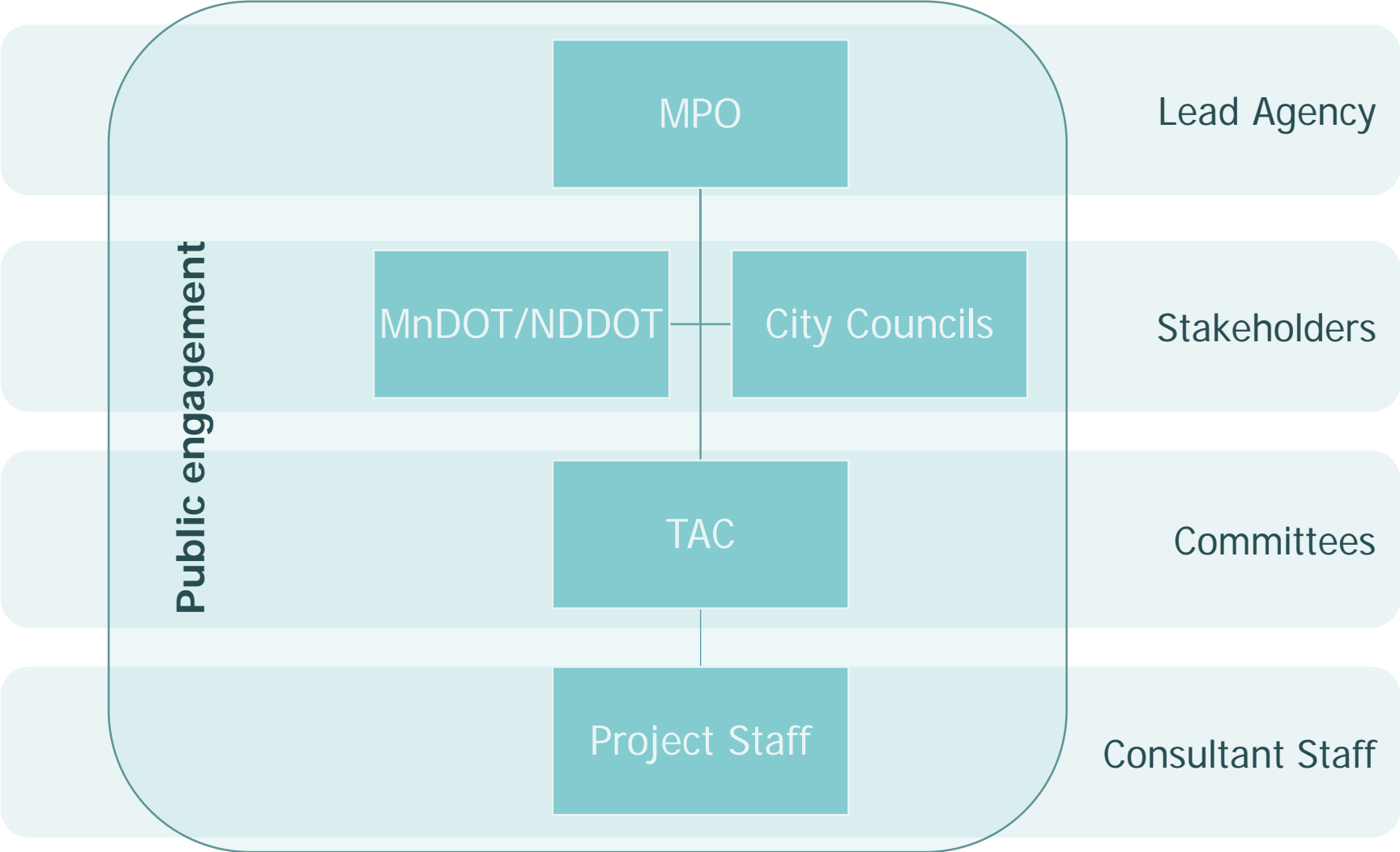
## ■ Project Area Issues Map



# Project Overview: Purpose

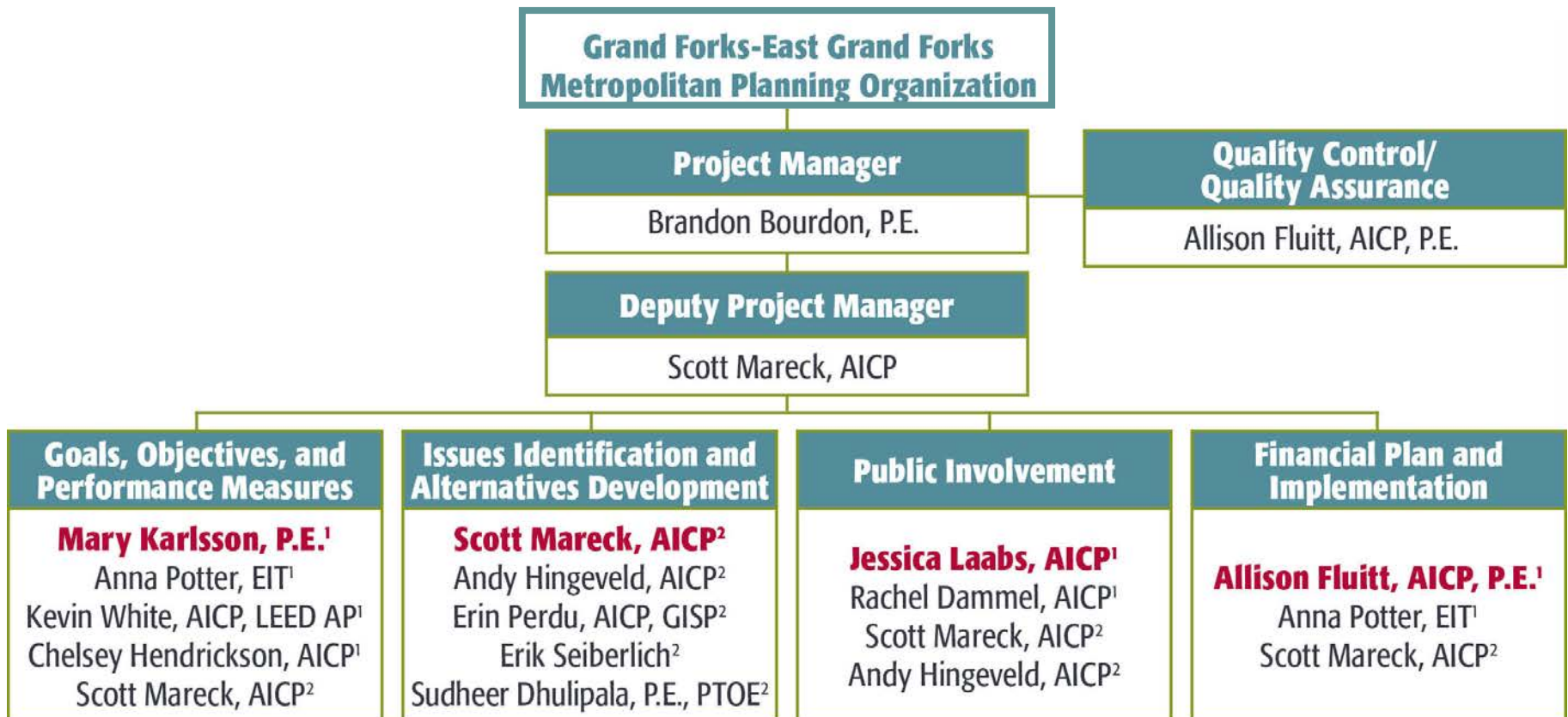
- Update street/highway element of the 2040 plan
  - Communicate local investment **needs** and **priorities**
  - Address federal regulations in the **FAST Act**

# Project Overview: Organizational Chart





# Project Overview: Consultant Leadership



# Project Overview: Schedule

Description	2017												2018											
	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DI				
<b>Project Management</b>	[Solid teal bar]																							
Project Management Team Meetings	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<b>Goals, Objectives and Performance Measures Report</b>	[Solid teal bar]																							
<b>Existing Conditions Report</b>	[Solid teal bar]																							
<b>Existing Plus Future Network Conditions Report</b>			[Solid teal bar]																					
<b>Identification of Issues Report</b>					[Solid teal bar]																			
<b>Range of Alternatives Report</b>									[Solid teal bar]															
<b>Financial Plan Report</b>									[Solid teal bar]															
<b>Recommended Future Network and Implementation Report</b>											[Solid teal bar]													
Finalize Draft Plan															[Solid teal bar]									
<b>Public Meetings/Public Participation</b>	[Solid teal bar]																							
Public Meetings			●				●				●			●										
Technical Advisory Committee Meetings	●		●				●				●			●										
NDDOT Management Meeting																		●						
MnDOT Planning Group Meeting																		●						
Grand Forks City Council Meeting																			●					
East Grand Forks City Council Meeting																			●					

# Technical Process

# Task 1: Project Management

- Deliverables
  - Complete planning process on schedule
  - Positive and effective communication
  - Quality control and assurance
  - Meeting prep, attendance, and follow-up
- Outcome: Deliver the plan update

# Task 2: Vision, Goals, Objectives, and Performance Measures

- Foundational task for all subsequent tasks
  - Establishes the overall direction for the plan and serves as a resource when developing and prioritizing projects
- Build on and update existing goals and measures
  - Will respond to Federal direction, including FAST Act
  - Will respond to State direction
- Generate meaningful and implementable measures and targets applicable at the system- and corridor or project-level
  - Identify the minimum measures from both Federal and State perspective

Public feedback via  
Open House 1

# Task 2: Goals, Objectives, and Performance Measures

Previous Goal	More Detail
1: <b>Economic Vitality</b>	Increase accessibility to <i>jobs, markets, education</i>
2: <b>Security</b>	Increase <i>security</i> for motorized & non-motorized uses
3: <b>Accessibility &amp; Mobility</b>	Provide more <i>transportation choices</i>
4: <b>Environmental/ Energy/ Quality of Life</b>	Enhance <i>environmental assets</i> , promote <i>energy conservation</i> , and improve <i>quality of life</i> in each community
5: <b>Integration &amp; Connectivity</b>	Connect <i>people, modes, freight</i> , and <i>housing</i> , particularly affordable housing and transit
6: <b>Efficient System Management</b>	Increase collaboration between agencies with <i>targeted investments</i>
7: <b>System Preservation</b>	Steer federal funds to existing infrastructure to <i>spur revitalization</i> , <i>promote urban landscapes</i> , and <i>protect rural assets</i>
8: <b>Safety</b>	Increase <i>safety</i> for motorized & non-motorized users
9: <b>Resiliency</b>	Build <i>resilience in all aspects</i> of the transportation system
10: <b>Tourism</b>	Promote tourism through <i>increased access</i>

# Task 2: Vision, Goals, Objectives, and Performance Measures

- Inputs include
  - New federal guidelines (FAST Act)
  - New MN guidelines
  - New ND guidelines
  - Updated existing conditions (Task 3)
  - New priorities within the MPO
  - Perspectives that were not previously heard (Public Engagement/Task 9)
  - Effectiveness of existing goals and measures
  - Beneficial and relevant goals and measures from peer plans

Public feedback via  
Open House 1

# Task 3: Existing Conditions

## Benchmark for Comparing Improvement Alternatives

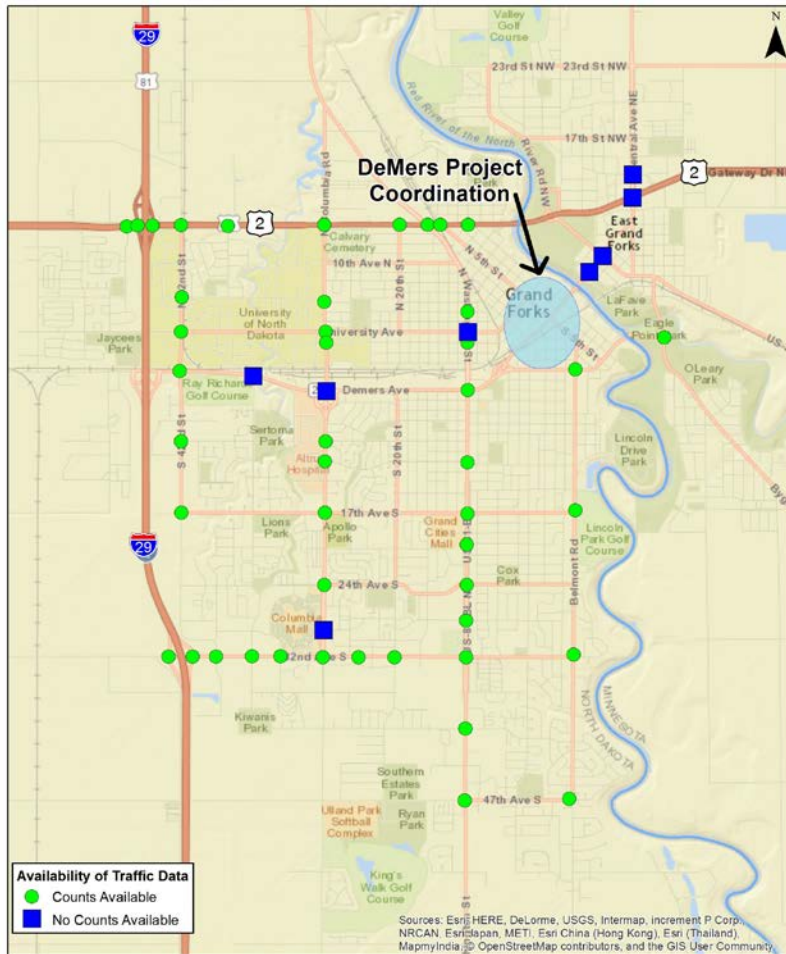
- ATAC developing 2015 calibrated travel demand model
- Received “data dump” from MPO May 26<sup>th</sup>
- Preparing a variety of maps and supporting narrative
- Conducting existing PM peak hour Level of Service (LOS) analysis
- Conducting crash analysis

Public feedback via  
Open House 1



# GIS Mapping

- Traffic Data
- NHS and Federal Aid Roads



# Task 4: Existing Plus Future Conditions

## Benchmark For Comparing Improvement Alternatives

### ATAC 2030/2045 Travel Demand Model Later this Summer

- Gateway, Columbia, Washington Speed Reductions?

### Key 2017-2020 TIP Projects

- Kennedy Bridge Rehabilitation (2017)
- South Columbia Road 2 to 5 Lane Expansion and New Signal (2017)
- South Columbia Road Turn Lanes at 17<sup>th</sup> Avenue South (2017)
- Central Avenue Multi-Use Trail (2018)
- Greenway Boulevard Reconstruction and Sidewalk (2018)
- 32<sup>nd</sup> Avenue Corridor Safety Improvements (2019)
- Demers Avenue (Columbia Rd/30<sup>th</sup> St.) Traffic Signal/Turn Lanes (2019)
- Demers Avenue Reconstruction/Expansion (2019)
- Gateway Drive/55<sup>th</sup> Street Traffic Signal/Turn Lanes (2020)

Public feedback via  
Open House 1

# Task 5: Issue Identification

- Universe of Projects
  - "State of Good Repair" – Pavement Preservation Projects
  - "Discretionary" – Safety, Capacity Expansion, New Facilities
- River Crossing Capacity
  - Existing (Kennedy, Sorlie, Minnesota)
  - Future (32<sup>nd</sup> Avenue, Merrifield Road)
- Key Regional Corridors (I-29, U.S. 2, U.S. 2 Business, Bygland Rd, Demers Ave., 32nd Ave., Columbia Road, Washington Street, etc.)
- Truck and Rail Freight Needs

Public feedback via  
Open House 2

# Key Studies Since Last Plan Approval

- 42<sup>nd</sup> Street Grade Separation Technical Needs Assessment (2014, GF)
- South Columbia Road Traffic Operations Study (2015, GF)
- US 2 Access Study (2015, GF)
- 32<sup>nd</sup> Avenue Safety Review (2016, GF)
- North 42<sup>nd</sup> Street Traffic Operations Study (2016, GF)
- Glasston Railroad Crossing Mitigation Study (2016, GF)
- Bygland Road Corridor Study (2016, EGF)
- Interstate 29 Corridor Study (2017, GF)
- US and US 2 Business Study (2017, EGF)

# Task 6: Range of Alternatives

## Sample Alternatives Evaluation Matrix

Weighting Alternatives	Performance Measure 1	Performance Measure 2	Performance Measure 3	Performance Measure 4	Recommendation
Alternative 1	25%	25%	25%	25%	
Alternative 2	20%	30%	40%	10%	

## Sample Performance Measures (Quantitative or Qualitative)

- Overall Network Speed
- Overall Network VMT/VHT Reduction
- Overall Regional Benefit
- “Discretionary” Safety/Operations/Access Control Benefits
- “Discretionary” Congestion Relief/Level of Service (LOS) Benefits
- “State of Good Repair” Pavement Preservation Benefits
- Project Cost Compared to Overall Financial Constraint
- Environmental Impacts/Human Impacts/Carbon Footprint
- Political Considerations/Public Opinion

Public feedback via  
Open House 3

# Task 7: Financial Plan

- Produce 2045 Financial Plan that includes capital, operating, and maintenance costs for two investment scenarios
  - Current revenues (fiscally constrained)
  - Increased revenues (illustrative)
- Will tailor financial model to Grand Forks/East Grand Forks, ND and MN
  - Cost drivers
  - Revenue sources
- Capital budget created in coordination with Recommended Future Network & Implementation Report (Task 8)
- Will include local fiscal policies, such as ongoing discussions to have a voter-approved sales tax

Public feedback via  
Open House 3

# Task 8: Recommended Future Network

- Base on goals, objectives and performance measures
- "State of Good Repair" – Pavement Preservation Projects
- "Discretionary" – Safety, Capacity Expansion, New Facilities
- "Financially Constrained" and "Illustrative" projects

Public feedback via  
Open House 4

# Task 8: Implementation Report

- Document how recommended projects advance system performance toward specific goals or criteria
- High-level scan of environmental features
  - Existing development projects and patterns
  - Environmental justice
  - Sensitive environmental species
- Project prioritization and phasing to address issues and help manage growth

Public feedback via  
Open House 4



# Task 9: Public Engagement

- 4 phases of engagement
  - Phase 1
    - Project introduction
    - Vision, goals, objectives, and performance measures
    - Existing conditions
  - Phase 2
    - Issue identification
  - Phase 3
    - Range of alternatives
    - Financial plan
  - Phase 4
    - Recommendations



# Task 9: Public Engagement

- Project fact sheet
- Public and stakeholder meetings
  - Public open houses (4)
  - GF-EGF MPO Technical Advisory Committee meetings (6)
  - City Councils, MnDOT, NDDOT
- Online
  - Project website
  - WikiMapping
  - Facebook page
- Stakeholder and contact database
- Public comment database
- Engagement tracking and adjustments

# Wrap-Up

Next Steps & Questions

# Wrap Up: Next Steps

Description	2017						
	MAY	JUN	JUL	AUG	SEP	OCT	NOV
<b>Project Management</b>	[Solid blue bar]						
Project Management Team Meetings	●	●	●	●	●	●	●
<b>Goals, Objectives and Performance Measures Report</b>	[Solid blue bar]						
<b>Existing Conditions Report</b>	[Solid blue bar]						
<b>Existing Plus Future Network Conditions Report</b>		[Solid blue bar]					
<b>Identification of Issues Report</b>				[Solid blue bar]			
<b>Range of Alternatives Report</b>							
<b>Financial Plan Report</b>							
<b>Recommended Future Network and Implementation Report</b>							
Finalize Draft Plan							
<b>Public Meetings/Public Participation</b>	[Solid blue bar]						
Public Meetings			●				●
Technical Advisory Committee Meetings	●		●				●
NDDOT Management Meeting							
MnDOT Planning Group Meeting							
Grand Forks City Council Meeting							
East Grand Forks City Council Meeting							

- Actively working on

- **Task 2:** Goals/Objectives/Performance Measures
- **Task 3:** Existing Conditions
- **Task 9:** Prep for Open House

- Followed by

- **Task 4:** Conditions Report
- **Task 5:** Issues Report

# Wrap Up: Questions

- Next Meeting: July 12, 2017

**TABLE OF CONTENTS\* UPDATE JUNE, 2017**

CODE	AREA	PROJECT SCHEDULE/TIMELINE		% COMPLETED	FISCAL YEAR	COMPLETION DATE
		Task(s)	ACTIVITY			
	Introduction					
300.1	PLANNING AND IMPLEMENTATION		ACTIVITIES			
	2045 Street & Highway Plan <b>NEW</b>	1	Consultant's team is working on the 2045 Street and Highway Plan Existing Conditions Report, initial stages of Goals, Objectives and Performance Measures research and also preparing introductory kick-off meeting presentations for the TAC and Policy Board meetings in June.			
300.1	Plan Update (Travel Demand Model)	1	The model development is in the data collection and methodology development stage. Cleaning up & formatting data obtained to represent the employment centers. The data shows the type of employment and the number of employees by NAICS code.	35%	2106	16-Dec
300.1	Bicycle & Pedestrian Planning Element (Update)	2-3-4-5	Prepared responses to address stakeholder's (City of Grand Forks Engineering Dept) concerns on goals, objectives, and performance measures. Worked with Intern-GIS preparing maps to be included in the Final Report. Attended agency related meetings seeking to inform those in attendance on the progress of the Element update. Addressed comments and feedback received regarding the "Barriers" section of the Bicycle and Pedestrian Element. Continue Existing Conditions Analysis Task #5 objective is to collect and analyze baseline of information to support strategies and actions necessary to reach the vision and goal statements, performance measures and targets.	70%	2016	May-16
300.1	Transit Development Planning Element (Update)			96%	2016	Feb-17
300.2	CORRIDOR PLANNING					
300.2	Traffic Count Program	Ongoing	Resumed data collection setup for the rest of the intersections, however ran into some technical issues which will hopefully be resolved in days to come.		2015	Ongoing
300.2	Corridor Preservation	Ongoing	Ongoing		2015	Ongoing
	Near South Neighborhood <b>NEW</b>	Task(s) 1	Spot speed studies' preliminary results submitted to the MPO for discussion with citizens group. Also, past studies are being reviewed currently.		2017	2017
300.3	TRANSPORTATION IMPROVEMENT PROGRAM (TIP) ANNUAL				2016	
300.4	LAND USE PLAN		ACTIVITIES			
300.5	SPECIAL STUDIES		ACTIVITIES			
300.5	MAP-21/FAST (2015)		Ongoing		2015	Ongoing
300.5	I-29 Traffic Operations Study	1	Completed 99% of study. Draft Report version pending final approval.	100%	2015	7/30/2016 (Work extended to 2017)
300.6	PLAN MONITORING, REVIEW AND EVALUATION		ACTIVITIES			
300.7	GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEVELOPMENT					
	Geographic Information Systems (GIS) Development	Ongoing	Ongoing in-house		2015	Ongoing

Note: Brief project update review for information only. It does not replace Project Reports.